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MANDRELS
COLLET CHUCKS

EDITION 8.2

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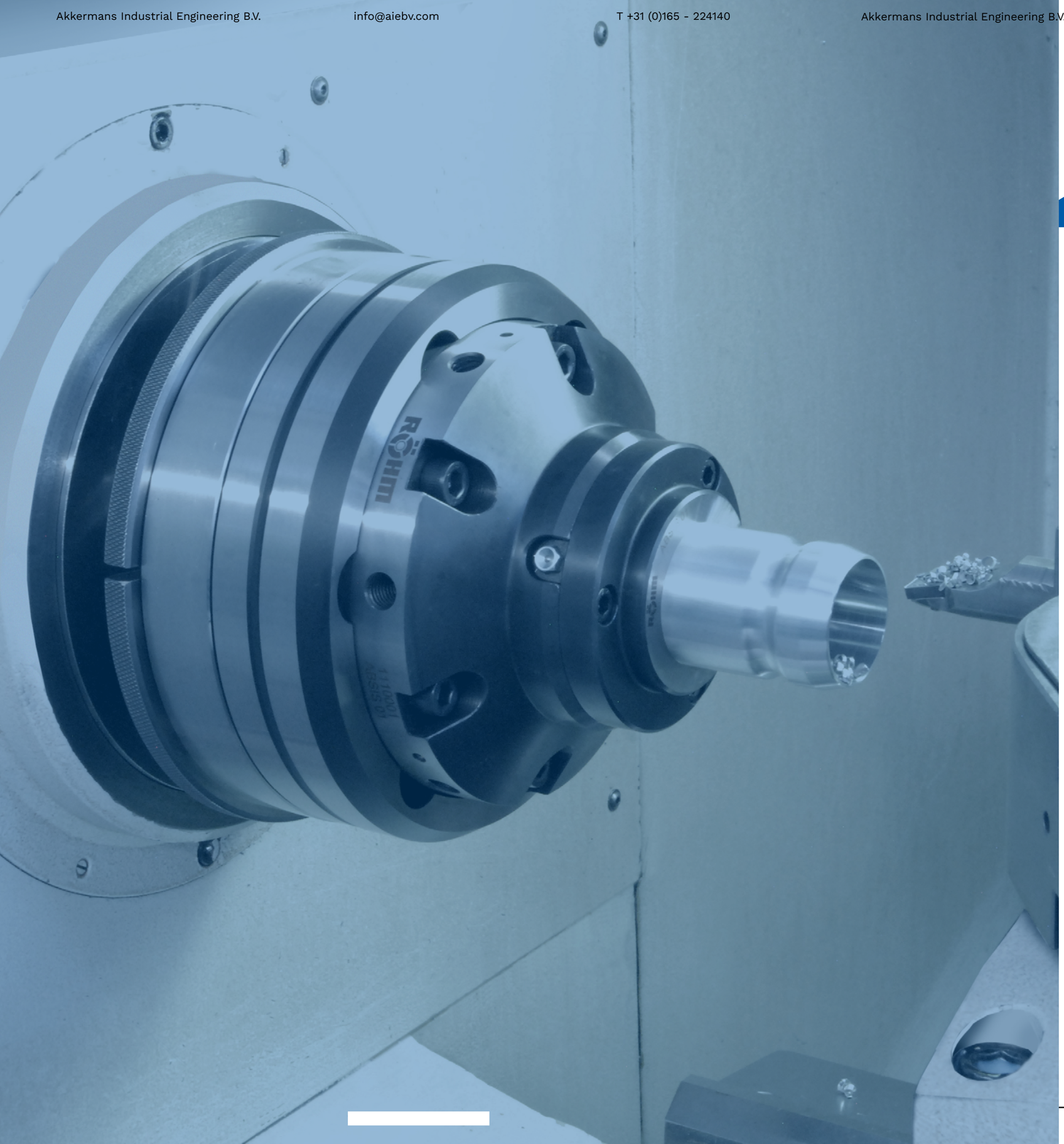


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Errors and corrections are reserved!

Orientation guide



TYPE	KFS/ MFS	KFR/ MFR	KFB	MZB	MZE	ABSIS	ABSIS-C	AGILIS
	Cartridge mandrel					Segment clamping mandrel		
Feature	Stable clamping, suitable for long workpieces or long clamping lengths	Suitable for short clamping lengths without a defined axial component	Stable system with high torque transmission for working with small Ø, for short clamping lengths	Stable system with high torque transmission for working with small Ø, for short clamping lengths	Cost-effective system for measuring tasks, high accuracy	High degree of hardness of the clamping sleeve, thereby wear resistant, long service life of the clamping sleeve	Stable system, for take-up into CAPTIS clamping system, with draw-down	Stable system with high torque transmission for working with small Ø, for short clamping lengths, high degree of hardness of the clamping sleeve
Application	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, gear cutting, balancing, measuring	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, measuring	Measuring, grinding	Turning, grinding, milling, gear cutting, balancing, measuring		
Clamping	Internal	Internal	Internal	Internal	Internal	Internal	Internal	Internal
Actuation	✔ ⚙	✔ ⚙	⚙	✔	✔	⚙	✔ ⚙	⚙
Clamping surface	Smooth (optionally coated, serrated, toothed, for shape clamping)				Smooth	Smooth (optionally coated, serrated, toothed, for shape clamping)		
Axial component	✔	O	✔	✔	✔	✔	✔	✔
Clamping range mm	15 - 140	14,5 - 131	5,5 - 29	5,5 - 78,7	8 - 230	20 - 106	20-106	10 -130
Workpiece stop possible	✔	✔	✔	✔		✔	✔	✔
Preparation for air sensing	✔	✔				✔		✔
Take-up	Cylindrical take-up mount combined with intermediate flange ISO 702-1 (DIN 55028)			Between points or cylindrical take-ups, driving at the shaft possible		Cylindrical take-up mount combined with intermediate flange ISO 702-1 (DIN 55028)	Take-up in CAPTIS clamp system	Cylindrical take-up mount combined with intermediate flange ISO 702-1 (DIN 55028)
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✔ yes O optional ✋ hand operated ⚙ power operated

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Mandrels and collet chucks

Orientation guide



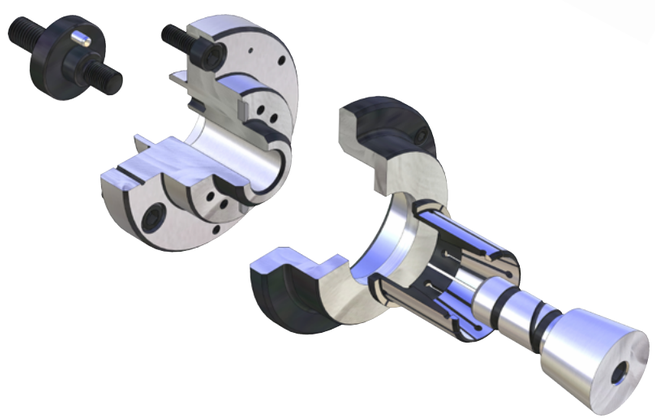
TYPE	CAPTIS-D	CAPTIS-A	CAPTIS-AF	CAPTIS-M	KZF	KZF-S
	Collet chucks					
Feature	Full through-hole, with centering edge, draw-down	Restricted through-hole, optional fixed workpiece stop, draw-down	Restricted through-hole, fixed workpiece stop, stationary collet: without draw-down	For rotating and stationary use, manually operated, with axial tension against workpiece stop	Bayonet quick lock with protection against torsion	Bayonet quick lock, draw-down, actuation by clamping mandrel
Application	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, milling, gear cutting, balancing, measuring	Stationary turning, grinding, milling, drilling, measuring	Turning, grinding, milling, measuring	Turning, grinding, milling, gear cutting
Clamping	External	External	External	External	External	External
Actuation	⚙	⚙	⚙	✋	⚙	⚙
Clamping surface	Longitudinal and cross grooves, cross grooves, smooth, shaped hexagon, square, special contour				Smooth, hexagon, square	Optionally smooth, toothed, coated, serrated
Axial component	✔	✔		✔		✔
Clamping range mm	4 - 120	4 - 120	4 - 120	4 - 80	2 - 80	30 - 180
Workpiece stop possible		✔	✔	✔	✔	✔
Preparation for air sensing						✔
Take-up	Cylindrical take-up				Cylindrical centering pick-up, short taper mount	Cylindrical take-up
Page	7052	7053	7054	7056	7062	7064

We have already implemented special solutions in all clamping system areas, some of which differ significantly from the values indicated above (for example, clamping surfaces, clamping diameter or precision). Besides these standard clamping systems, we offer a number of special systems, such as HYKS, KFG, centering and face clamping systems or combination clamps. Even unusual special solutions are a part of our focus.

Orientation guide



HIGH AXIAL RUN-OUT PRECISION, CONCENTRICITY AND REPEATABILITY



Custom-fit interaction of the individual components enables the highest degree of axial run-out precision, concentricity and repeatability.

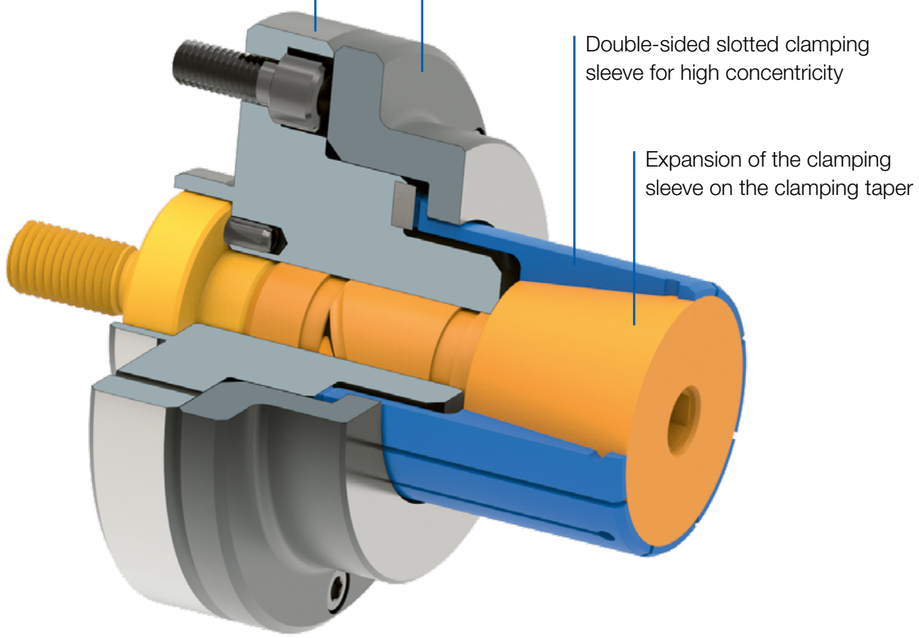
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CARTRIDGE MANDRELS

The various application areas of the cartridge mandrels require a varied programme which ranges from manual or power-operated versions to versions with and without axial tension. The centric and comprehensive internal clamping of cartridge mandrels are particularly impressive for very small clamping diameters and at low overall heights.

ADVANTAGES AT A GLANCE

- Stable clamping by axial tension against workpiece stop
- Low weight and reduced overall height by a compact design
- High axial run-out precision, concentricity and repeatability



ROHM Cartridge Mandrel

KFS - with axial tightening, force-actuated



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for thin-walled and long workpieces or long clamping lengths.

TYPE

Force-actuated. Clamping sleeves optionally vulcanized.
Convertible to MFS (required new intermediate piece).

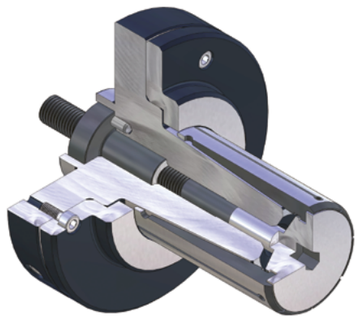
CUSTOMER BENEFITS

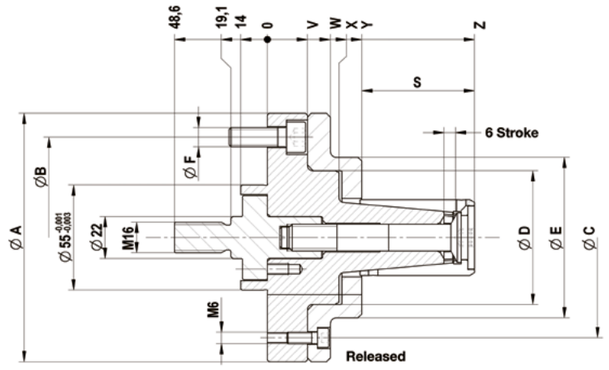
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Light weight and reduced height thanks to compact design
- High flexibility thanks to modular system
- Fast change of clamping sleeves thanks to central clamping screw

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

KFS = force-actuated, flange, S-type





C18
KFS cartridge mandrel, **power-operated with flanged seat,** for internal clamping
Consisting of basic mandrel and intermediate piece

	KFS 00	KFS 01	KFS 02	KFS 03	KFS 04	KFS 05	KFS 06	KFS 07	KFS 08	KFS 09	KFS 10	KFS 11
Components												
Cartridge Mandrel complete	**599800**	**599801**	**599802**	**599803**	**599804**	**599805**	**599806**	**599807**	**599808**	**599809**	**599810**	**599811**
Basic mandrel (individual part)	599820	599821	599822	599823	599824	599825	599826	599827	599828	599829	599830	599831
Adapter power-operated (individual part)	599833	599834	599980	599981	599982	599983	599984	599984	599984	315456	315456	315456
Clamping & Performance data												
Clamping range mm	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 55	55 - 65	65 - 82	82 - 101	101 - 120	120 - 140
Elongation Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Max stroke mm	6,2	6,2	6,2	6,2	6,2	6,3	6,3	6,3	6,3	6,3	6,3	6,3
Max actuation force kN	7	9	12	12	15	15	20	20	25	25	25	25
Max total tension kN	37,1	48,3	64,7	64,7	78,9	78,9	104	104	134	134	134	134
Max speed U/min	5000	5000	5000	5000	4000	4000	4000	4000	4000	3500	3500	3500
Dimensions of clamping devices												
External-Ø A mm	100	100	100	100	100	130	130	130	160	160	160	160
Pitch diameter B mm	75	75	75	75	75	105	105	105	130	130	130	130
Pitch diameter C mm	75	75	75	75	75	105	105	105	130	130	130	149
Ø D mm	40	40	46	46	46	70	70	70	83	91	87	107
Ø E mm	54	54	60	60	60	84	84	84	103	160	160	160
Ø F mm	M10	M10	M10	M10	M10	M10	M10	M10	M12	M12	M12	M12
S mm	31,5	36	45	49	59	59	79	89	99	121	138,9	171
V mm	21	21	21	21	21	21	21	21	23	21	21	25
W mm	33	33	33	33	33	33	33	33	35	21	21	25
X mm	36	36	37	41	36,5	37,5	35,5	35,5	35			
Y mm	47,5	47,5	48	51,5	46	49,5	47	47	47	33	37	57
Z mm	79	83,5	93	100,5	105	108,5	126	136	146	154	176	228

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ROHM Cartridge Mandrel

MFS - with axial tightening, manually actuated



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for thin-walled and long workpieces or long clamping lengths.

TYPE

Manually actuated. Clamping sleeves optionally vulcanized.
Convertible to KFS (required new intermediate piece).

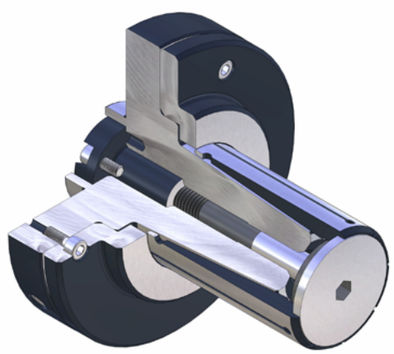
CUSTOMER BENEFITS

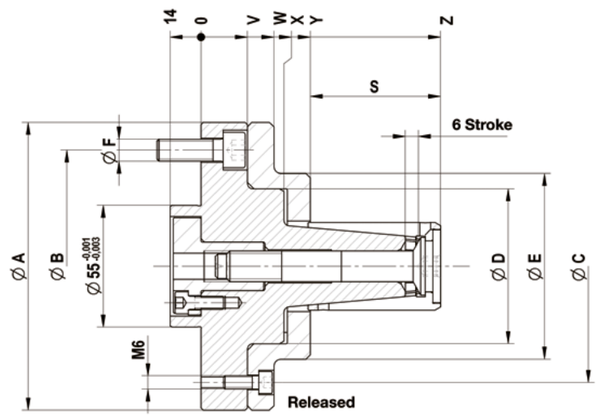
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Light weight and reduced height thanks to compact design
- High flexibility thanks to modular system
- Fast change of clamping sleeves thanks to central clamping screw

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

MFS = manually actuated, flange, S-type





C18
MFS cartridge mandrel, **hand-operated with flanged seat,** for internal clamping
Consisting of basic mandrel and intermediate piece

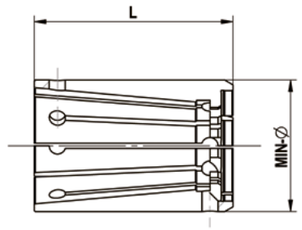
	MFS 00	MFS 01	MFS 02	MFS 03	MFS 04	MFS 05	MFS 06
Components							
Cartridge Mandrel complete	**1082800**	**1082801**	**1082802**	**1082803**	**1082804**	**1082805**	**1082806**
Basic mandrel (individual part)	599820	599821	599822	599823	599824	599825	599826
Adapter hand-operated (individual part)	599985	599986	599987	599988	599989	599990	599991
Clamping & Performance data							
Clamping range mm	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 55
Elongation Ø mm	1	1	1	1	1	1	1
Max stroke mm	6,2	6,2	6,2	6,2	6,3	6,3	6,3
Max actuation force kN	7	9	12	12	15	15	20
Max total tension kN	37,1	48,3	64,7	64,7	78,9	78,9	104
Max tightening torque in Nm	7	12	20	22	35	35	45
Max speed U/min	5000	5000	5000	5000	4000	4000	4000
Dimensions of clamping devices							
External-Ø A mm	100	100	100	100	100	130	130
Pitch diameter B mm	75	75	75	75	75	105	105
Pitch diameter C mm	75	75	75	75	75	105	105
Ø D mm	40	40	46	46	46	70	70
Ø E mm	54	54	60	60	60	84	84
Ø F mm	M10	M10	M10	M10	M10	M10	M10
S mm	31,5	36	45	49	59	59	79
V mm	21	21	21	21	21	21	21
W mm	33	33	33	33	33	33	33
X mm	36	36	37	41	36,5	37,5	35,5
Y mm	47,5	47,5	48	51,5	46	49,5	47
Z mm	79	83,5	93	100,5	105	108,5	126

ROHM Cartridge Mandrel

Accessories KFS / MFS







C18

Clamping set KFS / MFS vulcanized and unvulcanized, consisting of clamping sleeve and clamping screw

For size	00	01	02	03	04	05	06	07	08	09	10	11
Expansion in Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Length L mm	35	40	46	50	60	60	80	90	100	122	140	180
Min-Ø mm	14,7	19,7	24,7	29,7	34,7	39,7	44,7	54,7	64,7	81,7	100,7	119,7
Clamping set vulcanized	**1086511**	**1086522**	**1086533**	**1086544**	**1086555**	**1086566**	**1086577**	**1086588**	**1086599**	**1086617**	**1086637**	**1086657**
Clamping sleeve vulcanized	315730	315731	315732	315733	315734	315735	315736	315737	315738	315739	315740	315702
Clamping set unvulcanized	**1086311**	**1086322**	**1086333**	**1086344**	**1086355**	**1086366**	**1086377**	**1086388**	**1086399**	**1086417**	**1086437**	**1086457**
Clamping sleeve unvulcanized	315330	315331	315332	315333	315334	315335	315336	315337	315338	315339	315340	315302
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599840	599845	599850	599855	599860	599865	599992	599993	599994	599995	599996	599997
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	15,2	20,2	25,2	30,2	35,2	40,2	45,7	55,7	65,7	82,7	101,7	120,7
Clamping set vulcanized	**1086512**	**1086523**	**1086534**	**1086545**	**1086556**	**1086567**	**1086578**	**1086589**	**1086600**	**1086618**	**1086638**	**1086658**
Clamping sleeve vulcanized	650211	650224	650237	650250	650263	650276	650288	651051	651063	651082	651103	651124
Clamping set unvulcanized	**1086312**	**1086323**	**1086334**	**1086345**	**1086356**	**1086367**	**1086378**	**1086389**	**1086400**	**1086418**	**1086438**	**1086458**
Clamping sleeve unvulcanized	650021	650034	650047	650060	650073	650086	650098	650110	650123	650142	650163	650184
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599841	599846	599851	599856	599861	599866	599870	599880	599890	599907	599926	599945
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	15,7	20,7	25,7	30,7	35,7	40,7	46,7	56,7	66,7	83,7	102,7	121,7
Clamping set vulcanized	**1086513**	**1086524**	**1086535**	**1086546**	**1086557**	**1086568**	**1086579**	**1086590**	**1086601**	**1086619**	**1086639**	**1086659**
Clamping sleeve vulcanized	315741	315742	315743	315744	315745	315746	315747	315748	315749	315750	315751	315703
Clamping set unvulcanized	**1086313**	**1086324**	**1086335**	**1086346**	**1086357**	**1086368**	**1086379**	**1086390**	**1086401**	**1086419**	**1086439**	**1086459**
Clamping sleeve unvulcanized	315341	315342	315343	315344	315345	315346	315347	315348	315349	315350	315351	315303
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599841	599846	599851	599856	599861	599866	599871	599881	599891	599908	599927	599946
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	16,2	21,2	26,2	31,2	36,2	41,2	47,7	57,7	67,7	84,7	103,7	122,7
Clamping set vulcanized	**1086514**	**1086525**	**1086536**	**1086547**	**1086558**	**1086569**	**1086580**	**1086591**	**1086602**	**1086620**	**1086640**	**1086660**
Clamping sleeve vulcanized	650213	650226	650239	650252	650265	650278	650290	651053	651065	651084	651105	651126
Clamping set unvulcanized	**1086314**	**1086325**	**1086336**	**1086347**	**1086358**	**1086369**	**1086380**	**1086391**	**1086402**	**1086420**	**1086440**	**1086460**
Clamping sleeve unvulcanized	650023	650036	650049	650062	650075	650088	650100	650112	650125	650144	650165	650186
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599842	599847	599852	599857	599862	599867	599872	599882	599892	599909	599928	599947
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	16,7	21,7	26,7	31,7	36,7	41,7	48,7	58,7	68,7	85,7	104,7	123,7
Clamping set vulcanized	**1086515**	**1086526**	**1086537**	**1086548**	**1086559**	**1086570**	**1086581**	**1086592**	**1086603**	**1086621**	**1086641**	**1086661**
Clamping sleeve vulcanized	315752	315753	315754	315755	315756	315757	315758	315759	315760	315761	315762	315704
Clamping set unvulcanized	**1086315**	**1086326**	**1086337**	**1086348**	**1086359**	**1086370**	**1086381**	**1086392**	**1086403**	**1086421**	**1086441**	**1086461**
Clamping sleeve unvulcanized	315352	315353	315354	315355	315356	315357	315358	315359	315360	315361	315362	315304
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599842	599847	599852	599857	599862	599867	599873	599883	599893	599910	599929	599948
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	17,2	22,2	27,2	32,2	37,2	42,2	49,7	59,7	69,7	86,7	105,7	124,7
Clamping set vulcanized	**1086516**	**1086527**	**1086538**	**1086549**	**1086560**	**1086571**	**1086582**	**1086593**	**1086604**	**1086622**	**1086642**	**1086662**
Clamping sleeve vulcanized	650215	650228	650241	650254	650267	650280	315769	315770	315771	651086	651107	651128
Clamping set unvulcanized	**1086316**	**1086327**	**1086338**	**1086349**	**1086360**	**1086371**	**1086382**	**1086393**	**1086404**	**1086422**	**1086442**	**1086462**
Clamping sleeve unvulcanized	650025	650038	650051	650064	650077	650090	315369	315370	315371	650146	650167	650188
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599843	599848	599853	599858	599863	599868	599874	599884	599894	599911	599930	599949
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	17,7	22,7	27,7	32,7	37,7	42,7	50,7	60,7	70,7	87,7	106,7	125,7
Clamping set vulcanized	**1086517**	**1086528**	**1086539**	**1086550**	**1086561**	**1086572**	**1086583**	**1086594**	**1086605**	**1086623**	**1086643**	**1086663**
Clamping sleeve vulcanized	315763	315764	315765	315766	315767	315768	315780	315781	315782	315772	315773	315705
Clamping set unvulcanized	**1086317**	**1086328**	**1086339**	**1086350**	**1086361**	**1086372**	**1086383**	**1086394**	**1086405**	**1086423**	**1086443**	**1086463**
Clamping sleeve unvulcanized	315363	315364	315365	315366	315367	315368	315380	315381	315382	315372	315373	315403
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599843	599848	599853	599858	599863	599868	599875	599885	599895	599912	599931	599950
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187

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ROHM Cartridge Mandrel

Accessories KFS / MFS

C18

Clamping set KFS / MFS vulcanized and unvulcanized, consisting of clamping sleeve and clamping screw

For size	00	01	02	03	04	05	06	07	08	09	10	11
Expansion in Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Length L mm	35	40	46	50	60	60	80	90	100	122	140	180
Min-Ø mm	18,2	23,2	28,2	33,2	38,2	43,2	51,7	61,7	71,7	88,7	107,7	126,7
Clamping set vulcanized	**1086518**	**1086529**	**1086540**	**1086551**	**1086562**	**1086573**	**1086584**	**1086595**	**1086606**	**1086624**	**1086644**	**1086664**
Clamping sleeve vulcanized	650217	650230	650243	650256	650269	650282	650294	651057	651069	651088	651109	651130
Clamping set unvulcanized	**1086318**	**1086329**	**1086340**	**1086351**	**1086362**	**1086373**	**1086384**	**1086395**	**1086406**	**1086424**	**1086444**	**1086464**
Clamping sleeve unvulcanized	650027	650040	650053	650066	650079	650092	650104	650116	650129	650148	650169	650190
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599844	599849	599854	599859	599864	599869	599876	599886	599896	599913	599932	99951
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	18,7	23,7	28,7	33,7	38,7	43,7	52,7	62,7	72,7	89,7	108,7	127,7
Clamping set vulcanized	**1086519**	**1086530**	**1086541**	**1086552**	**1086563**	**1086574**	**1086585**	**1086596**	**1086607**	**1086625**	**1086645**	**1086665**
Clamping sleeve vulcanized	315774	315775	315776	315777	315778	315779	315785	315786	315787	315783	315784	315706
Clamping set unvulcanized	**1086319**	**1086330**	**1086341**	**1086352**	**1086363**	**1086374**	**1086385**	**1086396**	**1086407**	**1086425**	**1086445**	
Clamping sleeve unvulcanized	315374	315375	315376	315377	315378	315379	315385	315386	315387	315383	315384	
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599844	599849	599854	599859	599864	599869	599877	599887	599897	599914	599933	599952
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	19,2	24,2	29,2	34,2	39,2	44,2	53,7	63,7	73,7	90,7	109,7	128,7
Clamping set vulcanized	**1086520**	**1086531**	**1086542**	**1086553**	**1086564**	**1086575**	**1086586**	**1086597**	**1086608**	**1086626**	**1086646**	**1086666**
Clamping sleeve vulcanized	650219	650232	650245	650258	650271	650284	650296	651059	651071	651090	651111	651132
Clamping set unvulcanized	**1086320**	**1086331**	**1086342**	**1086353**	**1086364**	**1086375**	**1086386**	**1086397**	**1086408**	**1086426**	**1086446**	**1086466**
Clamping sleeve unvulcanized	650029	650042	650055	650068	650081	650094	650106	650118	650131	650150	650171	650192
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599966	599967	599968	599969	599970	599971	599878	599888	599898	599915	599934	599953
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	19,7	24,7	29,7	34,7	39,7	44,7	54,7	64,7	74,7	91,7	110,7	129,7
Clamping set vulcanized	**1086521**	**1086532**	**1086543**	**1086554**	**1086565**	**1086576**	**1086587**	**1086598**	**1086609**	**1086627**	**1086647**	**1086667**
Clamping sleeve vulcanized	650220	650233	650246	650259	650272	650285	650297	651060	315790	315788	315789	315707
Clamping set unvulcanized	**1086321**	**1086332**	**1086343**	**1086354**	**1086365**	**1086376**	**1086387**	**1086398**	**1086409**	**1086427**	**1086447**	**1086467**
Clamping sleeve unvulcanized	650030	650043	650056	650069	650082	650095	650107	650119	315390	315388	315389	315405
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599966	599967	599968	599969	599970	599971	599879	599889	599899	599916	599935	599954
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm									75,7	92,7	111,7	130,7
Clamping set vulcanized									**1086610**	**1086628**	**1086648**	**1086668**
Clamping sleeve vulcanized									651073	651092	651113	651134
Clamping set unvulcanized									**1086410**	**1086428**	**1086448**	**1086468**
Clamping sleeve unvulcanized									650133	650152	650173	650194
Locking bolt									315477	315478	315479	599998
Work stop									599900	599917	599936	599955
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									76,7	93,7	112,7	131,7
Clamping set vulcanized									**1086611**	**1086629**	**1086649**	**1086669**
Clamping sleeve vulcanized									651074	651093	651114	651135
Clamping set unvulcanized									**1086411**	**1086429**	**1086449**	**1086469**
Clamping sleeve unvulcanized									315393	315391	315392	315406
Locking bolt									315477	315478	315479	599998
Work stop									599901	599918	599937	599956
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									77,7	94,7	113,7	132,7
Clamping set vulcanized									**1086612**	**1086630**	**1086650**	**1086670**
Clamping sleeve vulcanized									651075	651094	651115	651136
Clamping set unvulcanized									**1086412**	**1086430**	**1086450**	**1086470**
Clamping sleeve unvulcanized									650135	650154	650175	650196
Locking bolt									315477	315478	315479	599998
Work stop									599902	599919	599938	599957
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									78,7	95,7	114,7	133,7
Clamping set vulcanized									**1086613**	**1086631**	**1086651**	**1086671**
Clamping sleeve vulcanized									315796	315794	315795	315709
Clamping set unvulcanized									**1086413**	**1086431**	**1086451**	**1086471**
Clamping sleeve unvulcanized									315396	315394	315395	315407
Locking bolt									315477	315478	315479	599998
Work stop									599903	599920	599939	599958
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									79,7	96,7	115,7	134,7
Clamping set vulcanized									**1086614**	**1086632**	**1086652**	**1086672**
Clamping sleeve vulcanized									651077	651096	651117	651138
Clamping set unvulcanized									**1086414**	**1086432**	**1086452**	**1086472**
Clamping sleeve unvulcanized									650137	650156	650177	650198
Locking bolt									315477	315478	315479	599998
Work stop									599904	599921	599940	599959
Montage mandrel clamping sets									724184	724185	724186	724187

Accessories KFS/MFS

Accessories KFS / MFS

C18

Clamping set KFS / MFS vulcanized and unvulcanized, consisting of clamping sleeve and clamping screw

For size	00	01	02	03	04	05	06	07	08	09	10	11
Expansion in Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Length L mm	35	40	46	50	60	60	80	90	100	122	140	180
Min-Ø mm									80,7	97,7	116,7	135,7
Clamping set vulcanized									**1086615**	**1086633**	**1086653**	**1086673**
Clamping sleeve vulcanized									315799	315797	315798	315710
Clamping set unvulcanized									**1086415**	**1086433**	**1086453**	**1086473**
Clamping sleeve unvulcanized									315399	315397	315398	315408
Locking bolt									315477	315478	315479	599998
Work stop									599905	599922	599941	599960
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									81,7	98,7	117,7	136,7
Clamping set vulcanized									**1086616**	**1086634**	**1086654**	**1086674**
Clamping sleeve vulcanized									651079	651098	651119	651140
Clamping set unvulcanized									**1086416**	**1086434**	**1086454**	**1086474**
Clamping sleeve unvulcanized									650139	650158	650179	650200
Locking bolt									315477	315478	315479	599998
Work stop									599906	599923	599942	599961
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm										99,7	118,7	137,7
Clamping set vulcanized										**1086635**	**1086655**	**1086675**
Clamping sleeve vulcanized										315800	315801	315711
Clamping set unvulcanized										**1086435**	**1086455**	**1086475**
Clamping sleeve unvulcanized										315400	315401	315409
Locking bolt										315478	315479	599998
Work stop										599924	599943	599962
Montage mandrel clamping sets										724185	724186	724187
Min-Ø mm										100,7	119,7	138,7
Clamping set vulcanized										**1086636**	**1086656**	**1086676**
Clamping sleeve vulcanized										651100	651121	651142
Clamping set unvulcanized										**1086436**	**1086456**	**1086476**
Clamping sleeve unvulcanized										650160	650181	650202
Locking bolt										315478	315479	599998
Work stop										599925	599944	599963
Montage mandrel clamping sets										724185	724186	724187
Min-Ø mm												139,7
Clamping set vulcanized												**1086677**
Clamping sleeve vulcanized												315712
Clamping set unvulcanized												**1086477**
Clamping sleeve unvulcanized												315410
Locking bolt												599998
Work stop												599964
Montage mandrel clamping sets												724187

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Cartridge Mandrel

Notes

Intermediate flange KFS / MFS



APPLICATION

For adaption of cartridge mandrel KFR/MFR//MFR-SE or KFS/MFS - on spindle head ISO 702-1 / ISO 702-3 (DIN 55021/55022/55026 and 55027).

TYPE

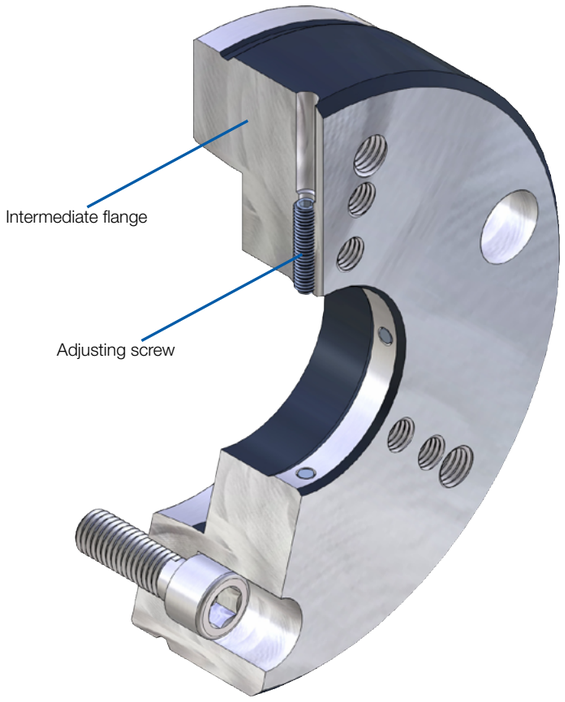
For KFR/MFR/MFR-SE or KFS/MFS.

CUSTOMER BENEFITS

- By replacement of the intermediate flange, one cartridge mandrel can be used on different machines

TECHNICAL FEATURES

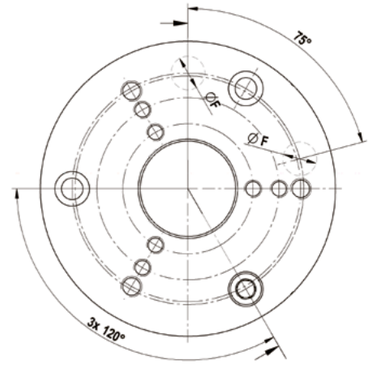
Adaptation of KFR/MFR/MFR-SE cartridge mandrel or KFS/MFS on spindle head, with or without adjusting screw, with or without performing air sensing.
Version acc. to ISO 702-1(DIN 55028-A) or ISO 702-3 (DIN 55028-C), in size no. 5, no. 6, no. 8, no. 11 or no. 5, no. 6, no. 8 (A5, A6, A8, A11 or C5, C6, C8).



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Cartridge Mandrel

Accessories KFS / MFS

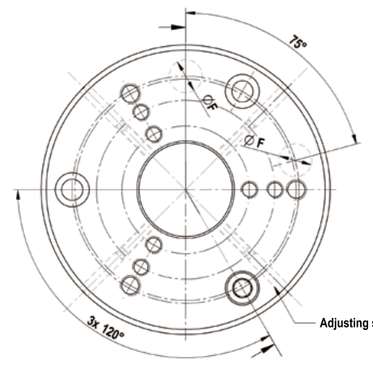




C 18
Intermediate flange ISO 702-1 (DIN 55026/55021) **without adjusting screws**

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**893975**	**893976**	**893977**	**893978**
Design	without air-sensing	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50	50
Ø B mm	165	170	220	282
Ø C mm	104,8	133,4	171,4	235
Ø D mm	82,563	106,375	139,719	196,869
Ø E	M10	M12	M16	M20
Ø F mm	16,3	19,45	24,2	29,4





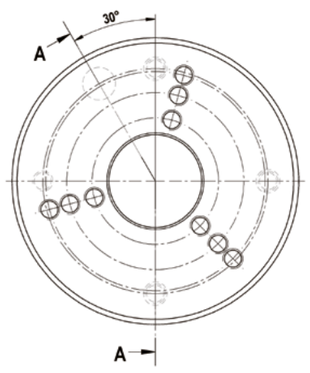
C 18
Intermediate flange ISO 702-1 (DIN 55028) **with adjusting screw**

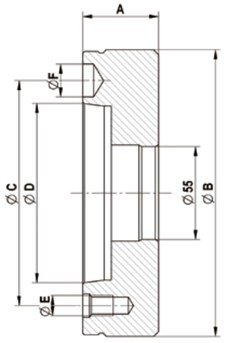
	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)
Intermediate flange	**893979**	**893980**	**893981**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M10	M12	M16
Ø F mm	16,3	19,45	24,2

ROHM Cartridge Mandrel

Accessories KFS / MFS

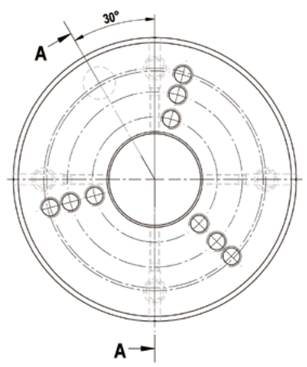


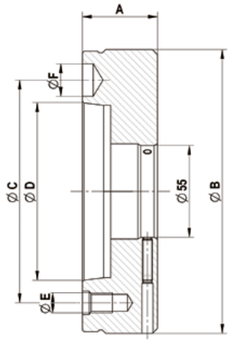




C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **without adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893982**	**893983**	**893984**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2





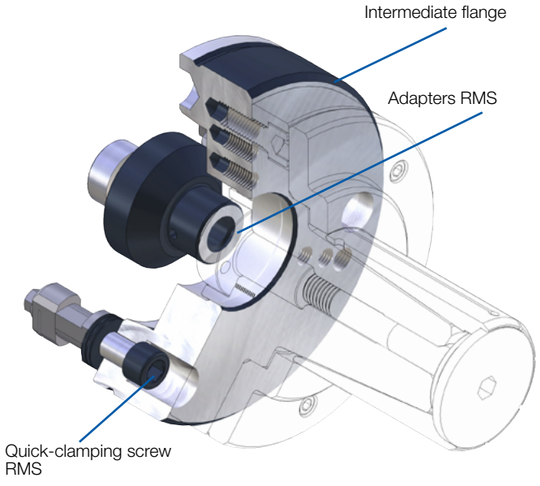
C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **with adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893985**	**893986**	**893987**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2

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ROHM Cartridge Mandrel

Accessories KFS / MFS



APPLICATION

For manual clamping device exchange in a minimum of time.

TYPE

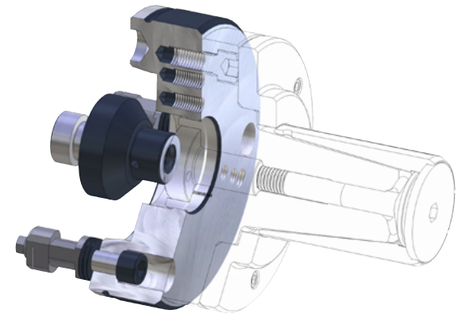
Manual quick-change system for clamping devices.
Fits for KFR/MFR or KFS/MFS.
Central lubrication and/or air sensing control possible.

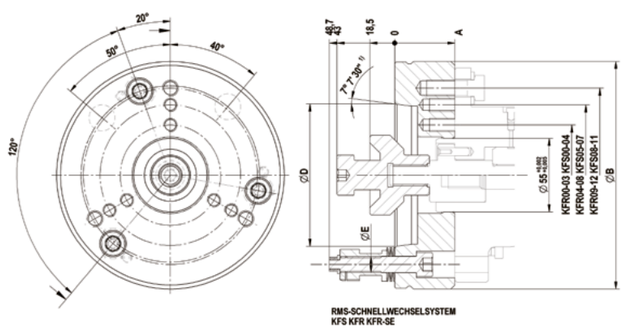
CUSTOMER BENEFITS

- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautometic clamping devices changing systems

TECHNICAL FEATURES

- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6)
- Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with ROHM safety clamping cylinder OVS and LVS





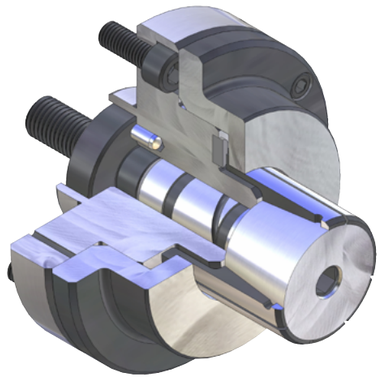
C18
RMS quick-change system, hand-operated for clamping devices

	KK 06	KK 08
RMS - complete (flange incl. quick-clamping screw)	**1160026**	**1160027**
Adapters RMS	**1183310**	**1183311**
Suitable basic take-up	**156670**	**156671**
A	45	50
Ø B mm	170	220
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M12	M16
Ø F mm	55 (+0,003/+0,001)	55 (+0,003/+0,001)

ROHM Cartridge Mandrel

KFR - force-actuated





APPLICATION

Internal clamping of round workpieces. Turning, grinding and toothing operations, as well as for balancing and measuring.
Ideal for short clamping lengths / workpieces.

TYPE

Force-actuated. Without axial tightening. Clamping sleeves optionally vulcanized.
Convertible to MFR (required new intermediate piece).

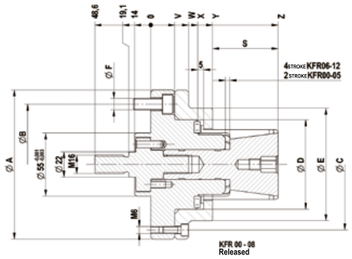
CUSTOMER BENEFITS

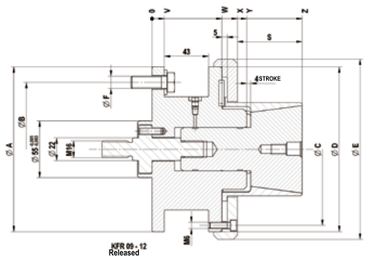
- No workpiece tension thanks to def. axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Low-maintenance

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

KFR = force-actuated, flange, R-type





C18
KFR cartridge mandrel, power-operated with flanged seat, for internal clamping
Consisting of basic body, clamping taper, intermediate piece, nut

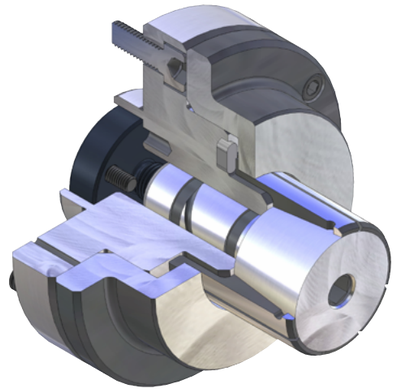
	KFR 00	KFR 01	KFR 02	KFR 03	KFR 04	KFR 05	KFR 06	KFR 07	KFR 08	KFR 09	KFR 10	KFR 11	KFR 12
Components													
Cartridge Mandrel complete	**893960**	**893961**	**893962**	**893963**	**893964**	**893965**	**893966**	**893967**	**893968**	**893969**	**893970**	**893971**	**893972**
Base bolt (individual part)	893800	893801	893802	893803	893804	893805	893806	893807	893807	893809	893809	893809	893809
Adapter power-operated (ind.part)	893816	893817	893818	893819	893820	893820	893821	893822	893822	893822	893822	893822	893822
Clamping taper (individual part)	650340	650341	650342	650343	650344	650345	650346	650347	650348	650349	650350	650351	650352
Nut (individual part)	893814	893814	893814										
Clamping & Performance data													
Clamping range mm	14,5 - 20	20 - 25,5	25,5 - 35,5	35,5 - 40	40,5 - 50,5	50,5 - 61	61 - 71	71 - 81	81 - 91	91 - 101	101 - 111	111 - 121	121 - 131
Elongation Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Max stroke mm	2	2	2	2	2	2	4	4	4	4	4	4	4
Max actuation force kN	4,65	13,1	19,5	24,4	26,8	33	33	33	33	33	33	33	33
Max total tension kN	19	55	83	103	114	140	140	140	140	140	140	140	140
Max speed U/min	5000	5000	5000	5000	5000	4000	4000	4000	4000	3500	3500	3500	3500
Dimensions clamping devices													
External-Ø A mm	100	100	100	100	130	130	130	160	160	160	160	160	160
Pitch diameter B mm	75	75	75	75	105	105	105	130	130	130	130	130	130
Pitch diameter C mm	85	85	85	85	114	114	114	145	145	148	148	148	148
Ø C mm							98	130	130	175	175	175	175
Ø D mm	50	50	50	50	78	78	78	100	100	160	160	160	160
Ø E mm	70	70	70	70	98	98	98	130	130	175	175	175	175
Ø F mm	M10	M10	M10	M10	M10	M10	M10	M12	M12	M12	M12	M12	M12
S mm	21	27	27	27	42	42	57	55	55	63	63	63	63
V mm	21	21	21	21	21	21	21	32	32	12	12	12	12
W mm	33	33	33	33	33	33	33	50	50	68	68	68	68
X mm	39	39	39	39	41	41	41	58	58	83	83	83	83
Y mm	50	52	52	52	54	54	54	73	73	92	92	92	92
Z mm	71	79	79	79	96	96	111	128	128	146	146	146	146

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ROHM Cartridge Mandrel

MFR - without axial tightening, manually actuated





APPLICATION

Internal clamping of round workpieces. Turning, grinding and toothing operations, as well as for balancing and measuring.
Ideal for short clamping lengths / workpieces.

TYPE

Manually actuated. Optional vulcanized clamping sleeves/segment sleeves (segment clamping mandrel KFR-SE).

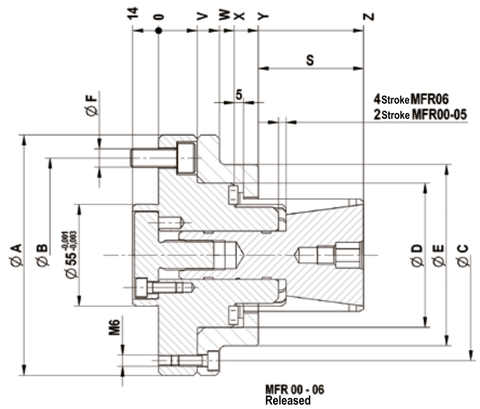
CUSTOMER BENEFITS

- No workpiece tension thanks to def. axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Low-maintenance

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

MFR = manually actuated, flange, R-type



C18
MFR cartridge mandrel, hand-operated with flanged seat, for internal clamping
Consisting of basic body, clamping taper, intermediate piece

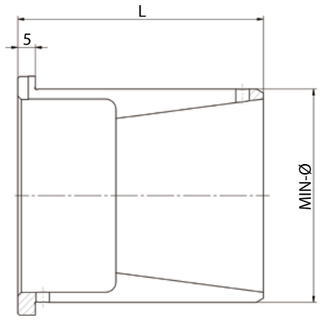
	MFR 00	MFR 01	MFR 02	MFR 03	MFR 04	MFR 05	MFR 06
Components							
Cartridge Mandrel complete	**1077700**	**1077701**	**1077702**	**1077703**	**1077704**	**1077705**	**1077706**
Base bolt (individual part)	893800	893801	893802	893803	893804	893805	893806
Adapter power-operated (ind.part)	893823	893824	893825	893826	893827	893827	893828
Clamping taper (individual part)	650340	650341	650342	650343	650344	650345	650346
Clamping & Performance data							
Clamping range mm	14,5 - 20	20 - 25,5	25,5 - 35,5	35,5 - 40	40,5 - 50,5	50,5 - 61	61 - 71
Elongation Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1
Max stroke mm	2	2	2	2	2	2	4
Max actuation force kN	4,65	13,1	19,5	24,4	26,8	33	33
Max total tension kN	19	55	83	103	114	140	140
Max tightening moment Nm	4	20	40	55	60	75	85
Max speed U/min	5000	5000	5000	5000	5000	4000	4000
Dimensions clamping devices							
External-Ø A mm	100	100	100	100	130	130	130
Pitch diameter B mm	75	75	75	75	105	105	105
Pitch diameter C mm	85	85	85	85	114	114	114
Ø C mm							98
Ø D mm	50	50	50	50	78	78	78
Ø E mm	70	70	70	70	98	98	98
Ø F mm	M10	M10	M10	M10	M10	M10	M10
S mm	21	27	27	27	42	42	57
V mm	21	21	21	21	21	21	21
W mm	33	33	33	33	33	33	33
X mm	39	39	39	39	41	41	41
Y mm	50	52	52	52	54	54	54
Z mm	71	79	79	79	96	96	111

ROHM Cartridge Mandrel

Accessories KFR / MFR







C 18
Clamping sleeve Type R - standard design, vulcanized and not vulcanized

For size	00	01	02	03	04	05	06	07	08	09	10	11	12
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Total length L	32	40	40	40	55	55	70	70	70	78	78	78	78
Min-Ø mm	14,2	19,7	25,2	35,2	40,2	50,2	60,7	70,7	80,7	90,7	100,7	110,7	120,7
Clamping sleeve vulcanized	**1015700**	**1015713**	**1015726**	**1015748**	**1015760**	**1015782**	**1015805**	**1015817**	**1015829**	**1015841**	**1015853**	**1015865**	**1015877**
Clamping sleeve unvulcanized	**1015500**	**1015513**	**1015526**	**1015548**	**1015560**	**1015582**	**1015605**	**1015617**	**1015629**	**1015641**	**1015653**	**1015665**	**1015677**
Work stop	893830	893836	893842	893852	893857	893867	893878	893888	893897	893907	893917	893927	893937
Min-Ø mm	14,7	20,2	25,7	35,7	40,7	50,7	61,7	71,7	81,7	91,7	101,7	111,7	121,7
Clamping sleeve vulcanized	**1015701**	**1015714**	**1015727**	**1015749**	**1015761**	**1015783**	**1015806**	**1015818**	**1015830**	**1015842**	**1015854**	**1015866**	**1015878**
Clamping sleeve unvulcanized	**1015501**	**1015514**	**1015527**	**1015549**	**1015561**	**1015583**	**1015606**	**1015618**	**1015630**	**1015642**	**1015654**	**1015666**	**1015678**
Work stop	893830	893836	893842	893852	893857	893867	893879	893889	893898	893908	893918	893928	893938
Min-Ø mm	15,2	20,7	26,2	36,2	41,2	51,2	62,7	72,7	82,7	92,7	102,7	112,7	122,7
Clamping sleeve vulcanized	**1015702**	**1015715**	**1015728**	**1015750**	**1015762**	**1015784**	**1015807**	**1015819**	**1015831**	**1015843**	**1015855**	**1015867**	**1015879**
Clamping sleeve unvulcanized	**1015502**	**1015515**	**1015528**	**1015550**	**1015562**	**1015584**	**1015607**	**1015619**	**1015631**	**1015643**	**1015655**	**1015667**	**1015679**
Work stop	893831	893837	893843	893853	893858	893868	893881	893891	893900	893910	893920	893930	893940
Min-Ø mm	15,7	21,2	26,7	36,7	41,7	51,7	63,7	73,7	83,7	93,7	103,7	113,7	123,7
Clamping sleeve vulcanized	**1015703**	**1015716**	**1015729**	**1015751**	**1015763**	**1015785**	**1015808**	**1015820**	**1015832**	**1015844**	**1015856**	**1015868**	**1015880**
Clamping sleeve unvulcanized	**1015503**	**1015516**	**1015529**	**1015551**	**1015563**	**1015585**	**1015608**	**1015620**	**1015632**	**1015644**	**1015656**	**1015668**	**1015680**
Work stop	893831	893837	893843	893853	893858	893868	893881	893891	893900	893910	893920	893930	893940
Min-Ø mm	16,2	21,7	27,2	37,2	42,2	52,2	64,7	74,7	84,7	94,7	104,7	114,7	124,7
Clamping sleeve vulcanized	**1015704**	**1015717**	**1015730**	**1015752**	**1015764**	**1015786**	**1015809**	**1015821**	**1015833**	**1015845**	**1015857**	**1015869**	**1015881**
Clamping sleeve unvulcanized	**1015504**	**1015517**	**1015530**	**1015552**	**1015564**	**1015586**	**1015609**	**1015621**	**1015633**	**1015645**	**1015657**	**1015669**	**1015681**
Work stop	893831	893838	893843	893853	893858	893868	893882	893892	893901	893911	893921	893931	893941
Min-Ø mm	16,7	22,2	27,7	37,7	42,7	52,7	65,7	75,7	85,7	95,7	105,7	115,7	125,7
Clamping sleeve vulcanized	**1015705**	**1015718**	**1015731**	**1015753**	**1015765**	**1015787**	**1015810**	**1015822**	**1015834**	**1015846**	**1015858**	**1015870**	**1015882**
Clamping sleeve unvulcanized	**1015505**	**1015518**	**1015531**	**1015553**	**1015565**	**1015587**	**1015610**	**1015622**	**1015634**	**1015646**	**1015658**	**1015670**	**1015682**
Work stop	893832	893838	893844	893854	893859	893869	893883	893893	893902	893912	893922	893932	893942
Min-Ø mm	17,2	22,7	28,2	38,2	43,2	53,2	66,7	76,7	86,7	96,7	106,7	116,7	126,7
Clamping sleeve vulcanized	**1015706**	**1015719**	**1015732**	**1015754**	**1015766**	**1015788**	**1015811**	**1015823**	**1015835**	**1015847**	**1015859**	**1015871**	**1015883**
Clamping sleeve unvulcanized	**1015506**	**1015519**	**1015532**	**1015554**	**1015566**	**1015588**	**1015611**	**1015623**	**1015635**	**1015647**	**1015659**	**1015671**	**1015683**
Work stop	893832	893839	893844	893854	893859	893869	893884	893894	893903	893913	893923	893933	893943
Min-Ø mm	17,7	23,2	28,7	38,7	43,7	53,7	67,7	77,7	87,7	97,7	107,7	117,7	127,7
Clamping sleeve vulcanized	**1015707**	**1015720**	**1015733**	**1015755**	**1015767**	**1015789**	**1015812**	**1015824**	**1015836**	**1015848**	**1015860**	**1015872**	**1015884**
Clamping sleeve unvulcanized	**1015507**	**1015520**	**1015533**	**1015555**	**1015567**	**1015589**	**1015612**	**1015624**	**1015636**	**1015648**	**1015660**	**1015672**	**1015684**
Work stop	893833	893839	893845	893855	893860	893870	893885	893895	893904	893914	893924	893934	893944
Min-Ø mm	18,2	23,7	29,2	39,2	44,2	54,2	68,7	78,7	88,7	98,7	108,7	118,7	128,7
Clamping sleeve vulcanized	**1015708**	**1015721**	**1015734**	**1015756**	**1015768**	**1015790**	**1015813**	**1015825**	**1015837**	**1015849**	**1015861**	**1015873**	**1015885**
Clamping sleeve unvulcanized	**1015508**	**1015521**	**1015534**	**1015556**	**1015568**	**1015590**	**1015613**	**1015625**	**1015637**	**1015649**	**1015661**	**1015673**	**1015685**
Work stop	893833	893840	893845	893855	893860	893870	893886	893947	893905	893915	893925	893935	893945
Min-Ø mm	18,7	24,2	29,7	39,7	44,7	54,7	69,7	79,7	89,7	99,7	109,7	119,7	129,7
Clamping sleeve vulcanized	**1015709**	**1015722**	**1015735**	**1015757**	**1015769**	**1015791**	**1015814**	**1015826**	**1015838**	**1015850**	**1015862**	**1015874**	**1015886**
Clamping sleeve unvulcanized	**1015509**	**1015522**	**1015535**	**1015557**	**1015569**	**1015591**	**1015614**	**1015626**	**1015638**	**1015650**	**1015662**	**1015674**	**1015686**
Work stop	893834	893840	893846	893856	893861	893871	893887	893896	893906	893916	893926	893936	893946
Min-Ø mm	19,2	24,7	30,2	40,2	45,2	55,2	70,7	80,7	90,7	100,7	110,7	120,7	130,7
Clamping sleeve vulcanized	**1015710**	**1015723**	**1015736**	**1015758**	**1015770**	**1015792**	**1015815**	**1015827**	**1015839**	**1015851**	**1015863**	**1015875**	**1015887**
Clamping sleeve unvulcanized	**1015510**	**1015523**	**1015536**	**1015558**	**1015570**	**1015592**	**1015615**	**1015627**	**1015639**	**1015651**	**1015663**	**1015675**	**1015687**
Work stop	893834	893841	893846	893856	893861	893871	893887	893896	893906	893916	893926	893936	893946

Other clamping diameters and profiled clamping sleeves are available on request

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ROHM Cartridge Mandrel

Accessories KFR / MFR

C 18
Clamping sleeve Type R - standard design, vulcanized and not vulcanized

For size	00	01	02	03	04	05	06	07	08	09	10	11	12
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Total length L	32	40	40	40	55	55	70	70	70	78	78	78	78
Min-Ø mm	19,7	25,2	30,7		45,7	55,7							
Clamping sleeve vulcanized	**1015711**	**1015724**	**1015737**		**1015771**	**1015793**							
Clamping sleeve unvulcanized	**1015511**	**1015524**	**1015537**		**1015571**	**1015593**							
Work stop	893835	893841	893847		893862	893872							
Min-Ø mm			31,2		46,2	56,2							
Clamping sleeve vulcanized			**1015738**		**1015772**	**1015794**							
Clamping sleeve unvulcanized			**1015538**		**1015572**	**1015594**							
Work stop			893847		893862	893872							
Min-Ø mm			31,7		46,7	56,7							
Clamping sleeve vulcanized			**1015739**		**1015773**	**1015795**							
Clamping sleeve unvulcanized			**1015539**		**1015573**	**1015595**							
Work stop			893848		893863	893873							
Min-Ø mm			32,2		47,2	57,2							
Clamping sleeve vulcanized			**1015740**		**1015774**	**1015796**							
Clamping sleeve unvulcanized			**1015540**		**1015574**	**1015596**							
Work stop			893848		893863	893873							
Min-Ø mm			32,7		47,7	57,7							
Clamping sleeve vulcanized			**1015741**		**1015775**	**1015797**							
Clamping sleeve unvulcanized			**1015541**		**1015575**	**1015597**							
Work stop			893849		893864	893874							
Min-Ø mm			33,2		48,2	58,2							
Clamping sleeve vulcanized			**1015742**		**1015776**	**1015798**							
Clamping sleeve unvulcanized			**1015542**		**1015576**	**1015598**							
Work stop			893849		893864	893874							
Min-Ø mm			33,7		48,7	58,7							
Clamping sleeve vulcanized			**1015743**		**1015777**	**1015799**							
Clamping sleeve unvulcanized			**1015543**		**1015577**	**1015599**							
Work stop			893850		893865	893875							
Min-Ø mm			34,2		49,2	59,2							
Clamping sleeve vulcanized			**1015744**		**1015778**	**1015800**							
Clamping sleeve unvulcanized			**1015544**		**1015578**	**1015600**							
Work stop			893850		893865	893875							
Min-Ø mm			34,7		49,7	59,7							
Clamping sleeve vulcanized			**1015745**		**1015779**	**1015801**							
Clamping sleeve unvulcanized			**1015545**		**1015579**	**1015601**							
Work stop			893851		893866	893876							
Min-Ø mm			35,2		50,2	60,2							
Clamping sleeve vulcanized			**1015746**		**1015780**	**1015802**							
Clamping sleeve unvulcanized			**1015546**		**1015580**	**1015602**							
Work stop			893851		893866	893876							
Min-Ø mm						60,7							
Clamping sleeve vulcanized						**1015803**							
Clamping sleeve unvulcanized						**1015603**							
Work stop						893877							

Other clamping diameters and profiled clamping sleeves are available on request

Accessories KFR / MFR

Intermediate flange KFR / MFR



APPLICATION

For adaption of cartridge mandrel KFR/MFR/MFR-SE or KFS/MFS - on spindle head ISO 702-1 / ISO 702-3 (DIN 55021/55022/55026 and 55027).

TYPE

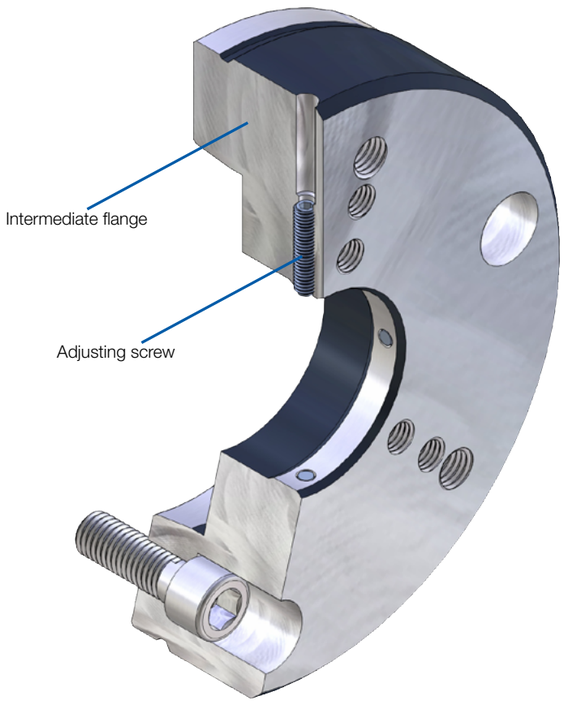
For KFR/MFR/MFR-SE or KFS/MFS.

CUSTOMER BENEFITS

- By replacement of the intermediate flange, one cartridge mandrel can be used on different machines

TECHNICAL FEATURES

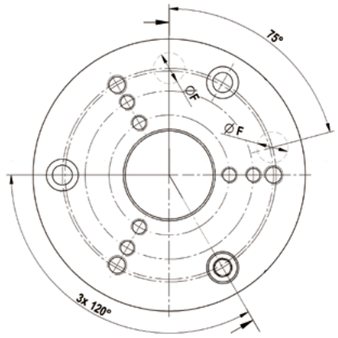
Adaptation of mandrel KFR/MFR/MFR-SE or KFS/MFS on spindle head, with or without adjustment, with or without operation of air-conditioning control. Execution according to ISO 702-1 (DIN 55028-A) or ISO 702-3 (DIN 55028-C), in size no. 5, no. 6, no. 8, no. 11 or no. 5, no. 6, Nr. 8 (A5, A6, A8, A11 or C5, C6, C8).

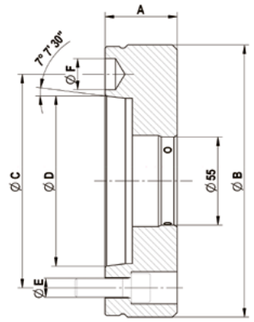


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Cartridge Mandrel

Accessories KFR / MFR



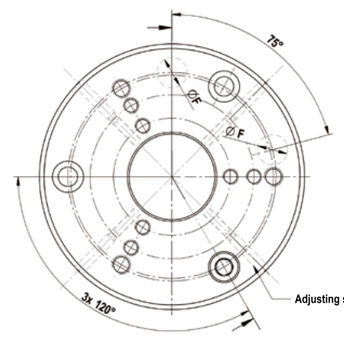


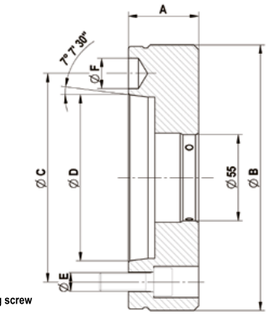


C 18
Intermediate flange ISO 702-1 (DIN 55026/55021) **without adjusting screws**

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**893975**	**893976**	**893977**	**893978**
Design	without air-sensing	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50	50
Ø B mm	165	170	220	282
Ø C mm	104,8	133,4	171,4	235
Ø D mm	82,563	106,375	139,719	196,869
Ø E	M10	M12	M16	M20
Ø F mm	16,3	19,45	24,2	29,4





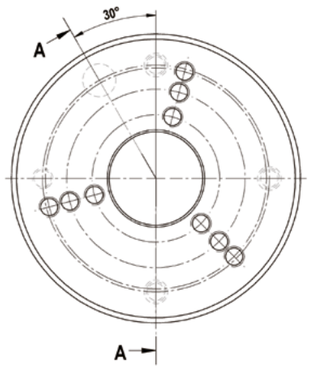


C 18
Intermediate flange ISO 702-1 (DIN 55028) **with adjusting screw**

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)
Intermediate flange	**893979**	**893980**	**893981**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M10	M12	M16
Ø F mm	16,3	19,45	24,2

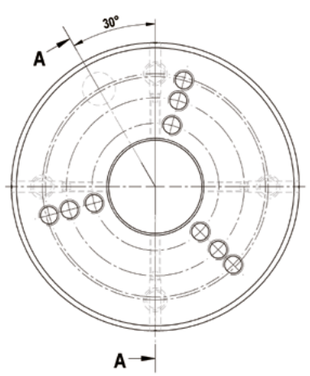
Accessories KFR / MFR

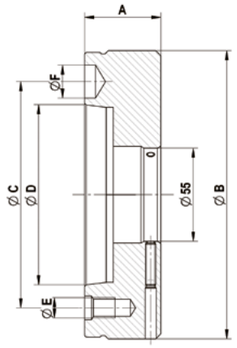




C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **without adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893982**	**893983**	**893984**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2



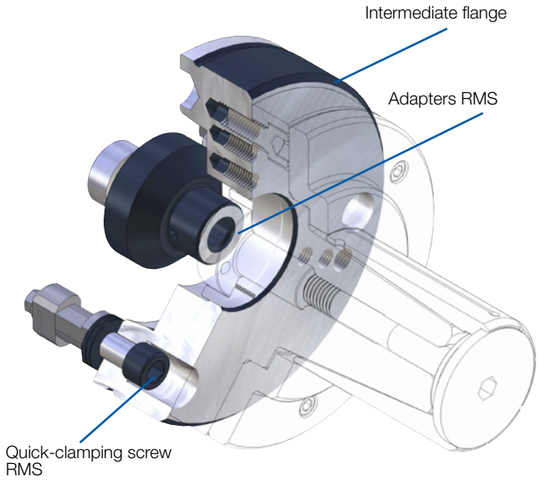


C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **with adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893985**	**893986**	**893987**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2

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Cartridge Mandrel

Accessories KFR / MFR

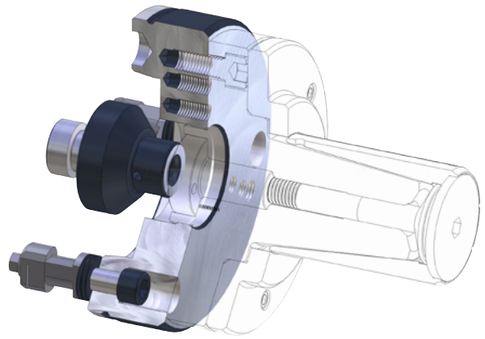


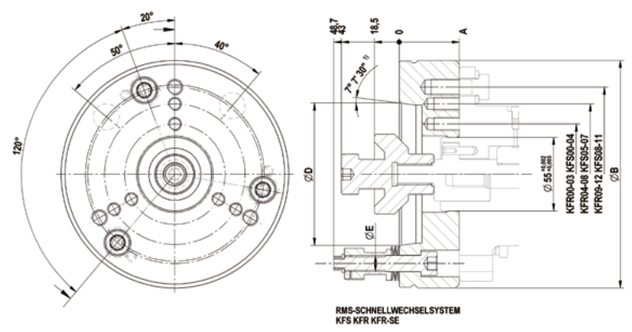
APPLICATION
For manual clamping device exchange in a minimum of time.

TYPE
Manual quick-change system for clamping devices.
Fits KFR (255-00), KFS (253-00).
Central lubrication and/or air sensing control possible.

CUSTOMER BENEFITS
- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautomatic clamping devices changing systems

TECHNICAL FEATURES
- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6)
- Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with RÖHM safety clamping cylinder OVS and LVS





C18
RMS quick-change system, hand-operated for clamping devices

	KK 06	KK 08
RMS - complete (flange incl. quick-clamping screw)	**1160026**	**1160027**
Adapters RMS	**1183310**	**1183311**
Suitable basic take-up	**156670**	**156671**
A	45	50
Ø B mm	170	220
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M12	M16
Ø F mm	55 (+0,003/+0,001)	55 (+0,003/+0,001)

Accessories KFR / MFR

KFB - with axial tightening, force-actuated



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for very small clamping diameters starting from Ø 5.5 mm or small workpieces.

TYPE

Force-actuated. Clamping sleeves optionally vulcanized.

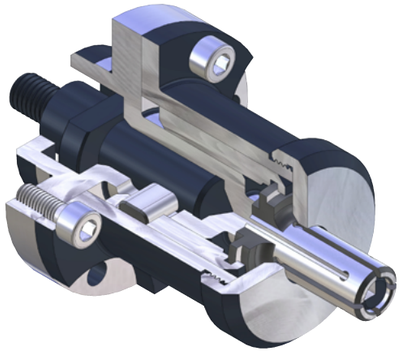
CUSTOMER BENEFITS

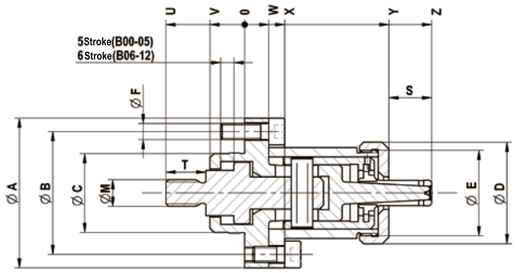
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Light weight and reduced height thanks to compact design

TECHNICAL FEATURES

- Hardened, low-wear design

KFB = force-actuated, flange, B-type



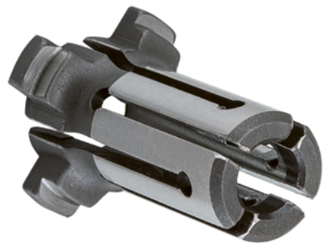


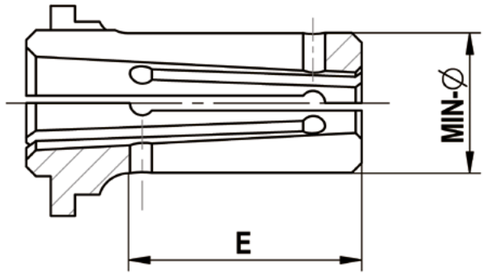
C18
KFB cartridge mandrel, power-operated with flanged seat, for internal clamping
Consisting of basic mandrel, stop sleeve, guide sleeve, cotter, draw bolt

	KFB 00	KFB 01	KFB 02	KFB 03	KFB 04	KFB 05	KFB 06	KFB 07
Components								
Cartridge Mandrel complete	327586	327587	327588	327589	327590	327591	327592	327593
Base bolt (individual part)	323521	323522	323523	323524	323525	323526	323527	323528
Stop sleeve (individual part)	323474	323475	323476	323477	323478	323479	323480	323481
Guide sleeve (individual part)	323461	323462	323463	323464	323465	323466	323467	323468
Cotter (individual part)	323508	323509	323510	323511	323512	323513	323514	323515
Draw bolt (individual part)	323500	323501	323502	323502	323503	323504	323504	323505
Clamping & Performance data								
Clamping range mm	5,8 - 7,3	7,8 - 9,3	9,8 - 11,8	12,3 - 14,8	14,8 - 19,3	19,8 - 24,8	25 - 29	30 - 34
Elongation Ø mm	0,5	0,5	0,5	0,5	0,5	1	1	1
Max stroke mm	5	5	5	5	5	5	6	6
Max actuation force kN	1,8	2,7	3,6	4,8	5,8	7,5	12	22
Max total tension kN	11,7	17,7	23,6	31,6	38	49,6	64,7	118,6
Max speed U/min	5000	5000	5000	5000	5000	4000	4000	4000
Dimensions clamping devices								
External-Ø A mm	45	50	56	60	72	76	82	95
Pitch diameter B mm	36	39	46	50	60	64	70	80
Ø C mm	25	25	30	30	40	40	40	60
Ø D mm	24	31	38	40	52	54	60	66
Ø E mm	M22x1,5	M27x1,5	M32x1,5	M36x1,5	M45x1,5	M48x1,5	M56x1,5	M60x1,5
Ø F mm	M5	M6	M6	M6	M6	M6	M6	M8
Hub G mm	5	5	5	5	5	5	6	6
Ø M mm	M8	M8	M10	M10	M10	M12	M12	M12
S mm	9	13	15	20,5	24	30	36	40
T mm	14	14	15	15	15	18	18	18
U mm	27	27,5	29,5	29,5	30,5	33,5	33,5	36,5
V mm	11,5	12	13	13	14	14	14	17
W mm	7,5	8	9	9	10	10	10	12,5
X mm	12,5	13	15	15	16	16	16	18,5
Y mm	42	46	45	58	66	67	71	74
Z mm	51,5	58,5	70	78,5	90	97	107	114

Accessories KFB







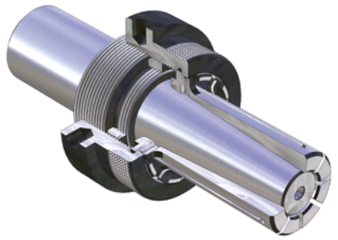
C 18
Clamping sleeve Type B - standard design vulcanized and unvulcanized

For size	KFB 00	KFB 01	KFB 02	KFB 03	KFB 04	KFB 05	KFB 06	KFB 07
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1
Total length E mm	11,5	15	19	20,5	28,5	34	40	43,5
Min-Ø mm	5,5	7,5	9,5	12	14,5	19,5	24,7	29,7
Clamping sleeve vulcanized	**323739**	**323740**	**323741**	**323742**	**323743**	**323744**	**323745**	**323746**
Clamping sleeve unvulcanized	**315139**	**315140**	**315141**	**315142**	**315143**	**315144**	**315145**	**315146**
Work stop	323420	323423	323426	323430	323435	323444	323452	323459
Min-Ø mm	6	8	10	12,5	15	20	25,7	30,7
Clamping sleeve vulcanized	**323752**	**323753**	**323754**	**323755**	**323756**	**323757**	**323758**	**323759**
Clamping sleeve unvulcanized	**315152**	**315153**	**315154**	**315155**	**315156**	**315157**	**315158**	**315159**
Work stop	323421	323424	323427	323431	323436	323445	323453	323460
Min-Ø mm	6,5	8,5	10,5	13	15,5	20,5	26,7	31,7
Clamping sleeve vulcanized	**323765**	**323766**	**323767**	**323768**	**323769**	**323770**	**323771**	**323772**
Clamping sleeve unvulcanized	**315165**	**315166**	**315167**	**315168**	**315169**	**315170**	**315171**	**315172**
Work stop	323422	323425	323428	323432	323437	323446	323454	323540
Min-Ø mm	7	9	11	13,5	16	21	27,7	32,7
Clamping sleeve vulcanized	**323778**	**323779**	**323780**	**323781**	**323782**	**323783**	**323784**	**323785**
Clamping sleeve unvulcanized	**315178**	**315179**	**315180**	**315181**	**315182**	**315183**	**315184**	**315185**
Work stop	323487	323488	323429	323433	323438	323447	323455	323541
Min-Ø mm			11,5	14	16,5	21,5	28,7	33,7
Clamping sleeve vulcanized			**323791**	**323792**	**323793**	**323794**	**323795**	**323796**
Clamping sleeve unvulcanized			**315191**	**315192**	**315193**	**315194**	**315195**	**315196**
Work stop			323489	323434	323439	323448	323493	323494
Min-Ø mm				14,5	17	22		
Clamping sleeve vulcanized				**323802**	**323803**	**323804**		
Clamping sleeve unvulcanized				**315202**	**315203**	**315204**		
Work stop				323490	323440	323449		
Min-Ø mm					17,5	22,5		
Clamping sleeve vulcanized					**323809**	**323810**		
Clamping sleeve unvulcanized					**315209**	**315210**		
Work stop					323441	323450		
Min-Ø mm					18	23		
Clamping sleeve vulcanized					**323815**	**323816**		
Clamping sleeve unvulcanized					**315215**	**315216**		
Work stop					323442	323456		
Min-Ø mm					18,5	23,5		
Clamping sleeve vulcanized					**323821**	**323822**		
Clamping sleeve unvulcanized					**315221**	**315222**		
Work stop					323443	323457		
Min-Ø mm					19	24		
Clamping sleeve vulcanized					**323827**	**323828**		
Clamping sleeve unvulcanized					**315227**	**315228**		
Work stop					323491	323458		
Min-Ø mm						24,5		
Clamping sleeve vulcanized						**323833**		
Clamping sleeve unvulcanized						**315233**		
Work stop						323492		

Other clamping diameters and profiled clamping sleeves are available on request

MZB - with axial tightening, manually actuated





APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for very small clamping diameters starting from Ø 5.5 mm or small workpieces.

TYPE

Manually actuated. Clamping sleeves optionally vulcanized.

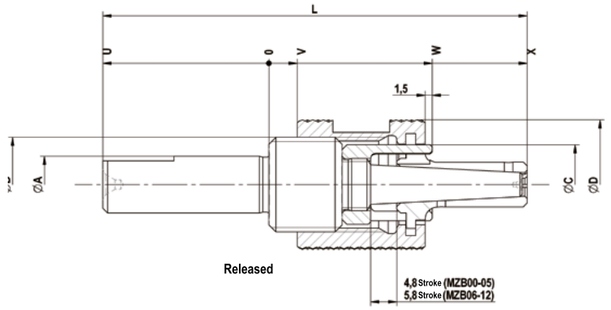
CUSTOMER BENEFITS

- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity and repeatability
- Light weight and reduced height thanks to compact design

TECHNICAL FEATURES

- Hardened, low-wear design

MZB = manually actuated, centre hole, B-type



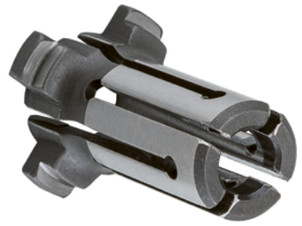
C18
MZB cartridge mandrel, hand-operated with centre hole, for internal clamping

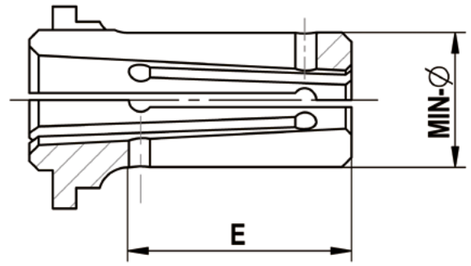
	MZB 00	MZB 01	MZB 02	MZB 03	MZB 04	MZB 05	MZB 06	MZB 07	MZB 08	MZB 09	MZB 10	MZB 11	MZB 12
Components													
Cartridge Mandrel complete	**1130361**	**1130362**	**1130363**	**1130364**	**1130365**	**1130366**	**1130367**	**1130368**	**1130369**	**1130370**	**1130371**	**1130372**	**1130373**
Basic mandrel (individual part)	315100	315101	315102	315103	315104	315105	315106	315107	315108	315109	315110	315111	315112
Nut (individual part)	315113	315114	315115	315116	315117	315118	315119	315120	315121	315122	315123	315124	315125
Clamping & Performance data													
Clamping range mm	5,8 - 7,3	7,8 - 9,3	9,8 - 11,8	12,3 - 14,8	14,8 - 19,3	19,8 - 24,8	25,0 - 29,0	30,0 - 34,0	35,0 - 39,0	40,0 - 44,0	45,0 - 54,0	55,0 - 64,0	65,0 - 79,0
Elongation Ø mm	0,5	0,55	0,55	0,55	0,55	0,55	1	1	1	1	1	1	1
Max stroke mm	5,5	5,5	5,5	5,5	5,5	5,5	6	6	6	6	6	6	6
Max speed U/min	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Clamping devices dimensions													
Ø A mm	10	12	12	14	18	20	25	30	40	40	45	50	50
Ø B mm	M14x1,5	M16x1,5	M20x1,5	M24x1,5	M30x1,5	M36x1,5	M42x1,5	M45x1,5	M52x1,5	M56x1,5	M65x1,5	M75x2	M95x2
Ø C mm	10,8	13	16,8	20,8	26,8	31,8	36,8	41,8	47,8	52,5	61,8	71,8	90,8
Ø D mm	19,5	23	28	31	38	47	54	57,5	66	74	83	93	108
Stroke G mm	5	5,5	5,5	5,5	5,5	6	6	6	6	6	6	6,5	7
L mm	74,5	79,5	89,5	97,5	102,5	113,5	136	144,5	156	166,5	197	208,5	221,5
U mm	30	30	35	35	35	40	45	50	55	60	67	67	67
V mm	5,5	6	6	6	6	6	7	7	7	7	7	7	7
W mm	29	33,5	34,5	36,5	37,5	37,5	48,5	48,5	48,5	48,5	53,5	56,5	58,5
X mm	44,5	48,5	53,5	61,5	66,5	72,5	89	92,5	99	104,5	128	139,5	152,5

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ROHM Cartridge Mandrel

Accessories MZB







C 18
Clamping sleeve Type B - standard design vulcanized and unvulcanized

For size	MZB 00	MZB 01	MZB 02	MZB 03	MZB 04	MZB 05	MZB 06	MZB 07	MZB 08	MZB 09	MZB 10	MZB 11	MZB 12
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Total length E mm	11,5	15	19	20,5	28,5	34	40	43,5	50	55,5	74	82,5	93,5
Min-Ø mm	5,5	7,5	9,5	12	14,5	19,5	24,7	29,7	34,7	39,7	44,7	54,7	64,7
Clamping sleeve vulcanized	**323739**	**323740**	**323741**	**323742**	**323743**	**323744**	**323745**	**323746**	**323747**	**323748**	**323749**	**323750**	**323751**
Clamping sleeve unvulcanized	**315139**	**315140**	**315141**	**315142**	**315143**	**315144**	**315145**	**315146**	**315147**	**315148**	**315149**	**315150**	**315151**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm	6	8	10	12,5	15	20	25,7	30,7	35,7	40,7	45,7	55,7	65,7
Clamping sleeve vulcanized	**323752**	**323753**	**323754**	**323755**	**323756**	**323757**	**323758**	**323759**	**323760**	**323761**	**323762**	**323763**	**323764**
Clamping sleeve unvulcanized	**315152**	**315153**	**315154**	**315155**	**315156**	**315157**	**315158**	**315159**	**315160**	**315161**	**315162**	**315163**	**315164**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm	6,5	8,5	10,5	13	15,5	20,5	26,7	31,7	36,7	41,7	46,7	56,7	66,7
Clamping sleeve vulcanized	**323765**	**323766**	**323767**	**323768**	**323769**	**323770**	**323771**	**323772**	**323773**	**323774**	**323775**	**323776**	**323777**
Clamping sleeve unvulcanized	**315165**	**315166**	**315167**	**315168**	**315169**	**315170**	**315171**	**315172**	**315173**	**315174**	**315175**	**315176**	**315177**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm	7	9	11	13,5	16	21	27,7	32,7	37,7	42,7	47,7	57,7	67,7
Clamping sleeve vulcanized	**323778**	**323779**	**323780**	**323781**	**323782**	**323783**	**323784**	**323785**	**323786**	**323787**	**323788**	**323789**	**323790**
Clamping sleeve unvulcanized	**315178**	**315179**	**315180**	**315181**	**315182**	**315183**	**315184**	**315185**	**315186**	**315187**	**315188**	**315189**	**315190**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm			11,5	14	16,5	21,5	28,7	33,7	38,7	43,7	48,7	58,7	68,7
Clamping sleeve vulcanized			**323791**	**323792**	**323793**	**323794**	**323795**	**323796**	**323797**	**323798**	**323799**	**323800**	**323801**
Clamping sleeve unvulcanized			**315191**	**315192**	**315193**	**315194**	**315195**	**315196**	**315197**	**315198**	**315199**	**315200**	**315201**
Work stop			315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm				14,5	17	22					49,7	59,7	69,7
Clamping sleeve vulcanized				**323802**	**323803**	**323804**					**323805**	**323806**	**323807**
Clamping sleeve unvulcanized				**315202**	**315203**	**315204**					**315205**	**315206**	**315207**
Work stop				315129	315130	315131					315136	315137	315138
Min-Ø mm					17,5	22,5					50,7	60,7	70,7
Clamping sleeve vulcanized					**323809**	**323810**					**323811**	**323812**	**323813**
Clamping sleeve unvulcanized					**315209**	**315210**					**315211**	**315212**	**315213**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm					18	23					51,7	61,7	71,7
Clamping sleeve vulcanized					**323815**	**323816**					**323817**	**323818**	**323819**
Clamping sleeve unvulcanized					**315215**	**315216**					**315217**	**315218**	**315219**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm					18,5	23,5					52,7	62,7	72,7
Clamping sleeve vulcanized					**323821**	**323822**					**323823**	**323824**	**323825**
Clamping sleeve unvulcanized					**315221**	**315222**					**315223**	**315224**	**315225**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm					19	24					53,7	63,7	73,7
Clamping sleeve vulcanized					**323827**	**323828**					**323829**	**323830**	**323831**
Clamping sleeve unvulcanized					**315227**	**315228**					**315229**	**315230**	**315231**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm						24,5							74,7
Clamping sleeve vulcanized						**323833**							**323808**
Clamping sleeve unvulcanized						**315233**							**315208**
Work stop						315131							315138
Min-Ø mm													75,7
Clamping sleeve vulcanized													**323814**
Clamping sleeve unvulcanized													**315214**
Work stop													315138
Min-Ø mm													76,7
Clamping sleeve vulcanized													**323820**
Clamping sleeve unvulcanized													**315220**
Work stop													315138
Min-Ø mm													77,7
Clamping sleeve vulcanized													**323826**
Clamping sleeve unvulcanized													**315226**
Work stop													315138
Min-Ø mm													78,7
Clamping sleeve vulcanized													**323832**
Clamping sleeve unvulcanized													**315232**
Work stop													315138

Other clamping diameters and profiled clamping sleeves are available on request

MZE - for long clamping lengths, manually actuated



APPLICATION

Internal clamping of round workpieces. Measuring operations and light grinding operations.
Ideal for long clamping lengths / long workpieces.

TYPE

Manually actuated.
Available as clamping mandrel assortment for various clamping diameters.
Clamping sleeve separatly available.

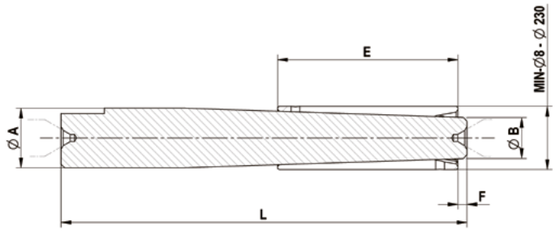
CUSTOMER BENEFITS

- Quick change of clamping sleeve without tools
- High concentricity and repeatability
- High flexibility thanks to mount on the shaft or between points
- Short retrofitting times

TECHNICAL FEATURES

- Hardened, low-wear design

MZE = manually actuated, centre hole, E-type



C18
MZE basic mandrel, hand-operated with centre hole, for internal clamping

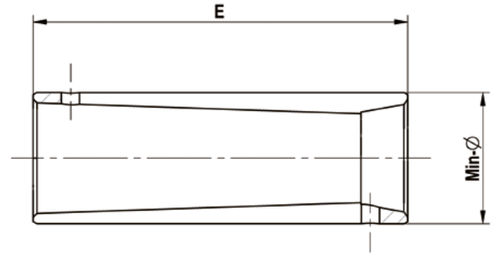
	MZE 00	MZE 01	MZE 02	MZE 03	MZE 04	MZE 05	MZE 06	MZE 07	MZE 08	MZE 09	MZE 10	MZE 11	MZE 12	MZE 13	MZE 14	MZE 15
Components																
Basic mandrel	**315000**	**315001**	**315002**	**315003**	**315004**	**315005**	**315006**	**315007**	**315008**	**315009**	**315010**	**315011**	**315012**	**315013**	**315014**	**315015**
Clamping & Performance data																
Clamping range mm	8,0-10,5	10,0-12,5	12,0-15,0	14,0-17,0	16,0-19,0	19,0-23,0	22,0-26,0	25,0-37,0	35,0-47,0	45,0-59,0	55,0-70,0	68,0-85,0	80,0-105,0	105,0- 140,0	135,0-185,0	185,0-235,0
Elongation Ø mm	1,5	1,5	2	2	2	2	2	3	3	5	5	5	5	5	5	5
Clamping length mm	40	45	60	70	70	80	80	100	100	125	135	150	150	170	180	200
Clamping devices dimensions																
Ø A mm	8	10	12	14	16	19	21	25	33	45	53	64	76	99	124	145,5
Ø B mm	4,1	5,3	5,7	6,9	8,5	10,7	12,2	14,6	22,6	31,1	38	48,2	60,9	80,4	97,4	122,4
E mm	40	45	60	70	70	80	80	100	100	125	135	150	150	170	180	200
F mm	3	3	4	4	4	4	4	4	5	5	5	5	5	5	82	63
L mm	75	110	125	140	150	170	175	225	225	300	330	350	350	400	442	443

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Cartridge Mandrel

Accessories MZE





C 18
Clamping sleeve Type E - **for basic mandrel MZE**

For size	MZE 00	MZE 01	MZE 02	MZE 03	MZE 04	MZE 05	MZE 06	MZE 07	MZE 08	MZE 09	MZE 10	MZE 11	MZE 12	MZE 13	MZE 14	MZE 15
Expansion in Ø mm	1,5	1,5	2	2	2	2	2	3	3	5	5	5	5	5	5	5
Total length E mm	40	45	60	70	70	80	80	100	100	125	135	150	150	170	180	200
Min-Ø mm	8	10	12	14	16	19	22	25	35	45	55	68		105	135	185
Clamping sleeve	**315016**	**315017**	**315018**	**315019**	**315020**	**315021**	**315022**	**315023**	**315024**	**315025**	**315026**	**315027**		**315029**	**315030**	**315031**
Min-Ø mm	9	11	13	15	17	20	23	26	36	48	58	70	80	110	140	190
Clamping sleeve	**315032**	**315033**	**315034**	**315035**	**315036**	**315037**	**315038**	**315039**	**315040**	**315041**	**315042**	**315043**	**315028**	**315045**	**315046**	**315047**
Min-Ø mm					18	21	24	28	38	50	60	72	85	115	145	195
Clamping sleeve					**315048**	**315049**	**315050**	**315051**	**315052**	**315053**	**315054**	**315055**	**315044**	**315057**	**315058**	**315059**
Min-Ø mm								30	40	52	62	75	90	120	150	200
Clamping sleeve								**315060**	**315061**	**315062**	**315063**	**315064**	**315056**	**315066**	**315067**	**315068**
Min-Ø mm								32	42	54	65	78	95	125	155	205
Clamping sleeve								**315069**	**315070**	**315071**	**315072**	**315073**	**315065**	**315075**	**315076**	**315077**
Min-Ø mm								34	44			80	100	130	160	210
Clamping sleeve								**315078**	**315079**			**315080**	**315074**	**315081**	**315082**	**315083**
Min-Ø mm														135	165	215
Clamping sleeve														**315084**	**315085**	**315086**
Min-Ø mm															170	220
Clamping sleeve															**315087**	**315088**
Min-Ø mm															175	225
Clamping sleeve															**315089**	**315090**
Min-Ø mm															180	230
Clamping sleeve															**315091**	**315092**

Other clamping diameters and profiled clamping sleeves are available on request

Product ranges MZE cartridge mandrel



Product ranges in wooden box size 1 – ID 315093

CONTENT
Consisting of 5 basic mandrels 02 - 06 and 7 clamping sleeves in the clamping range 12-26, Ø 12-14-16-18-20-22-24 mm.



Product range in wooden box size 2 – ID 315094

CONTENT
Consisting of 3 basic mandrels 07 - 09 and 6 clamping sleeves in the clamping range 25-55, Ø 25-30-35-40-45-50 mm.

Special solutions KFS



Cartridge mandrel KFS clamping-Ø 22.65 mm

APPLICATION
Turning

Clamping mandrel in special version due to required freedom of the tool. The clamping is done in the root circle of the toothing using a diagonally slotted clamping sleeve. Tilting in the toothing is prevented by the angled slotting.

CUSTOMER BENEFITS
- Optimal clamping of the toothed workpiece
- High concentricity and run-out precision of 0.02 mm

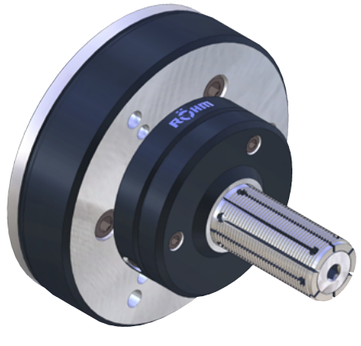


Cartridge mandrel KFS clamping-Ø SW 27.8 mm

APPLICATION
Turning

The clamping is done using a hexagonal clamping sleeve with axial pull via the draw bar against a fixed stop. The workpiece stop is designed of a two-sided loading of the workpiece.

CUSTOMER BENEFITS
- Clamping of special contours is possible
- Concentricity of 0.05 mm



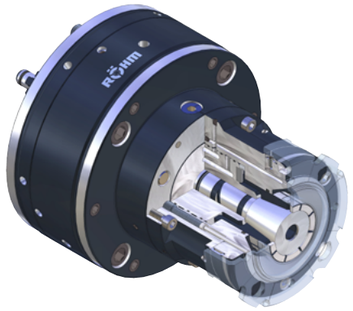
Cartridge mandrel KFS clamping-Ø 34.3 mm

APPLICATION
Turning / Cutting

Cartridge mandrel force-actuated with axial pull and fixed stop.
Clamping sleeve profiled for cutting off of the workpieces.

CUSTOMER BENEFITS
- Low-cost production of small parts
- Concentricity of 0.01 mm

Special solutions KFR / MFR



Cartridge mandrel KFR clamping-Ø 45 mm

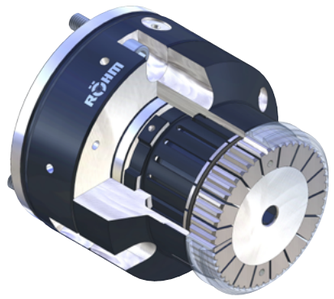
APPLICATION

Turning of a pressed part

Force-actuated cartridge mandrel actuated via draw bar.
Clamping mandrel is designed for different workpieces.
Fixed stop with damping ring, air sensing and ejector.

CUSTOMER BENEFITS

- Can be easily reconfigured to other clamping diameters by changing of clamping sleeve and/or stop
- Concentricity of 0.01 mm



Cartridge mandrel KFR clamping-Ø TK-Ø 90 mm

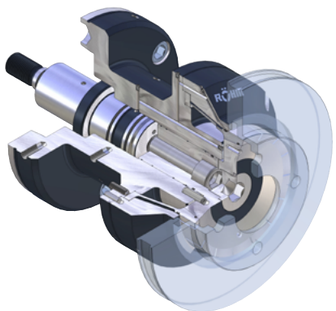
APPLICATION

Turning

Force-actuated cartridge mandrel with toothed clamping sleeve for clamping in the tooth flanks. Vulcanized collet sleeve with quick change system.

CUSTOMER BENEFITS

- Concentricity for toothing
- Concentricity of 0.03 mm



Cartridge mandrel KFR clamping-Ø 136 mm

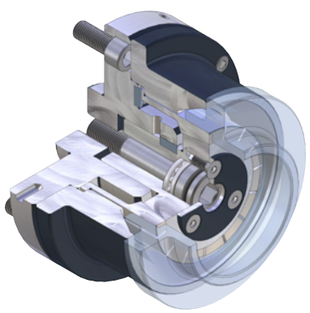
APPLICATION

Turning of brake discs

Force-actuated cartridge mandrel actuated via draw bar. Sealed against penetration of chips. Fixed stop with air sensing.

CUSTOMER BENEFITS

- Stable version of the clamping mandrel
- Concentricity of 0.02 mm



Cartridge mandrel MFR clamping-Ø 88 mm

APPLICATION

Milling / drilling for stationary use on clamping devices

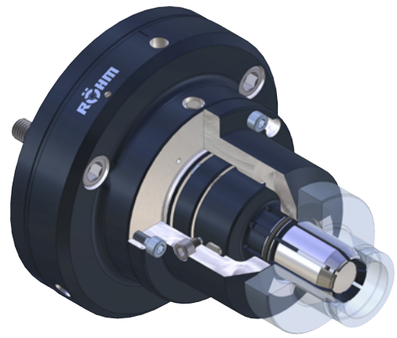
Cartridge mandrel in special version with manual actuation.
The actuation is done via the hexagon socket.

CUSTOMER BENEFITS

- Simple actuation by light roller bearing
- Concentricity of 0.015 mm

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Cartridge Mandrel

Special solutions KFB



Cartridge mandrel KFB clamping-Ø 42 mm

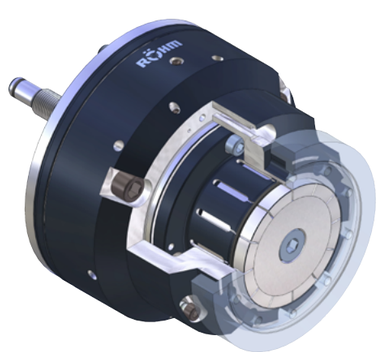
APPLICATION

Turning

Clamping of the workpiece with axial tension against the stop.
Clamping mandrel is hermetically sealed against penetration by dirt and cooling water.
The stop and clamping sleeve can be replaced together using the quick change system.

CUSTOMER BENEFITS

- Fast adjustment to different workpieces thanks to the quick change system
- Concentricity of 0.015 mm



Cartridge mandrel KFB clamping-Ø 114 mm

APPLICATION

Turning

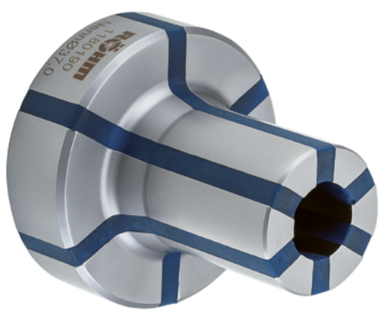
Clamping is done via draw bar with axial tension against the fixed stop. Idle stroke enables simpler stroke control in the clamping cylinder. The workpiece stop can be replaced quickly using the bayonet system.

CUSTOMER BENEFITS

- Simple handling
- Stable clamping using axial pull
- Concentricity of 0.01 mm



INNOVATIVE VULCANISATE IN THE SEGMENT CLAMPING SLEEVE



- Segment clamping sleeve with innovative vulcanisate for great elongation, longest service life and vibration dampening
- Hardened and ground steel segments for high resistance to wear

Video ABSIS

Video AGILIS

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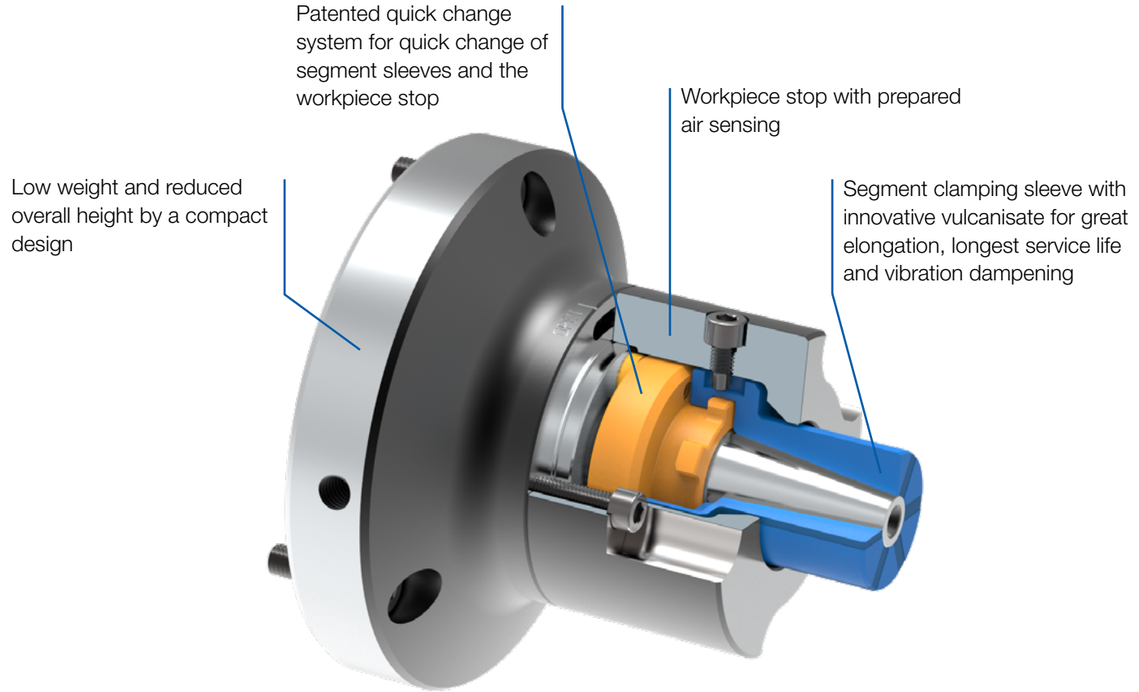
ROHM

SEGMENT CLAMPING MANDREL

Modern manufacturing technology can hardly do without the use of segment clamping mandrels. In the fields of precision machining, turning, grinding, gear cutting and checking, segment clamping mandrels assume important tasks that are associated with challenging conditions. The innovative rubber segments enable a great elongation of the clamping sleeve to 1.2 mm.

ADVANTAGES AT A GLANCE

- Short tooling and non-productive times thanks to the great elongation of the clamping sleeve up to 1.2 mm
- Vibration dampening and long service life thanks to innovative vulcanisate of the clamping sleeves
- Fast replacement of the clamping mandrel thanks to the patented bayonet quick change system



Segment clamping mandrel

ABSIS - for long clamping lengths, with axial tightening



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for clamping in through holes.

TYPE

Force-actuated.

CUSTOMER BENEFITS

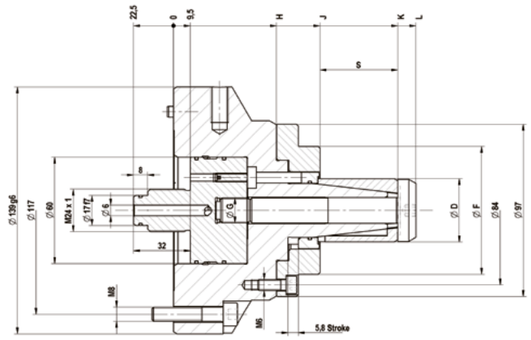
- Short setup and non-productive times thanks to great expansion of the segment sleeves
- Vibration damping due to high vulcanized rubber component of the clamping sleeves
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Fast change of segment sleeves thanks to central clamping screw
- High concentricity, axial run-out and repeatability

TECHNICAL FEATURES

- Manual lubrication
- Air sensing prepared

ABSIS = in Latin: segment





C 18
ABSIS segment clamping mandrel, power-operated with flanged seat, for internal clamping
Consisting of basic mandrel, adapter, ejector ring, locking belt

	ABSIS 00	ABSIS 01	ABSIS 02	ABSIS 03	ABSIS 04
Components					
Clamping mandrel complete	**1110000**	**1110001**	**1110002**	**1110003**	**1110004**
Basic mandrel (individual part)	1110100	1110101	1110102	1110103	1110104
Adapter power-operated (individual part)	1110040	1110041	1110042	1110043	1110044
Ejector ring (individual part)	1110020	1110021	1110022	1110023	1110024
Locking bolt (individual part)	1110060	1110061	1110062	1110063	1110064
Clamping & Performance data					
Clamping range mm	20 - 28	26 - 39	36 - 55	51 - 82	73 - 106
Elongation Ø mm	1,3	1,3	1,3	1,3	1,3
Max stroke mm	5,8	5,8	5,8	5,8	5,8
Max actuation force kN	7	10	20	25	30
Max total clamping force kN	32	46	92	115	138
Max speed U/min	5000	5000	4000	4000	3500
Clamping devices dimensions					
S mm	23	27	44	50	60
Ø F mm	58	58	72	90	120
Ø G mm	M6x0,75	M10x1	M14x1	M18x1	M20x1
H mm	55	55	58	58,5	60
J mm	75	75	82,5	84,5	86
K mm	98	102	126,3	134,5	146
L mm	103,5	108,5	136,5	146,5	160

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Segmentspanndorn

ABSIS-C - quick-change function



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Rotational machining with adaptation to CAPTIS-D, CAPTIS-A.
Stationary machining with adaptation to CAPTIS-M.
Ideal for clamping in through holes.

TYPE

Manual with adaptation to CAPTIS-M.
Force-actuation with adaptation to CAPTIS-D, CAPTIS-A.

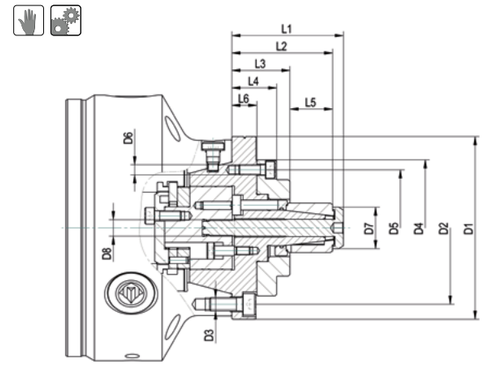
CUSTOMER BENEFITS

- Short setup and non-productive times thanks to great expansion of the segment sleeves
- Vibration damping due to high vulcanized rubber component of the clamping sleeves
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Fast change of segment sleeves thanks to central clamping screw
- High concentricity, axial run-out and repeatability
- Innovative quick-change function for fast retrofitting from external to internal clamping

TECHNICAL FEATURES

- Identical change parts as for standard segment clamping mandrel ABSIS

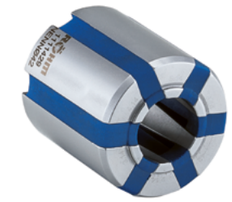
ABSIS-C = in Latin: segment, CAPTIS

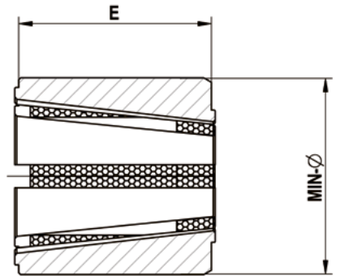


ABSIS-C clamping mandrel, manually or power operated
quick-change holder for collet chucks Captis M, A and D.

	ABSIS 00	ABSIS 00	ABSIS 00	ABSIS 00	ABSIS 01	ABSIS 01	ABSIS 01	ABSIS 01	ABSIS 02	ABSIS 02	ABSIS 02	ABSIS 03
Components												
Segment clamping mandrel	**1286200**	**1286201**	**1286202**	**1286203**	**1286204**	**1286205**	**1286206**	**1286207**	**1286208**	**1286209**	**1286210**	**1286211**
Compatible with the following collet chucks: Captis M, A und D	CAPTIS 32	CAPTIS 42	CAPTIS 52	CAPTIS 65	CAPTIS 32	CAPTIS 42	CAPTIS 52	CAPTIS 65	CAPTIS 42	CAPTIS 52	CAPTIS 65	CAPTIS 65
Clamping & performance data												
Clamping range mm	20 - 28	20 - 28	20 - 28	20 - 28	26 - 39	26 - 39	26 - 39	26 - 39	36 - 55	36 - 55	36 - 55	51 - 82
Elongation Ø mm	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3
Max stroke mm	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8
Max actuation force kN	7	7	7	7	10	10	10	10	20	20	20	25
Max total clamping force kN - **Captis A, D**	32	32	32	32	46	46	46	46	92	92	92	115
Max total clamping force kN - **Captis M**	30	32	32	32	30	46	46	46	60	60	50	50
Max speed U/min - **Captis A, D**	5000	5000	5000	5000	5000	5000	5000	5000	4000	4000	4000	4000
Max speed U/min - **Captis M**	5000	4500	4500	4000	5000	4500	4500	4000	4000	4000	4000	4000
Clamping devices dimensions												
D1	88	108	110	128	88	108	110	128	110	110	128	128
D2	70	90	92	110	70	90	92	110	90	92	110	110
D3	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8	3xM8	3x M8	3x M8	3x M8
D4	82	82	82	82	82	82	82	82	97	97	97	102
D5	70	70	70	70	70	70	70	70	84	84	84	89
D6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6
D7	19	19	19	19	25	25	25	25	35	35	35	48
D8	M6x0,75	M6x0,75	M6x0,75	M6x0,75	M10x1	M10x1	M10x1	M10x1	M14x1	M14x1	M14x1	M18x1
L1	62,2	62,2	62,2	62,2	67,2	67,2	67,2	67,2	95,2	95,2	95,2	105,2
L2	56,7	56,7	56,7	56,7	60,7	60,7	60,7	60,7	85	85	85	93,2
L3	35	35	35	35	35	35	35	35	42,5	42,5	42,5	44,5
L4	25	25	25	25	27	27	27	27	30,25	30,25	30,25	31,5
L5	21,7	21,7	21,7	21,7	25,7	25,7	25,7	25,7	42,5	42,5	42,5	48,7
L6	15	15	15	15	15	15	15	15	18	18	18	18,5

Accessories ABSIS





C 18
Segment clamping sleeve - standard design

	ABSIS 00	ABSIS 01	ABSIS 02	ABSIS 03	ABSIS 04
Expansion in Ø mm	1,2	1,2	1,2	1,2	1,2
Total length E mm	23	27	44	50	60
Min-Ø mm	19,7	25,7	35,7	50,7	72,7
Segment sleeve	**1111400**	**1111409**	**1111423**	**1111443**	**1111475**
Work stop	1110070	1110071	1110072	1110073	1110074
Min-Ø mm	20,7	26,7	36,7	51,7	73,7
Segment sleeve	**1111401**	**1111410**	**1111424**	**1111444**	**1111476**
Work stop	1110070	1110071	1110072	1110073	1110074
Min-Ø mm	21,7	27,7	37,7	52,7	74,7
Segment sleeve	**1111402**	**1111411**	**1111425**	**1111445**	**1111477**
Work stop	1110070	1110071	1110072	1123341	1123372
Min-Ø mm	22,7	28,7	38,7	53,7	75,7
Segment sleeve	**1111403**	**1111412**	**1111426**	**1111446**	**1111478**
Work stop	1110070	1110071	1110072	1123342	1123373
Min-Ø mm	23,7	29,7	39,7	54,7	76,7
Segment sleeve	**1111404**	**1111413**	**1111427**	**1111447**	**1111479**
Work stop	1110070	1110071	1110072	1123343	1123374
Min-Ø mm	24,7	30,7	40,7	55,7	77,7
Segment sleeve	**1111405**	**1111414**	**1111428**	**1111448**	**1111480**
Work stop	1110070	1110071	1110072	1123344	1123375
Min-Ø mm	25,7	31,7	41,7	56,7	78,7
Segment sleeve	**1111406**	**1111415**	**1111429**	**1111449**	**1111481**
Work stop	1110070	1110071	1110072	1123345	1123376
Min-Ø mm	26,7	32,7	42,7	57,7	79,7
Segment sleeve	**1111407**	**1111416**	**1111430**	**1111450**	**1111482**
Work stop	1123305	1110071	1123327	1123346	1123377
Min-Ø mm	27,7	33,7	43,7	58,7	80,7
Segment sleeve	**1111408**	**1111417**	**1111431**	**1111451**	**1111483**
Work stop	1123306	1123315	1123328	1123347	1123378
Min-Ø mm		34,7	44,7	59,7	81,7
Segment sleeve		**1111418**	**1111432**	**1111452**	**1111484**
Work stop		1123316	1123329	1123348	1123379
Min-Ø mm		35,7	45,7	60,7	82,7
Segment sleeve		**1111419**	**1111433**	**1111453**	**1111485**
Work stop		1123317	1123330	1123349	1123380
Min-Ø mm		36,7	46,7	61,7	83,7
Segment sleeve		**1111420**	**1111434**	**1111454**	**1111486**
Work stop		1123318	1123331	1123350	1123381
Min-Ø mm		37,7	47,7	62,7	84,7
Segment sleeve		**1111421**	**1111435**	**1111455**	**1111487**
Work stop		1123319	1123332	1123351	1123382
Min-Ø mm		38,7	48,7	63,7	85,7
Segment sleeve		**1111422**	**1111436**	**1111456**	**1111488**
Work stop		1123320	1123333	1123352	1123383
Min-Ø mm			49,7	64,7	86,7
Segment sleeve			**1111437**	**1111457**	**1111489**
Work stop			1123334	1123353	1123384
Min-Ø mm			50,7	65,7	87,7
Segment sleeve			**1111438**	**1111458**	**1111490**
Work stop			1123335	1123354	1123385
Min-Ø mm			51,7	66,7	88,7
Segment sleeve			**1111439**	**1111459**	**1111491**
Work stop			1123336	1123355	1123386

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Segment clamping mandrel

Accessories ABSIS

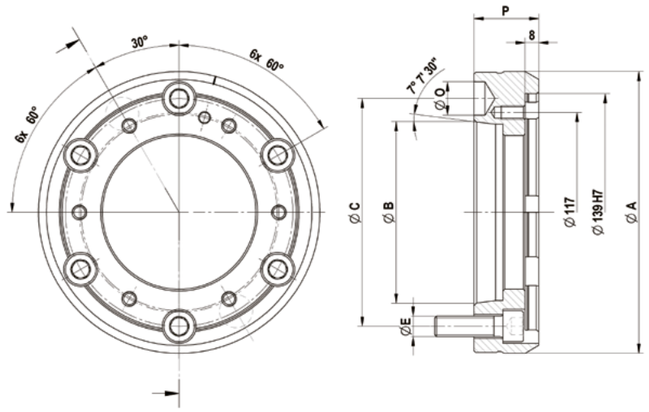
C 18
Segment clamping sleeve - standard design

	ABSIS 00	ABSIS 01	ABSIS 02	ABSIS 03	ABSIS 04
Expansion in Ø mm	1,2	1,2	1,2	1,2	1,2
Total length E mm	23	27	44	50	60
Min-Ø mm			52,7	67,7	89,7
Segment sleeve			**1111440**	**1111460**	**1111492**
Work stop			1123337	1123356	1123387
Min-Ø mm			53,7	68,7	90,7
Segment sleeve			**1111441**	**1111461**	**1111493**
Work stop			1123338	1123357	1123388
Min-Ø mm			54,7	69,7	91,7
Segment sleeve			**1111442**	**1111462**	**1111494**
Work stop			1123339	1123358	1123389
Min-Ø mm				70,7	92,7
Segment sleeve				**1111463**	**1111495**
Work stop				1123359	1123390
Min-Ø mm				71,7	93,7
Segment sleeve				**1111464**	**1111496**
Work stop				1123360	1123391
Min-Ø mm				72,7	94,7
Segment sleeve				**1111465**	**1111497**
Work stop				1123361	1123392
Min-Ø mm				73,7	95,7
Segment sleeve				**1111466**	**1111498**
Work stop				1123362	1123393
Min-Ø mm				74,7	96,7
Segment sleeve				**1111467**	**1111499**
Work stop				1123363	1123394
Min-Ø mm				75,7	97,7
Segment sleeve				**1111468**	**1111500**
Work stop				1123364	1123395
Min-Ø mm				76,7	98,7
Segment sleeve				**1111469**	**1111501**
Work stop				1123365	1123396
Min-Ø mm				77,7	99,7
Segment sleeve				**1111470**	**1111502**
Work stop				1123366	1123397
Min-Ø mm				78,7	100,7
Segment sleeve				**1111471**	**1111503**
Work stop				1123367	1123398
Min-Ø mm				79,7	101,7
Segment sleeve				**1111472**	**1111504**
Work stop				1123368	1123399
Min-Ø mm				80,7	102,7
Segment sleeve				**1111473**	**1111505**
Work stop				1123369	1123400
Min-Ø mm				81,7	103,7
Segment sleeve				**1111474**	**1111506**
Work stop				1123370	1123401
Min-Ø mm					104,7
Segment sleeve					**1111507**
Work stop					1123402
Min-Ø mm					105,7
Segment sleeve					**1111508**
Work stop					1123403

Accessories ABSIS

Accessories ABSIS

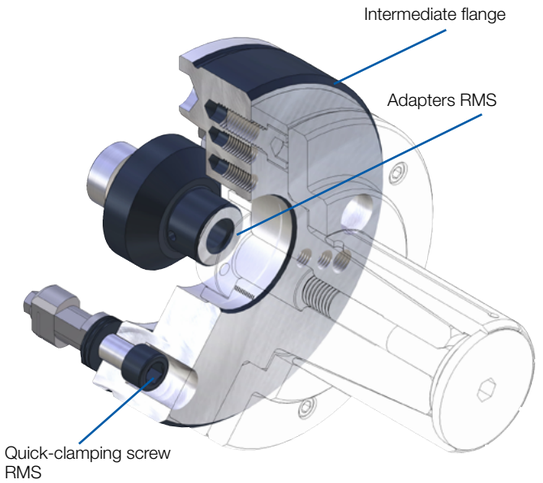




C 18
Intermediate flange ISO 702-1 (DIN 55028), for size 00-04

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**1110005**	**1110006**	**1110008**	**1110011**
Ø A mm	165	170	220	282
Ø B mm	82,563	106,375	139,719	196,869
Ø C mm	104,8	133,4	171,4	235
Thread-Ø M	M10	M12	M16	M20
Ø O mm	16,3	19,45	24,2	29,4
P mm	36	38	45	45

Accessories ABSIS



APPLICATION

For manual clamping device exchange in a minimum of time.

TYPE

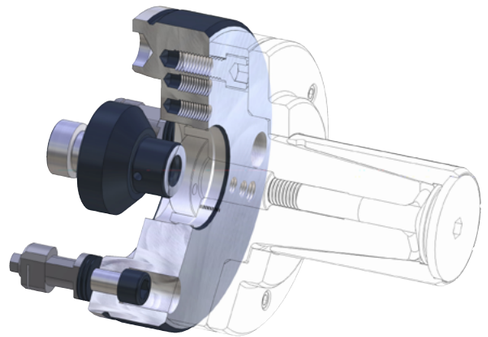
Manual quick-change system for clamping devices.
Fits for ABSIS (269-00) and AGILIS (296-00).
Central lubrication and/or air sensing control possible.

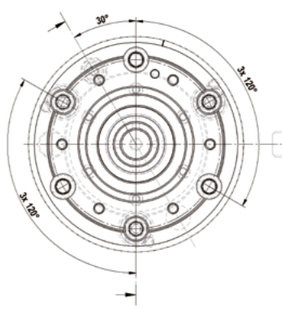
CUSTOMER BENEFITS

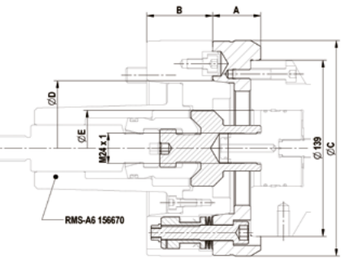
- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautometic clamping devices changing systems

TECHNICAL FEATURES

- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6) - Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with RÖHM safety clamping cylinder OVS and LVS







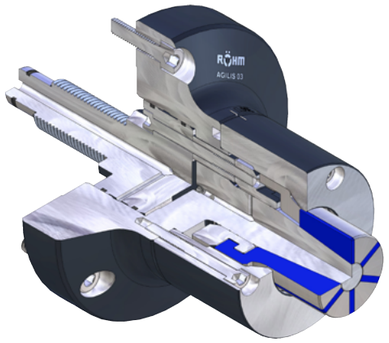
C18
RMS quick-change system, hand-operated for clamping devices

	KK 06	KK 08
RMS - complete (flange incl. quick-clamping screw)	**1160028**	**1160029**
Adapters RMS	**1183312**	**1183313**
Suitable basic take-up	**156670**	**156671**
A	38	45
Ø B	170	220
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M8	M8
Ø F mm	139 H7	139 H7

Segment clamping mandrel

AGILIS - for short clamping lengths, with axial tightening





APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring. Suitable for short clamping lengths and very small clamping diameters starting from 10 mm.

TYPE

Force-actuated.

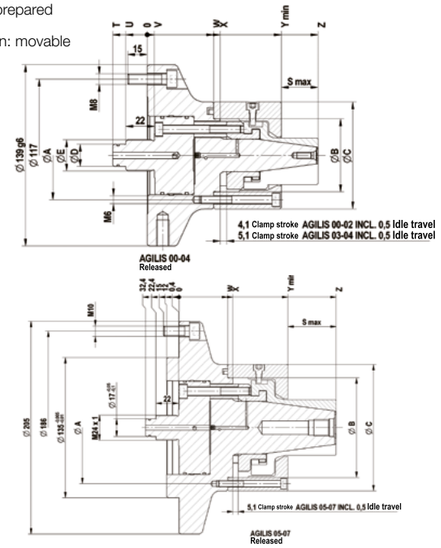
CUSTOMER BENEFITS

- Short setup and non-productive times thanks to great expansion of the segment sleeves
- Vibration damping due to high vulcanized rubber component of the clamping sleeves
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Fast change thanks to bayonet catch
- High concentricity, axial run-out and repeatability

TECHNICAL FEATURES

- Manual lubrication
- Air sensing prepared

AGILIS = in Latin: movable

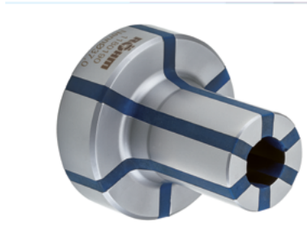


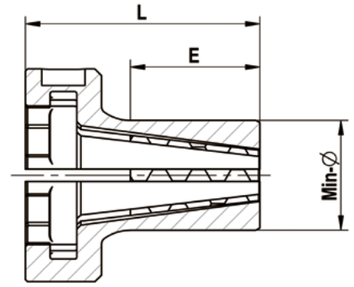
C 18
AGILIS segment clamping mandrel, power-operated with flanged seat, for internal clamping

	AGILIS 00	AGILIS 01	AGILIS 02	AGILIS 03	AGILIS 04	AGILIS 05	AGILIS 06	AGILIS 07
Components								
Clamping mandrel complete	**1180000**	**1180001**	**1180002**	**1180003**	**1180004**	**1180005**	**1180006**	**1180007**
Basic mandrel (individual part)	1180010	1180011	1180012	1180013	1180014	1180015	1180016	1180017
Adapter power-operated (individual part)	1180030	1180030	1180032	1180032	1180034	1180035	1180036	1180037
Bolt spacer (individual part)	1180060	1180060	1180062	1180063	1180064	1180065	1180066	1180066
Retaining ring (individual part)	1180050	1180050	1180052	1180052	1180054	1180055	1180056	1180057
Clamping & Performance data								
Clamping range mm	10 - 16	14 - 25	19 - 35	27 - 45	37 - 68	54 - 85	72 - 105	95 - 130
Elongation Ø in mm	0,6	0,6	0,6	1,2	1,2	1,2	1,2	1,2
Max stroke mm	4,1	4,1	4,1	5,1	5,1	5,1	5,1	5,1
Max actuation force kN	5	7,5	15	20	25	30	35	35
Max total clamping force kN	26	39	79	85	106	127	149	149
Max speed U/min	8000	8000	8000	8000	5000	5000	5000	5000
Clamping devices dimensions								
Pitch diameter Ø A mm	54	54	69	69	88	108	127	152
Guide diameter B mm	42	42	56	56	75	96	114	135
Ø C mm	68	68	82	82	101	122	140	169
Ø D mm	12	12	17	17	17			
Ø E mm	M 16	M 16	M 24x1	M 24x1	M 24x1			
S max, mm	16,8	18,8	23,8	28,1	42,1	46,1	57,1	67,1
T mm	27,7	27,7	25,4	26,4	26,4			
U mm	17,7	17,7	15,4	16,4	16,4			
V mm	4,3	4,3	6,6	5,6	5,6			
W mm	41,5	41,5	52	51	52	47	49	49
X mm	46,5	46,5	57,2	56	57	52	54	54
Y min	80	80	103	103	108	105	109	109
Z mm	96,8	98,8	126,8	131,1	150,1	151,1	166,1	176,1

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Accessories AGILIS





C18
Segment clamping sleeves AGILIS

	AGILIS 00	AGILIS 01	AGILIS 02	AGILIS 03	AGILIS 04	AGILIS 05	AGILIS 06	AGILIS 07
Expansion in Ø mm	0,6	0,6	0,6	1,2	1,2	1,2	1,2	1,2
Total length L	38	40	52,5	57	76	82	95	105
Min-Ø mm	9,7	13,7	18,7	26,7	36,7	53,7	71,7	94,7
Segment sleeve	**1180100**	**1180120**	**1180140**	**1180170**	**1180190**	**1180220**	**1180250**	**1180290**
Work stop	1180400	1180420	1180440	1180470	1180490	1180520	1180550	1180590
Min-Ø mm	10,2	14,2	19,2	27,7	37,7	54,7	72,7	95,7
Segment sleeve	**1180101**	**1180121**	**1180141**	**1180171**	**1180191**	**1180221**	**1180251**	**1180291**
Work stop	1180401	1180421	1180441	1180471	1180491	1180521	1180551	1180591
Min-Ø mm	10,7	14,7	19,7	28,7	38,7	55,7	73,7	96,7
Segment sleeve	**1180102**	**1180122**	**1180142**	**1180172**	**1180192**	**1180222**	**1180252**	**1180292**
Work stop	1180402	1180422	1180442	1180472	1180492	1180522	1180552	1180592
Min-Ø mm	11,2	15,2	20,2	29,7	39,7	56,7	74,7	97,7
Segment sleeve	**1180103**	**1180123**	**1180143**	**1180173**	**1180193**	**1180223**	**1180253**	**1180293**
Work stop	1180403	1180423	1180443	1180473	1180493	1180523	1180553	1180593
Min-Ø mm	11,7	15,7	20,7	30,7	40,7	57,7	75,7	98,7
Segment sleeve	**1180104**	**1180124**	**1180144**	**1180174**	**1180194**	**1180224**	**1180254**	**1180294**
Work stop	1180404	1180424	1180444	1180474	1180494	1180524	1180554	1180594
Min-Ø mm	12,2	16,2	21,2	31,7	41,7	58,7	76,7	99,7
Segment sleeve	**1180105**	**1180125**	**1180145**	**1180175**	**1180195**	**1180225**	**1180255**	**1180295**
Work stop	1180405	1180425	1180445	1180475	1180495	1180525	1180555	1180595
Min-Ø mm	12,7	16,7	21,7	32,7	42,7	59,7	77,7	100,7
Segment sleeve	**1180106**	**1180126**	**1180146**	**1180176**	**1180196**	**1180226**	**1180256**	**1180296**
Work stop	1180406	1180426	1180446	1180476	1180496	1180526	1180556	1180596
Min-Ø mm	13,2	17,2	22,2	33,7	43,7	60,7	78,7	101,7
Segment sleeve	**1180107**	**1180127**	**1180147**	**1180177**	**1180197**	**1180227**	**1180257**	**1180297**
Work stop	1180407	1180427	1180447	1180477	1180497	1180527	1180557	1180597
Min-Ø mm	13,7	17,7	22,7	34,7	44,7	61,7	79,7	102,7
Segment sleeve	**1180108**	**1180128**	**1180148**	**1180178**	**1180198**	**1180228**	**1180258**	**1180298**
Work stop	1180408	1180428	1180448	1180478	1180498	1180528	1180558	1180598
Min-Ø mm	14,2	18,2	23,2	35,7	45,7	62,7	80,7	103,7
Segment sleeve	**1180109**	**1180129**	**1180149**	**1180179**	**1180199**	**1180229**	**1180259**	**1180299**
Work stop	1180409	1180429	1180449	1180479	1180499	1180529	1180559	1180599
Min-Ø mm	14,7	18,7	23,7	36,7	46,7	63,7	81,7	104,7
Segment sleeve	**1180110**	**1180130**	**1180150**	**1180180**	**1180200**	**1180230**	**1180260**	**1180300**
Work stop	1180410	1180430	1180450	1180480	1180500	1180530	1180560	1180600
Min-Ø mm	15,2	19,2	24,2	37,7	47,7	64,7	82,7	105,7
Segment sleeve	**1180111**	**1180131**	**1180151**	**1180181**	**1180201**	**1180231**	**1180261**	**1180301**
Work stop	1180411	1180431	1180451	1180481	1180501	1180531	1180561	1180601
Min-Ø mm	15,7	19,7	24,7	38,7	48,7	65,7	83,7	106,7
Segment sleeve	**1180112**	**1180132**	**1180152**	**1180182**	**1180202**	**1180232**	**1180262**	**1180302**
Work stop	1180412	1180432	1180452	1180482	1180502	1180532	1180562	1180602
Min-Ø mm		20,2	25,2	39,7	49,7	66,7	84,7	107,7
Segment sleeve		**1180133**	**1180153**	**1180183**	**1180203**	**1180233**	**1180263**	**1180303**
Work stop		1180433	1180453	1180483	1180503	1180533	1180563	1180603
Min-Ø mm		20,7	25,7	40,7	50,7	67,7	85,7	108,7
Segment sleeve		**1180134**	**1180154**	**1180184**	**1180204**	**1180234**	**1180264**	**1180304**
Work stop		1180434	1180454	1180484	1180504	1180534	1180564	1180604
Min-Ø mm		21,2	26,2	41,7	51,7	68,7	86,7	109,7
Segment sleeve		**1180135**	**1180155**	**1180185**	**1180205**	**1180235**	**1180265**	**1180305**
Work stop		1180435	1180455	1180485	1180505	1180535	1180565	1180605

Accessories AGILIS

C18
Segment clamping sleeves AGILIS

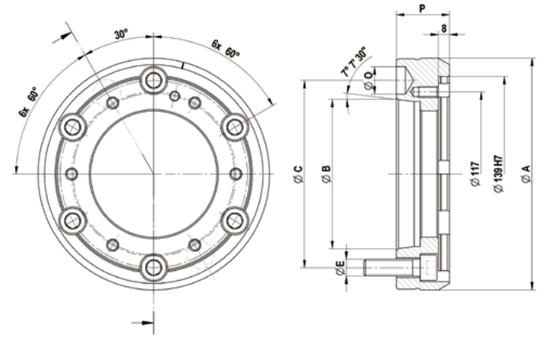
	AGILIS 00	AGILIS 01	AGILIS 02	AGILIS 03	AGILIS 04	AGILIS 05	AGILIS 06	AGILIS 07
Expansion in Ø mm	0,6	0,6	0,6	1,2	1,2	1,2	1,2	1,2
Total length L	38	40	52,5	57	76	82	95	105
Min-Ø mm		21,7	26,7	42,7	52,7	69,7	87,7	110,7
Segment sleeve		**1180136**	**1180156**	**1180186**	**1180206**	**1180236**	**1180266**	**1180306**
Work stop		1180436	1180456	1180486	1180506	1180536	1180566	1180606
Min-Ø mm		22,2	27,2	43,7	53,7	70,7	88,7	111,7
Segment sleeve		**1180137**	**1180157**	**1180187**	**1180207**	**1180237**	**1180267**	**1180307**
Work stop		1180437	1180457	1180487	1180507	1180537	1180567	1180607
Min-Ø mm		22,7	27,7	44,7	54,7	71,7	89,7	112,7
Segment sleeve		**1180138**	**1180158**	**1180188**	**1180208**	**1180238**	**1180268**	**1180308**
Work stop		1180438	1180458	1180488	1180508	1180538	1180568	1180608
Min-Ø mm		23,2	28,2		55,7	72,7	90,7	113,7
S**Segment sleeve**		**1180139**	**1180159**		**1180209**	**1180239**	**1180269**	**1180309**
Work stop		1180439	1180459		1180509	1180539	1180569	1180609
Min-Ø mm		23,7	28,7		56,7	73,7	91,7	114,7
Segment sleeve		**1180350**	**1180160**		**1180210**	**1180240**	**1180270**	**1180310**
Work stop		1180630	1180460		1180510	1180540	1180570	1180610
Min-Ø mm		24,2	29,2		57,7	74,7	92,7	115,7
Segment sleeve		**1180351**	**1180161**		**1180211**	**1180241**	**1180271**	**1180311**
Work stop		1180631	1180461		1180511	1180541	1180571	1180611
Min-Ø mm		24,7	29,7		58,7	75,7	93,7	116,7
Segment sleeve		**1180352**	**1180162**		**1180212**	**1180242**	**1180272**	**1180312**
Work stop		1180632	1180462		1180512	1180542	1180572	1180612
Min-Ø mm			30,2		59,7	76,7	94,7	117,7
Segment sleeve			**1180163**		**1180213**	**1180243**	**1180273**	**1180313**
Work stop			1180463		1180513	1180543	1180573	1180613
Min-Ø mm			30,7		60,7	77,7	95,7	118,7
Segment sleeve			**1180164**		**1180214**	**1180244**	**1180274**	**1180314**
Work stop			1180464		1180514	1180544	1180574	1180614
Min-Ø mm			31,2		61,7	78,7	96,7	119,7
Segment sleeve			**1180165**		**1180215**	**1180245**	**1180275**	**1180315**
Work stop			1180465		1180515	1180545	1180575	1180615
Min-Ø mm			31,7		62,7	79,7	97,7	120,7
Segment sleeve			**1180166**		**1180216**	**1180246**	**1180276**	**1180316**
Work stop			1180466		1180516	1180546	1180576	1180616
Min-Ø mm			32,2		63,7	80,7	98,7	121,7
Segment sleeve			**1180167**		**1180217**	**1180247**	**1180277**	**1180317**
Work stop			1180467		1180517	1180547	1180577	1180617
Min-Ø mm			32,7		64,7	81,7	99,7	122,7
Segment sleeve			**1180168**		**1180218**	**1180248**	**1180278**	**1180318**
Work stop			1180468		1180518	1180548	1180578	1180618
Min-Ø mm			33,2			82,7	100,7	123,7
Segment sleeve			**1180169**			**1180249**	**1180279**	**1180319**
Work stop			1180469			1180549	1180579	1180619
Min-Ø mm			33,7			83,7	101,7	124,7
Segment sleeve			**1180360**			**1180370**	**1180280**	**1180320**
Work stop			1180640			1180650	1180580	1180620
Min-Ø mm			34,2			84,7	102,7	125,7
Segment sleeve			**1180361**			**1180371**	**1180281**	**1180321**
Work stop			1180641			1180651	1180581	1180621
Min-Ø mm			34,7				103,7	126,7
Segment sleeve			**1180362**				**1180282**	**1180322**
Work stop			1180642				1180582	1180622
Min-Ø mm							104,7	127,7
Segment sleeve							**1180283**	**1180323**
Work stop							1180583	1180623
Min-Ø mm								128,7
Segment sleeve								**1180324**
Work stop								1180624
Min-Ø mm								129,7
Segment sleeve								**1180325**
Work stop								1180625

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Segment clamping mandrel

Accessories AGILIS

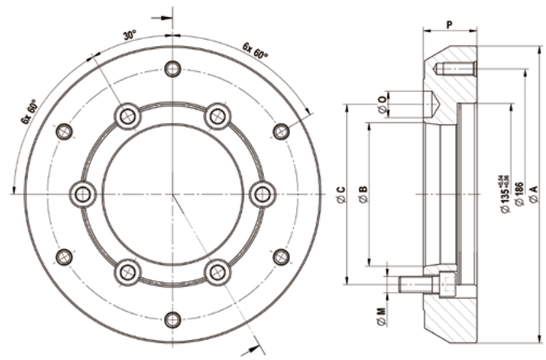




C 18
Intermediate flange ISO 702-1 (DIN 55028), for size 00-04

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**1110005**	**1110006**	**1110008**	**1110011**
Ø A mm	165	170	220	282
Ø B	82,563	106,375	139,719	196,869
Ø C mm	104,8	133,4	171,4	235
Thread-Ø M	M10	M12	M16	M20
Ø O mm	16,3	19,45	24,2	29,4
P mm	36	38	45	45





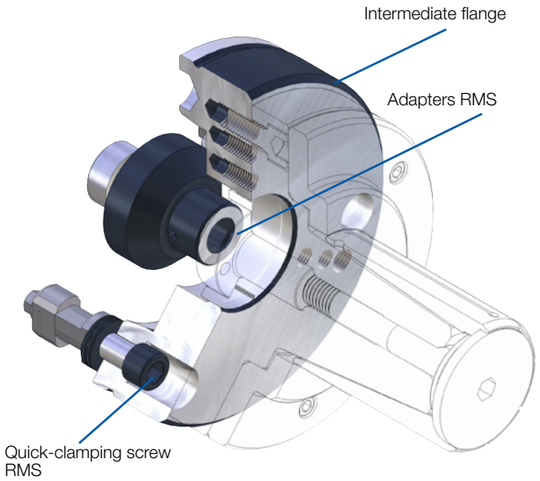
C 18
Intermediate flange ISO 702-1 (DIN 55028)

	Nr. 5 (A5)	Nr. 6 (A6)	Nr. 8 (A8)
Intermediate flange	**1072115**	**1072117**	**1072119**
For	KZF-S 80/AGILIS 05-07	KZF-S 120/AGILIS 05-07	KZF-S 120/AGILIS 05-07
Short-taper-Ø B	82,563	106,375	139,719
Short-taper pitch circle Ø C	104,8	133,4	171,4
Flange outer-Ø A	220	220	220
Ø D	135	135	135
Ø F mm	186	186	186
Ø O mm	16,3	19,45	24,2
Thread-Ø M	M10	M12	M16
Total length flange P	40	40	40

Accessories AGILIS

Segment clamping mandrel

Accessories AGILIS



APPLICATION

For manual clamping device exchange in a minimum of time.

TYPE

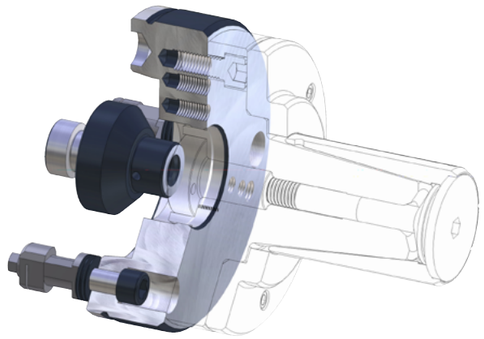
Manual quick-change system for clamping devices.
Fits for ABSIS (269-00) and AGILIS (296-00).
Central lubrication and/or air sensing control possible.

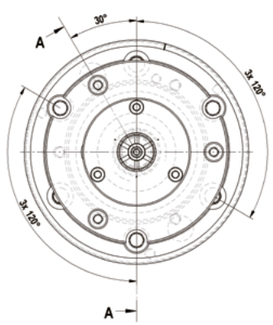
CUSTOMER BENEFITS

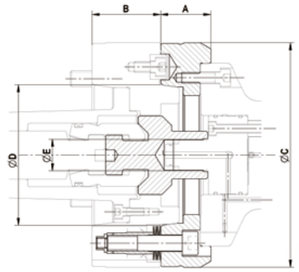
- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautometic clamping devices changing systems

TECHNICAL FEATURES

- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6)
- Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with RÖHM safety clamping cylinder OVS and LVS







C18
RMS quick-change system, hand-operated for clamping devices

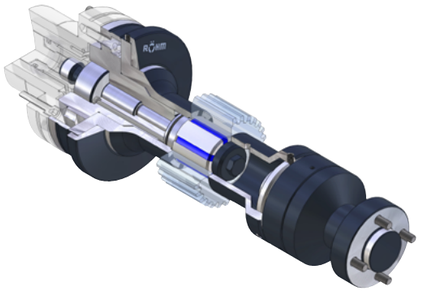
	A 06	A 08
RMS - complete (flange incl. quick-clamping screw)	**1180340**	**1180342**
Adapters RMS	**1183314**	**1183314**
Suitable basic take-up	**156670**	**156671**
A	38	45
Ø B	170	215
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M12	M16
Ø F mm	139 H7	139 H7

Matching intermediate pieces RMS KK6 and RMS KK8 can be found directly in the product table of the segment clamping mandrel AGILIS

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Notes

Special solutions ABSIS



ABSIS Segment clamping mandrel - nominal 38.43 mm

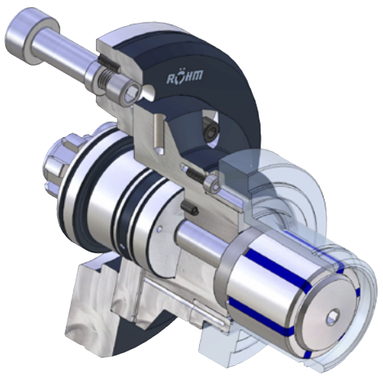
APPLICATION

Cutting, Turning

ABSIS clamping mandrel for clamping on a toothing machine. The centering is done by the segment clamping sleeve; the clamping by the pendulum bell. Clamping mandrel with quick change system on the basic take-up.

CUSTOMER BENEFITS

- Stable clamping using axial pull
- Concentricity of 0.01 mm
- A lot of freedom of the tool (milling coasting)
- Designed for wet machining



ABSIS Segment clamping mandrel - nominal 60.5 mm

APPLICATION

Turning

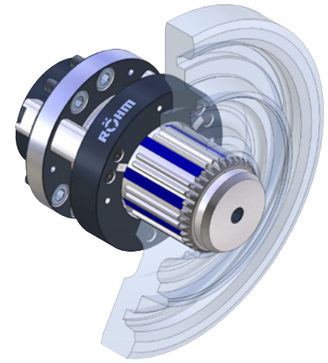
ABSIS clamping mandrel for clamping on a lathe. Clamping mandrel with quick change system on the basic take-up. Fixed workpiece stop with air sensing. Clamping screw sunk in the segment clamping sleeve to ensure the freedom of the tool.
Different clamping mandrel sizes of clamping diameters 25 mm to diameter 105 mm (ABSIS size 00 to size 04).

CUSTOMER BENEFITS

- Stable clamping using axial pull
- Concentricity of 0.01 mm
- Simple changing of the workpiece stop as well as the clamping sleeves
- A lot of freedom of the tool

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Segment clamping mandrel

Special solutions ABSIS



ABSIS Segment clamping mandrel TK-Ø 88 mm

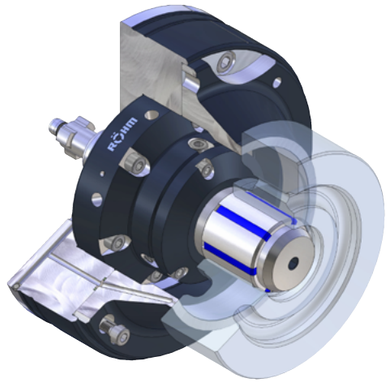
APPLICATION

Turning

ABSIS clamping mandrel for clamp in the toothing. The toothed segment clamping sleeve clamps the workpiece exactly in the tooth flanks. The centering disc helps during loading of the workpiece. Workpiece stop can be pulled back using draw bar with air sensing.

CUSTOMER BENEFITS

- Freedom of tool by stop that can be pulled back
- Concentricity of 0.01 mm



ABSIS Segment clamping mandrel Ø 55.33 mm

APPLICATION

Turning of a gear wheel blank

Force-actuated ABSIS standard clamping mandrel with quick change system. The stop diameter is far beyond the clamping diameter. Workpiece stop with air sensing attached on the intermediate flange.

CUSTOMER BENEFITS

- Stable clamping using axial pull
- Concentricity of 0.01 mm
- Low-cost thanks to standard components

Special solutions ABSIS



FAST CHANGING WITHIN THE MODULAR SYSTEM

As a consistent modular system, it is possible to combine the individual components such as CAPTIS collet chuck and CAPTIS collet depending on use.

Collet replacing
Fast and easy collet replacement in 15 seconds reduces the set-up times.







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COLLET CHUCKS

The new and modular CAPTIS clamping system is impressive in both rotary applications in lathes and in stationary use in drilling, milling and machining centres and measuring machines.
The encompassing clamping enables precise concentricity and repeatability of currently 0.01 mm without deforming the workpiece.

ADVANTAGES AT A GLANCE

- Highest flexibility due to modular construction
- Precise concentricity and repeatability of currently 0.01 mm
- Compact and weight-reduced construction for a larger work area



Video CAPTIS-D



CAPTIS-D, CAPTIS-A, CAPTIS-AF

- Modular construction for highest flexibility
- Compact construction for more work space
- Many combination and conversion possibilities

CAPTIS-M

- Compact design with reduced interfering contours for optimum workpiece accessibility and enlarged working space
- Modular conversion option for internal and external workpiece stop



CAPTIS COLLET CHUCKS

- Made of innovative rubber mixture for the longest service life
- Clamping range of ± 0,5 mm
- Hardened and ground steel segments for high resistance to wear
- Collet chuck hot vulcanized

CAPTIS-D - with through-hole



APPLICATION

For use on lathes.
Ideal for bars and pipe machining on the main spindle.

TYPE

Force-actuated.
With through-hole for bar and pipe machining.
With axial tension.

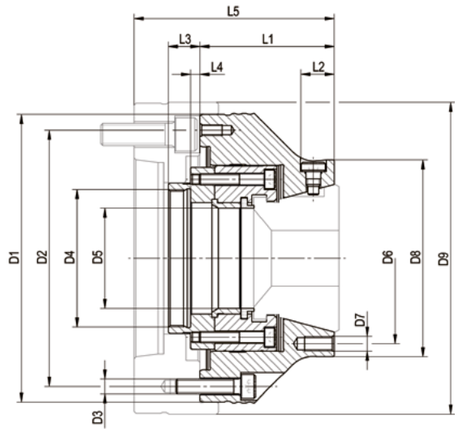
CUSTOMER BENEFITS

- Maximum flexibility thanks to modular design and versatile combination and retrofitting options
- Low weight and low height thanks to compact design for more work area in the machine
- Short setup and non-productive times thanks to fast collect chuck change as well as great expansion of the collet chucks

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-D = in Latin: hold, through-hole



CAPTIS-D collet chucks - with axial pull

	CAPTIS-D 32	CAPTIS-D 42	CAPTIS-D 52	CAPTIS-D 65	CAPTIS-D 80	CAPTIS-D 100	CAPTIS-D 120
Components							
Collet chucks (without changing parts)	**1283101**	**1283102**	**1283103**	**1283104**	**1283105**	**1283106**	**1283107**
Clamping device, manual	1283285	1283286	1283287	1283288	1283289	-	-
Clamping device, pneumatic	-	-	-	-	1362635	1362636	1362637
Conversion kit to CAPTIS-A	1283256	1283257	1283258	1283259	1283260	1283261	1283262
Turning fixture for soft collets	1316901	1316902	1316903	1316904	1316905	1316906	1316907
Clamping & Performance data							
Clamping range mm	4-32	4-42	4-52	4-65	5-80	16-100	65-120
Elongation Ø in mm	2	2,6	2,6	2,6	2,6	2,6	2,6
Max stroke mm	6	6	6	6	6	6	6
Max actuation force kN	25	35	40	45	50	65	70
Max total clamping force kN	66	92,5	105	118	132	170	180
Max speed U/min	8000	7000	6500	6000	5500	5000	4000
Clamping devices dimensions							
D1 mm	137	137	155	155	215	215	250
D2 mm	100	118	138	138	190	190	215
D3 mm	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D4 mm	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M120x1,5	M132x1,5
D5 mm	34	44	54	68	82	102	122
D6 mm	70	92	92	110	132	190	225
D7 mm	3x M8	3x M8	3x M8	3x M8	3x M10	3x M12	3x M12
D8 mm	84	106	106	122	152	215	250
L1 mm	70,5	69	72,5	78	85	102	102
L2 mm	18	18	18	26	19	-	-
L3 mm	17	17	17	17	20	20	20
L4 min mm	1,5	1,5	1,5	1,5	-0,5	-0,5	-0,5
L4 max mm	7,5	7,5	7,5	7,5	5,5	5,5	5,5

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Collet chucks

CAPTIS-A - prepared for internal workpiece stop



APPLICATION

External clamping of round workpieces, as well as square and hexagon profiles.
Turning, milling, grinding operations as well as for measuring.
Ideal for machining insertion parts on the main spindle.

TYPE

Force-actuated.
Optional through-hole for bar machining by removing the internal workpiece stop.
With axial tension against workpiece stop.

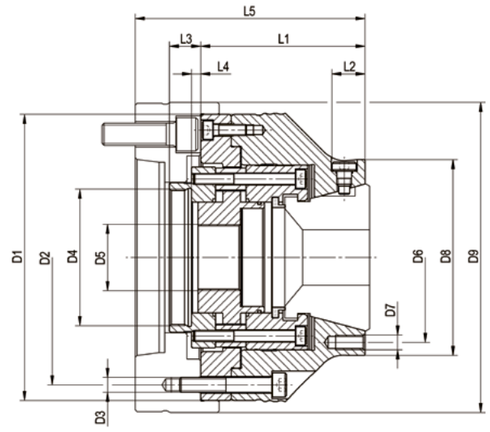
CUSTOMER BENEFITS

- Maximum flexibility thanks to modular design and versatile combination and retrofitting options
- Low weight and low height thanks to compact design for more work area in the machine
- Short setup and non-productive times thanks to fast collect chuck change as well as great expansion of the collet chucks
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Prepared for internal workpiece stop and front stop

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-A = in Latin: hold, workpiece stop



CAPTIS-A collet chuck - with axial tension against workpiece stop

	CAPTIS-A 32	CAPTIS-A 42	CAPTIS-A 52	CAPTIS-A 65	CAPTIS-A 80	CAPTIS-A 100	CAPTIS-A 120
Komponenten							
Collet chucks	**1283108**	**1283109**	**1283110**	**1283111**	**1283112**	**1283113**	**1283114**
Clamping device, manual	1283285	1283286	1283287	1283288	1283289	-	-
Clamping device, pneumatic	-	-	-	-	1362635	1362636	1362637
Conversion kit to CAPTIS-A	1283249	1283250	1283251	1283252	1283253	1283254	1283255
Turning fixture for soft collets	1316901	1316902	1316903	1316904	1316905	1316906	1316907
Clamping & Performance data							
Clamping range mm	4-32	4-42	4-52	4-65	5-80	16-100	65-120
Elongation Ø in mm	2	2,6	2,6	2,6	2,6	2,6	2,6
Max stroke mm	6	6	6	6	6	6	6
Max actuation force kN	25	35	40	45	50	65	70
Max total clamping force kN	66	92,5	105	118	132	170	180
Max speed U/min	8000	7000	6500	6000	5500	5000	4000
Clamping devices dimensions							
D1 mm	137	137	155	155	215	215	250
D2 mm	100	118	138	138	190	190	225
D3 mm	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D4 mm	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M120x1,5	M132x1,5
D5 mm	M22x1,5	M30x1,5	M36x1,5	M50x1,5	M55x1,5	M85x1,5	M105x1,5
D6 mm	70	92	92	110	132	190	225
D7 mm	3x M8	3x M8	3x M8	3x M8	3x M10	3xM12	3x M12
D8 mm	84	106	106	122	152	215	250
L1 mm	84	82,5	89	94,5	103	122	122
L2 mm	18	18	18	26	19	-	-
L3 mm	17	17	17	17	20	20	20
L4 min mm	1,5	1,5	1,5	1,5	-0,5	-0,5	-0,5
L4 max mm	7,5	7,5	7,5	7,5	5,5	5,5	5,5

Collet chuck system CAPTIS

CAPTIS-AF - axially fixed collet chuck



APPLICATION

External clamping of round workpieces, as well as square and hexagon profiles.
Turning, milling, grinding operations as well as for measuring.
Ideal for delicate workpieces, short clamping lengths and for use in opposed spindles or counter spindles.

TYPE

Force-actuated.
Optional through-hole for bar machining by removing the internal workpiece stop.
Axially fixed collect chuck, no axial tension against internal workpiece stop.

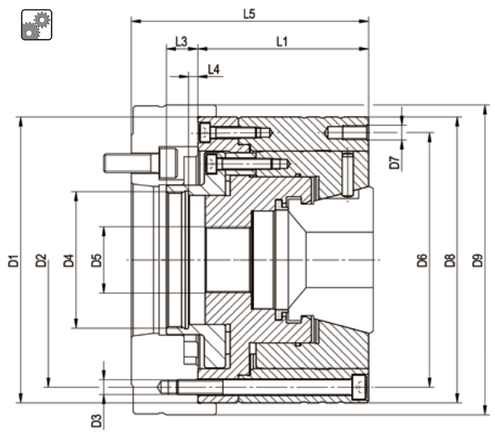
CUSTOMER BENEFITS

- Maximum flexibility thanks to modular design and versatile combination and retrofitting options
- Low weight and low height thanks to compact design for more work area in the machine
- Short setup and non-productive times thanks to fast collect chuck change as well as great expansion of the collet chucks
- No damage, impressions on workpieces due to axially fixed collect chuck
- Prepared for internal workpiece stop and front stop

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-AF = in Latin: hold, axially fixed collet chuck

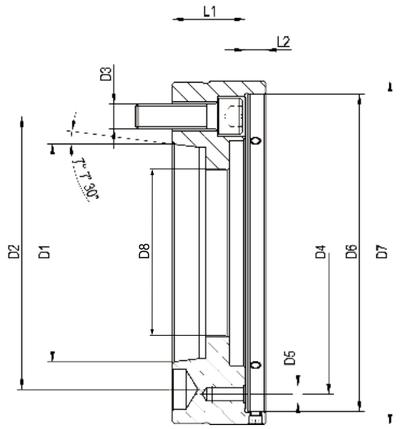


CAPTIS-AF collet chuck - axially fixed collet chuck, no axial tension against internal workpiece stop

	CAPTIS-AF 32	CAPTIS-AF 42	CAPTIS-AF 52	CAPTIS-AF 65	CAPTIS-AF 80	CAPTIS-AF 100	CAPTIS-AF 120
Components							
Collet chucks	**1285001**	**1285002**	**1285003**	**1285004**	**1285005**	**1285006**	**1285007**
Clamping device, manual	1283285	1283286	1283287	1283288	1283289	-	-
Clamping device, pneumatic	-	-	-	-	1362635	1362636	1362637
Turning fixture for soft collets	1316901	1316902	1316903	1316904	1316905	1316906	1316907
Clamping & Performance data							
Clamping range mm	4-32	4-42	4-52	4-65	5-80	42-100	62-120
Elongation Ø in mm	2	2,6	2,6	2,6	2,6	2,6	2,6
Max stroke mm	6	6	6	6	6	6	6
Max actuation force kN	25	35	40	45	50	65	70
Max total clamping force kN	66	92,5	105	118	132	170	180
Max speed U/min	8000	7000	6500	6000	5500	5000	4000
Clamping devices dimensions							
D1 mm	137	137	155	155	215	215	250
D2 mm	120	120	138	138	190	190	225
D3 mm	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D4 mm	M48x1,5	M54x1,5	M74x1,5	M74x1,5	M120x1,5	M120x1,5	M132x1,5
D5 mm	M22x1,5	M30x1,5	M36x1,5	M50x1,5	M65x1,5	M85x1,5	M105x1,5
D6 mm	94	120	138	138	190	190	225
D7 mm	3x M6	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8
D8 mm	105	137	155	155	215	215	250
L1 mm	80,5	81	92,5	92,5	102	102	122
L2 mm	34,7	-	-	-	-	-	-
L3 mm	15,5	16	17	17	18,5	18,5	18,5
L4 min mm	-4	-2,5	2,5	2,5	-1	-1	-1
L4 max mm	2	3,5	8,5	8,5	5	5	5

Intermediate flange

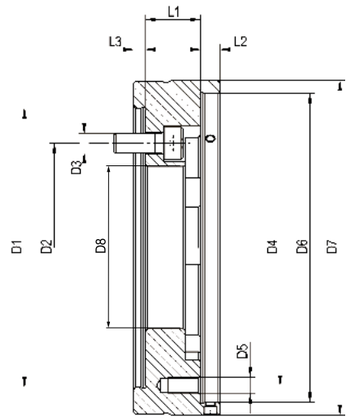




Intermediate flange ISO 702-1 (DIN 55028) **with adjusting screw**

Size	32/42 - Nr.5	32/42 - Nr.6	52/65 - Nr.5	52/65 - Nr.6	52/65 - Nr.8	80/100 - Nr.6	80/100 - Nr.8	120 - Nr.8	120 - Nr.11
Intermediate flange	**1283194**	**1283195**	**1283198**	**1283199**	**1283200**	**1283203**	**1283204**	**1283207**	**1283209**
D1 mm	82,563	106,375	82,563	106,375	139,719	106,375	139,719	139,719	196,869
D2 mm	104,8	133,4	104,8	133,4	171,4	133,4	171,4	171,4	235
D3 mm	6x M10	3x M12	6x M10	3x M12	3x M16	6x M12	3x M16	6x M16	3x M20
D4 mm	100/120	100/120	138	138	138	190	190	225	225
D5 mm	6x M8	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12	6x M12
D6 mm	137	137	155	155	155	215	215	250	250
D7 mm	150	165	168	168	210	230	230	270	280
D8 mm	63	63	79,5	81,5	81,5	103	136	136	165
L1 mm	34,5	35,5	36	35,5	42	47	40	55	40
L2 mm	10	10	10	10	10	10	10	12	12





Intermediate flange cylindrical centre mount **with adjusting screw**

Size	32/42-Z140	52/65-Z140	52/65-Z170	80/100-Z170	80/100-Z220	120-Z220
Intermediate flange	**1283196**	**1283201**	**1283202**	**1283205**	**1283206**	**1283208**
D1 mm	140	140	170	170	220	220
D2 mm	104,8	104,8	133,4	133,4	171,4	171,4
D3 mm	6x M10	6x M10	6x M12	6x M12	6x M16	6x M16
D4 mm	100/120	138	138	190	190	225
D5 mm	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D6 mm	137	155	155	215	215	250
D7 mm	150	168	180	230	230	270
D8 mm	63	81,5	81,5	102	137	137
L1 mm	19,5	27,5	22,5	47	40	55
L2 mm	10	10	10	10	10	12
L3 mm	6	6	6	6	6	6

CAPTIS-M - for rotating and stationary use



APPLICATION

Ideally suited for rotating use in lathes as well as for stationary use in drilling, milling and machining centers, measuring machines as well as for conventional and manual processing.

TYPE

Operated manually with a security key.
With axial tension against workpiece stop.

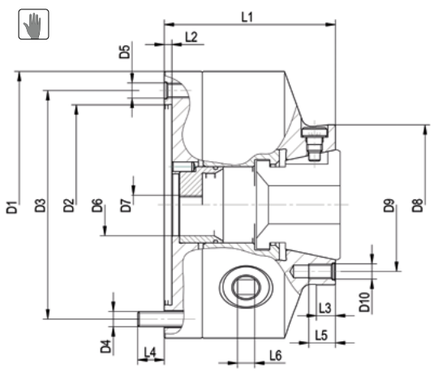
CUSTOMER BENEFITS

- Compact design with reduced interfering contours for optimum workpiece accessibility and enlarged working space
- Modular conversion option for internal and external workpiece stop
- Stable clamping using axial tension

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-M = in Latin: hold, manually

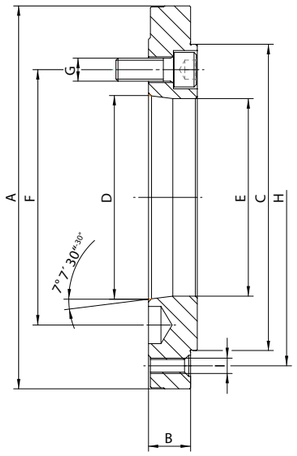


CAPTIS-M collet chuck - with axial tension against workpiece stop

	CAPTIS-M 32	CAPTIS-M 42	CAPTIS-M 52	CAPTIS-M 65
Components				
Collet chucks (incl. workpiece stop, protecting sleeve and security key)	**1345739**	**1345740**	**1345741**	**1345742**
Workpiece stop	1345749	1345758	1345766	1345775
Protecting sleeve	1345751	1345760	1345768	1345777
Security key (acc, to DIN 1550 for rotating chucks)	154372	154373	154373	154374
Clamping device, manual	1283285	1283286	1283287	1283288
Clamping device, pneumatic	-	-	-	-
Turning fixture for soft collets	1316901	1316902	1316903	1316904
Clamping & Performance data				
Clamping range mm	4-32	4-42	4-52	4-65
Elongation Ø in mm	2	2,6	2,6	2,6
Max stroke mm	6	6	6	6
Max actuation force kN	60	120	120	100
Max total clamping force kN	30	60	60	50
Max speed U/min	5000	4500	4500	4000
Clamping devices dimensions				
D1 mm	140	160	160	200
D2 mm	95	125	125	160
D3 mm [H6]	120	140	140	176
D4 mm	6xM8	6xM10	6xM10	6xM10
D5 mm	3xM8	3xM10	3xM10	3xM10
D6 mm	32,5	42,5	52,5	65,5
D7 mm	M10	M10	M10	M10
D8 mm [g6]	84	106	106	122
D9 mm	70	92	92	110
D10 mm	3xM8	3xM8	3xM8	3xM8
L1 mm	90	100	100	110
L2 mm	4	4	4	4
L3 mm	10	10	10	10
L4 mm	13	14	14	16
L5 mm	14	16	16	16
L6 mm	9	10	10	11

Intermediate flange



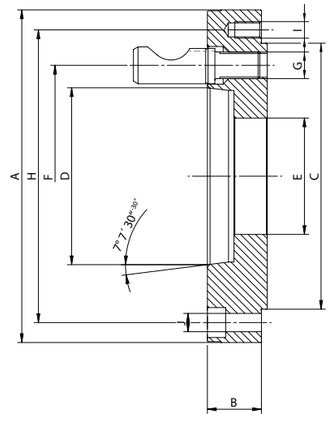


A09
Steel Intermediate flange according to **DIN ISO 702-1** (DIN 55026) / cylindrical mount on chuck side according to DIN 6350

Size	**32**	**32**	**32**	**42/52**	**42/52**	**42/52**	**42/52**	**65/80**	**65/80**	**65/80**
Short taper size	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 8**	**Gr. 5**	**Gr. 6**	**Gr. 8**
Intermediate flange	**182902**	**182904**	**182906**	**182908**	**182910**	**182912**	**182914**	**182918**	**182920**	**182922**
A mm	140	140	165	160	160	165	210	200	200	210
B mm	21	21	25	18	18	25	32	18	22	32
C mm	95	95	95	125	125	125	125	160	160	160
D mm	63,513	82,563	106,375	63,513	82,563	106,375	139,719	82,563	106,375	139,719
E mm	61	79,6	80	61	79,6	103,2	100	79,6	103,2	136,2
F mm	82,6	104,8	133,4	82,6	104,8	133,4	171,4	104,8	133,4	171,4
G	M10	M10	M12	M10	M10	M12	M16	M10	M12	M16
H mm	108 (120)	108 (120)	108 (120)	140	140	140	140	176	176	176
I	3x/6xM8	3x/6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10

Complete with fastening screws





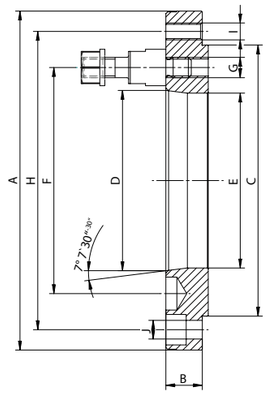
A09
Steel Intermediate flange according to **DIN ISO 702-2** (DIN 55029) / cylindrical mount on chuck side according to DIN 6350

Size	**32**	**32**	**32**	**42/52**	**42/52**	**42/52**	**42/52**	**65/80**	**65/80**	**65/80**
Short taper size	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 8**	**Gr. 5**	**Gr. 6**	**Gr. 8**
Intermediate flange	**182958**	**182960**	**182962**	**182966**	**182968**	**182970**	**182972**	**182976**	**182978**	**182980**
A mm	140	146	181	160	160	181	225	200	200	225
B mm	24	30	36	23,5	26,5	35,5	38,5	26,50	32,50	39,50
C mm	95	95	95	125	125	125	125	160	160	160
D mm	63,513	82,563	106,375	63,513	82,563	106,375	139,719	82,563	106,375	139,719
E mm	33	33	33	50	50	50	50	70	70	70
F mm	82,6	104,8	133,4	82,6	104,8	133,4	171,4	104,8	133,4	171,4
G	M10x1	M12x1	M16x1,5	M10x1	M12x1	M16x1,5	M20x1,5	M12x1	M16x1,5	M20x1,5
H mm	108 (120)	108 (120)	108 (120)	140	140	140	140	176	176	176
I	6xM8	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10
J mm	3x9	-	-	3x11	3x11	-	-	3x11	3x11	-

Complete with cam locking bolts

Intermediate flange



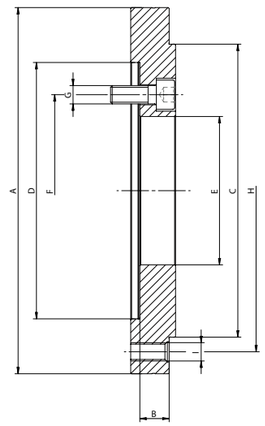


A09
Steel Intermediate flange according to **DIN ISO 702-3** (DIN 55027) / cylindrical mount on chuck side according to DIN 6350

Size	32	32	32	42/52	42/52	42/52	42/52	65/80	65/80	65/80
Short taper size	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 8**	**Gr. 5**	**Gr. 6**	**Gr. 8**
Intermediate flange	**183014**	**183016**	**183018**	**183022**	**183024**	**183026**	**183028**	**183032**	**183034**	**183036**
A mm	140	140	170	160	160	170	220	200	200	220
B mm	16,5	16,5	27	21,5	21,5	18	31,5	21,5	21,5	21,5
C mm	95	95	95	125	125	125	125	160	160	160
D mm	63,513	82,563	106,375	63,513	82,563	106,375	139,719	82,563	106,375	139,719
E mm	61	79,6	80	61	79,6	103,2	100	79,6	103,2	136,2
F mm	85	104,8	133,4	85	104,8	133,4	171,4	104,8	133,4	171,4
G	M10	M10	M12	M10	M10	M12	M16	M10	M12	M16
H mm	108 (120)	108 (120)	108 (120)	140	140	140	140	176	176	176
I	6xM8	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10
J mm	3x9	-	-	3x11	3x11	-	-	3x11	3x11	3x11

Complete with studs and collar nuts





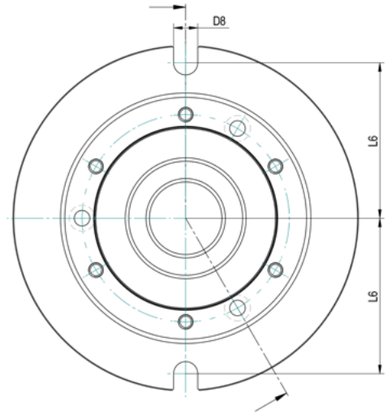
A09
Steel Intermediate flange according to **DIN ISO 702-4** (DIN 55028) / cylindrical mount on chuck side according to DIN 6350

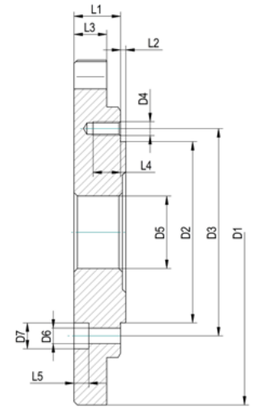
Size	32	32	32	42/52	42/52	42/52	42/52	65/80	65/80
Flange	**Gr. 3**	**Gr. 4**	**Gr. 5**	**Gr. 3**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 5**	**Gr. 6**
Cylindrical mount	**90**	**115**	**140**	**90**	**115**	**140**	**170**	**140**	**170**
Intermediate flange	**1349459**	**1349461**	**1349463**	**1349465**	**1349467**	**1349469**	**1349471**	**1349473**	**1349475**
A mm	140	140	150	160	160	160	180	200	200
B mm	13	20	18	13	13	15	20	16	18
C mm	95	95	95	125	125	125	125	160	160
D mm	90 + 0,022/0	115 + 0,022/0	140 + 0,025/0	90 + 0,022/0	115 + 0,022/0	140 + 0,025/0	170 + 0,025/0	140 + 0,025/0	170 + 0,025/0
E mm	43	53	81	43	53	81	81	81	81
F mm	70,6	82,6	104,8	70,6	82,6	104,8	133,4	104,8	133,4
G mm	3xM10	3xM10	3xM10	6xM10	6xM10	6xM10	3xM12	6xM10	6xM12
H mm	120	120	120	140	140	140	140	176	176
I	6xM8	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10

Complete with fastening screws

Base plate





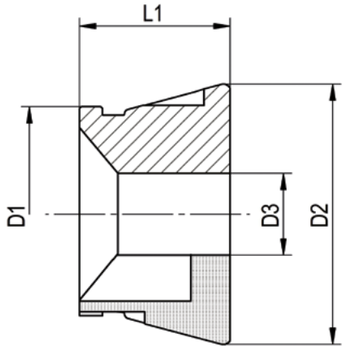


A09
Base plates for CAPTIS-M and lathe chucks with **cylindrical centre mount,** DIN 6350

Size	32	42/52	65/80
Base plate	**1406406**	**162793**	**162401**
D1 mm	220	240	280
D2 mm	95	125	160
D3 mm	120	140	176
D4 mm	6xM8	6xM10	6xM10
D5 mm	40	42	55
D6 mm	14	14	14
D7 mm	28	28	28
D8 mm	3x9	3x11	3x11
D9 mm	3x15	3x18	3x18
D10 mm	190	212	252
L1 mm	27	27	27
L2 mm	3	3	3
L3 mm	16	16	16
L4 mm	14	17	17
L5 mm	10	11	11

CAPTIS collet





(G): Smooth — from 4-7 mm smooth
(LQ): Longitudinal and transverse grooves — from 8-10 mm with trans. grooves
(Q): Transverse grooves — caused by production
(W): Soft

* Please specify clamping diameters D3 in the order, valid for collet chucks type LQ + Q

Clamping of macined and unmachined parts with extension and without extension

Size	D1	D2	L1	Longitu-dinal and transverse	Transvers grooves	Smooth	Soft	Round	Hexagon	Square	Raising	Order No.
32	46,2	57,7	44	X				8-32mm			1	CAPTIS-32-47-RLQ / D3*
32	46,2	57,7	44		X				7-27mm		1	CAPTIS-32-47-SQ / D3*
32	46,2	57,7	44		X					7-22mm	1	CAPTIS-32-47-VQ / D3*
32	46,2	57,7	44			X		4-32mm			1	CAPTIS-32-44-RG / D3*
32	46,2	57,7	44				X	5,15,20mm			1	CAPTIS-32-44-WG / D3*
Size												
42	54	79,5	47	X				8-42mm			0,5	CAPTIS-42-47-RLQ / D3*
42	54	79,5	47		X				7-36mm		1	CAPTIS-42-47-SQ / D3*
42	54	79,5	47		X					7-30mm	1	CAPTIS-42-47-VQ / D3*
42	54	79,5	42			X		4-42mm			0,5	CAPTIS-42-42-RG / D3*
42	54	79,5	42				X	8,15,30mm			0,5	CAPTIS-42-42-WG / D3*
Size												
52	65,7	79,5	46	X				8-52mm			0,5	CAPTIS-52-46-RLQ / D3*
52	65,7	79,5	46		X				7-45mm		1	CAPTIS-52-46-SQ / D3*
52	65,7	79,5	46		X					8-36mm	1	CAPTIS-52-46-VQ / D3*
52	65,7	79,5	46			X		4-52mm			0,5	CAPTIS-52-46-RG / D3*
52	65,7	79,5	46				X	8,15,30mm			0,5	CAPTIS-52-46-WG / D3*
Size												
65	80	99,5	58	X				8-65mm			0,5	CAPTIS-65-58-RLQ / D3*
65	80	99,5	58		X				7-56mm		1	CAPTIS-65-58-SQ / D3*
65	80	99,5	58		X					7-46mm	1	CAPTIS-65-58-VQ / D3*
65	80	99,5	53			X		5-65mm			0,5	CAPTIS-65-53-RG / D3*
65	80	99,5	53				X	8,20,40mm			0,5	CAPTIS-65-53-WG / D3*
Size												
80	94,5	114,5	53	X				11-80mm			1	CAPTIS-80-53-RLQ / D3*
80	94,5	114,5	53		X				7-68mm		1	CAPTIS-80-53-SQ / D3*
80	94,5	114,5	53		X					8-42mm	1	CAPTIS-80-53-VQ / D3*
80	94,5	114,5	53			X		5-80mm			1	CAPTIS-80-53-RG / D3*
80	94,5	114,5	53				X	20,30,40, 60mm			1	CAPTIS-80-53-WG / D3*
Size												
100	121	144,5	59	X				42-100mm			1	CAPTIS-100-59-RLQ / D3*
100	121	144,5	59		X				50-86mm		1	CAPTIS-100-59-SQ / D3*
100	121	144,5	59		X					50-70mm	1	CAPTIS-100-59-VQ / D3*
100	121	144,5	59			X		42-100mm			1	CAPTIS-100-59-RG / D3*
100	121	144,5	59				X	30,45,65, 90mm			1	CAPTIS-100-59-WG / D3*

Akkermans Industrial Engineering B.V. info@aiebv.com T +31 (0)165 - 224140
Collet chucks

Accessories CAPTIS



Clamping device for CAPTIS collets, manual

Size	32	42
Clamping device manual	**1283285**	**1283286**
Suitable for	round	round
Weight kg	1	1,1



Clamping device for CAPTIS collets, manual

Size	52	65	80
Clamping device manual	**1283287**	**1283288**	**1283289**
Suitable for	round	round	round
Weight kg	1,1	1,2	1,3



Clamping device for CAPTIS collets, pneumatic

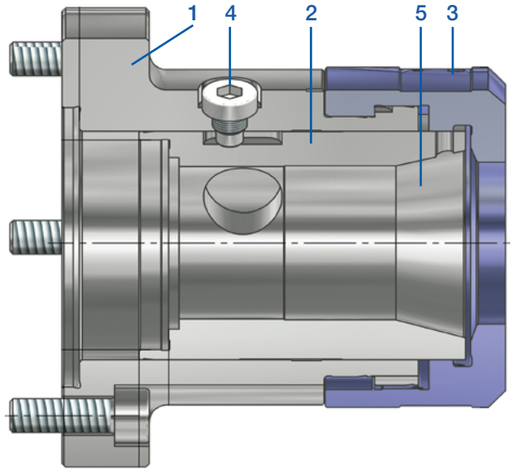
Size	80	100
Clamping device pneumatic	**1362635**	**1362636**
Suitable for	round	round
Weight kg	2,5	2,8



Clamping device for CAPTIS collets, pneumatic, 2 hand actuation

Size	120
Clamping device pneumatic (2 hand actuation)	**1362637**
Suitable for	round
Weight kg	3

KZF

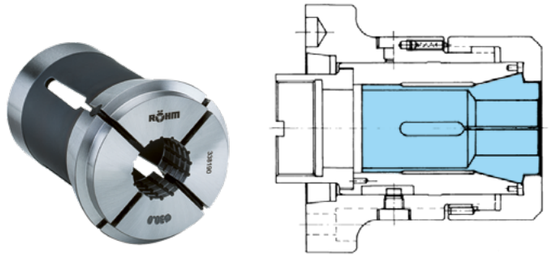


1. Body
2. Thrust sleeve for steel collets and segment collets. By replacing the thrust sleeve, duo-segment collets can be used.
3. Union nut with bayonet lock
4. Protection against torsion for thrust sleeve

- Adapter fitting must be ordered separately. Suitable for existing draw tube, glue into thrust sleeve.
- Special accessories, are not part of the scope of delivery. The workpiece stop can only be used for segment collets. Order separately: Cap screw or stud bolt with locknut acc. to DIN 55027.

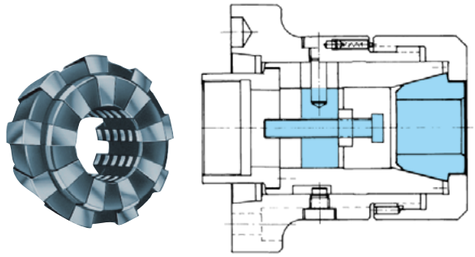
5. Protection against torsion for collet

Hollow clamping with steel collet DIN 6343



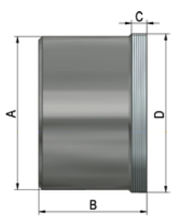
Chuck size	Collets DIN 6343					
	Type		Clamping capacity			Tolerance
KZF 40	8206-E	DIN 6343 173 E	2-42	6-36	6-29	+0,2 -0,3
KZF 60	8207-E	DIN 6343 185 E	4-60	8-52	7-42	+0,2 -0,3
KZF 80	7037-E	DIN 6343 193 E	20-80	18-69	15-56	+0,2 -0,3

Clamping with segment collet and workpiece stop



Chuck size	Segment collets DIN 6343		
	Type	Clamping capacity	Tolerance
KZF 40	Series R 36	8-42	2±0,3
KZF 60	Series R 52	19-61	2±0,3
KZF 80	-	-	-

C 15
Connecting piece for collet chuck KZF



Item no.	Größe	A	B	C	D
683648	40	62	60	8,5	M66x1,5
683649	60	85	60	8,5	M88x1,5
683652	80	100	60	12,5	M114x1,5

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Power-operated collet chucks

KZF - without axial tightening, for DIN collet chucks



APPLICATION

External clamping of round workpieces, as well as square and hexagon profiles.
Turning, milling, grinding operations as well as for measuring.
Ideal for bars and pipe machining on the main spindle. For using standardized DIN collet chucks or segment collet chucks.

TYPE

Force-actuated.
Internal workpiece stop optional in conjunction with segment collet.

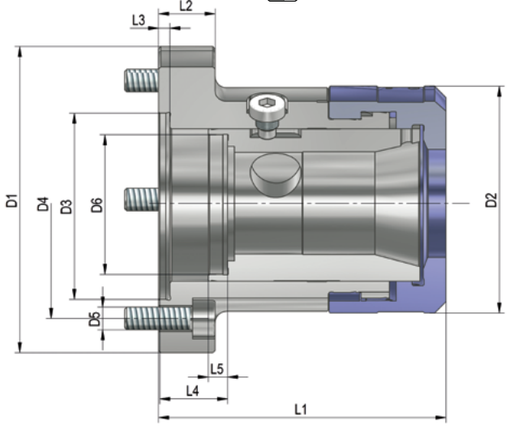
CUSTOMER BENEFITS

- Light weight and reduced height thanks to compact design
- Short setup times thanks to quick change of collet chuck
- High flexibility thanks to modular system
- Quick retrofitting to other workpieces by changing the collect chuck
- Axially fixed collect chuck, no axial tension against internal workpiece stop

TECHNICAL FEATURES

- Hardened, low-wear design
- Either DIN steel or segment collet chucks

KZF = force-actuated, collet, flange



C 15
Power-operated collet chuck KZF, with quick-acting bayonet catch, without collet
Cylindrical center mount / short taper mount, draw tube adapter available on request

	KZF 40	KZF 40	KZF 40	KZF 40	KZF 60	KZF 60	KZF 60	KZF 60	KZF 80	KZF 80
Recording	**Z-140**	**Z-88**	**KK 5**	**KK 6**	**Z-115**	**Z-170**	**KK 6**	**KK 8**	**Z-130**	**KK 8**
Components										
Collet chuck	**439989**	**439990**	**439991**	**439992**	**439993**	**439994**	**439995**	**439996**	**439997**	**439998**
Clamping & Performance data										
Clamping range mm	2-42	2-42	2-42	2-42	4-60	4-60	4-60	4-60	20-80	20-80
Elongation Ø in mm	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Max stroke mm	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
Max actuation force kN	25	25	25	25	30	30	30	30	35	35
Max total clamping force kN	66	66	66	66	79	79	79	79	92	92
Max speed U/min	8000	8000	8000	8000	5000	5000	5000	5000	4000	4000
Moment of inertia Jkg m²	0,029	0,029	0,029	0,029	0,038	0,038	0,038	0,038	0,108	0,108
Clamping devices dimensions										
D1 mm	160	135	170	170	157	190	210	210	187	210
D2 mm	100	100	100	100	122	122	122	122	150	150
D3 mm	140	88	82,563	106,375	115	170	106,375	139,719	130	139,719
D4 mm	104,8	115	104,8	133,4	136	133,4	133,4	171,4	166	171,4
D5 mm	4xM10	6xM8	4xM10	4xM12	8xM8	6xM12	4xM12	4xM16	8xM8	4xM16
D6 mm	M66x1,5	M66x1,5	M66x1,5	M66x1,5	M88x1,5	M88x1,5	M88x1,5	M88x1,5	M88x1,5	M114x1,5
L1 mm	116	116	127	128	132	132	144	146	156	170
L2 mm	25	25	25	25	25	25	25	25	30	30
L3 mm	5	5	16	18	5	5	18	22	5	22
L4 min mm	16	16	32	33	16	16	33	35	17	36
L4 max mm	8,5	8,5	24,5	25,5	8,5	8,5	25,5	27,5	9,5	28,5
L5 mm	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	12,5	12,5
Weight without collet kg	7,1	5,3	7,5	7,5	9,2	9,2	10,2	14	17,5	18

Power-operated collet chucks

KZF-S - with axial tightening, bayonet quick lock



APPLICATION

External clamping of round workpieces with smooth or toothed outer geometry for turning, milling, grinding and measuring operations.
Clamping device/clamping optimal adapted to the workpiece/machining process.
Ideal for short clamping lengths.

TYPE

Force-actuated.

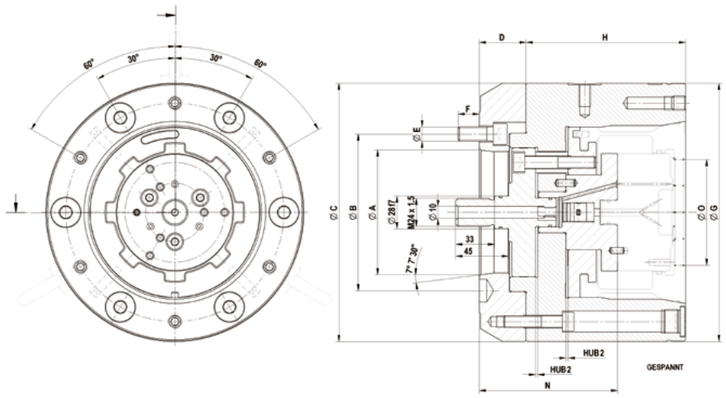
CUSTOMER BENEFITS

- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Quick change of collet chuck by bayonet lock
- High concentricity, axial run-out and repeatability
- High flexibility thanks to modular system

TECHNICAL FEATURES

- Manual lubrication/low-maintenance
- Prepared for internal media feed-through, e.g. air and coolant
- Prepared for internal workpiece stop
- Collet chucks and internal workpiece stop can be individually adapted to the workpiece
- Sealing against chips

KZF-S = force-actuated, collet, flange, quick-change function



C 18
Power-operated collet chuck KZF-S, for external clamping

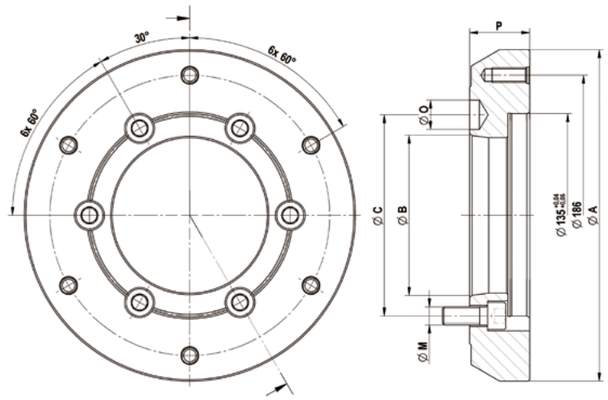
	KZF-S 80	KZF-S 120	KZF-S 180
Components			
Collet chuck	**1117832**	**1117830**	**1125403**
Base bolt	1117833	1072101	1125404
Draw piece	1117837	1117827	1125408
Fastening plate	1117835	1072105	1125406
Bolt space	1117836	1072103	1072103
Ground stop for reverse valve cartridge	1117839	1072113	1125410
Ground stop for ermeto pipe	1117841	1117824	1125412
Reverse valve cartridge 1 Bar	756641	863134	863134
Reverse valve cartridge 3 Bar	843866	889894	889894
Clamping & Performance data			
Clamping range mm	30 - 80	60 - 120	100 - 180
Elongation Ø in mm	1,4	1,4	1,4
Max stroke mm	4	4	4
Max actuation force kN	30	40	40
Max total clamping force kN	106	142	142
Max speed U/min	6000	5000	3500
Clamping devices dimensions			
Ø G mm	170	220	285
H mm	125	136	136

Infos: kzf@roehm.biz

Power-operated collet chucks

Accessories KZF-S





C 18
Intermediate flange ISO 702-1 (DIN 55028)

	A 05	Nr. 5 (A5)	A 05	Nr. 6 (A6)	A 06	A 08	Nr. 8 (A8)	A 08
Intermediate flange	**1117843**	**1072115**	**1117845**	**1072117**	**1125416**	**1117847**	**1072119**	**1125418**
For	KZF-S 80	KZF-S 80/AGILIS 05-07	KZF-S 81	KZF-S 120/ AGILIS 05-07	KZF-S 180	KZF-S 82	KZF-S 120/ AGILIS 05-07	KZF -S 180
Short-taper-Ø B	82,563	82,563	106,375	106,375	106,375	139,719	139,719	139,719
Short-taper pitch circle Ø C	104,8	104,8	133,4	133,4	133,4	171,4	171,4	171,4
Flange outer-Ø A	170	220	170	220	285	210	220	285
Ø D	105	135	105	135	200	105	135	200
Ø F mm	143	186	143	186	250	143	186	250
Ø O mm	16,3	16,3	19,45	19,45	19,45	24,2	24,2	24,2
Thread-Ø M	M10	M10	M12	M12	M12	M16	M16	M16
Total length flange P	35	40	35	40	45	35	40	45

Special solutions KFG



Sliding clamping mandrel KFG

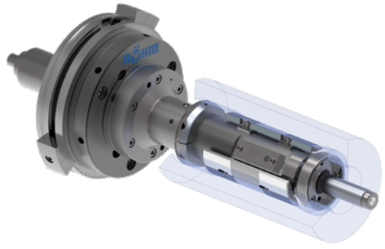
APPLICATION

Turning of tubes and shafts

Clamping via sliding jaws on two compensating clamping planes. The right-hand side is power-actuated, while the left-hand side is spring-actuated for workpiece tolerance compensation with a front stop.

CUSTOMER BENEFITS

- Very large expansion range of approx. 6 mm and large compensation between the clamping zones
- Version with serrated sliding jaws can be used as can be used for raw part clamping
- Concentricity of 0.05 mm



Sliding clamping mandrel KFG

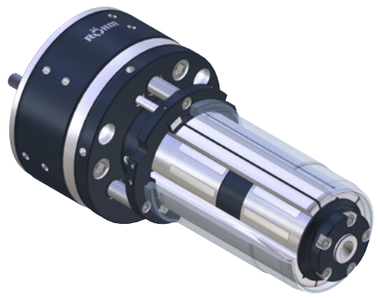
APPLICATION

Turning of stator housings

Clamping via bridge jaws, power-operated without compensation.

CUSTOMER BENEFITS

- Very large expansion range of approx. 5 mm
- Interchangeable bridge jaws and balancing weights, Support via tailstock
- Large clamping surfaces due to wide bridge jaws
- Concentricity of 0.05 mm



Sliding clamping mandrel KFG with intermediate sleeve Ø 104-120 mm

APPLICATION

Turning of cylinder liners, final machining.

Left clamping plane power-actuated via the draw bar. Right clamping plane power-actuated via the tailstock. Retractable stop with air contact control. Different workpiece diameters can be clamped by changing the intermediate sleeve.

CUSTOMER BENEFITS

- Interchangeable intermediate sleeve
- High concentricity of 0.05 mm

Special solutions KFG



Sliding clamping mandrel KFG clamping range from 98-113 mm

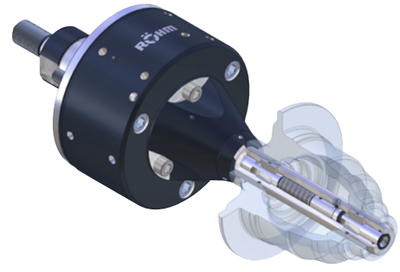
APPLICATION

Turning of clamping cylinder liners, raw part

Left clamping plane force-actuated by draw bar. Right clamping plane spring-actuated to compensate for workpiece tolerances. Stop can be pulled back. Different workpiece diameters can be clamped by changing the top jaws.

CUSTOMER BENEFITS

- Large clamping range elongation of 7 mm
- Large torque transmission from corrugation of the top jaws



Sliding clamping mandrel KFG clamping-Ø 30 mm

APPLICATION

Turning of a differential housing

Clamping of a differential housing in two clamping planes. Diameter difference between the clamping planes are compensated. The workpiece stop is equipped with an air sensing. The entire clamping mandrel is sealed with purge air.

CUSTOMER BENEFITS

- Two compensating clamping planes
- Concentricity of 0.02 mm



Sliding clamping mandrel KFG clamping-Ø 39 mm / clamping-Ø 40 mm

APPLICATION

Turning

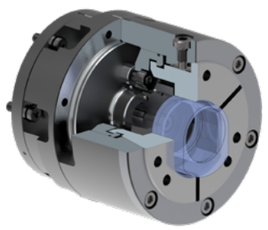
The clamping in clamping zone 1 is done by the draw bar with serrated jaws for high torque transmission. Clamping zone 2 is actuated by springs and is equipped with an intermediate sleeve.

CUSTOMER BENEFITS

- Intermediate sleeve protects the workpiece surface
- Concentricity of 0.01 mm

Special solutions KFG

Special solutions CAPTIS



CAPTIS A-80
Collet chuck with profile collet

APPLICATION

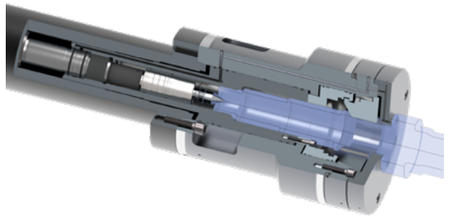
Turning of aluminum profiles

Pneumatic clamping via pistons integrated into the chuck, using a collet adapted to the workpiece profile.

CUSTOMER BENEFITS

- Compatible with standard collet chucks
- Both centric and eccentric collets available
- Suitable for a wide range of profile shapes
- Concentricity of 0.01 mm

CAPTIS A-120
Collet chuck with front stop and movable live center



APPLICATION

Power-actuated clamping via draw bar.

Workpieces are supported by a movable live center integrated within the clamping cylinder.

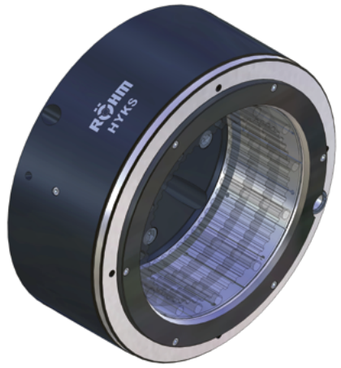
CUSTOMER BENEFITS

- Accommodates different workpiece lengths due to the movable live center
- Enhanced workpiece support for improved stability
- Quick change of collet chuck
- Concentricity of 0.015 mm

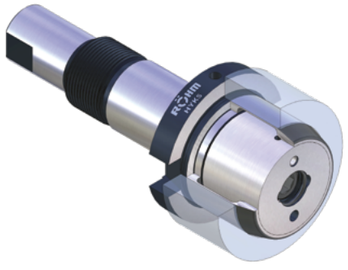
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Notes

Special solution HYKS







Hydraulically actuated clamping mandrel for internal and external clamping

APPLICATION

Grinding, turning, milling, measuring

The hydraulic medium is put under pressure by a piston or by system pressure. The elongation can be up to 0.3 % (up to 1 % for special materials) of the diameter of the extension sleeve. Clamping directly by extension sleeve or indirectly by a slotted intermediate sleeve.

CUSTOMER BENEFITS

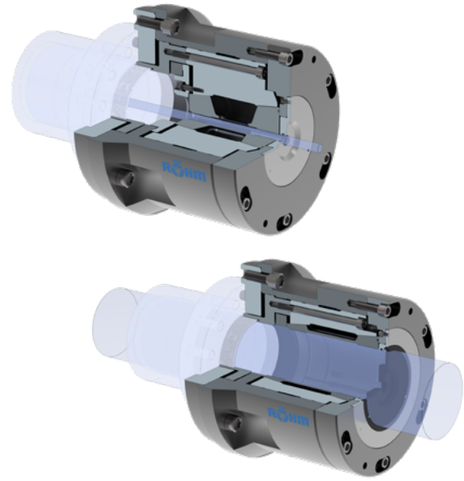
- Cylindrical and round elongation over the entire clamping range for a maximum concentricity tolerance of 0.003 mm
- Very high clamping force in the clamping zone
- Optimum damping, extremely quiet machining and significantly higher service life of the tool due to precisely fitted clamping sleeve

TECHNICAL FEATURES

Force-actuated or manual actuation. Wear-resistant surface.
The clamping systems can be put under pressure by hydraulic or pneumatic cylinders, by the machine hydraulics directly or even manually by using a screw. Different stops (optional): fixed, withdrawable, external, oscillating, etc.

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Special solutions

Special solutions



Double cone collet chuck Ø16mm-Ø110mm

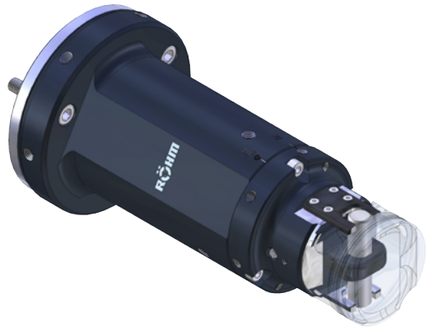
APPLICATION

Machining of piston rods.

Power-actuated clamping via draw bar, with both clamping planes engaging in parallel without compensation. By changing the clamping cone and the collet chuck workpieces of Ø15mm to Ø110mm can be clamped.

CUSTOMER BENEFITS

- Extremely large clamping range with extended clamping length
- Low surface pressure protects the workpiece surface
- The two conical surfaces ensure a more even distribution of the clamping force over the collet chuck, leading to better centering and reducing the risk of the workpiece tilting or inaccurate clamping.
- Concentricity accuracy of 0.01 mm



Special mandrels

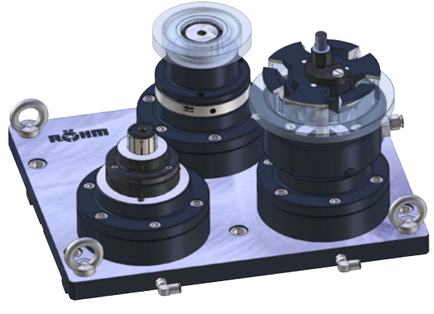
APPLICATION

Grinding, milling

Basic take-up with different replaceable head for clamping of pistons.
Face clamping using internal draw piece. Position orientation using centering forks.
An insertion securing device prevents incorrect loading. The actuation is done using OVS70 RÖHM clamping cylinders. The entire external contour can be machined.

CUSTOMER BENEFITS

- Clamping head with quick change system
- Concentricity of 0.005 mm



Clamping fixture

APPLICATION

Milling, drilling

Clamping device with three basic units. Pneumatically release; Clamping via spring force. Two basic units equipped with KFR clamping mandrels. A basic unit equipped with a power chuck.

CUSTOMER BENEFITS

- Basic units can be equipped with different clamping systems

The headquarters: our main plant in Sontheim/Brenz

The RÖHM main plant is located in Sontheim/Brenz. In this ultra-modern production facility comprising 41,000 m² optimum conditions have been achieved in order to solve the extensive range of discerning construction and production tasks making the company even better, faster and more efficient in the future.





Sontheim/Brenz

Sontheim I All national and international activities are planned and coordinated at the administrative headquarters in Sontheim. Thanks to the excellent infrastructure and transport routes, this location is ideal for a company relying on perfect product quality as well as maximum flexibility. Furthermore, the region around Sontheim offers another key basis for the success of our company: it is rich in quality awareness and motivated employees with the result that we are ideally prepared for the challenges of the future. The main plant uniquely unites mass production, serial production and customised individual production under a single roof.

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Key locations for the company: Dillingen and St. Georgen

Such strong growth on the part of the RÖHM Group is also obviously associated with higher requirements on development and production capacities. The demands of today and tomorrow can be complied with the two facilities in Dillingen and St. Georgen.



Dillingen/Danube



St. Georgen

Plant Dillingen/Danube | This branch plant in Dillingen was put into operation by the RÖHM Group as early as 1953. Thanks to extremely positive development, the plant is subject to constant expansion and modernisation. For this reason, new modern production facilities were built in 1982 and 1991. In 2007 RÖHM built a new production hall for two portal turning and milling machines. This enables machining of workpieces up to 4 metres in length which will secure a leading market position for RÖHM in the future. More than 300 employees are primarily involved in engineering and manufacturing lathechucks, machine vices and special clamping equipment for turning and milling machinery as well as for machining centres.

Engineering and sales department St. Georgen | Apart from standard mandrels, tailor-made solutions for a wide variety of requirements are also manufactured here in this small but accomplished high-tech forge. RÖHM retains mechanical or power-operated mandrels, sliding jaw mandrels and hydraulic mandrels for its customers for tensioning workpieces in drill holes or interior contours.

Always close to our customers. With locations all around the world.



Customer orientation at RÖHM has less to do with marketing than with attitude. We consider customer proximity as an intensive dialogue with our partners as well as direct presence on key international markets.

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General Terms of Sale and Delivery

§ 1 Offer, conclusion of contract and contractual contents
1. Our Terms of Sale shall apply exclusively; we do not recognise contradictory terms and conditions or terms and conditions which deviate from our Terms of Sale unless we had explicitly approved their validity in writing. Our Terms of Sale shall also apply if we carry out the delivery to the buyer without reservation in the knowledge of contradictory terms and conditions of the buyer or terms and conditions which deviate from our Terms of Sale.
2. Our Terms of Sale shall only apply towards an entrepreneur within the meaning of Section 14 BGB [German Civil Code].
3. Our General Service Terms shall apply with precedence over these Terms of Sale in the respective valid version in cases, which comprise the service offer of RÖHM GmbH.
4. Our offers are always to be understood as invitatio ad offerendum and are therefore without obligation insofar as they have not explicitly been described as binding. The contract shall only be concluded with our written confirmation and in line with its contents and – if a written confirmation is missing – by the service/delivery. If a delivery/service is carried out immediately without a confirmation then the invoice shall at the same time be deemed as an order confirmation.
5. Costs for the production of drawings for special constructions are to be borne by the orderer insofar as the offer does not lead to an order for reasons, for which we are not responsible.
6. All details concerning weights, dimensions, services and technical data, which are contained in our printed material, catalogues, price lists or in other contractual documents, merely serve for purposes of information and are only binding insofar as they are explicitly described as binding.
7. We reserve the right to make construction and form changes to the object of contract insofar as no changes are made hereto, which are deemed unreasonable for the orderer.
8. The documentation consists of the compilation drawing, the BOM with marking of the parts subject to wear and tear and spare parts as well as assembly instructions upon request. Respectively in German and/or, upon request, in English. This free documentation will be supplied in a digital form. The PDF format shall apply to drawings, BOMs and texts. Any scope of documentation beyond this is liable to costs respectively requires a special agreement. The documents may not be reproduced in full or in part, not made accessible to third parties or used for any other purpose apart from that for which they were handed over to the customer without our prior written authorization.
9. The corresponding measurement methods for tests, with which certain temperatures, times and other measured or control values should apply, must be stipulated before start of delivery and recognised by both parties. If no stipulation is made the measurement methods usually applied by RÖHM shall apply, we shall provide the details thereof upon request.
10. Samples will only be supplied against payment and owing to a separately placed order.
11. Assurances, collateral agreements and amendments to the contract require a written form in order to be valid. This requirement cannot be waived orally.
12. Placed orders are irrevocable unless the supplier has approved the revocation in writing.
13. In case of export business the delivery is carried out at the conditions agreed on the order confirmation, the international regulations for the interpretation of customary contractual forms shall apply in addition (incoterms 2010 of the International Chamber of Commerce, respective valid status).
14. Our General Business Terms shall apply to the RÖHM online shop with the following supplementations:
a) The offer on the part of the customer is submitted binding as soon as the customer orders the products in the shopping basket by using the function „binding order".
b) A purchase in the online shop is only possible if the customer actively agrees to our General Business Terms.
c) Mistakes and errors with regard to the goods availability, prices and other details and data excepted. Diagrams in the online shop are merely for the purpose of illustration respectively as visual aids; the description is binding.
d) We will inform the customer if the product ordered by the customer is temporarily or permanently not available.
15. Our „product information", technical information leaflets as well as other product-specific publications shall apply in addition to the General Business Terms. These are always to be complied with in their current version.
16. When a contract is concluded between Röhm and the buyer, both parties undertake to observe and comply with the applicable laws and regulations as well as the current RÖHM code of conduct. You can find the code of conduct at:
https://www.roehm.biz/unternehmen/code-of-conduct/

§ 2 Prices
1. In the absence of special written agreements the prices in the Federal Republic of Germany shall apply „carriage paid" recipient plus the statutory value added tax. With export business the object of delivery shall be deemed as sold „ex works" if nothing is determined in the contract concerning the type of sale. A processing fee of EUR 15.00 will be charged for individual orders with a goods value of less than EUR 150.00 net, a processing fee of EUR 30.00 for orders with a goods value of less than EUR 50.00 net respectively plus the applicable rate of value added tax. This shall apply to deliveries within the domestic country and overseas. At the customer's request the goods can be delivered to an alternative shipping address against a logistics fee in the amount of EUR 10.00.
2. We would like to point out that we will only carry out the shipment at the customer's request. This shall have no effect on the regulations according to Section 5.
3. We shall charge the prices valid upon conclusion of the contract, which are based on the cost factors which are valid at this time. Should these cost factors (in particular material, wages, energy, etc.) change between conclusion of the contract and the agreed delivery time then we are entitled to make a corresponding change to the prices. In case of export business the supplier is entitled to terminate the contract extraordinarily with regard to the part of the order that has not yet been completed or to adjust the prices for this accordingly in the event of a substantial devaluation in the currency, in which the order is concluded.
4. In case of conclusion ex works the goods will be conveyed at the costs and risk of the orderer. With all other consignments the provisions stipulated in the incoterms 2010, respective valid status, will apply with regard to insurance and the assumption of risks.
5. We will inform the buyer of our production quantity for parts/products, which are produced especially according to the buyer's requests. The buyer undertakes to purchase the quantities confirmed to him.
6. Excess and shortfalls in deliveries of up to 5 %, with special tools up to 10 %, at least however 2 pieces, are permitted and do not substantiate any quality defects. The respective delivery will be charged.

§ 3 Terms of payment
1. In the absence of a special agreement the payment is to be made without any deduction free paying agent within 10 days after the invoice date – also with partial deliveries.
2. In case of default of payment interest will be charged in the amount of the credit costs charged by banks, at least however interest in the amount of 9 % above the respective base lending rate of the ECB.
3. In case of export business the payments are to be made in line with the agreed terms of payment.
4. Costs of the payment transactions, in particular bank charges for overseas transfers to us, shall principally be for the expense of the customer.

§ 4 Delivery time
1. The start of the delivery deadline stated by us presumes the clarification of all technical questions. Delivery dates stated by us are – insofar as not explicitly agreed or described as binding – non-binding and shall merely represent an expected delivery date.
2. The compliance with our delivery obligation further presumes the timely and proper fulfilment of the buyer's obligations, in particular the compliance with the agreed terms of payment. The right is reserved to the plea of the unfulfilled contract.
This right shall also consist of obligations from previous deliveries which have not been satisfied in full.
3. The delivery deadline shall begin with the sending of the order confirmation, however not before the provision of the documents, permit, releases, etc., which are to be procured by the orderer, as well as not before the receipt of the agreed down payment.
4. If a binding delivery date has been agreed then the supplier also has to deliver within the deadline. The delivery deadline shall have been adhered to if the object of delivery has left the plant by the time it expires or notification has been given that the object is ready for delivery, the right is reserved to the timely and correct self-delivery. If the orderer changes his order with regard to parts of the delivery then the delivery deadline shall only begin to apply new again with the confirmation of the change.
5. Force majeure, war, civil commotion, strike, lock-out or measures of authorities, no matter for what reason, which oppose a delivery, as well as deficiencies of raw materials, of transport means as well as theft – also at the sub-suppliers – shall release the supplier from the obligation to deliver within the agreed deadline. The orderer is to be notified immediately of the occurrence of the event and of the expected implications.
6. Deliveries before expiry of the delivery time and in reasonable parts are permitted.
7. The adherence to the delivery time presumes the fulfilment of the orderer's contractual obligations.
8. The regulations of Article 10 shall apply in the event of the delay in delivery or impossibility.

§ 5 Passing of risk and acceptance
1. The risk shall pass to the orderer by no later than with the despatch of the delivered parts also if partial deliveries are made or we have taken over other services e.g. the shipping costs or delivery to the location and installation.
2. At the orderer's request the shipment shall be insured by us against theft, damages caused by breakage, transport, fire and water and other insurable risks at his costs.
3. If the shipment is delayed as a result of circumstances, for which the orderer is responsible, then the risk shall pass to the orderer from the day upon which the goods are ready for shipment; however we are obliged to procure the insurances, which he requests, at the request and costs of the orderer.
4. Delivered objects are, even if they feature insignificant features, to be accepted by the orderer irrespective of the rights from Section 8.

§ 6 Delay in acceptance, order on call
1. If the orderer does not accept the object of contract within the deadline we are entitled to set him a reasonable final deadline, to dispose otherwise over the object after its expiry and to supply the orderer with a reasonably extended deadline. Our rights to cancel the contract under the pre-requisites of Section 326 BGB and to request damages owing to the non-fulfilment shall remain unaffected hereby. If we request damages owing to non-fulfilment we can request 40 % of the agreed price plus value added tax as compensation unless the orderer proves less damages. We reserve the right to assert higher actual damages.
2. Orders, which are confirmed by us on call, must – insofar as nothing special has been agreed – be accepted by no later than within one year from the order date. The same shall apply in case of date reservations or sustainable „on call position". Subclause 6.1 shall apply accordingly in case the goods are not called within the stated deadline.

§ 7 Reservation of title
1. The objects of the deliveries (reserved goods) shall remain our property until the fulfilment of all claims to which we are entitled against the buyer from the business relationship. Insofar as the value of all security rights, to which we are entitled against the buyer, exceed the amount of all secured claims by more than 10 %, we will release a corresponding part of the security rights at the buyer's request.
2. During the existence of the reservation of title the buyer is prohibited from a pledge or assignment as collateral and the resale only permitted for resellers in the customary course of business and only under the condition that the reseller receives a payment from his customer or stipulates the reservation that the property shall only pass to the customer when he has satisfied his payment obligations.
3. In case of attachments, seizures or other disposals or interventions of third parties the buyer has to inform us immediately so that we can file an action according to Section 771 ZPO [German Code of Civil Procedure]. Insofar as the third party is not in the position to reimburse us the court and out-of-court costs of an action according to Section 771 ZPO, the buyer will be liable for the loss incurred to us.
4. The buyer undertakes to treat the object of purchase with due care and attention; he is in particular obliged to sufficiently insure these at the value as new at his own costs against damages caused by fire, water and theft. Insofar as maintenance and inspection work is necessary the buyer must carry this out in time at his own costs.

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General Terms of Sale and Delivery

5. In case of breaches of duty by the buyer, in particular with default of payment we are entitled to cancellation and to take the goods back; the buyer is obliged to hand the goods over. The taking back of goods respectively the assertion of the reservation of title does not require any cancellation of the supplier; these acts or an attachment of the reserved goods by us shall not represent a cancellation of the contract unless we had explicitly declared this.
6. If the buyer has resold the object of purchase in the ordinary course of business then he shall hereby now already assign all claims to us in the amount of the final invoice amount (including value added tax) of our claim, to which he is entitled from the resale against his buyers or third parties, irrespective of whether the object of purchase has been resold without or after processing. The buyer shall also remain authorized to collect this claim after the assignment. Our authorization to collect the claim ourselves shall remain unaffected hereby. However, we undertake not to collect the claim as long as the buyer satisfies his payment obligations from the collected proceedings, is not in default of payment and in particular no application has been filed for the opening of insolvency proceedings or payments have been suspended. If this is however the case we can request that the buyer announces the assigned claims and their debtors to us, provides us all details which are necessary for the collection, hands over the associated documents and informs the debtors (third parties) of the assignment.
7. The processing or conversion of the object of purchase by the buyer is always carried out on our behalf. If the object of purchase is processed with other objects, which do not belong to us, then we shall acquire the co-ownership to the new object in the ratio of the value of the object of purchase (end invoice amount, including value added tax) to the other processed objects at the time of the processing. Incidentally, the same shall apply to the object produced by processing as to the object of purchase delivered under reservation.
8. If the object of purchase is inseparably mixed with other objects that do not belong to us then we shall acquire the co-ownership to the new object in the ratio of the value of the object of purchase (end invoice amount, including value added tax) to the other mixed objects at the time of the mixing. If the mixing is carried out to the extent that the object of the buyer is to be seen as the main object then it shall be deemed as agreed that the buyer assigns us the pro rata co-ownership. The buyer shall store the thus produced sole ownership or co-ownership on our behalf.

§ 8 Quality defects
We shall be liable for quality defects as follows:
1. All those parts or services are to be subsequently improved free of charge at our choice, delivered or provided new, which – irrespective of the operating duration – feature a quality defect if this cause existed already at the time when the risk was passed.
2. Claims for quality defects shall become statute-barred in 12 months. The deadline will begin with the passing of the risk (Article 5).
3. The buyer has to report quality defects to us immediately in writing.
4. In case of reports of defects payments of the buyer may be withheld in a scope, which is in reasonable relation to the occurred quality defects. If the defect is unjustifiably reported we are entitled to request reimbursement of the expenses incurred to us by the buyer.
5. We are first of all always to be granted the opportunity for the subsequent fulfilment within a reasonable period of time.
6. If the subsequent fulfilment fails the buyer can – irrespective of possible claims for damages – cancel the contract or reduce the remuneration. The buyer can only request reimbursement for fruitless expenses if we are responsible for the defect owing to wilful intent or gross negligence.
7. Defects shall not exist with an only insignificant deviation from the agreed conditions, with an only insignificant impairment to the usability, with natural wear and tear or damages, which are caused after the risk has passed as a result of faulty or negligent treatment, excessive use, unsuitable operating equipment or owing to special external influences, which are not presumed according to the contract, as well as with software faults that cannot be reproduced. If improper changes or repair work is carried out by the buyer or by third parties then this and the thus incurred consequences shall not substantiate any defects either. The same shall apply if our stipulations concerning the handling and other instructions are not complied with and a proper maintenance is not carried out.
8. Claims of the buyer owing to the expenses, which are necessary for the purpose of the subsequent fulfilment, in particular transport, route, labour and material costs, are excluded if the expenses increase, because the object of the delivery has subsequently been taken to another location than the buyer's branch unless the transportation corresponds with its use as intended.
9. Statutory claims for recourse of the buyer against us shall only exist to the extent that the buyer has not reached any agreements with its buyer that go beyond the statutory claims for defects.
10. Article 10 shall apply to claims for damages. Further or other than claims regulated in this Article or in Article 10 owing to a quality defect are excluded.

§ 9 Industrial property rights and copyrights, defects of title
Insofar as not otherwise agreed, we are obliged to merely provide the delivery in the country of the place of delivery free of industrial property rights and copyrights of third parties (hereinafter property rights). Insofar as a third party asserts justified claims owing to the infringement of property rights due to deliveries provided by us and used as per contract against the buyer, we shall be liable towards the buyer as follows within the deadline determined in Subclause 8.2:
1. We will, at our choice and at our costs, either obtain a right of use for the deliveries concerned, change these so that the property right is not infringed, or exchange these. If this is not possible for us at reasonable conditions, the buyer shall be entitled to the statutory rights to cancellation or reduction. The buyer can only request reimbursement for fruitless expenses if we are responsible for wilful intent or gross negligence. Our obligation to pay compensation is oriented to Article 10.
2. The afore-mentioned obligations shall only exist if the buyer informs us immediately in writing about the claims asserted by third parties, does not recognise an infringement and we reserve the right to all defence measures and settlement negotiations. If the buyer discontinues the use of the delivery for reasons to minimise damages or for other important reasons he undertakes to inform the third party that the discontinuation of the use is not associated with a recognition of an infringement of a property right.
3. Claims of the buyer are excluded insofar as he is responsible for the infringement of property right.
4. Claims of the buyer are further excluded insofar as the infringement of property right is caused by special stipulations of the buyer, due to an application that is not foreseeable for us or by the fact that the delivery is changed by the buyer or is used together with products not delivered by us.
5. In the event of infringements of property rights the provisions of Subclauses 8.4, 8.5 and 8.9 shall apply accordingly to the claims of the buyer regulated in Article 10.
6. Further or other claims of the buyer against us or our vicarious agents owing to a defect of title than those regulated in this Article 9 are excluded.

§ 10 Joint and several liability
1. Claims of the buyer for damages – irrespective of the legal nature of the asserted claim – are excluded.
2. Excluded from this are:
a) Damages owing to the breach of essential contractual obligations. Deemed as essential are such contractual obligations, the fulfilment of which makes the proper execution of the contract possible at all and on the compliance with which the contractual partner may as a rule rely and depend on.
b) Damages from the injury to life, the body or the health if we are responsible for the breach of obligation.
c) For other damages, which are due to a wilful or grossly negligent breach of duty, whereby our breach of duty is deemed equivalent to that of our legal representatives or vicarious agents.
d) Liability according to the ProdHaftG [German Product Liability Act]
3. A change to the burden of proof for the disadvantage of the buyer is not associated with the afore-mentioned regulations.
4. Insofar as the liability for damages is excluded or limited against us, this shall also apply with regard to the personal liability for damages of our employees, our commercial agents and our vicarious agents.

§ 11 Obligations of the buyer to provide assistance
1. Assistance services of the buyer, which are explicitly or tacitly agreed within the framework of the contract, shall be carried out without a special remuneration unless explicitly otherwise agreed.
2. The buyer is obliged to inform us about all facts in time, from which it can be derived that goods and products in stock in our company, which we have made available with regard to the production capacities reported to us, cannot be used or not used in full. If residual stocks remain the buyer shall take over the stocks and the, if applicable incurred destruction costs in the event of a premature change to its material scheduling. This shall also apply to products, with which we had to order minimum quantities on the part of our suppliers if we have informed the customer hereof in advance.
3. The buyer guarantees that the products supplied by him for processing are suitable for this purpose. We are not obliged to examine the products supplied by the buyer for the condition and the suitability for the further processing. Within the framework of ongoing business relationships as well as if an object for processing has initially been inspected, tested and released, the buyer undertakes to inform us of each product change without request in writing. In the case of regular processing of objects the buyer is further obliged to examine the object that is to be processed by us for deviations and changes for each change to the production conditions and in his company, in particular with the exchange of tools, machines or with the introduction of new production processes and to notify us of such changes and modifications in writing.
4. We do not have to examine the instructions of our buyers, the material selection or other regulations, which are made by our buyer, for their accuracy.
5. Therefore, the buyer has to examine all instructions, which he issues as well as the quality of the materials stipulated or made available to us for the compliance with the statutory and technical regulations.
6. If the buyer is in default with regard to his obligation for provision or to provide assistance after a written warning we are entitled to the statutory rights.
7. Goods may only be returned with the supplier's express permission. Any returned goods must be delivered free in their original packaging and must be accompanied by the return receipt provided by the supplier. The goods must be in their original state, i.e. undamaged and fully functional. Returned goods will no longer be accepted when six months have lapsed from the date of delivery. Returns of specially designed or custom-made items, as well as used goods will not be accepted. We will charge a handling fee of 20 % - 40 % of the value of the goods, however, at least EUR 100 per item plus statutory VAT. Following presentation of appropriate evidence, the supplier reserves the right to charge a higher amount to the purchaser in individual cases; the purchaser is free to prove that the damage was lower.

§ 12 Place of performance, Choice of Law and Place of Jurisdiction
1. The place of performance and place of payment is the registered seat of our company in Sontheim/Brenz.
2. The law of the Federal Republic of Germany is to be exclusively applied to the contractual relationship. The application of the Convention of the United Nations of 11 April 1980 concerning Contracts for the International Sale of Goods (CISG „Law governing the sale of goods of Vienna") is excluded.
3. With all disputes ensuing from the contractual relationship, if the orderer is a merchant, a legal entity under public law or a special fund under public law, the action is to be filed at the court that has jurisdiction for our headquarters. We are also entitled to file action at the headquarters of the orderer.

§ 13 Data protection
We process personal data in accordance with the General Data Protection Regulation (GDPR) and the Federal Data Protection Act (BDSG).

RÖHM GmbH
89565 Sontheim (Germany)

Status: July 2024

General Service Terms (ASB) of RÖHM GmbH, Sontheim

1. Validity
1.1 These ASB form the basis for all business transactions with our customers, which refer to the repair or maintenance of the products manufactured or delivered by us insofar as these customers concern entrepreneurs within the meaning of Section 14 BGB [German Civil Code].
1.2 Contradictory, supplementary contractual terms and conditions of the customer or those which deviate from these ASB will not be recognised.
1.3 Within the framework of a regular business relationship these ASB will also be valid after the effective inclusion for the first time if we do not explicitly refer hereto in follow-up transactions.
1.4 Insofar as the ASB do not include any regulations, the General Terms of Sale and Delivery of RÖHM GmbH shall apply.

2. Offer and conclusion of the contract
2.1 Our offers are – insofar as not explicitly marked as binding – without obligation and merely to be understood as invitatio ad offerendum. The right is reserved to an interim sale.
2.2 Contracts with us will only be concluded with our written acceptance declaration or – if such is not carried out – by our delivery and service. Changes and supplementations to the contracts concluded with us require a written form.
2.3 If the object of maintenance or repair was not delivered by us then the customer has to point out existing industrial property rights with regard to the object if we are not responsible for any fault the customer shall indemnify us from possible claims of third parties from industrial property rights.
2.4 Insofar as we are responsible for negligence Par. 2.3 shall apply accordingly.

3. Contractual parts
The offer and the product list respectively available to us and the customer are a part of the contract.

4. Technical documents and plans
4.1 All rights to our offer documents as well as documents, which have been handed over, shall remain reserved.
4.2 The customer shall recognise our rights and will not reproduce the documents in full or in part, not make these accessible to third parties or use these for any other purpose than that for which they were handed over to him without our prior written authorization.

5. Scope of services, maintenance, condition of device, repair
5.1 Decisive for the scope of our delivery and service is our binding offer or – if such is not available – our written declaration of acceptance. Both individual services can be agreed, which are principally to be remunerated according to Subclause 12.1, as well as the service packages described under Subclause 5.2, which are to be remunerated according to 12.2 respectively 12.3.
5.2 The following activities are a part of our service obligation with the processing of service packages:
5.2.1 Commissioning of service
- skilled execution of the necessary commissioning of the clamping device and control at the place of installation in line with the regulations of the manufacturer.
- assembly work over the course of the commissioning together with the machine manufacturer
- first instructions and operator training
- we will invoice separate requests for the training with regard to the maintenance and use as separate work.

5.2.2 Inspection service
Skilled execution of the necessary inspection of the clamping device and control at the place of installation in line with the regulations of the manufacturer. Insofar as additional maintenance or repairs become necessary at the customer's request or owing to special loads, these are to be remunerated separately by the customer.
5.2.3 Maintenance service
Skilled execution of the necessary maintenance of the clamping device and control at the place of installation in line with the regulations of the manufacturer. Insofar as additional repairs become necessary at the customer's request or owing to special loads, these are to be remunerated separately by the customer.
5.3 The service obligation shall begin with the purchase or conclusion of a service package. With the purchase or conclusion of a service package after the expiry of the warranty period the service obligation of RÖHM shall only refer to such products, which are capable of use and free of defects at the time of the conclusion or purchase of the service package. This is to be ensured by an inspection of the products; if defects are determined these are to be remedied before the start of validity of the service package by a necessary repair liable to costs; this repair is not part of the service package.
5.4 Our service obligation shall not include carrying out work on products and accessories, which was(were) not delivered by us.
5.5 Our service obligation shall lapse if the product was not subjected to the function and safety tests according to the details in the operating instructions or third parties have carried out work on the products concerned without our prior written consent unless this work has no disadvantageous influence on the provision of our service. The same shall apply if the products have been damaged due to causes for which we are not responsible, for example by water, fire, stroke of lightning or other implications of force majeure as well as with improper treatment by the customer or third parties.
5.6 Depending on the use and type of the product an overhaul may be necessary after longer use. This is the case if the costs of a repair exceed the current value of the product. Overhaul within this meaning is also the necessary new acquisition of a product in the absence of available spare parts. Overhauls are not part of the service obligation within the service packages. If we are of the opinion that a products that is to be maintained by us under a service package requires an overhaul, we will inform the customer hereof by stating the current value estimated by us and submit an offer for the overhaul to the customer with a remuneration calculated according to 12.1.

6. Repair/service that cannot be carried out
6.1 The services provided concerning the details of a cost estimate as well as the further incurred and to be proven work (fault search time equal to working hours) will be invoiced to the customer if the repair cannot be carried out due to reasons for which RÖHM GmbH is not responsible, in particular because the fault for which a complaint will be made did not occur during the inspection, spare parts cannot be procured, the customer culpably missed the agreed date or the contract was terminated during the execution.
6.2 The object of repair only needs to be restored to the original condition again at the explicit request of the customer against reimbursement of the costs unless the undertaken work was not necessary.
6.3 In case of a repair that cannot be carried out RÖHM GmbH shall not be liable subject to sentence 2 for damages to the object of repair, the breach of contractual secondary obligations and for damages, which were not suffered to the object of repair itself, no matter to which legal grounds the customer refers. RÖHM, on the other hand, will be liable in case of wilful intent, with gross negligence of the owner / the executive bodies or executives as well as with the culpable breach of essential contractual duties. Such contractual obligations are deemed essential, the fulfilment of which makes the proper execution of the contract possible at all and the compliance with which the contractual partner may as a rule rely and depend upon.

7. Duration of the service
7.1 The details with regard to the duration of repairs and services are based upon estimates and merely serve as information and a first estimate by the customer. They are therefore not binding if they have not been explicitly marked as binding.
7.2 In case of subsequently placed additional and extension orders or with necessary additional repair work the agreed repair deadline shall be extended accordingly.

8. Obligations to provide assistance of the customer
8.1 The customer has to draw our attention to the statutory, official and company safety and other regulations applicable at the place of destination of our delivery and service, which refer to the delivery, the assembly and the operation.
8.2 The customer will inform us with or immediately after his order about possible special features of the place of installation, which may have an implication on the proper function of the products, in particular about the structural condition and the concrete operating environment.
8.3 The customer shall ensure – also during the warranty period according to Subclause 17.5 – a regular and skilled maintenance of the products delivered by us insofar as this was not taken over by us as per contract.
8.4 The customer shall dispose of the goods delivered by us at his own responsibility and at his own costs according to the respective valid regulations. We are not obliged to create a possibility for the return unless this would have been stipulated by law.
8.5 The customer has to support the repair / maintenance personnel with the execution of the repair at his own costs.
8.6 The customer has to take the special measures, which are necessary for the protection of persons and objects at the workplace. He also has to inform the repair managers about existing special safety regulations insofar as these are of significance for the repair personnel. He shall inform us in case of breaches of the repair personnel of such safety regulations. In case of serious breaches he can refuse the infringing party access to the repair location by mutual agreement with the repair manager.
8.7 The customer shall bear a supervisory and assistance obligation for the compliance with the statutory working time limits. Breaches are to be reported to RÖHM GmbH.
8.8 The customer is obliged to provide the reasonable and necessary technical assistance at his costs, in particular to:
a) Provision of the necessary, suitable assistants in the number that is necessary for the repair and for the necessary time; the assistants have to follow the instructions of the repair manager. We do not assume any liability for the assistants. If a defect or damages were caused by the assistants owing to instructions of the repair manager, then the regulations of Sections 17 and 18 shall apply accordingly.
b) Undertaking of all construction, bedding and scaffolding work including the procurement of the necessary building materials.
c) Provision of the necessary devices and heavy tools as well as the necessary commodities and required materials.
d) Provision of heating, lighting, operating power, water, including the necessary connections.
e) Provision of necessary, dry rooms, which can be locked for the storage of the tool for the repair personnel.
f) Protection of the repair place and materials against harmful influences of all kinds, cleaning of the repair place.
g) Provision of suitable, theft-proof recreation rooms and work rooms (with heating, lighting, washing possibility, sanitary facilities) and First Aid for the repair personnel.
h) Provision of the materials and undertaking of all other acts, which are necessary for the adjustment of the object of repair and for carrying out a testing that is envisaged as per contract.
8.9 The technical assistance of the orderer must guarantee that the service can be started immediately after the arrival of our personnel and carried out without delay until the acceptance by the orderer. Insofar as special plans or instructions of RÖHM are necessary, RÖHM shall make these available to the orderer in time.

9. Obligations of the customer to provide assistance in case of maintenance
9.1 The products are to be used as intended and according to their protection type and in line with the operating instructions together with their annexes.
9.2 In case of an agreement of one of the service packages described in Subclause 5, the customer will place the products that are to be installed, maintained or repaired into a faultless condition, capable of use before conclusion of the contract at his own costs if the products are not already in such a condition. If the customer does not properly satisfy this obligation either after a warning on our part and within the deadline we are entitled to accordingly cancel the contract or the delivery. Further claims for damages on our part shall remain unaffected.
9.3 If the customer uses the maintenance service interferences are to be reported to us immediately in writing, in detail and in an understandable manner.
9.4 Our employees and vicarious agents are to be granted the unimpeded and safe access to the products. In case of delays for which the customer is responsible he is obliged to remunerate the waiting times of our employees and vicarious agents resulting from the delay separately.
9.5 The customer shall refrain from commission third parties with the services during the term of a service agreement, which we have to provide according to the agreement or from performing this work himself.
9.6 The customer has to draw our attention to the statutory, official and company safety regulations and other regulations applicable at the place of destination of our delivery and service, which refer to the delivery, the assembly and the operation.

10. Inspection and acceptance
10.1 Services will be provided by us according to the guidelines of our quality control and deliveries inspected accordingly. If the customer requests further inspections then these are to be agreed in writing and paid by the customer. This shall relate e.g. to special tests for the acceptance.

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General Service Terms (ASB) of RÖHM GmbH, Sontheim

10.2 The customer undertakes to accept our services under this contract immediately after the report that they have been completed. Upon request he has to declare their acceptance in writing towards our employees or vicarious agents insofar as there is no essential defect. This is carried out by the signing of the service report.
10.3 Our services shall be deemed as accepted free of defects with the re-commencement of the operational use of the maintained or repaired product, in particular for production purposes, if no defects have been previously reported by the customer.

11. Cost details and cost estimate
11.1 The creation of the cost estimates is liable to costs if the execution of the repair is not approved.
11.2. The costs for a cost estimate amount to the flat rates fixed in the current price list.
11.3 If the repair cannot be carried out at these costs or if our employees or vicarious agents consider the execution of additional work to be necessary during the repair the customer's consent is to be obtained if the stated costs are exceeded by more than 15%.

12. Remuneration, maturity and terms of payment
12.1 Insofar as not otherwise agreed and there is no warranty case our services are to be remunerated according to the actual work requirement pursuant to our respectively valid general price lists. The time required by our employees will be settled in time sections of 15 min. In addition to the time required for the work that is to be performed in these cases the customer will pay the travelling and waiting times, overtime surcharges, expenses, travelling and accommodation costs as well as the costs of spare parts, materials subject to wear and tear and consumables and replacement part sets according to our prices lists or in line with the offer.
12.2 Insofar as a flat rate remuneration was agreed for a service package, our work and travelling costs and expenses are thus covered, not however the costs for waiting times, overtime at the customer's request, spare parts, materials subject to wear and tear and consumables, replacement parts sets as well as other accessories. Our work for if applicable necessary repairs is to be remunerated separately by the customer according to Subclause 12.1.
12.3 The prices for our services can be derived from the respective price list valid upon conclusion of the contract and are deemed ex works plus value added tax. The calculation basis for the remuneration is the one-shift operation, i.e. a use of the products up to 160 hours in a calendar month. A surcharge to the list price of 50% is charged for the two-shift operation, a surcharge of 100% for the three-shift operation. The above two rates shall only apply to the service packages described under Subclause 5.. If the customer requests assignments outside of our normal working hours (Mo - Fr, 6:30 am - 6:30 pm, a max. of 7 h per day) surcharges will be calculated according to the respective valid price list.
12.4 If our personnel and material costs are increased then we are entitled to adjust the contractual prices after the expiry of the first year up to a maximum of 5% above the price of the previous year. Price changes will be announced to the customer at least one month before the new contractual prices come into force. The customer is entitled to terminate the contract effective as of the time at which the new price would become valid for him for the first time.

13. Transport and insurance with the repair in the plant of RÖHM GmbH
13.1 The object for repair will be delivered by the customer to us at his costs together with the repair and service form and after execution of the repair collected by the customer again or return to him at the customer's costs.
13.2 The customer shall bear the risk of transport.
13.3 At the customer's request a shipment carried out by us will be insured at the customer's costs against the insurable transport risks, e.g. theft, breakage and fire.
13.4 No insurance cover exists during the repair time in our plant. The customer has to ensure the maintenance of the existing insurance cover for the object of repair e.g. with regard to fire, pipe water, storm and machine breakage insurance. Insurance cover can only be procured for these risks at the explicit wish and costs of the customer.
13.5 In case of delay of the customer with the take-over we can charge a storage fee for the storage in our plant. The object of repair can also be stored otherwise at our discretion. The costs and risk of the storage during the delay shall be for the expense of the customer.

14. Repair deadline
14.1. The details concerning the repair deadlines are based on estimates and merely serve for the purpose of information and first orientation. They are therefore not binding unless this is explicitly agreed.
14.2. The agreement of a binding repair deadline, which must be described as binding, can only be requested by the customer if the scope of the work has been precisely determined.
14.3. The binding repair deadline will have been adhered to if by the time that it expires the object of repair is ready for take-over by the customer, in the event of a contractually envisaged testing ready for its execution.
14.4. In case of subsequently placed additional and extension orders or with necessary additional repair work the agreed repair deadline will be extended accordingly.
14.5. If the repair is delayed due to measures within the scope of industrial disputes, in particular strike and lock-out as well as the occurrence of circumstances, which were not caused by us, a reasonable extension to the repair deadline will occur insofar as such impediments have as proven a substantial influence on the completion of the repair; this shall also apply if such circumstances occur after we are in default.

15. Ban on offsetting and assignment; subcontractors
15.1 The customer is only entitled to offsetting in the event of undisputed claims or claims which have been declared final and binding. This shall not apply if the customer asserts claims in the reciprocal relationship, in particular claims for defects.
15.2 The assignment of rights of the customer from contractual relationships with us presumes our prior consent in order to be valid. This shall not apply insofar as Section 354 a HGB [German Commercial Code] applies.
15.3 We are entitled to use third parties in order to fulfil our contractual obligations.

16. Reservation of title
16.1 The goods delivered by us shall remain our property until the payment of all of our claims against the customer, no matter for what legal grounds, also future ones. In case of current account the afore-mentioned property shall be deemed as security for our balance claim.
16.2 The customer may only sell within the framework of his customary business transactions and neither pledge, nor assign the goods as collateral. The customer hereby assigns us for security of our payment claims against him, in the amount of the value of our delivery and service, all claims with all secondary rights, which he acquires against his buyer owing to such a sale.
16.3 As long as the property has not yet been assigned, the customer has to inform us immediately in writing if the delivered object is attached or is exposed to other interventions of third parties. Insofar as the third party is not in the position to reimburse us the court and out-of-court costs of an action according to Section 771 ZPO [German Code of Civil Procedure] the customer shall be liable for the loss incurred to us.
16.4. We undertake to release the securities to which we are entitled at the customer's request insofar as their value exceeds the claims which are to be secured by more than 20 %."

17. Warranty
17.1 Insofar as the creation of a work has been agreed and thus the law governing contracts for work and services applies the following shall apply: If our services are faulty then we are first of all entitled and obliged to subsequent satisfaction according to Section 634 No. 1 BGB. If the subsequent satisfaction finally fails the customer can according to Section 634 No. 3 cancel the contract or reduce the remuneration and according to Section 634 No. 4 BGB request damages. Claims of the customer for reimbursement of expenses according to Section 634 No. 2 BGB (self-execution) are excluded. Subclause 18 shall apply to claims for damages.
17.2 Insofar as we provide planning services without executing these and thus the law governing service contracts applies (e.g. in the event of a breach of our duties under Subclauses 5.2.1, 5.2.2 and 5.2.3) the following applies: If our services are faulty then we are first of all entitled and obliged to subsequent improvement. If the subsequent improvement finally fails the customer is entitled to damages according to Subclause 18.
17.3 Excluded from the warranty are damages as a result of natural wear and tear, faulty maintenance – insofar as we have not carried out this maintenance as per contract, failure to comply with operating equipment regulations, excessive use, unsuitable operating equipment, chemical or electrolytic influences, faulty construction and assembly work of third parties as well as other causes, for which we are not responsible.
17.4 The warranty shall lapse if the customer or third party makes changes or repairs to our services /products without our prior written consent unless the defect is not a result thereof.
17.5 Claims of the customer owing to defects of quality and title shall become statute-barred with the expiry of 12 months after the acceptance of the work or the knowledge of defects with the provision of planning services.

18. Liability
18.1 We shall be liable to an unlimited extent in case of wilful intent and gross negligence as well as with the injury to life, the body and the health as well as with the culpable breach of essential contractual obligations. Deemed as essential are such contractual obligations, the fulfilment of which makes the proper execution of the contract possible at all and the compliance with which the contractual partner may as a rule rely and depend on.
18.3 Incidentally our liability is excluded.
18.4 A liability according to the Product Liability Act remains unaffected.
18.5 The personal liability of our legal representatives and vicarious agents is limited as our own liability according to the afore-mentioned provisions.

19. Term of the contract; termination
19.1 Service agreements according to Subclause 5. shall come into force when signed by both parties and shall initially apply until the end of the calendar year, that follows the year in which the contract was concluded. The contractual relationship will subsequently be extended respectively by one further year unless it is terminated by one of the parties with a period of notice of 3 months to the end of the second or a following year. Contractual relationships can be terminated on the whole or only with regard to individual products.
19.2 The right to the extraordinary termination for an important reason remains unaffected.

20. Place of jurisdiction; applicable law
20.1 With all disputes ensuing from the contractual relationship if the orderer is a merchant, a legal entity under public law or a special fund under public law, the action is to be filed at the court that has jurisdiction for our headquarters. We are also entitled to file an action at the headquarters of the orderer.
20.2 The legal relationship is subject to the law of the Federal Republic of Germany. German international private law and the Viennese Convention of the United Nations concerning Contracts for the International Sale of Goods (CISG) will not apply.

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Status: July 2024

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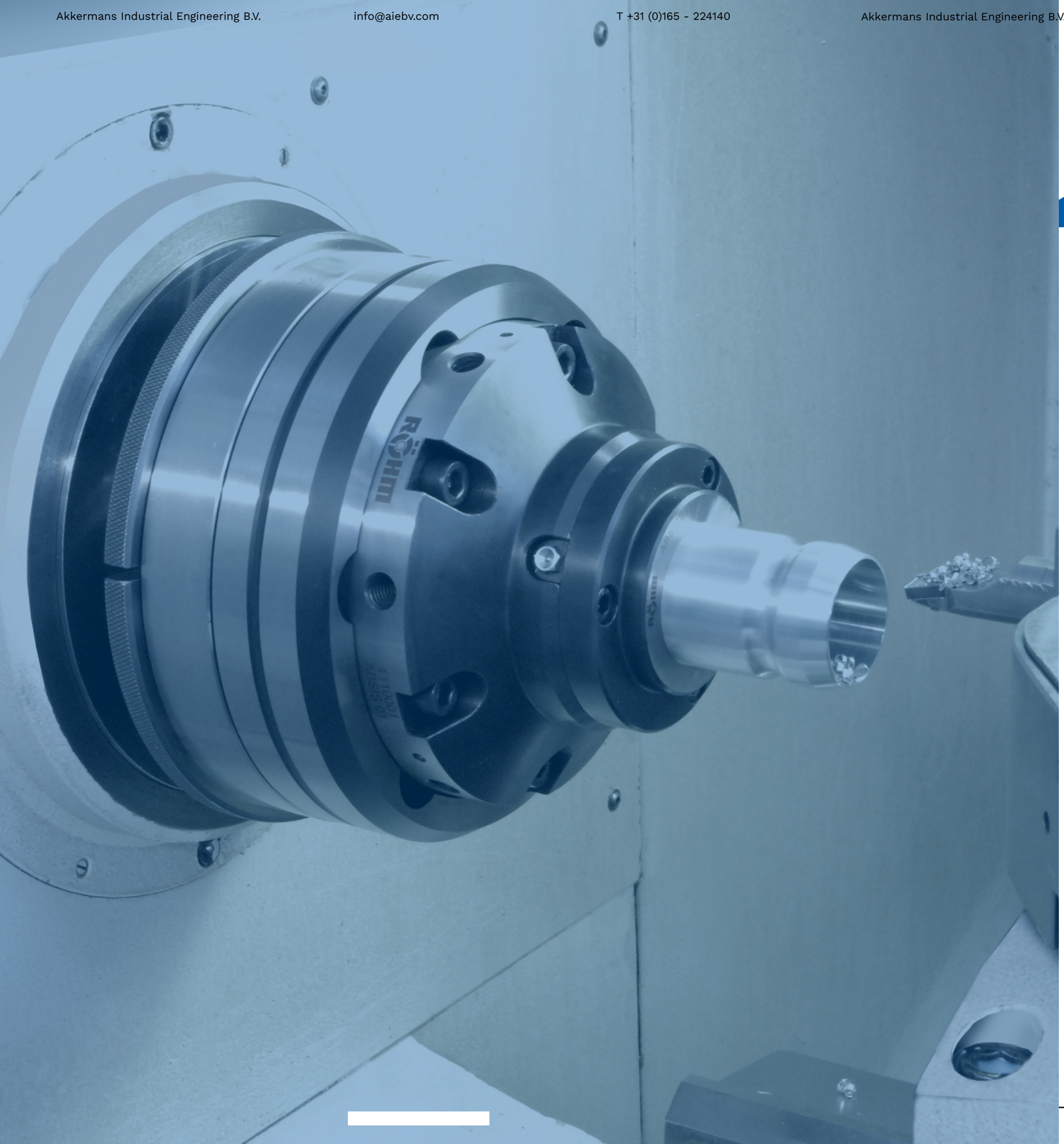


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Errors and corrections are reserved!

Orientation guide



TYPE	KFS/ MFS	KFR/ MFR	KFB	MZB	MZE	ABSIS	ABSIS-C	AGILIS
	Cartridge mandrel					Segment clamping mandrel		
Feature	Stable clamping, suitable for long workpieces or long clamping lengths	Suitable for short clamping lengths without a defined axial component	Stable system with high torque transmission for working with small Ø, for short clamping lengths	Stable system with high torque transmission for working with small Ø, for short clamping lengths	Cost-effective system for measuring tasks, high accuracy	High degree of hardness of the clamping sleeve, thereby wear resistant, long service life of the clamping sleeve	Stable system, for take-up into CAPTIS clamping system, with draw-down	Stable system with high torque transmission for working with small Ø, for short clamping lengths, high degree of hardness of the clamping sleeve
Application	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, gear cutting, balancing, measuring	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, measuring	Measuring, grinding	Turning, grinding, milling, gear cutting, balancing, measuring		
Clamping	Internal	Internal	Internal	Internal	Internal	Internal	Internal	Internal
Actuation	✔ ⚙	✔ ⚙	⚙	✔	✔	⚙	✔ ⚙	⚙
Clamping surface	Smooth (optionally coated, serrated, toothed, for shape clamping)				Smooth	Smooth (optionally coated, serrated, toothed, for shape clamping)		
Axial component	✔	O	✔	✔	✔	✔	✔	✔
Clamping range mm	15 - 140	14,5 - 131	5,5 - 29	5,5 - 78,7	8 - 230	20 - 106	20-106	10 -130
Workpiece stop possible	✔	✔	✔	✔		✔	✔	✔
Preparation for air sensing	✔	✔				✔		✔
Take-up	Cylindrical take-up mount combined with intermediate flange ISO 702-1 (DIN 55028)			Between points or cylindrical take-ups, driving at the shaft possible		Cylindrical take-up mount combined with intermediate flange ISO 702-1 (DIN 55028)	Take-up in CAPTIS clamp system	Cylindrical take-up mount combined with intermediate flange ISO 702-1 (DIN 55028)
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✔ yes O optional ✋ hand operated ⚙ power operated

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Mandrels and collet chucks

Orientation guide



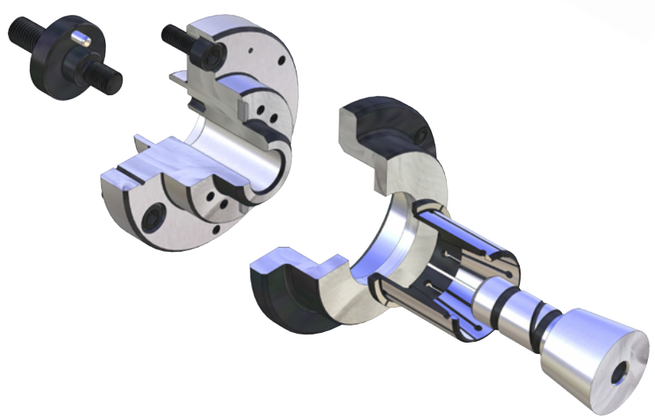
TYPE	CAPTIS-D	CAPTIS-A	CAPTIS-AF	CAPTIS-M	KZF	KZF-S
	Collet chucks					
Feature	Full through-hole, with centering edge, draw-down	Restricted through-hole, optional fixed workpiece stop, draw-down	Restricted through-hole, fixed workpiece stop, stationary collet: without draw-down	For rotating and stationary use, manually operated, with axial tension against workpiece stop	Bayonet quick lock with protection against torsion	Bayonet quick lock, draw-down, actuation by clamping mandrel
Application	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, milling, gear cutting, balancing, measuring	Turning, grinding, milling, gear cutting, balancing, measuring	Stationary turning, grinding, milling, drilling, measuring	Turning, grinding, milling, measuring	Turning, grinding, milling, gear cutting
Clamping	External	External	External	External	External	External
Actuation	⚙	⚙	⚙	✋	⚙	⚙
Clamping surface	Longitudinal and cross grooves, cross grooves, smooth, shaped hexagon, square, special contour				Smooth, hexagon, square	Optionally smooth, toothed, coated, serrated
Axial component	✔	✔		✔		✔
Clamping range mm	4 - 120	4 - 120	4 - 120	4 - 80	2 - 80	30 - 180
Workpiece stop possible		✔	✔	✔	✔	✔
Preparation for air sensing						✔
Take-up	Cylindrical take-up				Cylindrical centering pick-up, short taper mount	Cylindrical take-up
Page	7052	7053	7054	7056	7062	7064

We have already implemented special solutions in all clamping system areas, some of which differ significantly from the values indicated above (for example, clamping surfaces, clamping diameter or precision). Besides these standard clamping systems, we offer a number of special systems, such as HYKS, KFG, centering and face clamping systems or combination clamps. Even unusual special solutions are a part of our focus.

Orientation guide



HIGH AXIAL RUN-OUT PRECISION, CONCENTRICITY AND REPEATABILITY



Custom-fit interaction of the individual components enables the highest degree of axial run-out precision, concentricity and repeatability.

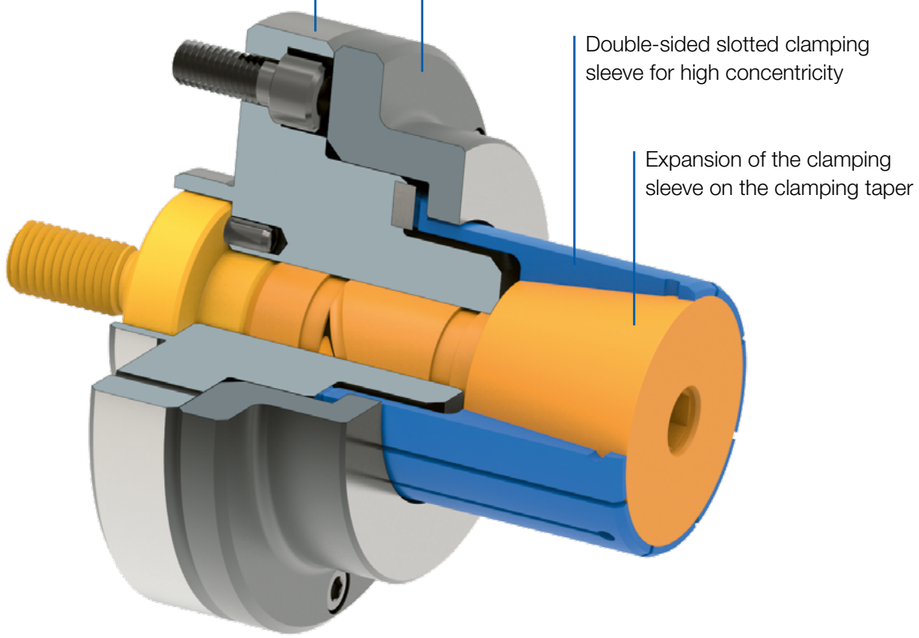
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CARTRIDGE MANDRELS

The various application areas of the cartridge mandrels require a varied programme which ranges from manual or power-operated versions to versions with and without axial tension. The centric and comprehensive internal clamping of cartridge mandrels are particularly impressive for very small clamping diameters and at low overall heights.

ADVANTAGES AT A GLANCE

- Stable clamping by axial tension against workpiece stop
- Low weight and reduced overall height by a compact design
- High axial run-out precision, concentricity and repeatability



ROHM Cartridge Mandrel

KFS - with axial tightening, force-actuated



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for thin-walled and long workpieces or long clamping lengths.

TYPE

Force-actuated. Clamping sleeves optionally vulcanized.
Convertible to MFS (required new intermediate piece).

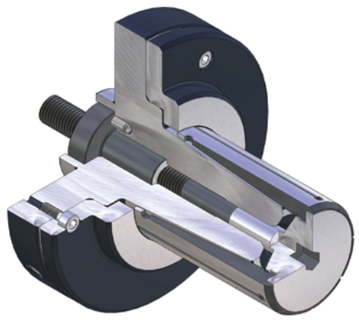
CUSTOMER BENEFITS

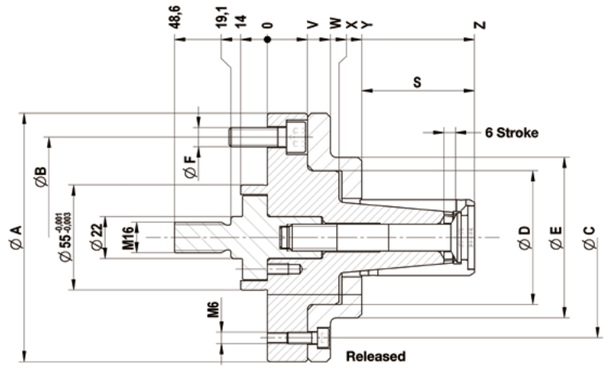
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Light weight and reduced height thanks to compact design
- High flexibility thanks to modular system
- Fast change of clamping sleeves thanks to central clamping screw

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

KFS = force-actuated, flange, S-type





C18
KFS cartridge mandrel, **power-operated with flanged seat,** for internal clamping
Consisting of basic mandrel and intermediate piece

	KFS 00	KFS 01	KFS 02	KFS 03	KFS 04	KFS 05	KFS 06	KFS 07	KFS 08	KFS 09	KFS 10	KFS 11
Components												
Cartridge Mandrel complete	**599800**	**599801**	**599802**	**599803**	**599804**	**599805**	**599806**	**599807**	**599808**	**599809**	**599810**	**599811**
Basic mandrel (individual part)	599820	599821	599822	599823	599824	599825	599826	599827	599828	599829	599830	599831
Adapter power-operated (individual part)	599833	599834	599980	599981	599982	599983	599984	599984	599984	315456	315456	315456
Clamping & Performance data												
Clamping range mm	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 55	55 - 65	65 - 82	82 - 101	101 - 120	120 - 140
Elongation Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Max stroke mm	6,2	6,2	6,2	6,2	6,2	6,3	6,3	6,3	6,3	6,3	6,3	6,3
Max actuation force kN	7	9	12	12	15	15	20	20	25	25	25	25
Max total tension kN	37,1	48,3	64,7	64,7	78,9	78,9	104	104	134	134	134	134
Max speed U/min	5000	5000	5000	5000	4000	4000	4000	4000	4000	3500	3500	3500
Dimensions of clamping devices												
External-Ø A mm	100	100	100	100	100	130	130	130	160	160	160	160
Pitch diameter B mm	75	75	75	75	75	105	105	105	130	130	130	130
Pitch diameter C mm	75	75	75	75	75	105	105	105	130	130	130	149
Ø D mm	40	40	46	46	46	70	70	70	83	91	87	107
Ø E mm	54	54	60	60	60	84	84	84	103	160	160	160
Ø F mm	M10	M10	M10	M10	M10	M10	M10	M10	M12	M12	M12	M12
S mm	31,5	36	45	49	59	59	79	89	99	121	138,9	171
V mm	21	21	21	21	21	21	21	21	23	21	21	25
W mm	33	33	33	33	33	33	33	33	35	21	21	25
X mm	36	36	37	41	36,5	37,5	35,5	35,5	35			
Y mm	47,5	47,5	48	51,5	46	49,5	47	47	47	33	37	57
Z mm	79	83,5	93	100,5	105	108,5	126	136	146	154	176	228

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ROHM Cartridge Mandrel

MFS - with axial tightening, manually actuated



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for thin-walled and long workpieces or long clamping lengths.

TYPE

Manually actuated. Clamping sleeves optionally vulcanized.
Convertible to KFS (required new intermediate piece).

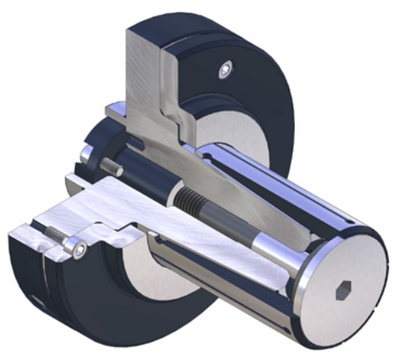
CUSTOMER BENEFITS

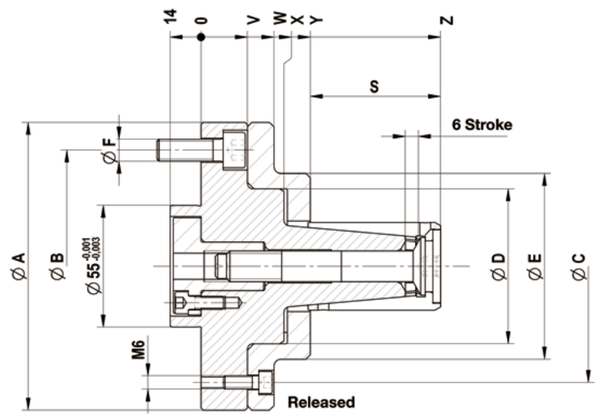
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Light weight and reduced height thanks to compact design
- High flexibility thanks to modular system
- Fast change of clamping sleeves thanks to central clamping screw

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

MFS = manually actuated, flange, S-type





C18
MFS cartridge mandrel, **hand-operated with flanged seat,** for internal clamping
Consisting of basic mandrel and intermediate piece

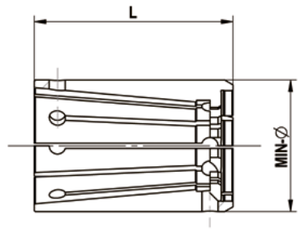
	MFS 00	MFS 01	MFS 02	MFS 03	MFS 04	MFS 05	MFS 06
Components							
Cartridge Mandrel complete	**1082800**	**1082801**	**1082802**	**1082803**	**1082804**	**1082805**	**1082806**
Basic mandrel (individual part)	599820	599821	599822	599823	599824	599825	599826
Adapter hand-operated (individual part)	599985	599986	599987	599988	599989	599990	599991
Clamping & Performance data							
Clamping range mm	15 - 20	20 - 25	25 - 30	30 - 35	35 - 40	40 - 45	45 - 55
Elongation Ø mm	1	1	1	1	1	1	1
Max stroke mm	6,2	6,2	6,2	6,2	6,3	6,3	6,3
Max actuation force kN	7	9	12	12	15	15	20
Max total tension kN	37,1	48,3	64,7	64,7	78,9	78,9	104
Max tightening torque in Nm	7	12	20	22	35	35	45
Max speed U/min	5000	5000	5000	5000	4000	4000	4000
Dimensions of clamping devices							
External-Ø A mm	100	100	100	100	100	130	130
Pitch diameter B mm	75	75	75	75	75	105	105
Pitch diameter C mm	75	75	75	75	75	105	105
Ø D mm	40	40	46	46	46	70	70
Ø E mm	54	54	60	60	60	84	84
Ø F mm	M10	M10	M10	M10	M10	M10	M10
S mm	31,5	36	45	49	59	59	79
V mm	21	21	21	21	21	21	21
W mm	33	33	33	33	33	33	33
X mm	36	36	37	41	36,5	37,5	35,5
Y mm	47,5	47,5	48	51,5	46	49,5	47
Z mm	79	83,5	93	100,5	105	108,5	126

ROHM Cartridge Mandrel

Accessories KFS / MFS







C18

Clamping set KFS / MFS vulcanized and unvulcanized, consisting of clamping sleeve and clamping screw

For size	00	01	02	03	04	05	06	07	08	09	10	11
Expansion in Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Length L mm	35	40	46	50	60	60	80	90	100	122	140	180
Min-Ø mm	14,7	19,7	24,7	29,7	34,7	39,7	44,7	54,7	64,7	81,7	100,7	119,7
Clamping set vulcanized	**1086511**	**1086522**	**1086533**	**1086544**	**1086555**	**1086566**	**1086577**	**1086588**	**1086599**	**1086617**	**1086637**	**1086657**
Clamping sleeve vulcanized	315730	315731	315732	315733	315734	315735	315736	315737	315738	315739	315740	315702
Clamping set unvulcanized	**1086311**	**1086322**	**1086333**	**1086344**	**1086355**	**1086366**	**1086377**	**1086388**	**1086399**	**1086417**	**1086437**	**1086457**
Clamping sleeve unvulcanized	315330	315331	315332	315333	315334	315335	315336	315337	315338	315339	315340	315302
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599840	599845	599850	599855	599860	599865	599992	599993	599994	599995	599996	599997
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	15,2	20,2	25,2	30,2	35,2	40,2	45,7	55,7	65,7	82,7	101,7	120,7
Clamping set vulcanized	**1086512**	**1086523**	**1086534**	**1086545**	**1086556**	**1086567**	**1086578**	**1086589**	**1086600**	**1086618**	**1086638**	**1086658**
Clamping sleeve vulcanized	650211	650224	650237	650250	650263	650276	650288	651051	651063	651082	651103	651124
Clamping set unvulcanized	**1086312**	**1086323**	**1086334**	**1086345**	**1086356**	**1086367**	**1086378**	**1086389**	**1086400**	**1086418**	**1086438**	**1086458**
Clamping sleeve unvulcanized	650021	650034	650047	650060	650073	650086	650098	650110	650123	650142	650163	650184
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599841	599846	599851	599856	599861	599866	599870	599880	599890	599907	599926	599945
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	15,7	20,7	25,7	30,7	35,7	40,7	46,7	56,7	66,7	83,7	102,7	121,7
Clamping set vulcanized	**1086513**	**1086524**	**1086535**	**1086546**	**1086557**	**1086568**	**1086579**	**1086590**	**1086601**	**1086619**	**1086639**	**1086659**
Clamping sleeve vulcanized	315741	315742	315743	315744	315745	315746	315747	315748	315749	315750	315751	315703
Clamping set unvulcanized	**1086313**	**1086324**	**1086335**	**1086346**	**1086357**	**1086368**	**1086379**	**1086390**	**1086401**	**1086419**	**1086439**	**1086459**
Clamping sleeve unvulcanized	315341	315342	315343	315344	315345	315346	315347	315348	315349	315350	315351	315303
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599841	599846	599851	599856	599861	599866	599871	599881	599891	599908	599927	599946
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	16,2	21,2	26,2	31,2	36,2	41,2	47,7	57,7	67,7	84,7	103,7	122,7
Clamping set vulcanized	**1086514**	**1086525**	**1086536**	**1086547**	**1086558**	**1086569**	**1086580**	**1086591**	**1086602**	**1086620**	**1086640**	**1086660**
Clamping sleeve vulcanized	650213	650226	650239	650252	650265	650278	650290	651053	651065	651084	651105	651126
Clamping set unvulcanized	**1086314**	**1086325**	**1086336**	**1086347**	**1086358**	**1086369**	**1086380**	**1086391**	**1086402**	**1086420**	**1086440**	**1086460**
Clamping sleeve unvulcanized	650023	650036	650049	650062	650075	650088	650100	650112	650125	650144	650165	650186
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599842	599847	599852	599857	599862	599867	599872	599882	599892	599909	599928	599947
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	16,7	21,7	26,7	31,7	36,7	41,7	48,7	58,7	68,7	85,7	104,7	123,7
Clamping set vulcanized	**1086515**	**1086526**	**1086537**	**1086548**	**1086559**	**1086570**	**1086581**	**1086592**	**1086603**	**1086621**	**1086641**	**1086661**
Clamping sleeve vulcanized	315752	315753	315754	315755	315756	315757	315758	315759	315760	315761	315762	315704
Clamping set unvulcanized	**1086315**	**1086326**	**1086337**	**1086348**	**1086359**	**1086370**	**1086381**	**1086392**	**1086403**	**1086421**	**1086441**	**1086461**
Clamping sleeve unvulcanized	315352	315353	315354	315355	315356	315357	315358	315359	315360	315361	315362	315304
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599842	599847	599852	599857	599862	599867	599873	599883	599893	599910	599929	599948
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	17,2	22,2	27,2	32,2	37,2	42,2	49,7	59,7	69,7	86,7	105,7	124,7
Clamping set vulcanized	**1086516**	**1086527**	**1086538**	**1086549**	**1086560**	**1086571**	**1086582**	**1086593**	**1086604**	**1086622**	**1086642**	**1086662**
Clamping sleeve vulcanized	650215	650228	650241	650254	650267	650280	315769	315770	315771	651086	651107	651128
Clamping set unvulcanized	**1086316**	**1086327**	**1086338**	**1086349**	**1086360**	**1086371**	**1086382**	**1086393**	**1086404**	**1086422**	**1086442**	**1086462**
Clamping sleeve unvulcanized	650025	650038	650051	650064	650077	650090	315369	315370	315371	650146	650167	650188
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599843	599848	599853	599858	599863	599868	599874	599884	599894	599911	599930	599949
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	17,7	22,7	27,7	32,7	37,7	42,7	50,7	60,7	70,7	87,7	106,7	125,7
Clamping set vulcanized	**1086517**	**1086528**	**1086539**	**1086550**	**1086561**	**1086572**	**1086583**	**1086594**	**1086605**	**1086623**	**1086643**	**1086663**
Clamping sleeve vulcanized	315763	315764	315765	315766	315767	315768	315780	315781	315782	315772	315773	315705
Clamping set unvulcanized	**1086317**	**1086328**	**1086339**	**1086350**	**1086361**	**1086372**	**1086383**	**1086394**	**1086405**	**1086423**	**1086443**	**1086463**
Clamping sleeve unvulcanized	315363	315364	315365	315366	315367	315368	315380	315381	315382	315372	315373	315403
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599843	599848	599853	599858	599863	599868	599875	599885	599895	599912	599931	599950
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187

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ROHM Cartridge Mandrel

Accessories KFS / MFS

C18

Clamping set KFS / MFS vulcanized and unvulcanized, consisting of clamping sleeve and clamping screw

For size	00	01	02	03	04	05	06	07	08	09	10	11
Expansion in Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Length L mm	35	40	46	50	60	60	80	90	100	122	140	180
Min-Ø mm	18,2	23,2	28,2	33,2	38,2	43,2	51,7	61,7	71,7	88,7	107,7	126,7
Clamping set vulcanized	**1086518**	**1086529**	**1086540**	**1086551**	**1086562**	**1086573**	**1086584**	**1086595**	**1086606**	**1086624**	**1086644**	**1086664**
Clamping sleeve vulcanized	650217	650230	650243	650256	650269	650282	650294	651057	651069	651088	651109	651130
Clamping set unvulcanized	**1086318**	**1086329**	**1086340**	**1086351**	**1086362**	**1086373**	**1086384**	**1086395**	**1086406**	**1086424**	**1086444**	**1086464**
Clamping sleeve unvulcanized	650027	650040	650053	650066	650079	650092	650104	650116	650129	650148	650169	650190
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599844	599849	599854	599859	599864	599869	599876	599886	599896	599913	599932	99951
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	18,7	23,7	28,7	33,7	38,7	43,7	52,7	62,7	72,7	89,7	108,7	127,7
Clamping set vulcanized	**1086519**	**1086530**	**1086541**	**1086552**	**1086563**	**1086574**	**1086585**	**1086596**	**1086607**	**1086625**	**1086645**	**1086665**
Clamping sleeve vulcanized	315774	315775	315776	315777	315778	315779	315785	315786	315787	315783	315784	315706
Clamping set unvulcanized	**1086319**	**1086330**	**1086341**	**1086352**	**1086363**	**1086374**	**1086385**	**1086396**	**1086407**	**1086425**	**1086445**	
Clamping sleeve unvulcanized	315374	315375	315376	315377	315378	315379	315385	315386	315387	315383	315384	
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599844	599849	599854	599859	599864	599869	599877	599887	599897	599914	599933	599952
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	19,2	24,2	29,2	34,2	39,2	44,2	53,7	63,7	73,7	90,7	109,7	128,7
Clamping set vulcanized	**1086520**	**1086531**	**1086542**	**1086553**	**1086564**	**1086575**	**1086586**	**1086597**	**1086608**	**1086626**	**1086646**	**1086666**
Clamping sleeve vulcanized	650219	650232	650245	650258	650271	650284	650296	651059	651071	651090	651111	651132
Clamping set unvulcanized	**1086320**	**1086331**	**1086342**	**1086353**	**1086364**	**1086375**	**1086386**	**1086397**	**1086408**	**1086426**	**1086446**	**1086466**
Clamping sleeve unvulcanized	650029	650042	650055	650068	650081	650094	650106	650118	650131	650150	650171	650192
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599966	599967	599968	599969	599970	599971	599878	599888	599898	599915	599934	599953
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm	19,7	24,7	29,7	34,7	39,7	44,7	54,7	64,7	74,7	91,7	110,7	129,7
Clamping set vulcanized	**1086521**	**1086532**	**1086543**	**1086554**	**1086565**	**1086576**	**1086587**	**1086598**	**1086609**	**1086627**	**1086647**	**1086667**
Clamping sleeve vulcanized	650220	650233	650246	650259	650272	650285	650297	651060	315790	315788	315789	315707
Clamping set unvulcanized	**1086321**	**1086332**	**1086343**	**1086354**	**1086365**	**1086376**	**1086387**	**1086398**	**1086409**	**1086427**	**1086447**	**1086467**
Clamping sleeve unvulcanized	650030	650043	650056	650069	650082	650095	650107	650119	315390	315388	315389	315405
Locking bolt	315469	315470	315471	315472	315473	315474	315475	315476	315477	315478	315479	599998
Work stop	599966	599967	599968	599969	599970	599971	599879	599889	599899	599916	599935	599954
Montage mandrel clamping sets	724176	724177	724178	724179	724180	724181	724182	724183	724184	724185	724186	724187
Min-Ø mm									75,7	92,7	111,7	130,7
Clamping set vulcanized									**1086610**	**1086628**	**1086648**	**1086668**
Clamping sleeve vulcanized									651073	651092	651113	651134
Clamping set unvulcanized									**1086410**	**1086428**	**1086448**	**1086468**
Clamping sleeve unvulcanized									650133	650152	650173	650194
Locking bolt									315477	315478	315479	599998
Work stop									599900	599917	599936	599955
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									76,7	93,7	112,7	131,7
Clamping set vulcanized									**1086611**	**1086629**	**1086649**	**1086669**
Clamping sleeve vulcanized									651074	651093	651114	651135
Clamping set unvulcanized									**1086411**	**1086429**	**1086449**	**1086469**
Clamping sleeve unvulcanized									315393	315391	315392	315406
Locking bolt									315477	315478	315479	599998
Work stop									599901	599918	599937	599956
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									77,7	94,7	113,7	132,7
Clamping set vulcanized									**1086612**	**1086630**	**1086650**	**1086670**
Clamping sleeve vulcanized									651075	651094	651115	651136
Clamping set unvulcanized									**1086412**	**1086430**	**1086450**	**1086470**
Clamping sleeve unvulcanized									650135	650154	650175	650196
Locking bolt									315477	315478	315479	599998
Work stop									599902	599919	599938	599957
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									78,7	95,7	114,7	133,7
Clamping set vulcanized									**1086613**	**1086631**	**1086651**	**1086671**
Clamping sleeve vulcanized									315796	315794	315795	315709
Clamping set unvulcanized									**1086413**	**1086431**	**1086451**	**1086471**
Clamping sleeve unvulcanized									315396	315394	315395	315407
Locking bolt									315477	315478	315479	599998
Work stop									599903	599920	599939	599958
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									79,7	96,7	115,7	134,7
Clamping set vulcanized									**1086614**	**1086632**	**1086652**	**1086672**
Clamping sleeve vulcanized									651077	651096	651117	651138
Clamping set unvulcanized									**1086414**	**1086432**	**1086452**	**1086472**
Clamping sleeve unvulcanized									650137	650156	650177	650198
Locking bolt									315477	315478	315479	599998
Work stop									599904	599921	599940	599959
Montage mandrel clamping sets									724184	724185	724186	724187

Accessories KFS/MFS

Accessories KFS / MFS

C18

Clamping set KFS / MFS vulcanized and unvulcanized, consisting of clamping sleeve and clamping screw

For size	00	01	02	03	04	05	06	07	08	09	10	11
Expansion in Ø mm	1	1	1	1	1	1	1	1	1	1	1	1
Length L mm	35	40	46	50	60	60	80	90	100	122	140	180
Min-Ø mm									80,7	97,7	116,7	135,7
Clamping set vulcanized									**1086615**	**1086633**	**1086653**	**1086673**
Clamping sleeve vulcanized									315799	315797	315798	315710
Clamping set unvulcanized									**1086415**	**1086433**	**1086453**	**1086473**
Clamping sleeve unvulcanized									315399	315397	315398	315408
Locking bolt									315477	315478	315479	599998
Work stop									599905	599922	599941	599960
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm									81,7	98,7	117,7	136,7
Clamping set vulcanized									**1086616**	**1086634**	**1086654**	**1086674**
Clamping sleeve vulcanized									651079	651098	651119	651140
Clamping set unvulcanized									**1086416**	**1086434**	**1086454**	**1086474**
Clamping sleeve unvulcanized									650139	650158	650179	650200
Locking bolt									315477	315478	315479	599998
Work stop									599906	599923	599942	599961
Montage mandrel clamping sets									724184	724185	724186	724187
Min-Ø mm										99,7	118,7	137,7
Clamping set vulcanized										**1086635**	**1086655**	**1086675**
Clamping sleeve vulcanized										315800	315801	315711
Clamping set unvulcanized										**1086435**	**1086455**	**1086475**
Clamping sleeve unvulcanized										315400	315401	315409
Locking bolt										315478	315479	599998
Work stop										599924	599943	599962
Montage mandrel clamping sets										724185	724186	724187
Min-Ø mm										100,7	119,7	138,7
Clamping set vulcanized										**1086636**	**1086656**	**1086676**
Clamping sleeve vulcanized										651100	651121	651142
Clamping set unvulcanized										**1086436**	**1086456**	**1086476**
Clamping sleeve unvulcanized										650160	650181	650202
Locking bolt										315478	315479	599998
Work stop										599925	599944	599963
Montage mandrel clamping sets										724185	724186	724187
Min-Ø mm												139,7
Clamping set vulcanized												**1086677**
Clamping sleeve vulcanized												315712
Clamping set unvulcanized												**1086477**
Clamping sleeve unvulcanized												315410
Locking bolt												599998
Work stop												599964
Montage mandrel clamping sets												724187

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Cartridge Mandrel

Notes

Intermediate flange KFS / MFS



APPLICATION

For adaption of cartridge mandrel KFR/MFR//MFR-SE or KFS/MFS - on spindle head ISO 702-1 / ISO 702-3 (DIN 55021/55022/55026 and 55027).

TYPE

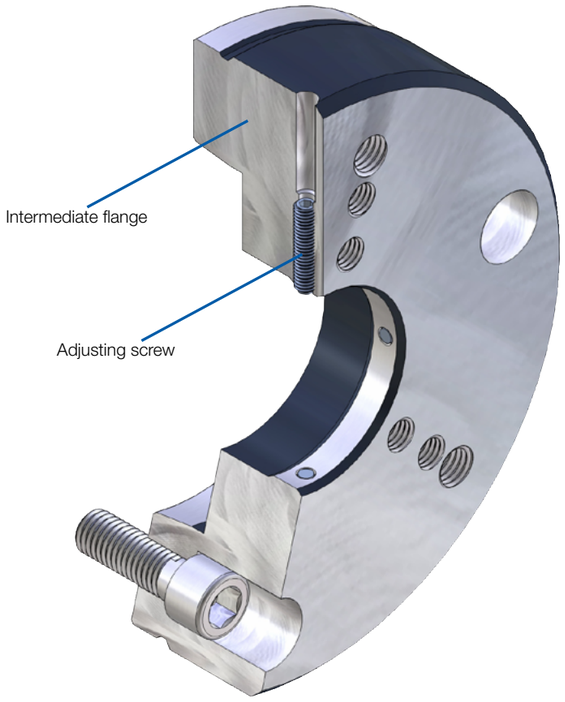
For KFR/MFR/MFR-SE or KFS/MFS.

CUSTOMER BENEFITS

- By replacement of the intermediate flange, one cartridge mandrel can be used on different machines

TECHNICAL FEATURES

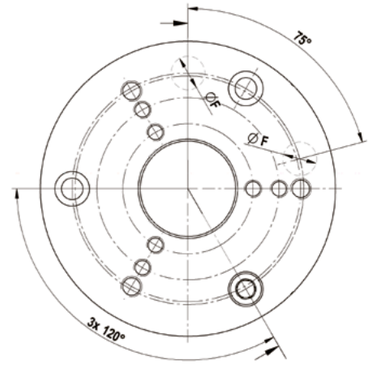
Adaptation of KFR/MFR/MFR-SE cartridge mandrel or KFS/MFS on spindle head, with or without adjusting screw, with or without performing air sensing.
Version acc. to ISO 702-1(DIN 55028-A) or ISO 702-3 (DIN 55028-C), in size no. 5, no. 6, no. 8, no. 11 or no. 5, no. 6, no. 8 (A5, A6, A8, A11 or C5, C6, C8).



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Cartridge Mandrel

Accessories KFS / MFS

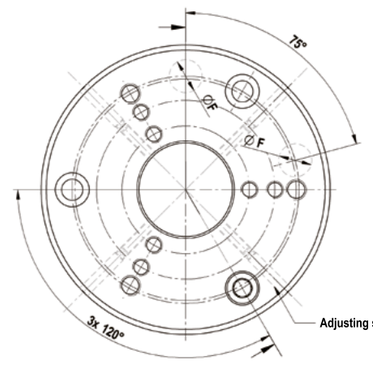




C 18
Intermediate flange ISO 702-1 (DIN 55026/55021) **without adjusting screws**

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**893975**	**893976**	**893977**	**893978**
Design	without air-sensing	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50	50
Ø B mm	165	170	220	282
Ø C mm	104,8	133,4	171,4	235
Ø D mm	82,563	106,375	139,719	196,869
Ø E	M10	M12	M16	M20
Ø F mm	16,3	19,45	24,2	29,4





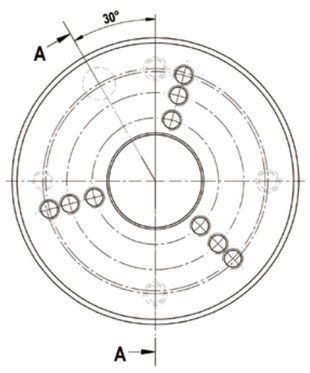
C 18
Intermediate flange ISO 702-1 (DIN 55028) **with adjusting screw**

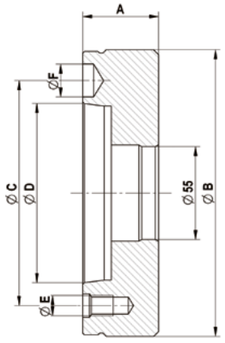
	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)
Intermediate flange	**893979**	**893980**	**893981**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M10	M12	M16
Ø F mm	16,3	19,45	24,2

ROHM Cartridge Mandrel

Accessories KFS / MFS

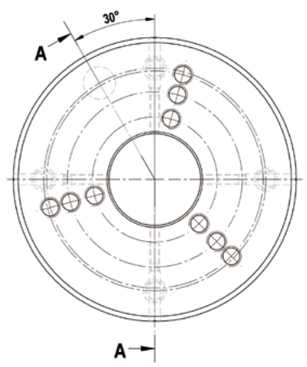


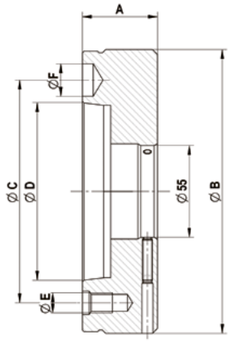




C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **without adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893982**	**893983**	**893984**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2





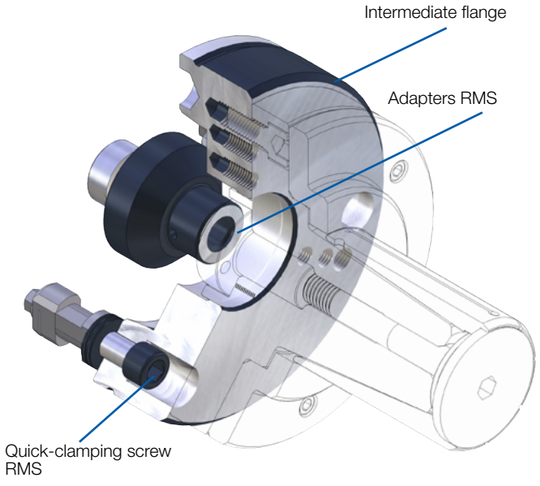
C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **with adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893985**	**893986**	**893987**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2

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ROHM Cartridge Mandrel

Accessories KFS / MFS



APPLICATION

For manual clamping device exchange in a minimum of time.

TYPE

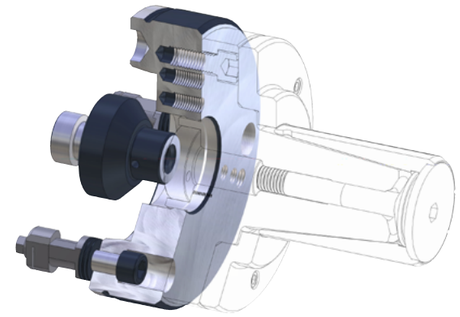
Manual quick-change system for clamping devices.
Fits for KFR/MFR or KFS/MFS.
Central lubrication and/or air sensing control possible.

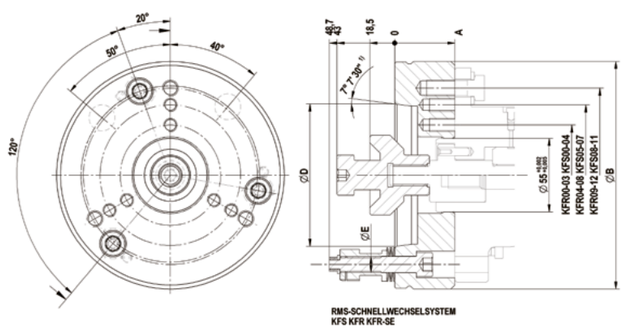
CUSTOMER BENEFITS

- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautometic clamping devices changing systems

TECHNICAL FEATURES

- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6)
- Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with ROHM safety clamping cylinder OVS and LVS





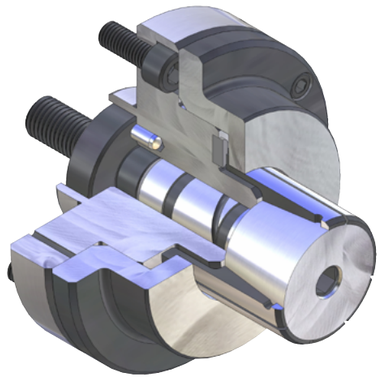
C18
RMS quick-change system, hand-operated for clamping devices

	KK 06	KK 08
RMS - complete (flange incl. quick-clamping screw)	**1160026**	**1160027**
Adapters RMS	**1183310**	**1183311**
Suitable basic take-up	**156670**	**156671**
A	45	50
Ø B mm	170	220
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M12	M16
Ø F mm	55 (+0,003/+0,001)	55 (+0,003/+0,001)

ROHM Cartridge Mandrel

KFR - force-actuated





APPLICATION

Internal clamping of round workpieces. Turning, grinding and toothing operations, as well as for balancing and measuring.
Ideal for short clamping lengths / workpieces.

TYPE

Force-actuated. Without axial tightening. Clamping sleeves optionally vulcanized.
Convertible to MFR (required new intermediate piece).

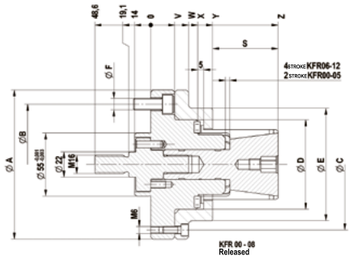
CUSTOMER BENEFITS

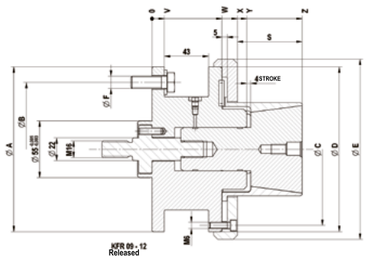
- No workpiece tension thanks to def. axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Low-maintenance

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

KFR = force-actuated, flange, R-type





C18
KFR cartridge mandrel, power-operated with flanged seat, for internal clamping
Consisting of basic body, clamping taper, intermediate piece, nut

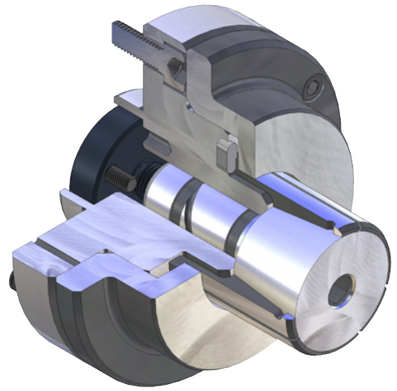
	KFR 00	KFR 01	KFR 02	KFR 03	KFR 04	KFR 05	KFR 06	KFR 07	KFR 08	KFR 09	KFR 10	KFR 11	KFR 12
Components													
Cartridge Mandrel complete	**893960**	**893961**	**893962**	**893963**	**893964**	**893965**	**893966**	**893967**	**893968**	**893969**	**893970**	**893971**	**893972**
Base bolt (individual part)	893800	893801	893802	893803	893804	893805	893806	893807	893807	893809	893809	893809	893809
Adapter power-operated (ind.part)	893816	893817	893818	893819	893820	893820	893821	893822	893822	893822	893822	893822	893822
Clamping taper (individual part)	650340	650341	650342	650343	650344	650345	650346	650347	650348	650349	650350	650351	650352
Nut (individual part)	893814	893814	893814										
Clamping & Performance data													
Clamping range mm	14,5 - 20	20 - 25,5	25,5 - 35,5	35,5 - 40	40,5 - 50,5	50,5 - 61	61 - 71	71 - 81	81 - 91	91 - 101	101 - 111	111 - 121	121 - 131
Elongation Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Max stroke mm	2	2	2	2	2	2	4	4	4	4	4	4	4
Max actuation force kN	4,65	13,1	19,5	24,4	26,8	33	33	33	33	33	33	33	33
Max total tension kN	19	55	83	103	114	140	140	140	140	140	140	140	140
Max speed U/min	5000	5000	5000	5000	5000	4000	4000	4000	4000	3500	3500	3500	3500
Dimensions clamping devices													
External-Ø A mm	100	100	100	100	130	130	130	160	160	160	160	160	160
Pitch diameter B mm	75	75	75	75	105	105	105	130	130	130	130	130	130
Pitch diameter C mm	85	85	85	85	114	114	114	145	145	148	148	148	148
Ø C mm							98	130	130	175	175	175	175
Ø D mm	50	50	50	50	78	78	78	100	100	160	160	160	160
Ø E mm	70	70	70	70	98	98	98	130	130	175	175	175	175
Ø F mm	M10	M10	M10	M10	M10	M10	M10	M12	M12	M12	M12	M12	M12
S mm	21	27	27	27	42	42	57	55	55	63	63	63	63
V mm	21	21	21	21	21	21	21	32	32	12	12	12	12
W mm	33	33	33	33	33	33	33	50	50	68	68	68	68
X mm	39	39	39	39	41	41	41	58	58	83	83	83	83
Y mm	50	52	52	52	54	54	54	73	73	92	92	92	92
Z mm	71	79	79	79	96	96	111	128	128	146	146	146	146

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ROHM Cartridge Mandrel

MFR - without axial tightening, manually actuated





APPLICATION

Internal clamping of round workpieces. Turning, grinding and toothing operations, as well as for balancing and measuring.
Ideal for short clamping lengths / workpieces.

TYPE

Manually actuated. Optional vulcanized clamping sleeves/segment sleeves (segment clamping mandrel KFR-SE).

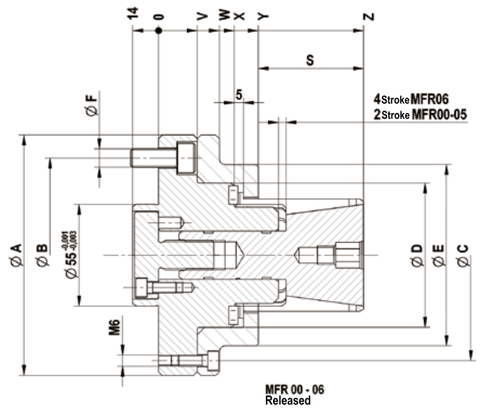
CUSTOMER BENEFITS

- No workpiece tension thanks to def. axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Low-maintenance

TECHNICAL FEATURES

- Hardened, low-wear design
- Integrated lubrication
- Air sensing prepared

MFR = manually actuated, flange, R-type



C18
MFR cartridge mandrel, hand-operated with flanged seat, for internal clamping
Consisting of basic body, clamping taper, intermediate piece

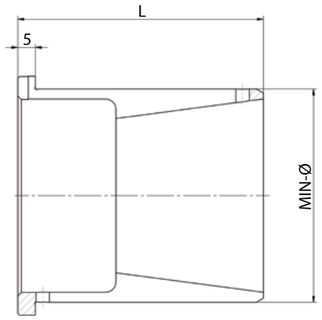
	MFR 00	MFR 01	MFR 02	MFR 03	MFR 04	MFR 05	MFR 06
Components							
Cartridge Mandrel complete	**1077700**	**1077701**	**1077702**	**1077703**	**1077704**	**1077705**	**1077706**
Base bolt (individual part)	893800	893801	893802	893803	893804	893805	893806
Adapter power-operated (ind.part)	893823	893824	893825	893826	893827	893827	893828
Clamping taper (individual part)	650340	650341	650342	650343	650344	650345	650346
Clamping & Performance data							
Clamping range mm	14,5 - 20	20 - 25,5	25,5 - 35,5	35,5 - 40	40,5 - 50,5	50,5 - 61	61 - 71
Elongation Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1
Max stroke mm	2	2	2	2	2	2	4
Max actuation force kN	4,65	13,1	19,5	24,4	26,8	33	33
Max total tension kN	19	55	83	103	114	140	140
Max tightening moment Nm	4	20	40	55	60	75	85
Max speed U/min	5000	5000	5000	5000	5000	4000	4000
Dimensions clamping devices							
External-Ø A mm	100	100	100	100	130	130	130
Pitch diameter B mm	75	75	75	75	105	105	105
Pitch diameter C mm	85	85	85	85	114	114	114
Ø C mm							98
Ø D mm	50	50	50	50	78	78	78
Ø E mm	70	70	70	70	98	98	98
Ø F mm	M10	M10	M10	M10	M10	M10	M10
S mm	21	27	27	27	42	42	57
V mm	21	21	21	21	21	21	21
W mm	33	33	33	33	33	33	33
X mm	39	39	39	39	41	41	41
Y mm	50	52	52	52	54	54	54
Z mm	71	79	79	79	96	96	111

ROHM Cartridge Mandrel

Accessories KFR / MFR







C 18
Clamping sleeve Type R - standard design, vulcanized and not vulcanized

For size	00	01	02	03	04	05	06	07	08	09	10	11	12
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Total length L	32	40	40	40	55	55	70	70	70	78	78	78	78
Min-Ø mm	14,2	19,7	25,2	35,2	40,2	50,2	60,7	70,7	80,7	90,7	100,7	110,7	120,7
Clamping sleeve vulcanized	**1015700**	**1015713**	**1015726**	**1015748**	**1015760**	**1015782**	**1015805**	**1015817**	**1015829**	**1015841**	**1015853**	**1015865**	**1015877**
Clamping sleeve unvulcanized	**1015500**	**1015513**	**1015526**	**1015548**	**1015560**	**1015582**	**1015605**	**1015617**	**1015629**	**1015641**	**1015653**	**1015665**	**1015677**
Work stop	893830	893836	893842	893852	893857	893867	893878	893888	893897	893907	893917	893927	893937
Min-Ø mm	14,7	20,2	25,7	35,7	40,7	50,7	61,7	71,7	81,7	91,7	101,7	111,7	121,7
Clamping sleeve vulcanized	**1015701**	**1015714**	**1015727**	**1015749**	**1015761**	**1015783**	**1015806**	**1015818**	**1015830**	**1015842**	**1015854**	**1015866**	**1015878**
Clamping sleeve unvulcanized	**1015501**	**1015514**	**1015527**	**1015549**	**1015561**	**1015583**	**1015606**	**1015618**	**1015630**	**1015642**	**1015654**	**1015666**	**1015678**
Work stop	893830	893836	893842	893852	893857	893867	893879	893889	893898	893908	893918	893928	893938
Min-Ø mm	15,2	20,7	26,2	36,2	41,2	51,2	62,7	72,7	82,7	92,7	102,7	112,7	122,7
Clamping sleeve vulcanized	**1015702**	**1015715**	**1015728**	**1015750**	**1015762**	**1015784**	**1015807**	**1015819**	**1015831**	**1015843**	**1015855**	**1015867**	**1015879**
Clamping sleeve unvulcanized	**1015502**	**1015515**	**1015528**	**1015550**	**1015562**	**1015584**	**1015607**	**1015619**	**1015631**	**1015643**	**1015655**	**1015667**	**1015679**
Work stop	893831	893837	893843	893853	893858	893868	893881	893891	893900	893910	893920	893930	893940
Min-Ø mm	15,7	21,2	26,7	36,7	41,7	51,7	63,7	73,7	83,7	93,7	103,7	113,7	123,7
Clamping sleeve vulcanized	**1015703**	**1015716**	**1015729**	**1015751**	**1015763**	**1015785**	**1015808**	**1015820**	**1015832**	**1015844**	**1015856**	**1015868**	**1015880**
Clamping sleeve unvulcanized	**1015503**	**1015516**	**1015529**	**1015551**	**1015563**	**1015585**	**1015608**	**1015620**	**1015632**	**1015644**	**1015656**	**1015668**	**1015680**
Work stop	893831	893837	893843	893853	893858	893868	893881	893891	893900	893910	893920	893930	893940
Min-Ø mm	16,2	21,7	27,2	37,2	42,2	52,2	64,7	74,7	84,7	94,7	104,7	114,7	124,7
Clamping sleeve vulcanized	**1015704**	**1015717**	**1015730**	**1015752**	**1015764**	**1015786**	**1015809**	**1015821**	**1015833**	**1015845**	**1015857**	**1015869**	**1015881**
Clamping sleeve unvulcanized	**1015504**	**1015517**	**1015530**	**1015552**	**1015564**	**1015586**	**1015609**	**1015621**	**1015633**	**1015645**	**1015657**	**1015669**	**1015681**
Work stop	893831	893838	893843	893853	893858	893868	893882	893892	893901	893911	893921	893931	893941
Min-Ø mm	16,7	22,2	27,7	37,7	42,7	52,7	65,7	75,7	85,7	95,7	105,7	115,7	125,7
Clamping sleeve vulcanized	**1015705**	**1015718**	**1015731**	**1015753**	**1015765**	**1015787**	**1015810**	**1015822**	**1015834**	**1015846**	**1015858**	**1015870**	**1015882**
Clamping sleeve unvulcanized	**1015505**	**1015518**	**1015531**	**1015553**	**1015565**	**1015587**	**1015610**	**1015622**	**1015634**	**1015646**	**1015658**	**1015670**	**1015682**
Work stop	893832	893838	893844	893854	893859	893869	893883	893893	893902	893912	893922	893932	893942
Min-Ø mm	17,2	22,7	28,2	38,2	43,2	53,2	66,7	76,7	86,7	96,7	106,7	116,7	126,7
Clamping sleeve vulcanized	**1015706**	**1015719**	**1015732**	**1015754**	**1015766**	**1015788**	**1015811**	**1015823**	**1015835**	**1015847**	**1015859**	**1015871**	**1015883**
Clamping sleeve unvulcanized	**1015506**	**1015519**	**1015532**	**1015554**	**1015566**	**1015588**	**1015611**	**1015623**	**1015635**	**1015647**	**1015659**	**1015671**	**1015683**
Work stop	893832	893839	893844	893854	893859	893869	893884	893894	893903	893913	893923	893933	893943
Min-Ø mm	17,7	23,2	28,7	38,7	43,7	53,7	67,7	77,7	87,7	97,7	107,7	117,7	127,7
Clamping sleeve vulcanized	**1015707**	**1015720**	**1015733**	**1015755**	**1015767**	**1015789**	**1015812**	**1015824**	**1015836**	**1015848**	**1015860**	**1015872**	**1015884**
Clamping sleeve unvulcanized	**1015507**	**1015520**	**1015533**	**1015555**	**1015567**	**1015589**	**1015612**	**1015624**	**1015636**	**1015648**	**1015660**	**1015672**	**1015684**
Work stop	893833	893839	893845	893855	893860	893870	893885	893895	893904	893914	893924	893934	893944
Min-Ø mm	18,2	23,7	29,2	39,2	44,2	54,2	68,7	78,7	88,7	98,7	108,7	118,7	128,7
Clamping sleeve vulcanized	**1015708**	**1015721**	**1015734**	**1015756**	**1015768**	**1015790**	**1015813**	**1015825**	**1015837**	**1015849**	**1015861**	**1015873**	**1015885**
Clamping sleeve unvulcanized	**1015508**	**1015521**	**1015534**	**1015556**	**1015568**	**1015590**	**1015613**	**1015625**	**1015637**	**1015649**	**1015661**	**1015673**	**1015685**
Work stop	893833	893840	893845	893855	893860	893870	893886	893947	893905	893915	893925	893935	893945
Min-Ø mm	18,7	24,2	29,7	39,7	44,7	54,7	69,7	79,7	89,7	99,7	109,7	119,7	129,7
Clamping sleeve vulcanized	**1015709**	**1015722**	**1015735**	**1015757**	**1015769**	**1015791**	**1015814**	**1015826**	**1015838**	**1015850**	**1015862**	**1015874**	**1015886**
Clamping sleeve unvulcanized	**1015509**	**1015522**	**1015535**	**1015557**	**1015569**	**1015591**	**1015614**	**1015626**	**1015638**	**1015650**	**1015662**	**1015674**	**1015686**
Work stop	893834	893840	893846	893856	893861	893871	893887	893896	893906	893916	893926	893936	893946
Min-Ø mm	19,2	24,7	30,2	40,2	45,2	55,2	70,7	80,7	90,7	100,7	110,7	120,7	130,7
Clamping sleeve vulcanized	**1015710**	**1015723**	**1015736**	**1015758**	**1015770**	**1015792**	**1015815**	**1015827**	**1015839**	**1015851**	**1015863**	**1015875**	**1015887**
Clamping sleeve unvulcanized	**1015510**	**1015523**	**1015536**	**1015558**	**1015570**	**1015592**	**1015615**	**1015627**	**1015639**	**1015651**	**1015663**	**1015675**	**1015687**
Work stop	893834	893841	893846	893856	893861	893871	893887	893896	893906	893916	893926	893936	893946

Other clamping diameters and profiled clamping sleeves are available on request

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ROHM Cartridge Mandrel

Accessories KFR / MFR

C 18
Clamping sleeve Type R - standard design, vulcanized and not vulcanized

For size	00	01	02	03	04	05	06	07	08	09	10	11	12
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Total length L	32	40	40	40	55	55	70	70	70	78	78	78	78
Min-Ø mm	19,7	25,2	30,7		45,7	55,7							
Clamping sleeve vulcanized	**1015711**	**1015724**	**1015737**		**1015771**	**1015793**							
Clamping sleeve unvulcanized	**1015511**	**1015524**	**1015537**		**1015571**	**1015593**							
Work stop	893835	893841	893847		893862	893872							
Min-Ø mm			31,2		46,2	56,2							
Clamping sleeve vulcanized			**1015738**		**1015772**	**1015794**							
Clamping sleeve unvulcanized			**1015538**		**1015572**	**1015594**							
Work stop			893847		893862	893872							
Min-Ø mm			31,7		46,7	56,7							
Clamping sleeve vulcanized			**1015739**		**1015773**	**1015795**							
Clamping sleeve unvulcanized			**1015539**		**1015573**	**1015595**							
Work stop			893848		893863	893873							
Min-Ø mm			32,2		47,2	57,2							
Clamping sleeve vulcanized			**1015740**		**1015774**	**1015796**							
Clamping sleeve unvulcanized			**1015540**		**1015574**	**1015596**							
Work stop			893848		893863	893873							
Min-Ø mm			32,7		47,7	57,7							
Clamping sleeve vulcanized			**1015741**		**1015775**	**1015797**							
Clamping sleeve unvulcanized			**1015541**		**1015575**	**1015597**							
Work stop			893849		893864	893874							
Min-Ø mm			33,2		48,2	58,2							
Clamping sleeve vulcanized			**1015742**		**1015776**	**1015798**							
Clamping sleeve unvulcanized			**1015542**		**1015576**	**1015598**							
Work stop			893849		893864	893874							
Min-Ø mm			33,7		48,7	58,7							
Clamping sleeve vulcanized			**1015743**		**1015777**	**1015799**							
Clamping sleeve unvulcanized			**1015543**		**1015577**	**1015599**							
Work stop			893850		893865	893875							
Min-Ø mm			34,2		49,2	59,2							
Clamping sleeve vulcanized			**1015744**		**1015778**	**1015800**							
Clamping sleeve unvulcanized			**1015544**		**1015578**	**1015600**							
Work stop			893850		893865	893875							
Min-Ø mm			34,7		49,7	59,7							
Clamping sleeve vulcanized			**1015745**		**1015779**	**1015801**							
Clamping sleeve unvulcanized			**1015545**		**1015579**	**1015601**							
Work stop			893851		893866	893876							
Min-Ø mm			35,2		50,2	60,2							
Clamping sleeve vulcanized			**1015746**		**1015780**	**1015802**							
Clamping sleeve unvulcanized			**1015546**		**1015580**	**1015602**							
Work stop			893851		893866	893876							
Min-Ø mm						60,7							
Clamping sleeve vulcanized						**1015803**							
Clamping sleeve unvulcanized						**1015603**							
Work stop						893877							

Other clamping diameters and profiled clamping sleeves are available on request

Accessories KFR / MFR

Intermediate flange KFR / MFR



APPLICATION

For adaption of cartridge mandrel KFR/MFR/MFR-SE or KFS/MFS - on spindle head ISO 702-1 / ISO 702-3 (DIN 55021/55022/55026 and 55027).

TYPE

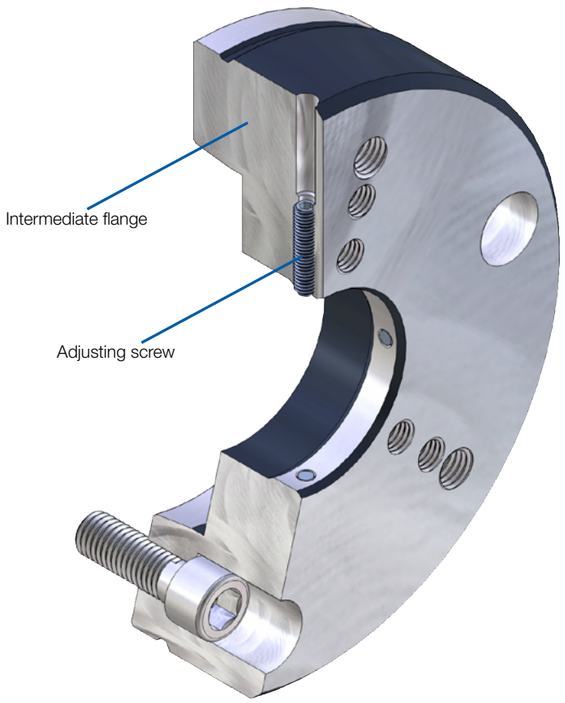
For KFR/MFR/MFR-SE or KFS/MFS.

CUSTOMER BENEFITS

- By replacement of the intermediate flange, one cartridge mandrel can be used on different machines

TECHNICAL FEATURES

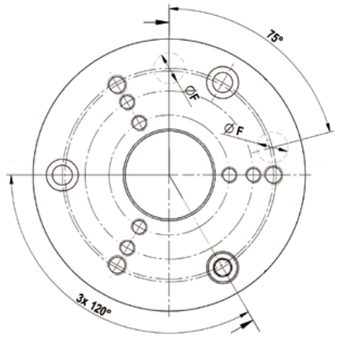
Adaptation of mandrel KFR/MFR/MFR-SE or KFS/MFS on spindle head, with or without adjustment, with or without operation of air-conditioning control. Execution according to ISO 702-1 (DIN 55028-A) or ISO 702-3 (DIN 55028-C), in size no. 5, no. 6, no. 8, no. 11 or no. 5, no. 6, Nr. 8 (A5, A6, A8, A11 or C5, C6, C8).

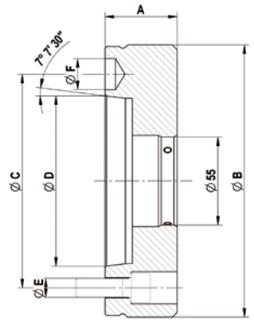


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Cartridge Mandrel

Accessories KFR / MFR



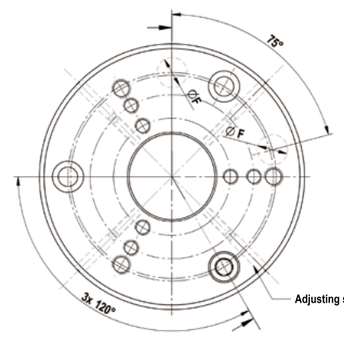


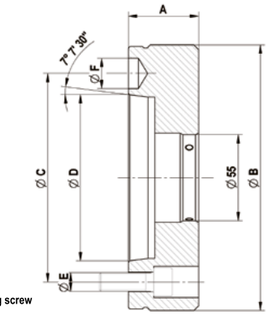


C 18
Intermediate flange ISO 702-1 (DIN 55026/55021) **without adjusting screws**

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**893975**	**893976**	**893977**	**893978**
Design	without air-sensing	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50	50
Ø B mm	165	170	220	282
Ø C mm	104,8	133,4	171,4	235
Ø D mm	82,563	106,375	139,719	196,869
Ø E	M10	M12	M16	M20
Ø F mm	16,3	19,45	24,2	29,4





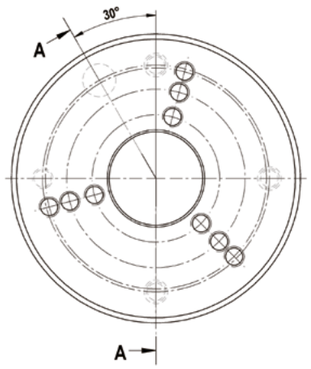


C 18
Intermediate flange ISO 702-1 (DIN 55028) **with adjusting screw**

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)
Intermediate flange	**893979**	**893980**	**893981**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M10	M12	M16
Ø F mm	16,3	19,45	24,2

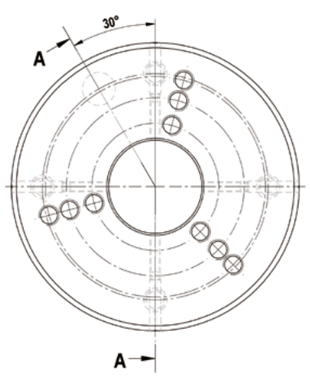
Accessories KFR / MFR

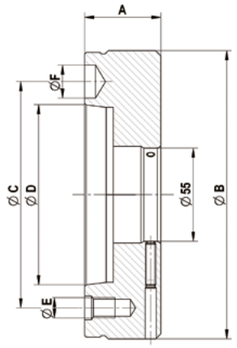




C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **without adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893982**	**893983**	**893984**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,003/+0,001	+0,003/+0,001	+0,003/+0,001
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2



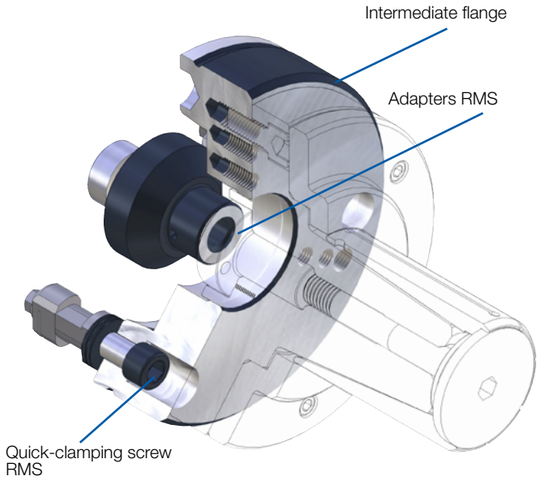


C 18
Intermediate flange ISO 702-3 (DIN 55027/55022) **with adjusting screws**

	Nr. 5 (C 05)	Nr. 6 (C 06)	Nr. 8 (C 08)
Intermediate flange	**893985**	**893986**	**893987**
Design	without air-sensing	without air-sensing	without air-sensing
Mount-Ø 55 mm	+0,05/+0,04	+0,05/+0,04	+0,05/+0,04
A mm	45	45	50
Ø B mm	165	170	220
Ø C mm	104,8	133,4	171,4
Ø D mm	82,563	106,375	139,719
Ø E	M 10	M 12	M 16
Ø F mm	16,3	19,45	24,2

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Cartridge Mandrel

Accessories KFR / MFR

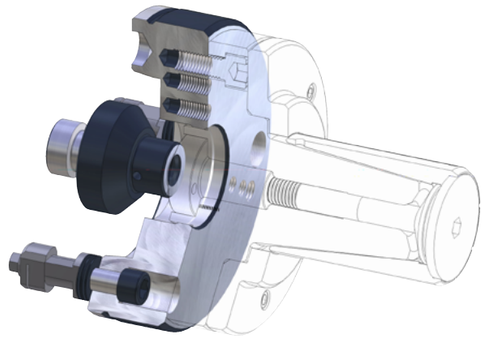


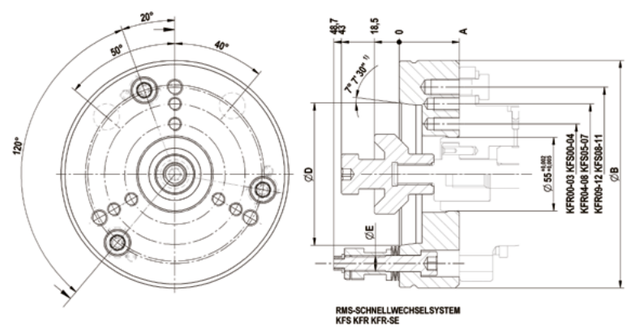
APPLICATION
For manual clamping device exchange in a minimum of time.

TYPE
Manual quick-change system for clamping devices.
Fits KFR (255-00), KFS (253-00).
Central lubrication and/or air sensing control possible.

CUSTOMER BENEFITS
- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautomatic clamping devices changing systems

TECHNICAL FEATURES
- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6)
- Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with RÖHM safety clamping cylinder OVS and LVS





C18
RMS quick-change system, hand-operated for clamping devices

	KK 06	KK 08
RMS - complete (flange incl. quick-clamping screw)	**1160026**	**1160027**
Adapters RMS	**1183310**	**1183311**
Suitable basic take-up	**156670**	**156671**
A	45	50
Ø B mm	170	220
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M12	M16
Ø F mm	55 (+0,003/+0,001)	55 (+0,003/+0,001)

Accessories KFR / MFR

KFB - with axial tightening, force-actuated



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for very small clamping diameters starting from Ø 5.5 mm or small workpieces.

TYPE

Force-actuated. Clamping sleeves optionally vulcanized.

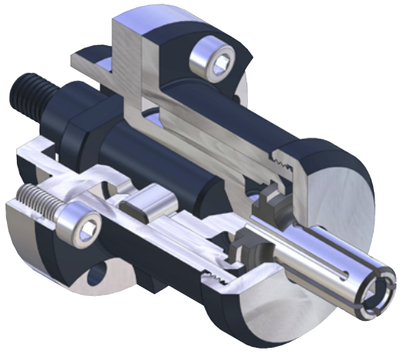
CUSTOMER BENEFITS

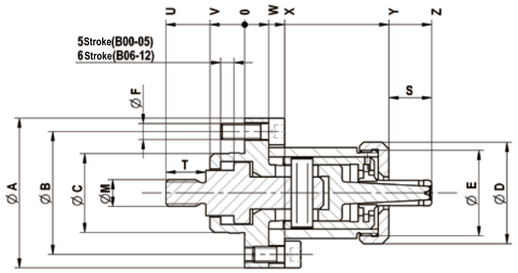
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity, axial run-out and repeatability
- Light weight and reduced height thanks to compact design

TECHNICAL FEATURES

- Hardened, low-wear design

KFB = force-actuated, flange, B-type



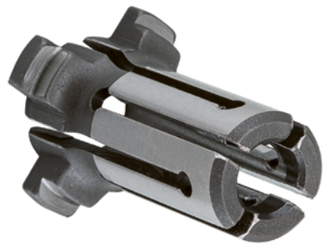


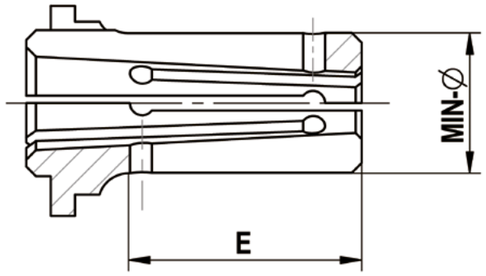
C18
KFB cartridge mandrel, power-operated with flanged seat, for internal clamping
Consisting of basic mandrel, stop sleeve, guide sleeve, cotter, draw bolt

	KFB 00	KFB 01	KFB 02	KFB 03	KFB 04	KFB 05	KFB 06	KFB 07
Components								
Cartridge Mandrel complete	327586	327587	327588	327589	327590	327591	327592	327593
Base bolt (individual part)	323521	323522	323523	323524	323525	323526	323527	323528
Stop sleeve (individual part)	323474	323475	323476	323477	323478	323479	323480	323481
Guide sleeve (individual part)	323461	323462	323463	323464	323465	323466	323467	323468
Cotter (individual part)	323508	323509	323510	323511	323512	323513	323514	323515
Draw bolt (individual part)	323500	323501	323502	323502	323503	323504	323504	323505
Clamping & Performance data								
Clamping range mm	5,8 - 7,3	7,8 - 9,3	9,8 - 11,8	12,3 - 14,8	14,8 - 19,3	19,8 - 24,8	25 - 29	30 - 34
Elongation Ø mm	0,5	0,5	0,5	0,5	0,5	1	1	1
Max stroke mm	5	5	5	5	5	5	6	6
Max actuation force kN	1,8	2,7	3,6	4,8	5,8	7,5	12	22
Max total tension kN	11,7	17,7	23,6	31,6	38	49,6	64,7	118,6
Max speed U/min	5000	5000	5000	5000	5000	4000	4000	4000
Dimensions clamping devices								
External-Ø A mm	45	50	56	60	72	76	82	95
Pitch diameter B mm	36	39	46	50	60	64	70	80
Ø C mm	25	25	30	30	40	40	40	60
Ø D mm	24	31	38	40	52	54	60	66
Ø E mm	M22x1,5	M27x1,5	M32x1,5	M36x1,5	M45x1,5	M48x1,5	M56x1,5	M60x1,5
Ø F mm	M5	M6	M6	M6	M6	M6	M6	M8
Hub G mm	5	5	5	5	5	5	6	6
Ø M mm	M8	M8	M10	M10	M10	M12	M12	M12
S mm	9	13	15	20,5	24	30	36	40
T mm	14	14	15	15	15	18	18	18
U mm	27	27,5	29,5	29,5	30,5	33,5	33,5	36,5
V mm	11,5	12	13	13	14	14	14	17
W mm	7,5	8	9	9	10	10	10	12,5
X mm	12,5	13	15	15	16	16	16	18,5
Y mm	42	46	45	58	66	67	71	74
Z mm	51,5	58,5	70	78,5	90	97	107	114

Accessories KFB







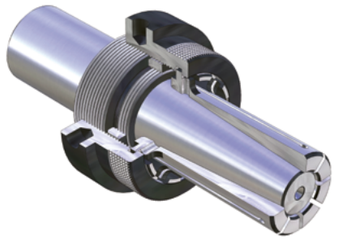
C 18
Clamping sleeve Type B - standard design vulcanized and unvulcanized

For size	KFB 00	KFB 01	KFB 02	KFB 03	KFB 04	KFB 05	KFB 06	KFB 07
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1
Total length E mm	11,5	15	19	20,5	28,5	34	40	43,5
Min-Ø mm	5,5	7,5	9,5	12	14,5	19,5	24,7	29,7
Clamping sleeve vulcanized	**323739**	**323740**	**323741**	**323742**	**323743**	**323744**	**323745**	**323746**
Clamping sleeve unvulcanized	**315139**	**315140**	**315141**	**315142**	**315143**	**315144**	**315145**	**315146**
Work stop	323420	323423	323426	323430	323435	323444	323452	323459
Min-Ø mm	6	8	10	12,5	15	20	25,7	30,7
Clamping sleeve vulcanized	**323752**	**323753**	**323754**	**323755**	**323756**	**323757**	**323758**	**323759**
Clamping sleeve unvulcanized	**315152**	**315153**	**315154**	**315155**	**315156**	**315157**	**315158**	**315159**
Work stop	323421	323424	323427	323431	323436	323445	323453	323460
Min-Ø mm	6,5	8,5	10,5	13	15,5	20,5	26,7	31,7
Clamping sleeve vulcanized	**323765**	**323766**	**323767**	**323768**	**323769**	**323770**	**323771**	**323772**
Clamping sleeve unvulcanized	**315165**	**315166**	**315167**	**315168**	**315169**	**315170**	**315171**	**315172**
Work stop	323422	323425	323428	323432	323437	323446	323454	323540
Min-Ø mm	7	9	11	13,5	16	21	27,7	32,7
Clamping sleeve vulcanized	**323778**	**323779**	**323780**	**323781**	**323782**	**323783**	**323784**	**323785**
Clamping sleeve unvulcanized	**315178**	**315179**	**315180**	**315181**	**315182**	**315183**	**315184**	**315185**
Work stop	323487	323488	323429	323433	323438	323447	323455	323541
Min-Ø mm			11,5	14	16,5	21,5	28,7	33,7
Clamping sleeve vulcanized			**323791**	**323792**	**323793**	**323794**	**323795**	**323796**
Clamping sleeve unvulcanized			**315191**	**315192**	**315193**	**315194**	**315195**	**315196**
Work stop			323489	323434	323439	323448	323493	323494
Min-Ø mm				14,5	17	22		
Clamping sleeve vulcanized				**323802**	**323803**	**323804**		
Clamping sleeve unvulcanized				**315202**	**315203**	**315204**		
Work stop				323490	323440	323449		
Min-Ø mm					17,5	22,5		
Clamping sleeve vulcanized					**323809**	**323810**		
Clamping sleeve unvulcanized					**315209**	**315210**		
Work stop					323441	323450		
Min-Ø mm					18	23		
Clamping sleeve vulcanized					**323815**	**323816**		
Clamping sleeve unvulcanized					**315215**	**315216**		
Work stop					323442	323456		
Min-Ø mm					18,5	23,5		
Clamping sleeve vulcanized					**323821**	**323822**		
Clamping sleeve unvulcanized					**315221**	**315222**		
Work stop					323443	323457		
Min-Ø mm					19	24		
Clamping sleeve vulcanized					**323827**	**323828**		
Clamping sleeve unvulcanized					**315227**	**315228**		
Work stop					323491	323458		
Min-Ø mm						24,5		
Clamping sleeve vulcanized						**323833**		
Clamping sleeve unvulcanized						**315233**		
Work stop						323492		

Other clamping diameters and profiled clamping sleeves are available on request

MZB - with axial tightening, manually actuated





APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for very small clamping diameters starting from Ø 5.5 mm or small workpieces.

TYPE

Manually actuated. Clamping sleeves optionally vulcanized.

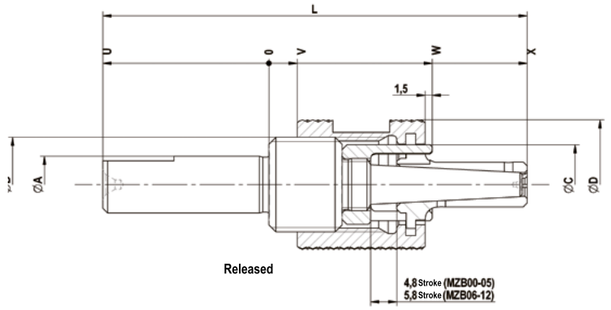
CUSTOMER BENEFITS

- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- High concentricity and repeatability
- Light weight and reduced height thanks to compact design

TECHNICAL FEATURES

- Hardened, low-wear design

MZB = manually actuated, centre hole, B-type



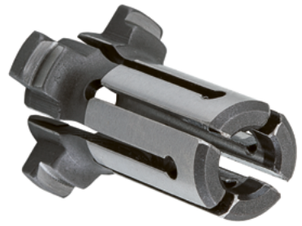
C18
MZB cartridge mandrel, hand-operated with centre hole, for internal clamping

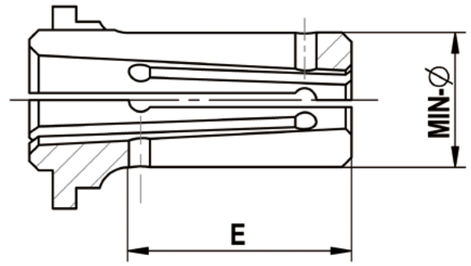
	MZB 00	MZB 01	MZB 02	MZB 03	MZB 04	MZB 05	MZB 06	MZB 07	MZB 08	MZB 09	MZB 10	MZB 11	MZB 12
Components													
Cartridge Mandrel complete	**1130361**	**1130362**	**1130363**	**1130364**	**1130365**	**1130366**	**1130367**	**1130368**	**1130369**	**1130370**	**1130371**	**1130372**	**1130373**
Basic mandrel (individual part)	315100	315101	315102	315103	315104	315105	315106	315107	315108	315109	315110	315111	315112
Nut (individual part)	315113	315114	315115	315116	315117	315118	315119	315120	315121	315122	315123	315124	315125
Clamping & Performance data													
Clamping range mm	5,8 - 7,3	7,8 - 9,3	9,8 - 11,8	12,3 - 14,8	14,8 - 19,3	19,8 - 24,8	25,0 - 29,0	30,0 - 34,0	35,0 - 39,0	40,0 - 44,0	45,0 - 54,0	55,0 - 64,0	65,0 - 79,0
Elongation Ø mm	0,5	0,55	0,55	0,55	0,55	0,55	1	1	1	1	1	1	1
Max stroke mm	5,5	5,5	5,5	5,5	5,5	5,5	6	6	6	6	6	6	6
Max speed U/min	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000	3000
Clamping devices dimensions													
Ø A mm	10	12	12	14	18	20	25	30	40	40	45	50	50
Ø B mm	M14x1,5	M16x1,5	M20x1,5	M24x1,5	M30x1,5	M36x1,5	M42x1,5	M45x1,5	M52x1,5	M56x1,5	M65x1,5	M75x2	M95x2
Ø C mm	10,8	13	16,8	20,8	26,8	31,8	36,8	41,8	47,8	52,5	61,8	71,8	90,8
Ø D mm	19,5	23	28	31	38	47	54	57,5	66	74	83	93	108
Stroke G mm	5	5,5	5,5	5,5	5,5	6	6	6	6	6	6	6,5	7
L mm	74,5	79,5	89,5	97,5	102,5	113,5	136	144,5	156	166,5	197	208,5	221,5
U mm	30	30	35	35	35	40	45	50	55	60	67	67	67
V mm	5,5	6	6	6	6	6	7	7	7	7	7	7	7
W mm	29	33,5	34,5	36,5	37,5	37,5	48,5	48,5	48,5	48,5	53,5	56,5	58,5
X mm	44,5	48,5	53,5	61,5	66,5	72,5	89	92,5	99	104,5	128	139,5	152,5

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ROHM Cartridge Mandrel

Accessories MZB







C 18
Clamping sleeve Type B - standard design vulcanized and unvulcanized

For size	MZB 00	MZB 01	MZB 02	MZB 03	MZB 04	MZB 05	MZB 06	MZB 07	MZB 08	MZB 09	MZB 10	MZB 11	MZB 12
Expansion in Ø mm	0,5	0,5	0,5	0,5	0,5	0,5	1	1	1	1	1	1	1
Total length E mm	11,5	15	19	20,5	28,5	34	40	43,5	50	55,5	74	82,5	93,5
Min-Ø mm	5,5	7,5	9,5	12	14,5	19,5	24,7	29,7	34,7	39,7	44,7	54,7	64,7
Clamping sleeve vulcanized	**323739**	**323740**	**323741**	**323742**	**323743**	**323744**	**323745**	**323746**	**323747**	**323748**	**323749**	**323750**	**323751**
Clamping sleeve unvulcanized	**315139**	**315140**	**315141**	**315142**	**315143**	**315144**	**315145**	**315146**	**315147**	**315148**	**315149**	**315150**	**315151**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm	6	8	10	12,5	15	20	25,7	30,7	35,7	40,7	45,7	55,7	65,7
Clamping sleeve vulcanized	**323752**	**323753**	**323754**	**323755**	**323756**	**323757**	**323758**	**323759**	**323760**	**323761**	**323762**	**323763**	**323764**
Clamping sleeve unvulcanized	**315152**	**315153**	**315154**	**315155**	**315156**	**315157**	**315158**	**315159**	**315160**	**315161**	**315162**	**315163**	**315164**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm	6,5	8,5	10,5	13	15,5	20,5	26,7	31,7	36,7	41,7	46,7	56,7	66,7
Clamping sleeve vulcanized	**323765**	**323766**	**323767**	**323768**	**323769**	**323770**	**323771**	**323772**	**323773**	**323774**	**323775**	**323776**	**323777**
Clamping sleeve unvulcanized	**315165**	**315166**	**315167**	**315168**	**315169**	**315170**	**315171**	**315172**	**315173**	**315174**	**315175**	**315176**	**315177**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm	7	9	11	13,5	16	21	27,7	32,7	37,7	42,7	47,7	57,7	67,7
Clamping sleeve vulcanized	**323778**	**323779**	**323780**	**323781**	**323782**	**323783**	**323784**	**323785**	**323786**	**323787**	**323788**	**323789**	**323790**
Clamping sleeve unvulcanized	**315178**	**315179**	**315180**	**315181**	**315182**	**315183**	**315184**	**315185**	**315186**	**315187**	**315188**	**315189**	**315190**
Work stop	315126	315127	315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm			11,5	14	16,5	21,5	28,7	33,7	38,7	43,7	48,7	58,7	68,7
Clamping sleeve vulcanized			**323791**	**323792**	**323793**	**323794**	**323795**	**323796**	**323797**	**323798**	**323799**	**323800**	**323801**
Clamping sleeve unvulcanized			**315191**	**315192**	**315193**	**315194**	**315195**	**315196**	**315197**	**315198**	**315199**	**315200**	**315201**
Work stop			315128	315129	315130	315131	315132	315133	315134	315135	315136	315137	315138
Min-Ø mm				14,5	17	22					49,7	59,7	69,7
Clamping sleeve vulcanized				**323802**	**323803**	**323804**					**323805**	**323806**	**323807**
Clamping sleeve unvulcanized				**315202**	**315203**	**315204**					**315205**	**315206**	**315207**
Work stop				315129	315130	315131					315136	315137	315138
Min-Ø mm					17,5	22,5					50,7	60,7	70,7
Clamping sleeve vulcanized					**323809**	**323810**					**323811**	**323812**	**323813**
Clamping sleeve unvulcanized					**315209**	**315210**					**315211**	**315212**	**315213**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm					18	23					51,7	61,7	71,7
Clamping sleeve vulcanized					**323815**	**323816**					**323817**	**323818**	**323819**
Clamping sleeve unvulcanized					**315215**	**315216**					**315217**	**315218**	**315219**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm					18,5	23,5					52,7	62,7	72,7
Clamping sleeve vulcanized					**323821**	**323822**					**323823**	**323824**	**323825**
Clamping sleeve unvulcanized					**315221**	**315222**					**315223**	**315224**	**315225**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm					19	24					53,7	63,7	73,7
Clamping sleeve vulcanized					**323827**	**323828**					**323829**	**323830**	**323831**
Clamping sleeve unvulcanized					**315227**	**315228**					**315229**	**315230**	**315231**
Work stop					315130	315131					315136	315137	315138
Min-Ø mm						24,5							74,7
Clamping sleeve vulcanized						**323833**							**323808**
Clamping sleeve unvulcanized						**315233**							**315208**
Work stop						315131							315138
Min-Ø mm													75,7
Clamping sleeve vulcanized													**323814**
Clamping sleeve unvulcanized													**315214**
Work stop													315138
Min-Ø mm													76,7
Clamping sleeve vulcanized													**323820**
Clamping sleeve unvulcanized													**315220**
Work stop													315138
Min-Ø mm													77,7
Clamping sleeve vulcanized													**323826**
Clamping sleeve unvulcanized													**315226**
Work stop													315138
Min-Ø mm													78,7
Clamping sleeve vulcanized													**323832**
Clamping sleeve unvulcanized													**315232**
Work stop													315138

Other clamping diameters and profiled clamping sleeves are available on request

MZE - for long clamping lengths, manually actuated



APPLICATION

Internal clamping of round workpieces. Measuring operations and light grinding operations.
Ideal for long clamping lengths / long workpieces.

TYPE

Manually actuated.
Available as clamping mandrel assortment for various clamping diameters.
Clamping sleeve separatly available.

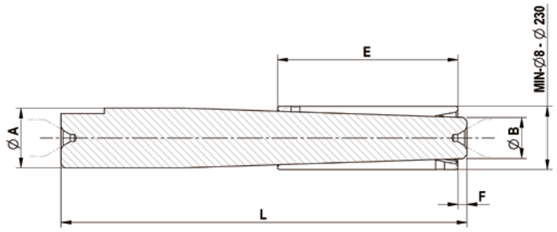
CUSTOMER BENEFITS

- Quick change of clamping sleeve without tools
- High concentricity and repeatability
- High flexibility thanks to mount on the shaft or between points
- Short retrofitting times

TECHNICAL FEATURES

- Hardened, low-wear design

MZE = manually actuated, centre hole, E-type



C18
MZE basic mandrel, hand-operated with centre hole, for internal clamping

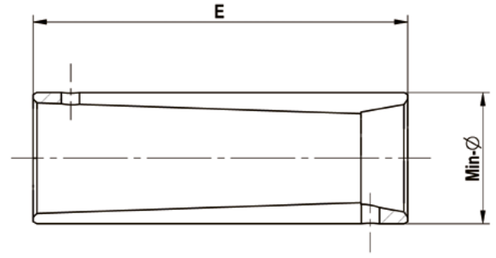
	MZE 00	MZE 01	MZE 02	MZE 03	MZE 04	MZE 05	MZE 06	MZE 07	MZE 08	MZE 09	MZE 10	MZE 11	MZE 12	MZE 13	MZE 14	MZE 15
Components																
Basic mandrel	**315000**	**315001**	**315002**	**315003**	**315004**	**315005**	**315006**	**315007**	**315008**	**315009**	**315010**	**315011**	**315012**	**315013**	**315014**	**315015**
Clamping & Performance data																
Clamping range mm	8,0-10,5	10,0-12,5	12,0-15,0	14,0-17,0	16,0-19,0	19,0-23,0	22,0-26,0	25,0-37,0	35,0-47,0	45,0-59,0	55,0-70,0	68,0-85,0	80,0-105,0	105,0- 140,0	135,0-185,0	185,0-235,0
Elongation Ø mm	1,5	1,5	2	2	2	2	2	3	3	5	5	5	5	5	5	5
Clamping length mm	40	45	60	70	70	80	80	100	100	125	135	150	150	170	180	200
Clamping devices dimensions																
Ø A mm	8	10	12	14	16	19	21	25	33	45	53	64	76	99	124	145,5
Ø B mm	4,1	5,3	5,7	6,9	8,5	10,7	12,2	14,6	22,6	31,1	38	48,2	60,9	80,4	97,4	122,4
E mm	40	45	60	70	70	80	80	100	100	125	135	150	150	170	180	200
F mm	3	3	4	4	4	4	4	4	5	5	5	5	5	5	82	63
L mm	75	110	125	140	150	170	175	225	225	300	330	350	350	400	442	443

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Cartridge Mandrel

Accessories MZE





C 18
Clamping sleeve Type E - **for basic mandrel MZE**

For size	MZE 00	MZE 01	MZE 02	MZE 03	MZE 04	MZE 05	MZE 06	MZE 07	MZE 08	MZE 09	MZE 10	MZE 11	MZE 12	MZE 13	MZE 14	MZE 15
Expansion in Ø mm	1,5	1,5	2	2	2	2	2	3	3	5	5	5	5	5	5	5
Total length E mm	40	45	60	70	70	80	80	100	100	125	135	150	150	170	180	200
Min-Ø mm	8	10	12	14	16	19	22	25	35	45	55	68		105	135	185
Clamping sleeve	**315016**	**315017**	**315018**	**315019**	**315020**	**315021**	**315022**	**315023**	**315024**	**315025**	**315026**	**315027**		**315029**	**315030**	**315031**
Min-Ø mm	9	11	13	15	17	20	23	26	36	48	58	70	80	110	140	190
Clamping sleeve	**315032**	**315033**	**315034**	**315035**	**315036**	**315037**	**315038**	**315039**	**315040**	**315041**	**315042**	**315043**	**315028**	**315045**	**315046**	**315047**
Min-Ø mm					18	21	24	28	38	50	60	72	85	115	145	195
Clamping sleeve					**315048**	**315049**	**315050**	**315051**	**315052**	**315053**	**315054**	**315055**	**315044**	**315057**	**315058**	**315059**
Min-Ø mm								30	40	52	62	75	90	120	150	200
Clamping sleeve								**315060**	**315061**	**315062**	**315063**	**315064**	**315056**	**315066**	**315067**	**315068**
Min-Ø mm								32	42	54	65	78	95	125	155	205
Clamping sleeve								**315069**	**315070**	**315071**	**315072**	**315073**	**315065**	**315075**	**315076**	**315077**
Min-Ø mm								34	44			80	100	130	160	210
Clamping sleeve								**315078**	**315079**			**315080**	**315074**	**315081**	**315082**	**315083**
Min-Ø mm														135	165	215
Clamping sleeve														**315084**	**315085**	**315086**
Min-Ø mm															170	220
Clamping sleeve															**315087**	**315088**
Min-Ø mm															175	225
Clamping sleeve															**315089**	**315090**
Min-Ø mm															180	230
Clamping sleeve															**315091**	**315092**

Other clamping diameters and profiled clamping sleeves are available on request

Product ranges MZE cartridge mandrel



Product ranges in wooden box size 1 – ID 315093

CONTENT
Consisting of 5 basic mandrels 02 - 06 and 7 clamping sleeves in the clamping range 12-26, Ø 12-14-16-18-20-22-24 mm.



Product range in wooden box size 2 – ID 315094

CONTENT
Consisting of 3 basic mandrels 07 - 09 and 6 clamping sleeves in the clamping range 25-55, Ø 25-30-35-40-45-50 mm.

Special solutions KFS



Cartridge mandrel KFS clamping-Ø 22.65 mm

APPLICATION
Turning

Clamping mandrel in special version due to required freedom of the tool. The clamping is done in the root circle of the toothing using a diagonally slotted clamping sleeve. Tilting in the toothing is prevented by the angled slotting.

CUSTOMER BENEFITS
- Optimal clamping of the toothed workpiece
- High concentricity and run-out precision of 0.02 mm

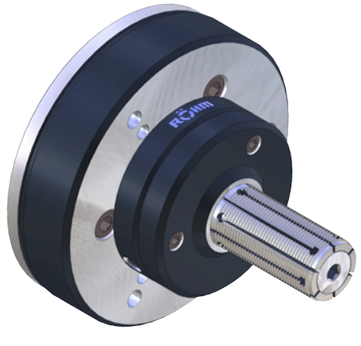


Cartridge mandrel KFS clamping-Ø SW 27.8 mm

APPLICATION
Turning

The clamping is done using a hexagonal clamping sleeve with axial pull via the draw bar against a fixed stop. The workpiece stop is designed of a two-sided loading of the workpiece.

CUSTOMER BENEFITS
- Clamping of special contours is possible
- Concentricity of 0.05 mm



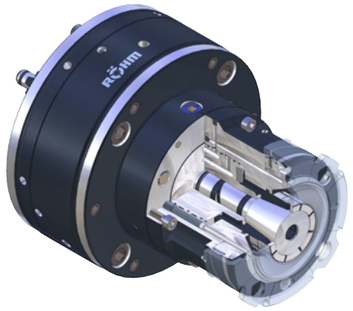
Cartridge mandrel KFS clamping-Ø 34.3 mm

APPLICATION
Turning / Cutting

Cartridge mandrel force-actuated with axial pull and fixed stop.
Clamping sleeve profiled for cutting off of the workpieces.

CUSTOMER BENEFITS
- Low-cost production of small parts
- Concentricity of 0.01 mm

Special solutions KFR / MFR



Cartridge mandrel KFR clamping-Ø 45 mm

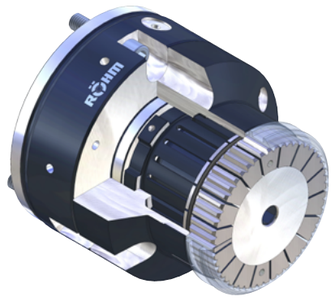
APPLICATION

Turning of a pressed part

Force-actuated cartridge mandrel actuated via draw bar.
Clamping mandrel is designed for different workpieces.
Fixed stop with damping ring, air sensing and ejector.

CUSTOMER BENEFITS

- Can be easily reconfigured to other clamping diameters by changing of clamping sleeve and/or stop
- Concentricity of 0.01 mm



Cartridge mandrel KFR clamping-Ø TK-Ø 90 mm

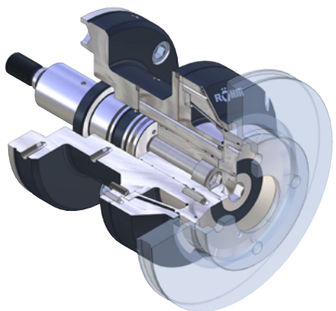
APPLICATION

Turning

Force-actuated cartridge mandrel with toothed clamping sleeve for clamping in the tooth flanks. Vulcanized collet sleeve with quick change system.

CUSTOMER BENEFITS

- Concentricity for toothing
- Concentricity of 0.03 mm



Cartridge mandrel KFR clamping-Ø 136 mm

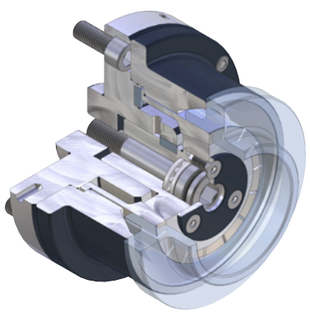
APPLICATION

Turning of brake discs

Force-actuated cartridge mandrel actuated via draw bar. Sealed against penetration of chips. Fixed stop with air sensing.

CUSTOMER BENEFITS

- Stable version of the clamping mandrel
- Concentricity of 0.02 mm



Cartridge mandrel MFR clamping-Ø 88 mm

APPLICATION

Milling / drilling for stationary use on clamping devices

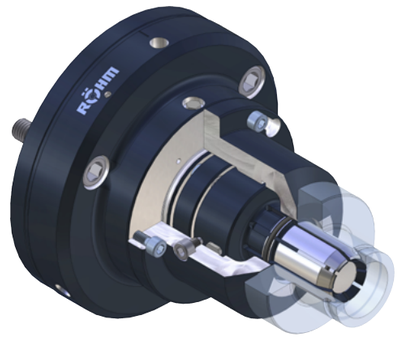
Cartridge mandrel in special version with manual actuation.
The actuation is done via the hexagon socket.

CUSTOMER BENEFITS

- Simple actuation by light roller bearing
- Concentricity of 0.015 mm

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Cartridge Mandrel

Special solutions KFB



Cartridge mandrel KFB clamping-Ø 42 mm

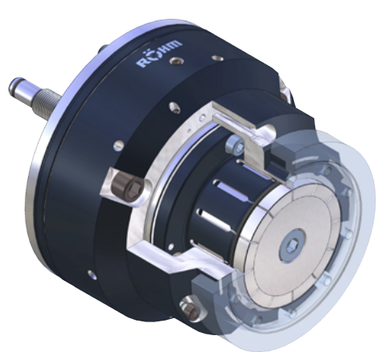
APPLICATION

Turning

Clamping of the workpiece with axial tension against the stop.
Clamping mandrel is hermetically sealed against penetration by dirt and cooling water.
The stop and clamping sleeve can be replaced together using the quick change system.

CUSTOMER BENEFITS

- Fast adjustment to different workpieces thanks to the quick change system
- Concentricity of 0.015 mm



Cartridge mandrel KFB clamping-Ø 114 mm

APPLICATION

Turning

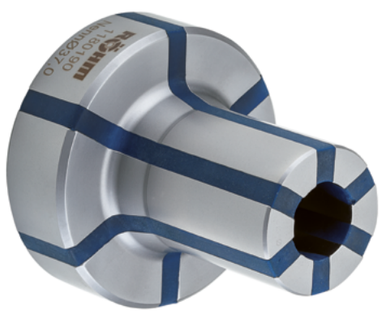
Clamping is done via draw bar with axial tension against the fixed stop. Idle stroke enables simpler stroke control in the clamping cylinder. The workpiece stop can be replaced quickly using the bayonet system.

CUSTOMER BENEFITS

- Simple handling
- Stable clamping using axial pull
- Concentricity of 0.01 mm



INNOVATIVE VULCANISATE IN THE SEGMENT CLAMPING SLEEVE



- Segment clamping sleeve with innovative vulcanisate for great elongation, longest service life and vibration dampening
- Hardened and ground steel segments for high resistance to wear

Video ABSIS

Video AGILIS

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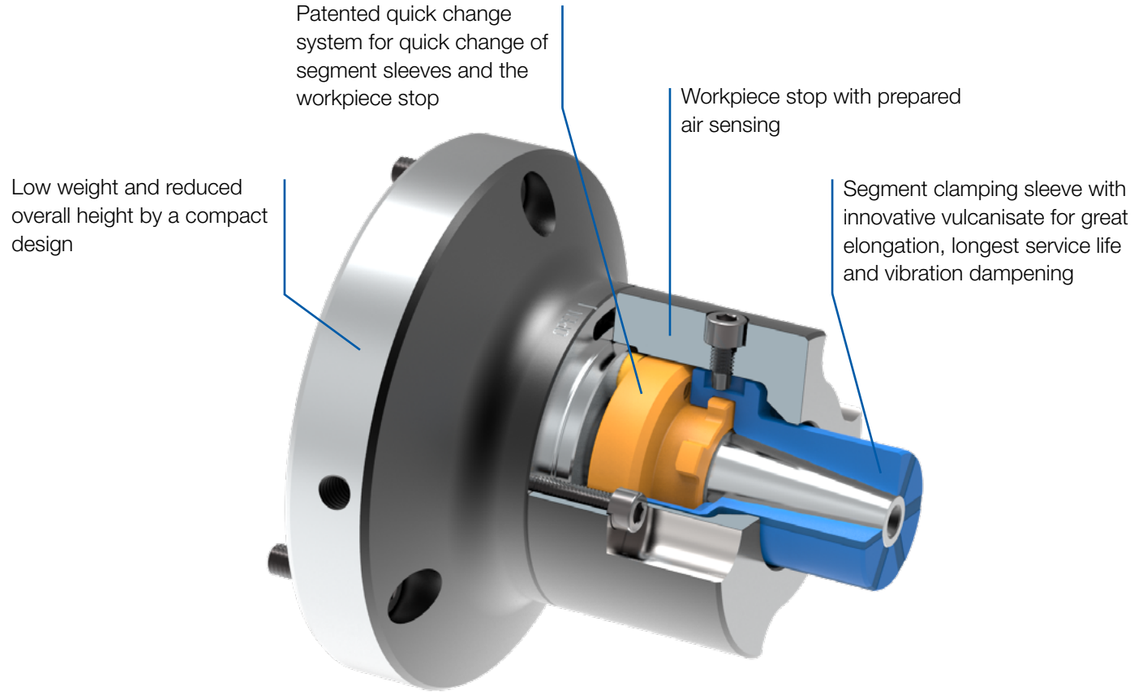
ROHM

SEGMENT CLAMPING MANDREL

Modern manufacturing technology can hardly do without the use of segment clamping mandrels. In the fields of precision machining, turning, grinding, gear cutting and checking, segment clamping mandrels assume important tasks that are associated with challenging conditions. The innovative rubber segments enable a great elongation of the clamping sleeve to 1.2 mm.

ADVANTAGES AT A GLANCE

- Short tooling and non-productive times thanks to the great elongation of the clamping sleeve up to 1.2 mm
- Vibration dampening and long service life thanks to innovative vulcanisate of the clamping sleeves
- Fast replacement of the clamping mandrel thanks to the patented bayonet quick change system



Segment clamping mandrel

ABSIS - for long clamping lengths, with axial tightening



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Ideal for clamping in through holes.

TYPE

Force-actuated.

CUSTOMER BENEFITS

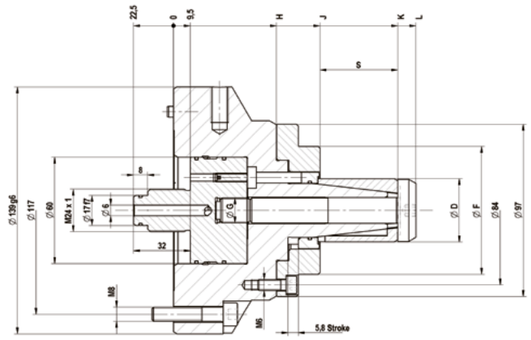
- Short setup and non-productive times thanks to great expansion of the segment sleeves
- Vibration damping due to high vulcanized rubber component of the clamping sleeves
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Fast change of segment sleeves thanks to central clamping screw
- High concentricity, axial run-out and repeatability

TECHNICAL FEATURES

- Manual lubrication
- Air sensing prepared

ABSIS = in Latin: segment





C 18
ABSIS segment clamping mandrel, power-operated with flanged seat, for internal clamping
Consisting of basic mandrel, adapter, ejector ring, locking belt

	ABSIS 00	ABSIS 01	ABSIS 02	ABSIS 03	ABSIS 04
Components					
Clamping mandrel complete	**1110000**	**1110001**	**1110002**	**1110003**	**1110004**
Basic mandrel (individual part)	1110100	1110101	1110102	1110103	1110104
Adapter power-operated (individual part)	1110040	1110041	1110042	1110043	1110044
Ejector ring (individual part)	1110020	1110021	1110022	1110023	1110024
Locking bolt (individual part)	1110060	1110061	1110062	1110063	1110064
Clamping & Performance data					
Clamping range mm	20 - 28	26 - 39	36 - 55	51 - 82	73 - 106
Elongation Ø mm	1,3	1,3	1,3	1,3	1,3
Max stroke mm	5,8	5,8	5,8	5,8	5,8
Max actuation force kN	7	10	20	25	30
Max total clamping force kN	32	46	92	115	138
Max speed U/min	5000	5000	4000	4000	3500
Clamping devices dimensions					
S mm	23	27	44	50	60
Ø F mm	58	58	72	90	120
Ø G mm	M6x0,75	M10x1	M14x1	M18x1	M20x1
H mm	55	55	58	58,5	60
J mm	75	75	82,5	84,5	86
K mm	98	102	126,3	134,5	146
L mm	103,5	108,5	136,5	146,5	160

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Segmentspanndorn

ABSIS-C - quick-change function



APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring.
Rotational machining with adaptation to CAPTIS-D, CAPTIS-A.
Stationary machining with adaptation to CAPTIS-M.
Ideal for clamping in through holes.

TYPE

Manual with adaptation to CAPTIS-M.
Force-actuation with adaptation to CAPTIS-D, CAPTIS-A.

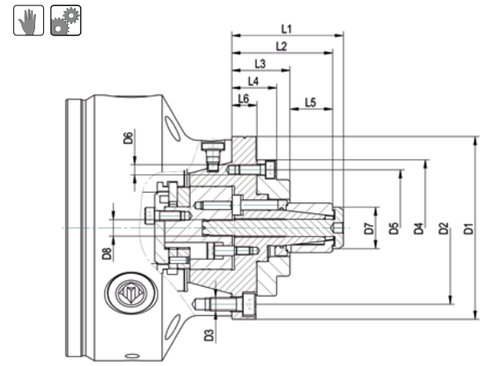
CUSTOMER BENEFITS

- Short setup and non-productive times thanks to great expansion of the segment sleeves
- Vibration damping due to high vulcanized rubber component of the clamping sleeves
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Fast change of segment sleeves thanks to central clamping screw
- High concentricity, axial run-out and repeatability
- Innovative quick-change function for fast retrofitting from external to internal clamping

TECHNICAL FEATURES

- Identical change parts as for standard segment clamping mandrel ABSIS

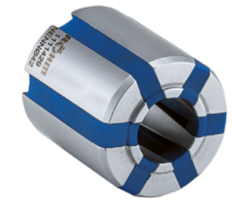
ABSIS-C = in Latin: segment, CAPTIS

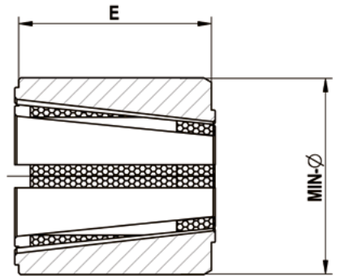


ABSIS-C clamping mandrel, manually or power operated
quick-change holder for collet chucks Captis M, A and D.

	ABSIS 00	ABSIS 00	ABSIS 00	ABSIS 00	ABSIS 01	ABSIS 01	ABSIS 01	ABSIS 01	ABSIS 02	ABSIS 02	ABSIS 02	ABSIS 03
Components												
Segment clamping mandrel	**1286200**	**1286201**	**1286202**	**1286203**	**1286204**	**1286205**	**1286206**	**1286207**	**1286208**	**1286209**	**1286210**	**1286211**
Compatible with the following collet chucks: Captis M, A und D	CAPTIS 32	CAPTIS 42	CAPTIS 52	CAPTIS 65	CAPTIS 32	CAPTIS 42	CAPTIS 52	CAPTIS 65	CAPTIS 42	CAPTIS 52	CAPTIS 65	CAPTIS 65
Clamping & performance data												
Clamping range mm	20 - 28	20 - 28	20 - 28	20 - 28	26 - 39	26 - 39	26 - 39	26 - 39	36 - 55	36 - 55	36 - 55	51 - 82
Elongation Ø mm	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3
Max stroke mm	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8	5,8
Max actuation force kN	7	7	7	7	10	10	10	10	20	20	20	25
Max total clamping force kN - **Captis A, D**	32	32	32	32	46	46	46	46	92	92	92	115
Max total clamping force kN - **Captis M**	30	32	32	32	30	46	46	46	60	60	50	50
Max speed U/min - **Captis A, D**	5000	5000	5000	5000	5000	5000	5000	5000	4000	4000	4000	4000
Max speed U/min - **Captis M**	5000	4500	4500	4000	5000	4500	4500	4000	4000	4000	4000	4000
Clamping devices dimensions												
D1	88	108	110	128	88	108	110	128	110	110	128	128
D2	70	90	92	110	70	90	92	110	90	92	110	110
D3	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8	3xM8	3x M8	3x M8	3x M8
D4	82	82	82	82	82	82	82	82	97	97	97	102
D5	70	70	70	70	70	70	70	70	84	84	84	89
D6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6	3x M6
D7	19	19	19	19	25	25	25	25	35	35	35	48
D8	M6x0,75	M6x0,75	M6x0,75	M6x0,75	M10x1	M10x1	M10x1	M10x1	M14x1	M14x1	M14x1	M18x1
L1	62,2	62,2	62,2	62,2	67,2	67,2	67,2	67,2	95,2	95,2	95,2	105,2
L2	56,7	56,7	56,7	56,7	60,7	60,7	60,7	60,7	85	85	85	93,2
L3	35	35	35	35	35	35	35	35	42,5	42,5	42,5	44,5
L4	25	25	25	25	27	27	27	27	30,25	30,25	30,25	31,5
L5	21,7	21,7	21,7	21,7	25,7	25,7	25,7	25,7	42,5	42,5	42,5	48,7
L6	15	15	15	15	15	15	15	15	18	18	18	18,5

Accessories ABSIS





C 18
Segment clamping sleeve - standard design

	ABSIS 00	ABSIS 01	ABSIS 02	ABSIS 03	ABSIS 04
Expansion in Ø mm	1,2	1,2	1,2	1,2	1,2
Total length E mm	23	27	44	50	60
Min-Ø mm	19,7	25,7	35,7	50,7	72,7
Segment sleeve	**1111400**	**1111409**	**1111423**	**1111443**	**1111475**
Work stop	1110070	1110071	1110072	1110073	1110074
Min-Ø mm	20,7	26,7	36,7	51,7	73,7
Segment sleeve	**1111401**	**1111410**	**1111424**	**1111444**	**1111476**
Work stop	1110070	1110071	1110072	1110073	1110074
Min-Ø mm	21,7	27,7	37,7	52,7	74,7
Segment sleeve	**1111402**	**1111411**	**1111425**	**1111445**	**1111477**
Work stop	1110070	1110071	1110072	1123341	1123372
Min-Ø mm	22,7	28,7	38,7	53,7	75,7
Segment sleeve	**1111403**	**1111412**	**1111426**	**1111446**	**1111478**
Work stop	1110070	1110071	1110072	1123342	1123373
Min-Ø mm	23,7	29,7	39,7	54,7	76,7
Segment sleeve	**1111404**	**1111413**	**1111427**	**1111447**	**1111479**
Work stop	1110070	1110071	1110072	1123343	1123374
Min-Ø mm	24,7	30,7	40,7	55,7	77,7
Segment sleeve	**1111405**	**1111414**	**1111428**	**1111448**	**1111480**
Work stop	1110070	1110071	1110072	1123344	1123375
Min-Ø mm	25,7	31,7	41,7	56,7	78,7
Segment sleeve	**1111406**	**1111415**	**1111429**	**1111449**	**1111481**
Work stop	1110070	1110071	1110072	1123345	1123376
Min-Ø mm	26,7	32,7	42,7	57,7	79,7
Segment sleeve	**1111407**	**1111416**	**1111430**	**1111450**	**1111482**
Work stop	1123305	1110071	1123327	1123346	1123377
Min-Ø mm	27,7	33,7	43,7	58,7	80,7
Segment sleeve	**1111408**	**1111417**	**1111431**	**1111451**	**1111483**
Work stop	1123306	1123315	1123328	1123347	1123378
Min-Ø mm		34,7	44,7	59,7	81,7
Segment sleeve		**1111418**	**1111432**	**1111452**	**1111484**
Work stop		1123316	1123329	1123348	1123379
Min-Ø mm		35,7	45,7	60,7	82,7
Segment sleeve		**1111419**	**1111433**	**1111453**	**1111485**
Work stop		1123317	1123330	1123349	1123380
Min-Ø mm		36,7	46,7	61,7	83,7
Segment sleeve		**1111420**	**1111434**	**1111454**	**1111486**
Work stop		1123318	1123331	1123350	1123381
Min-Ø mm		37,7	47,7	62,7	84,7
Segment sleeve		**1111421**	**1111435**	**1111455**	**1111487**
Work stop		1123319	1123332	1123351	1123382
Min-Ø mm		38,7	48,7	63,7	85,7
Segment sleeve		**1111422**	**1111436**	**1111456**	**1111488**
Work stop		1123320	1123333	1123352	1123383
Min-Ø mm			49,7	64,7	86,7
Segment sleeve			**1111437**	**1111457**	**1111489**
Work stop			1123334	1123353	1123384
Min-Ø mm			50,7	65,7	87,7
Segment sleeve			**1111438**	**1111458**	**1111490**
Work stop			1123335	1123354	1123385
Min-Ø mm			51,7	66,7	88,7
Segment sleeve			**1111439**	**1111459**	**1111491**
Work stop			1123336	1123355	1123386

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Segment clamping mandrel

Accessories ABSIS

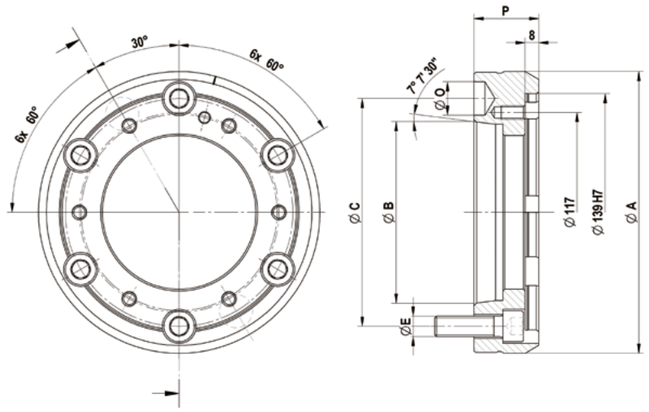
C 18
Segment clamping sleeve - standard design

	ABSIS 00	ABSIS 01	ABSIS 02	ABSIS 03	ABSIS 04
Expansion in Ø mm	1,2	1,2	1,2	1,2	1,2
Total length E mm	23	27	44	50	60
Min-Ø mm			52,7	67,7	89,7
Segment sleeve			**1111440**	**1111460**	**1111492**
Work stop			1123337	1123356	1123387
Min-Ø mm			53,7	68,7	90,7
Segment sleeve			**1111441**	**1111461**	**1111493**
Work stop			1123338	1123357	1123388
Min-Ø mm			54,7	69,7	91,7
Segment sleeve			**1111442**	**1111462**	**1111494**
Work stop			1123339	1123358	1123389
Min-Ø mm				70,7	92,7
Segment sleeve				**1111463**	**1111495**
Work stop				1123359	1123390
Min-Ø mm				71,7	93,7
Segment sleeve				**1111464**	**1111496**
Work stop				1123360	1123391
Min-Ø mm				72,7	94,7
Segment sleeve				**1111465**	**1111497**
Work stop				1123361	1123392
Min-Ø mm				73,7	95,7
Segment sleeve				**1111466**	**1111498**
Work stop				1123362	1123393
Min-Ø mm				74,7	96,7
Segment sleeve				**1111467**	**1111499**
Work stop				1123363	1123394
Min-Ø mm				75,7	97,7
Segment sleeve				**1111468**	**1111500**
Work stop				1123364	1123395
Min-Ø mm				76,7	98,7
Segment sleeve				**1111469**	**1111501**
Work stop				1123365	1123396
Min-Ø mm				77,7	99,7
Segment sleeve				**1111470**	**1111502**
Work stop				1123366	1123397
Min-Ø mm				78,7	100,7
Segment sleeve				**1111471**	**1111503**
Work stop				1123367	1123398
Min-Ø mm				79,7	101,7
Segment sleeve				**1111472**	**1111504**
Work stop				1123368	1123399
Min-Ø mm				80,7	102,7
Segment sleeve				**1111473**	**1111505**
Work stop				1123369	1123400
Min-Ø mm				81,7	103,7
Segment sleeve				**1111474**	**1111506**
Work stop				1123370	1123401
Min-Ø mm					104,7
Segment sleeve					**1111507**
Work stop					1123402
Min-Ø mm					105,7
Segment sleeve					**1111508**
Work stop					1123403

Accessories ABSIS

Accessories ABSIS

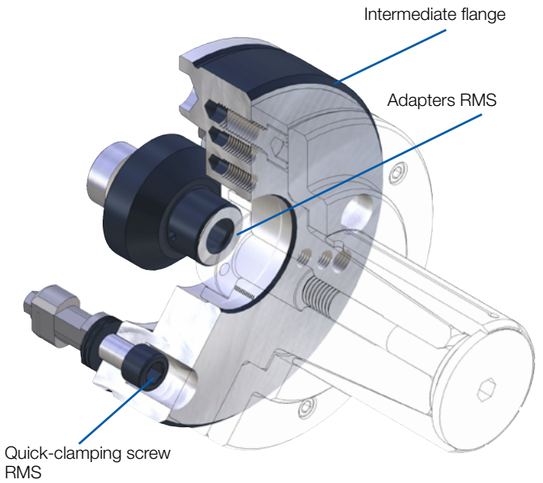




C 18
Intermediate flange ISO 702-1 (DIN 55028), for size 00-04

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**1110005**	**1110006**	**1110008**	**1110011**
Ø A mm	165	170	220	282
Ø B mm	82,563	106,375	139,719	196,869
Ø C mm	104,8	133,4	171,4	235
Thread-Ø M	M10	M12	M16	M20
Ø O mm	16,3	19,45	24,2	29,4
P mm	36	38	45	45

Accessories ABSIS



APPLICATION

For manual clamping device exchange in a minimum of time.

TYPE

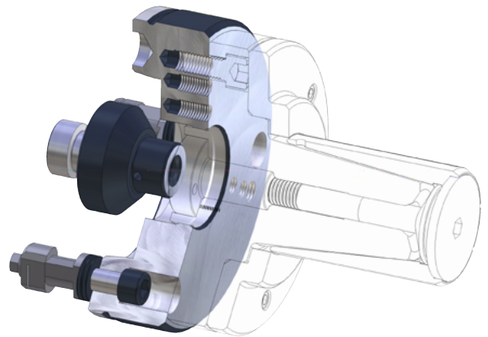
Manual quick-change system for clamping devices.
Fits for ABSIS (269-00) and AGILIS (296-00).
Central lubrication and/or air sensing control possible.

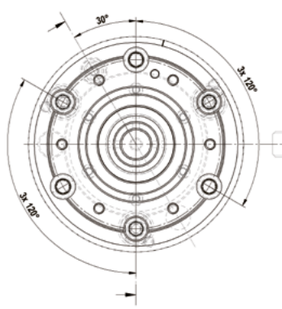
CUSTOMER BENEFITS

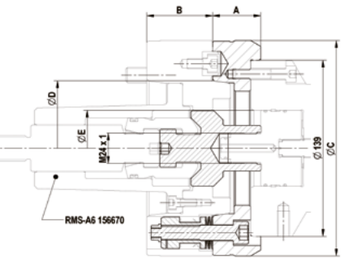
- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautometic clamping devices changing systems

TECHNICAL FEATURES

- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6) - Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with RÖHM safety clamping cylinder OVS and LVS







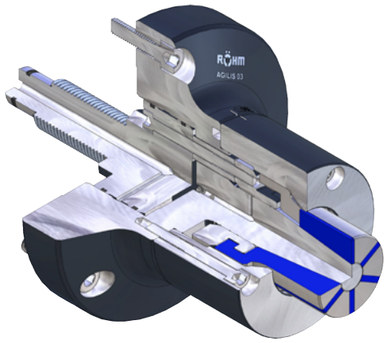
C18
RMS quick-change system, hand-operated for clamping devices

	KK 06	KK 08
RMS - complete (flange incl. quick-clamping screw)	**1160028**	**1160029**
Adapters RMS	**1183312**	**1183313**
Suitable basic take-up	**156670**	**156671**
A	38	45
Ø B	170	220
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M8	M8
Ø F mm	139 H7	139 H7

Segment clamping mandrel

AGILIS - for short clamping lengths, with axial tightening





APPLICATION

Internal clamping of round workpieces. Turning, milling, grinding and toothing operations, as well as for balancing and measuring. Suitable for short clamping lengths and very small clamping diameters starting from 10 mm.

TYPE

Force-actuated.

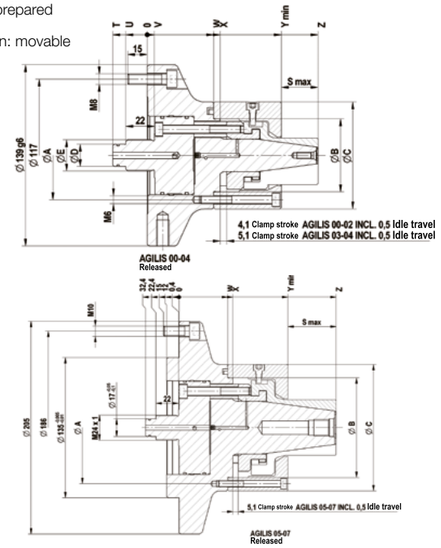
CUSTOMER BENEFITS

- Short setup and non-productive times thanks to great expansion of the segment sleeves
- Vibration damping due to high vulcanized rubber component of the clamping sleeves
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Fast change thanks to bayonet catch
- High concentricity, axial run-out and repeatability

TECHNICAL FEATURES

- Manual lubrication
- Air sensing prepared

AGILIS = in Latin: movable

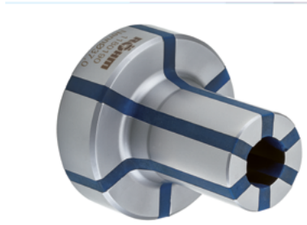


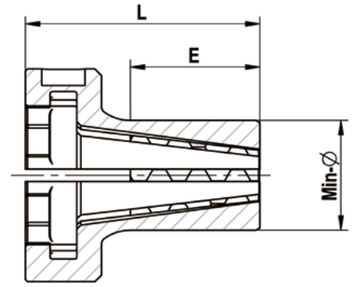
C 18
AGILIS segment clamping mandrel, power-operated with flanged seat, for internal clamping

	AGILIS 00	AGILIS 01	AGILIS 02	AGILIS 03	AGILIS 04	AGILIS 05	AGILIS 06	AGILIS 07
Components								
Clamping mandrel complete	**1180000**	**1180001**	**1180002**	**1180003**	**1180004**	**1180005**	**1180006**	**1180007**
Basic mandrel (individual part)	1180010	1180011	1180012	1180013	1180014	1180015	1180016	1180017
Adapter power-operated (individual part)	1180030	1180030	1180032	1180032	1180034	1180035	1180036	1180037
Bolt spacer (individual part)	1180060	1180060	1180062	1180063	1180064	1180065	1180066	1180066
Retaining ring (individual part)	1180050	1180050	1180052	1180052	1180054	1180055	1180056	1180057
Clamping & Performance data								
Clamping range mm	10 - 16	14 - 25	19 - 35	27 - 45	37 - 68	54 - 85	72 - 105	95 - 130
Elongation Ø in mm	0,6	0,6	0,6	1,2	1,2	1,2	1,2	1,2
Max stroke mm	4,1	4,1	4,1	5,1	5,1	5,1	5,1	5,1
Max actuation force kN	5	7,5	15	20	25	30	35	35
Max total clamping force kN	26	39	79	85	106	127	149	149
Max speed U/min	8000	8000	8000	8000	5000	5000	5000	5000
Clamping devices dimensions								
Pitch diameter Ø A mm	54	54	69	69	88	108	127	152
Guide diameter B mm	42	42	56	56	75	96	114	135
Ø C mm	68	68	82	82	101	122	140	169
Ø D mm	12	12	17	17	17			
Ø E mm	M 16	M 16	M 24x1	M 24x1	M 24x1			
S max, mm	16,8	18,8	23,8	28,1	42,1	46,1	57,1	67,1
T mm	27,7	27,7	25,4	26,4	26,4			
U mm	17,7	17,7	15,4	16,4	16,4			
V mm	4,3	4,3	6,6	5,6	5,6			
W mm	41,5	41,5	52	51	52	47	49	49
X mm	46,5	46,5	57,2	56	57	52	54	54
Y min	80	80	103	103	108	105	109	109
Z mm	96,8	98,8	126,8	131,1	150,1	151,1	166,1	176,1

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Accessories AGILIS





C18
Segment clamping sleeves AGILIS

	AGILIS 00	AGILIS 01	AGILIS 02	AGILIS 03	AGILIS 04	AGILIS 05	AGILIS 06	AGILIS 07
Expansion in Ø mm	0,6	0,6	0,6	1,2	1,2	1,2	1,2	1,2
Total length L	38	40	52,5	57	76	82	95	105
Min-Ø mm	9,7	13,7	18,7	26,7	36,7	53,7	71,7	94,7
Segment sleeve	**1180100**	**1180120**	**1180140**	**1180170**	**1180190**	**1180220**	**1180250**	**1180290**
Work stop	1180400	1180420	1180440	1180470	1180490	1180520	1180550	1180590
Min-Ø mm	10,2	14,2	19,2	27,7	37,7	54,7	72,7	95,7
Segment sleeve	**1180101**	**1180121**	**1180141**	**1180171**	**1180191**	**1180221**	**1180251**	**1180291**
Work stop	1180401	1180421	1180441	1180471	1180491	1180521	1180551	1180591
Min-Ø mm	10,7	14,7	19,7	28,7	38,7	55,7	73,7	96,7
Segment sleeve	**1180102**	**1180122**	**1180142**	**1180172**	**1180192**	**1180222**	**1180252**	**1180292**
Work stop	1180402	1180422	1180442	1180472	1180492	1180522	1180552	1180592
Min-Ø mm	11,2	15,2	20,2	29,7	39,7	56,7	74,7	97,7
Segment sleeve	**1180103**	**1180123**	**1180143**	**1180173**	**1180193**	**1180223**	**1180253**	**1180293**
Work stop	1180403	1180423	1180443	1180473	1180493	1180523	1180553	1180593
Min-Ø mm	11,7	15,7	20,7	30,7	40,7	57,7	75,7	98,7
Segment sleeve	**1180104**	**1180124**	**1180144**	**1180174**	**1180194**	**1180224**	**1180254**	**1180294**
Work stop	1180404	1180424	1180444	1180474	1180494	1180524	1180554	1180594
Min-Ø mm	12,2	16,2	21,2	31,7	41,7	58,7	76,7	99,7
Segment sleeve	**1180105**	**1180125**	**1180145**	**1180175**	**1180195**	**1180225**	**1180255**	**1180295**
Work stop	1180405	1180425	1180445	1180475	1180495	1180525	1180555	1180595
Min-Ø mm	12,7	16,7	21,7	32,7	42,7	59,7	77,7	100,7
Segment sleeve	**1180106**	**1180126**	**1180146**	**1180176**	**1180196**	**1180226**	**1180256**	**1180296**
Work stop	1180406	1180426	1180446	1180476	1180496	1180526	1180556	1180596
Min-Ø mm	13,2	17,2	22,2	33,7	43,7	60,7	78,7	101,7
Segment sleeve	**1180107**	**1180127**	**1180147**	**1180177**	**1180197**	**1180227**	**1180257**	**1180297**
Work stop	1180407	1180427	1180447	1180477	1180497	1180527	1180557	1180597
Min-Ø mm	13,7	17,7	22,7	34,7	44,7	61,7	79,7	102,7
Segment sleeve	**1180108**	**1180128**	**1180148**	**1180178**	**1180198**	**1180228**	**1180258**	**1180298**
Work stop	1180408	1180428	1180448	1180478	1180498	1180528	1180558	1180598
Min-Ø mm	14,2	18,2	23,2	35,7	45,7	62,7	80,7	103,7
Segment sleeve	**1180109**	**1180129**	**1180149**	**1180179**	**1180199**	**1180229**	**1180259**	**1180299**
Work stop	1180409	1180429	1180449	1180479	1180499	1180529	1180559	1180599
Min-Ø mm	14,7	18,7	23,7	36,7	46,7	63,7	81,7	104,7
Segment sleeve	**1180110**	**1180130**	**1180150**	**1180180**	**1180200**	**1180230**	**1180260**	**1180300**
Work stop	1180410	1180430	1180450	1180480	1180500	1180530	1180560	1180600
Min-Ø mm	15,2	19,2	24,2	37,7	47,7	64,7	82,7	105,7
Segment sleeve	**1180111**	**1180131**	**1180151**	**1180181**	**1180201**	**1180231**	**1180261**	**1180301**
Work stop	1180411	1180431	1180451	1180481	1180501	1180531	1180561	1180601
Min-Ø mm	15,7	19,7	24,7	38,7	48,7	65,7	83,7	106,7
Segment sleeve	**1180112**	**1180132**	**1180152**	**1180182**	**1180202**	**1180232**	**1180262**	**1180302**
Work stop	1180412	1180432	1180452	1180482	1180502	1180532	1180562	1180602
Min-Ø mm		20,2	25,2	39,7	49,7	66,7	84,7	107,7
Segment sleeve		**1180133**	**1180153**	**1180183**	**1180203**	**1180233**	**1180263**	**1180303**
Work stop		1180433	1180453	1180483	1180503	1180533	1180563	1180603
Min-Ø mm		20,7	25,7	40,7	50,7	67,7	85,7	108,7
Segment sleeve		**1180134**	**1180154**	**1180184**	**1180204**	**1180234**	**1180264**	**1180304**
Work stop		1180434	1180454	1180484	1180504	1180534	1180564	1180604
Min-Ø mm		21,2	26,2	41,7	51,7	68,7	86,7	109,7
Segment sleeve		**1180135**	**1180155**	**1180185**	**1180205**	**1180235**	**1180265**	**1180305**
Work stop		1180435	1180455	1180485	1180505	1180535	1180565	1180605

Accessories AGILIS

C18
Segment clamping sleeves AGILIS

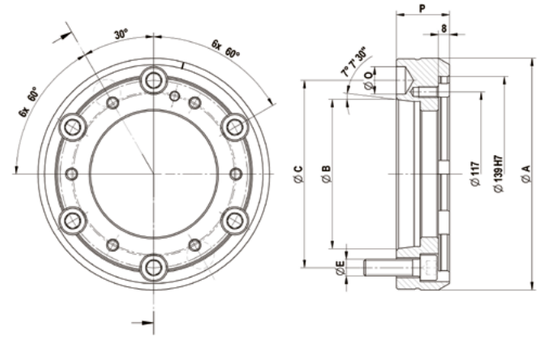
	AGILIS 00	AGILIS 01	AGILIS 02	AGILIS 03	AGILIS 04	AGILIS 05	AGILIS 06	AGILIS 07
Expansion in Ø mm	0,6	0,6	0,6	1,2	1,2	1,2	1,2	1,2
Total length L	38	40	52,5	57	76	82	95	105
Min-Ø mm		21,7	26,7	42,7	52,7	69,7	87,7	110,7
Segment sleeve		**1180136**	**1180156**	**1180186**	**1180206**	**1180236**	**1180266**	**1180306**
Work stop		1180436	1180456	1180486	1180506	1180536	1180566	1180606
Min-Ø mm		22,2	27,2	43,7	53,7	70,7	88,7	111,7
Segment sleeve		**1180137**	**1180157**	**1180187**	**1180207**	**1180237**	**1180267**	**1180307**
Work stop		1180437	1180457	1180487	1180507	1180537	1180567	1180607
Min-Ø mm		22,7	27,7	44,7	54,7	71,7	89,7	112,7
Segment sleeve		**1180138**	**1180158**	**1180188**	**1180208**	**1180238**	**1180268**	**1180308**
Work stop		1180438	1180458	1180488	1180508	1180538	1180568	1180608
Min-Ø mm		23,2	28,2		55,7	72,7	90,7	113,7
S**Segment sleeve**		**1180139**	**1180159**		**1180209**	**1180239**	**1180269**	**1180309**
Work stop		1180439	1180459		1180509	1180539	1180569	1180609
Min-Ø mm		23,7	28,7		56,7	73,7	91,7	114,7
Segment sleeve		**1180350**	**1180160**		**1180210**	**1180240**	**1180270**	**1180310**
Work stop		1180630	1180460		1180510	1180540	1180570	1180610
Min-Ø mm		24,2	29,2		57,7	74,7	92,7	115,7
Segment sleeve		**1180351**	**1180161**		**1180211**	**1180241**	**1180271**	**1180311**
Work stop		1180631	1180461		1180511	1180541	1180571	1180611
Min-Ø mm		24,7	29,7		58,7	75,7	93,7	116,7
Segment sleeve		**1180352**	**1180162**		**1180212**	**1180242**	**1180272**	**1180312**
Work stop		1180632	1180462		1180512	1180542	1180572	1180612
Min-Ø mm			30,2		59,7	76,7	94,7	117,7
Segment sleeve			**1180163**		**1180213**	**1180243**	**1180273**	**1180313**
Work stop			1180463		1180513	1180543	1180573	1180613
Min-Ø mm			30,7		60,7	77,7	95,7	118,7
Segment sleeve			**1180164**		**1180214**	**1180244**	**1180274**	**1180314**
Work stop			1180464		1180514	1180544	1180574	1180614
Min-Ø mm			31,2		61,7	78,7	96,7	119,7
Segment sleeve			**1180165**		**1180215**	**1180245**	**1180275**	**1180315**
Work stop			1180465		1180515	1180545	1180575	1180615
Min-Ø mm			31,7		62,7	79,7	97,7	120,7
Segment sleeve			**1180166**		**1180216**	**1180246**	**1180276**	**1180316**
Work stop			1180466		1180516	1180546	1180576	1180616
Min-Ø mm			32,2		63,7	80,7	98,7	121,7
Segment sleeve			**1180167**		**1180217**	**1180247**	**1180277**	**1180317**
Work stop			1180467		1180517	1180547	1180577	1180617
Min-Ø mm			32,7		64,7	81,7	99,7	122,7
Segment sleeve			**1180168**		**1180218**	**1180248**	**1180278**	**1180318**
Work stop			1180468		1180518	1180548	1180578	1180618
Min-Ø mm			33,2			82,7	100,7	123,7
Segment sleeve			**1180169**			**1180249**	**1180279**	**1180319**
Work stop			1180469			1180549	1180579	1180619
Min-Ø mm			33,7			83,7	101,7	124,7
Segment sleeve			**1180360**			**1180370**	**1180280**	**1180320**
Work stop			1180640			1180650	1180580	1180620
Min-Ø mm			34,2			84,7	102,7	125,7
Segment sleeve			**1180361**			**1180371**	**1180281**	**1180321**
Work stop			1180641			1180651	1180581	1180621
Min-Ø mm			34,7				103,7	126,7
Segment sleeve			**1180362**				**1180282**	**1180322**
Work stop			1180642				1180582	1180622
Min-Ø mm							104,7	127,7
Segment sleeve							**1180283**	**1180323**
Work stop							1180583	1180623
Min-Ø mm								128,7
Segment sleeve								**1180324**
Work stop								1180624
Min-Ø mm								129,7
Segment sleeve								**1180325**
Work stop								1180625

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Segment clamping mandrel

Accessories AGILIS

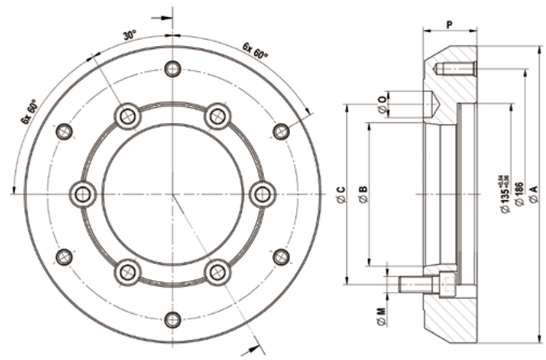




C 18
Intermediate flange ISO 702-1 (DIN 55028), for size 00-04

	Nr. 5 (A 05)	Nr. 6 (A 06)	Nr. 8 (A 08)	Nr. 11 (A 11)
Intermediate flange	**1110005**	**1110006**	**1110008**	**1110011**
Ø A mm	165	170	220	282
Ø B	82,563	106,375	139,719	196,869
Ø C mm	104,8	133,4	171,4	235
Thread-Ø M	M10	M12	M16	M20
Ø O mm	16,3	19,45	24,2	29,4
P mm	36	38	45	45





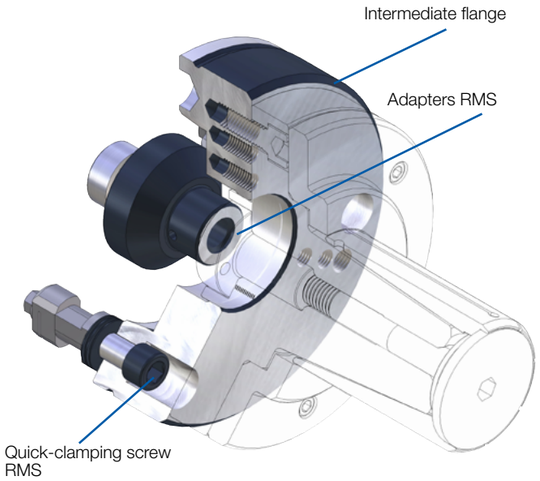
C 18
Intermediate flange ISO 702-1 (DIN 55028)

	Nr. 5 (A5)	Nr. 6 (A6)	Nr. 8 (A8)
Intermediate flange	**1072115**	**1072117**	**1072119**
For	KZF-S 80/AGILIS 05-07	KZF-S 120/AGILIS 05-07	KZF-S 120/AGILIS 05-07
Short-taper-Ø B	82,563	106,375	139,719
Short-taper pitch circle Ø C	104,8	133,4	171,4
Flange outer-Ø A	220	220	220
Ø D	135	135	135
Ø F mm	186	186	186
Ø O mm	16,3	19,45	24,2
Thread-Ø M	M10	M12	M16
Total length flange P	40	40	40

Accessories AGILIS

Segment clamping mandrel

Accessories AGILIS



APPLICATION

For manual clamping device exchange in a minimum of time.

TYPE

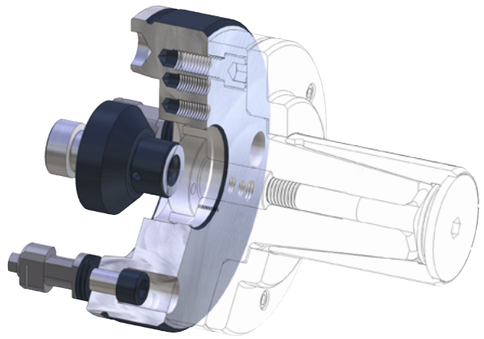
Manual quick-change system for clamping devices.
Fits for ABSIS (269-00) and AGILIS (296-00).
Central lubrication and/or air sensing control possible.

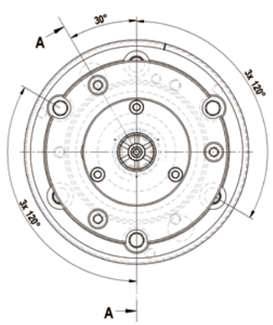
CUSTOMER BENEFITS

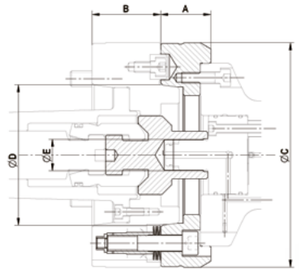
- Manual clamping devices change in about 30 seconds
- High change precision within 0.005 mm
- Quick change of different clamping devices with short time, similar to the automatic or semiautometic clamping devices changing systems

TECHNICAL FEATURES

- Quick-change system suitable due to recording RMS see quick-change system RMS (Product Group 6)
- Corresponds to the guidelines of the Employer's Liability Insurance Association in combination with RÖHM safety clamping cylinder OVS and LVS







C18
RMS quick-change system, hand-operated for clamping devices

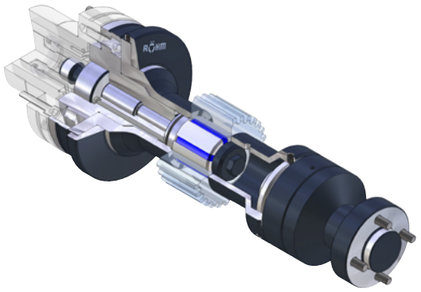
	A 06	A 08
RMS - complete (flange incl. quick-clamping screw)	**1180340**	**1180342**
Adapters RMS	**1183314**	**1183314**
Suitable basic take-up	**156670**	**156671**
A	38	45
Ø B	170	215
Ø C	133,4	171,4
Ø D	106,375	139,719
Ø E mm	M12	M16
Ø F mm	139 H7	139 H7

Matching intermediate pieces RMS KK6 and RMS KK8 can be found directly in the product table of the segment clamping mandrel AGILIS

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Notes

Special solutions ABSIS



ABSIS Segment clamping mandrel - nominal 38.43 mm

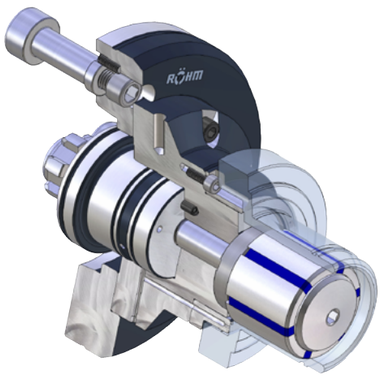
APPLICATION

Cutting, Turning

ABSIS clamping mandrel for clamping on a toothing machine. The centering is done by the segment clamping sleeve; the clamping by the pendulum bell. Clamping mandrel with quick change system on the basic take-up.

CUSTOMER BENEFITS

- Stable clamping using axial pull
- Concentricity of 0.01 mm
- A lot of freedom of the tool (milling coasting)
- Designed for wet machining



ABSIS Segment clamping mandrel - nominal 60.5 mm

APPLICATION

Turning

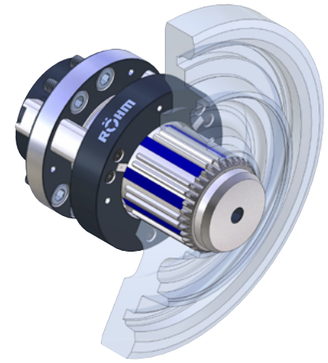
ABSIS clamping mandrel for clamping on a lathe. Clamping mandrel with quick change system on the basic take-up. Fixed workpiece stop with air sensing. Clamping screw sunk in the segment clamping sleeve to ensure the freedom of the tool.
Different clamping mandrel sizes of clamping diameters 25 mm to diameter 105 mm (ABSIS size 00 to size 04).

CUSTOMER BENEFITS

- Stable clamping using axial pull
- Concentricity of 0.01 mm
- Simple changing of the workpiece stop as well as the clamping sleeves
- A lot of freedom of the tool

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Segment clamping mandrel

Special solutions ABSIS



ABSIS Segment clamping mandrel TK-Ø 88 mm

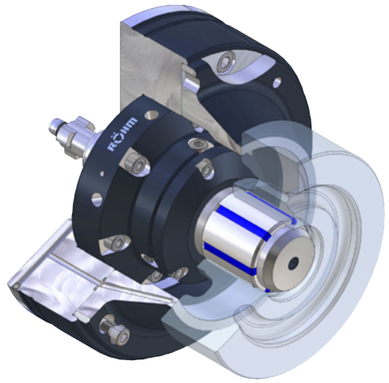
APPLICATION

Turning

ABSIS clamping mandrel for clamp in the toothing. The toothed segment clamping sleeve clamps the workpiece exactly in the tooth flanks. The centering disc helps during loading of the workpiece. Workpiece stop can be pulled back using draw bar with air sensing.

CUSTOMER BENEFITS

- Freedom of tool by stop that can be pulled back
- Concentricity of 0.01 mm



ABSIS Segment clamping mandrel Ø 55.33 mm

APPLICATION

Turning of a gear wheel blank

Force-actuated ABSIS standard clamping mandrel with quick change system. The stop diameter is far beyond the clamping diameter. Workpiece stop with air sensing attached on the intermediate flange.

CUSTOMER BENEFITS

- Stable clamping using axial pull
- Concentricity of 0.01 mm
- Low-cost thanks to standard components

Special solutions ABSIS



FAST CHANGING WITHIN THE MODULAR SYSTEM

As a consistent modular system, it is possible to combine the individual components such as CAPTIS collet chuck and CAPTIS collet depending on use.

Collet replacing
Fast and easy collet replacement in 15 seconds reduces the set-up times.







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COLLET CHUCKS

The new and modular CAPTIS clamping system is impressive in both rotary applications in lathes and in stationary use in drilling, milling and machining centres and measuring machines.
The encompassing clamping enables precise concentricity and repeatability of currently 0.01 mm without deforming the workpiece.

ADVANTAGES AT A GLANCE

- Highest flexibility due to modular construction
- Precise concentricity and repeatability of currently 0.01 mm
- Compact and weight-reduced construction for a larger work area



Video CAPTIS-D



CAPTIS-D, CAPTIS-A, CAPTIS-AF

- Modular construction for highest flexibility
- Compact construction for more work space
- Many combination and conversion possibilities

CAPTIS-M

- Compact design with reduced interfering contours for optimum workpiece accessibility and enlarged working space
- Modular conversion option for internal and external workpiece stop



CAPTIS COLLET CHUCKS

- Made of innovative rubber mixture for the longest service life
- Clamping range of ± 0,5 mm
- Hardened and ground steel segments for high resistance to wear
- Collet chuck hot vulcanized

CAPTIS-D - with through-hole



APPLICATION

For use on lathes.
Ideal for bars and pipe machining on the main spindle.

TYPE

Force-actuated.
With through-hole for bar and pipe machining.
With axial tension.

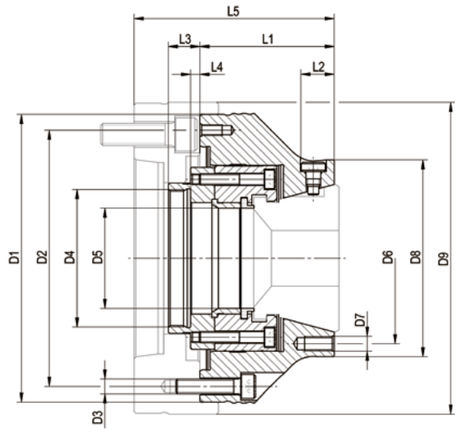
CUSTOMER BENEFITS

- Maximum flexibility thanks to modular design and versatile combination and retrofitting options
- Low weight and low height thanks to compact design for more work area in the machine
- Short setup and non-productive times thanks to fast collect chuck change as well as great expansion of the collet chucks

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-D = in Latin: hold, through-hole



CAPTIS-D collet chucks - with axial pull

	CAPTIS-D 32	CAPTIS-D 42	CAPTIS-D 52	CAPTIS-D 65	CAPTIS-D 80	CAPTIS-D 100	CAPTIS-D 120
Components							
Collet chucks (without changing parts)	**1283101**	**1283102**	**1283103**	**1283104**	**1283105**	**1283106**	**1283107**
Clamping device, manual	1283285	1283286	1283287	1283288	1283289	-	-
Clamping device, pneumatic	-	-	-	-	1362635	1362636	1362637
Conversion kit to CAPTIS-A	1283256	1283257	1283258	1283259	1283260	1283261	1283262
Turning fixture for soft collets	1316901	1316902	1316903	1316904	1316905	1316906	1316907
Clamping & Performance data							
Clamping range mm	4-32	4-42	4-52	4-65	5-80	16-100	65-120
Elongation Ø in mm	2	2,6	2,6	2,6	2,6	2,6	2,6
Max stroke mm	6	6	6	6	6	6	6
Max actuation force kN	25	35	40	45	50	65	70
Max total clamping force kN	66	92,5	105	118	132	170	180
Max speed U/min	8000	7000	6500	6000	5500	5000	4000
Clamping devices dimensions							
D1 mm	137	137	155	155	215	215	250
D2 mm	100	118	138	138	190	190	215
D3 mm	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D4 mm	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M120x1,5	M132x1,5
D5 mm	34	44	54	68	82	102	122
D6 mm	70	92	92	110	132	190	225
D7 mm	3x M8	3x M8	3x M8	3x M8	3x M10	3x M12	3x M12
D8 mm	84	106	106	122	152	215	250
L1 mm	70,5	69	72,5	78	85	102	102
L2 mm	18	18	18	26	19	-	-
L3 mm	17	17	17	17	20	20	20
L4 min mm	1,5	1,5	1,5	1,5	-0,5	-0,5	-0,5
L4 max mm	7,5	7,5	7,5	7,5	5,5	5,5	5,5

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Collet chucks

CAPTIS-A - prepared for internal workpiece stop



APPLICATION

External clamping of round workpieces, as well as square and hexagon profiles.
Turning, milling, grinding operations as well as for measuring.
Ideal for machining insertion parts on the main spindle.

TYPE

Force-actuated.
Optional through-hole for bar machining by removing the internal workpiece stop.
With axial tension against workpiece stop.

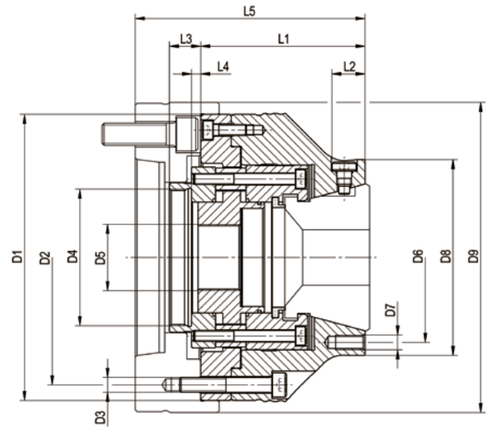
CUSTOMER BENEFITS

- Maximum flexibility thanks to modular design and versatile combination and retrofitting options
- Low weight and low height thanks to compact design for more work area in the machine
- Short setup and non-productive times thanks to fast collect chuck change as well as great expansion of the collet chucks
- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Prepared for internal workpiece stop and front stop

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-A = in Latin: hold, workpiece stop



CAPTIS-A collet chuck - with axial tension against workpiece stop

	CAPTIS-A 32	CAPTIS-A 42	CAPTIS-A 52	CAPTIS-A 65	CAPTIS-A 80	CAPTIS-A 100	CAPTIS-A 120
Komponenten							
Collet chucks	**1283108**	**1283109**	**1283110**	**1283111**	**1283112**	**1283113**	**1283114**
Clamping device, manual	1283285	1283286	1283287	1283288	1283289	-	-
Clamping device, pneumatic	-	-	-	-	1362635	1362636	1362637
Conversion kit to CAPTIS-A	1283249	1283250	1283251	1283252	1283253	1283254	1283255
Turning fixture for soft collets	1316901	1316902	1316903	1316904	1316905	1316906	1316907
Clamping & Performance data							
Clamping range mm	4-32	4-42	4-52	4-65	5-80	16-100	65-120
Elongation Ø in mm	2	2,6	2,6	2,6	2,6	2,6	2,6
Max stroke mm	6	6	6	6	6	6	6
Max actuation force kN	25	35	40	45	50	65	70
Max total clamping force kN	66	92,5	105	118	132	170	180
Max speed U/min	8000	7000	6500	6000	5500	5000	4000
Clamping devices dimensions							
D1 mm	137	137	155	155	215	215	250
D2 mm	100	118	138	138	190	190	225
D3 mm	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D4 mm	M54x1,5	M54x1,5	M74x1,5	M74x1,5	M94x1,5	M120x1,5	M132x1,5
D5 mm	M22x1,5	M30x1,5	M36x1,5	M50x1,5	M55x1,5	M85x1,5	M105x1,5
D6 mm	70	92	92	110	132	190	225
D7 mm	3x M8	3x M8	3x M8	3x M8	3x M10	3xM12	3x M12
D8 mm	84	106	106	122	152	215	250
L1 mm	84	82,5	89	94,5	103	122	122
L2 mm	18	18	18	26	19	-	-
L3 mm	17	17	17	17	20	20	20
L4 min mm	1,5	1,5	1,5	1,5	-0,5	-0,5	-0,5
L4 max mm	7,5	7,5	7,5	7,5	5,5	5,5	5,5

Collet chuck system CAPTIS

CAPTIS-AF - axially fixed collet chuck



APPLICATION

External clamping of round workpieces, as well as square and hexagon profiles.
Turning, milling, grinding operations as well as for measuring.
Ideal for delicate workpieces, short clamping lengths and for use in opposed spindles or counter spindles.

TYPE

Force-actuated.
Optional through-hole for bar machining by removing the internal workpiece stop.
Axially fixed collect chuck, no axial tension against internal workpiece stop.

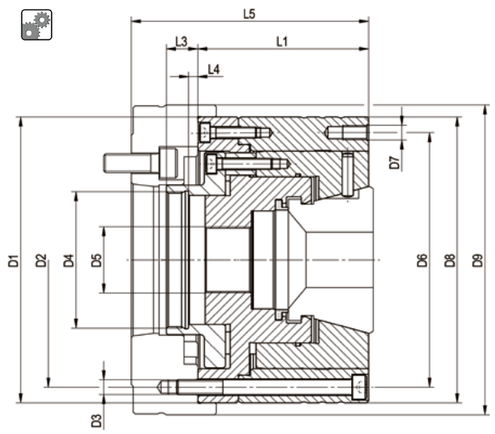
CUSTOMER BENEFITS

- Maximum flexibility thanks to modular design and versatile combination and retrofitting options
- Low weight and low height thanks to compact design for more work area in the machine
- Short setup and non-productive times thanks to fast collect chuck change as well as great expansion of the collet chucks
- No damage, impressions on workpieces due to axially fixed collect chuck
- Prepared for internal workpiece stop and front stop

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-AF = in Latin: hold, axially fixed collet chuck

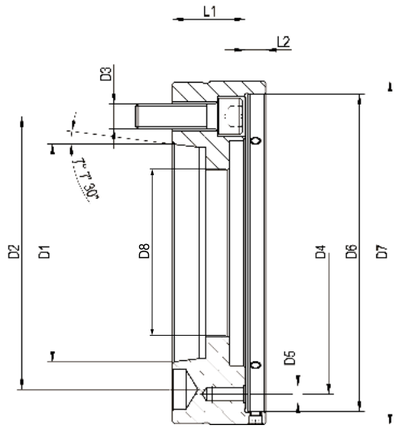


CAPTIS-AF collet chuck - axially fixed collet chuck, no axial tension against internal workpiece stop

	CAPTIS-AF 32	CAPTIS-AF 42	CAPTIS-AF 52	CAPTIS-AF 65	CAPTIS-AF 80	CAPTIS-AF 100	CAPTIS-AF 120
Components							
Collet chucks	**1285001**	**1285002**	**1285003**	**1285004**	**1285005**	**1285006**	**1285007**
Clamping device, manual	1283285	1283286	1283287	1283288	1283289	-	-
Clamping device, pneumatic	-	-	-	-	1362635	1362636	1362637
Turning fixture for soft collets	1316901	1316902	1316903	1316904	1316905	1316906	1316907
Clamping & Performance data							
Clamping range mm	4-32	4-42	4-52	4-65	5-80	42-100	62-120
Elongation Ø in mm	2	2,6	2,6	2,6	2,6	2,6	2,6
Max stroke mm	6	6	6	6	6	6	6
Max actuation force kN	25	35	40	45	50	65	70
Max total clamping force kN	66	92,5	105	118	132	170	180
Max speed U/min	8000	7000	6500	6000	5500	5000	4000
Clamping devices dimensions							
D1 mm	137	137	155	155	215	215	250
D2 mm	120	120	138	138	190	190	225
D3 mm	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D4 mm	M48x1,5	M54x1,5	M74x1,5	M74x1,5	M120x1,5	M120x1,5	M132x1,5
D5 mm	M22x1,5	M30x1,5	M36x1,5	M50x1,5	M65x1,5	M85x1,5	M105x1,5
D6 mm	94	120	138	138	190	190	225
D7 mm	3x M6	3x M8	3x M8	3x M8	3x M8	3x M8	3x M8
D8 mm	105	137	155	155	215	215	250
L1 mm	80,5	81	92,5	92,5	102	102	122
L2 mm	34,7	-	-	-	-	-	-
L3 mm	15,5	16	17	17	18,5	18,5	18,5
L4 min mm	-4	-2,5	2,5	2,5	-1	-1	-1
L4 max mm	2	3,5	8,5	8,5	5	5	5

Intermediate flange

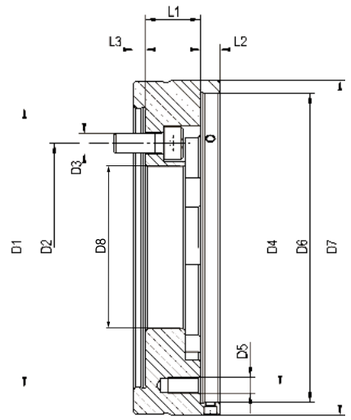




Intermediate flange ISO 702-1 (DIN 55028) **with adjusting screw**

Size	32/42 - Nr.5	32/42 - Nr.6	52/65 - Nr.5	52/65 - Nr.6	52/65 - Nr.8	80/100 - Nr.6	80/100 - Nr.8	120 - Nr.8	120 - Nr.11
Intermediate flange	**1283194**	**1283195**	**1283198**	**1283199**	**1283200**	**1283203**	**1283204**	**1283207**	**1283209**
D1 mm	82,563	106,375	82,563	106,375	139,719	106,375	139,719	139,719	196,869
D2 mm	104,8	133,4	104,8	133,4	171,4	133,4	171,4	171,4	235
D3 mm	6x M10	3x M12	6x M10	3x M12	3x M16	6x M12	3x M16	6x M16	3x M20
D4 mm	100/120	100/120	138	138	138	190	190	225	225
D5 mm	6x M8	6x M8	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12	6x M12
D6 mm	137	137	155	155	155	215	215	250	250
D7 mm	150	165	168	168	210	230	230	270	280
D8 mm	63	63	79,5	81,5	81,5	103	136	136	165
L1 mm	34,5	35,5	36	35,5	42	47	40	55	40
L2 mm	10	10	10	10	10	10	10	12	12





Intermediate flange cylindrical centre mount **with adjusting screw**

Size	32/42-Z140	52/65-Z140	52/65-Z170	80/100-Z170	80/100-Z220	120-Z220
Intermediate flange	**1283196**	**1283201**	**1283202**	**1283205**	**1283206**	**1283208**
D1 mm	140	140	170	170	220	220
D2 mm	104,8	104,8	133,4	133,4	171,4	171,4
D3 mm	6x M10	6x M10	6x M12	6x M12	6x M16	6x M16
D4 mm	100/120	138	138	190	190	225
D5 mm	6x M8	6x M8	6x M8	6x M12	6x M12	6x M12
D6 mm	137	155	155	215	215	250
D7 mm	150	168	180	230	230	270
D8 mm	63	81,5	81,5	102	137	137
L1 mm	19,5	27,5	22,5	47	40	55
L2 mm	10	10	10	10	10	12
L3 mm	6	6	6	6	6	6

CAPTIS-M - for rotating and stationary use



APPLICATION

Ideally suited for rotating use in lathes as well as for stationary use in drilling, milling and machining centers, measuring machines as well as for conventional and manual processing.

TYPE

Operated manually with a security key.
With axial tension against workpiece stop.

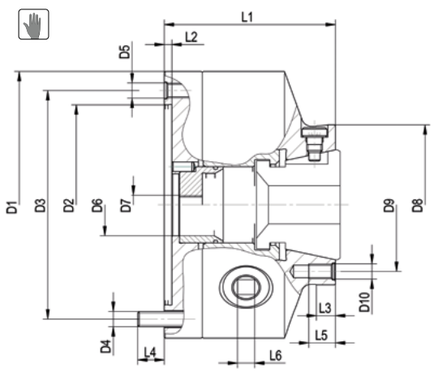
CUSTOMER BENEFITS

- Compact design with reduced interfering contours for optimum workpiece accessibility and enlarged working space
- Modular conversion option for internal and external workpiece stop
- Stable clamping using axial tension

TECHNICAL FEATURES

- Manual lubrication
- Collet chucks with exchangeable and oil-resistant vulcanized rubber

CAPTIS-M = in Latin: hold, manually

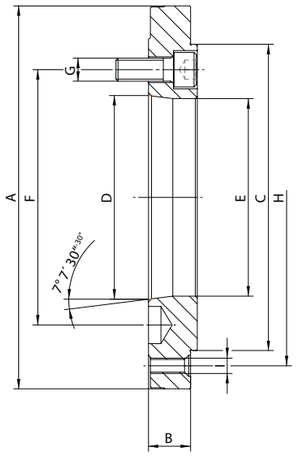


CAPTIS-M collet chuck - with axial tension against workpiece stop

	CAPTIS-M 32	CAPTIS-M 42	CAPTIS-M 52	CAPTIS-M 65
Components				
Collet chucks (incl. workpiece stop, protecting sleeve and security key)	**1345739**	**1345740**	**1345741**	**1345742**
Workpiece stop	1345749	1345758	1345766	1345775
Protecting sleeve	1345751	1345760	1345768	1345777
Security key (acc, to DIN 1550 for rotating chucks)	154372	154373	154373	154374
Clamping device, manual	1283285	1283286	1283287	1283288
Clamping device, pneumatic	-	-	-	-
Turning fixture for soft collets	1316901	1316902	1316903	1316904
Clamping & Performance data				
Clamping range mm	4-32	4-42	4-52	4-65
Elongation Ø in mm	2	2,6	2,6	2,6
Max stroke mm	6	6	6	6
Max actuation force kN	60	120	120	100
Max total clamping force kN	30	60	60	50
Max speed U/min	5000	4500	4500	4000
Clamping devices dimensions				
D1 mm	140	160	160	200
D2 mm	95	125	125	160
D3 mm [H6]	120	140	140	176
D4 mm	6xM8	6xM10	6xM10	6xM10
D5 mm	3xM8	3xM10	3xM10	3xM10
D6 mm	32,5	42,5	52,5	65,5
D7 mm	M10	M10	M10	M10
D8 mm [g6]	84	106	106	122
D9 mm	70	92	92	110
D10 mm	3xM8	3xM8	3xM8	3xM8
L1 mm	90	100	100	110
L2 mm	4	4	4	4
L3 mm	10	10	10	10
L4 mm	13	14	14	16
L5 mm	14	16	16	16
L6 mm	9	10	10	11

Intermediate flange



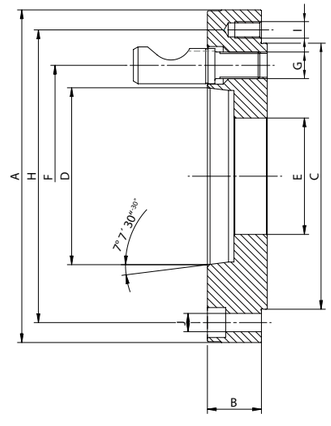


A09
Steel Intermediate flange according to **DIN ISO 702-1** (DIN 55026) / cylindrical mount on chuck side according to DIN 6350

Size	**32**	**32**	**32**	**42/52**	**42/52**	**42/52**	**42/52**	**65/80**	**65/80**	**65/80**
Short taper size	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 8**	**Gr. 5**	**Gr. 6**	**Gr. 8**
Intermediate flange	**182902**	**182904**	**182906**	**182908**	**182910**	**182912**	**182914**	**182918**	**182920**	**182922**
A mm	140	140	165	160	160	165	210	200	200	210
B mm	21	21	25	18	18	25	32	18	22	32
C mm	95	95	95	125	125	125	125	160	160	160
D mm	63,513	82,563	106,375	63,513	82,563	106,375	139,719	82,563	106,375	139,719
E mm	61	79,6	80	61	79,6	103,2	100	79,6	103,2	136,2
F mm	82,6	104,8	133,4	82,6	104,8	133,4	171,4	104,8	133,4	171,4
G	M10	M10	M12	M10	M10	M12	M16	M10	M12	M16
H mm	108 (120)	108 (120)	108 (120)	140	140	140	140	176	176	176
I	3x/6xM8	3x/6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10

Complete with fastening screws





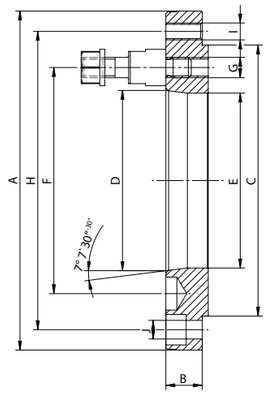
A09
Steel Intermediate flange according to **DIN ISO 702-2** (DIN 55029) / cylindrical mount on chuck side according to DIN 6350

Size	**32**	**32**	**32**	**42/52**	**42/52**	**42/52**	**42/52**	**65/80**	**65/80**	**65/80**
Short taper size	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 8**	**Gr. 5**	**Gr. 6**	**Gr. 8**
Intermediate flange	**182958**	**182960**	**182962**	**182966**	**182968**	**182970**	**182972**	**182976**	**182978**	**182980**
A mm	140	146	181	160	160	181	225	200	200	225
B mm	24	30	36	23,5	26,5	35,5	38,5	26,50	32,50	39,50
C mm	95	95	95	125	125	125	125	160	160	160
D mm	63,513	82,563	106,375	63,513	82,563	106,375	139,719	82,563	106,375	139,719
E mm	33	33	33	50	50	50	50	70	70	70
F mm	82,6	104,8	133,4	82,6	104,8	133,4	171,4	104,8	133,4	171,4
G	M10x1	M12x1	M16x1,5	M10x1	M12x1	M16x1,5	M20x1,5	M12x1	M16x1,5	M20x1,5
H mm	108 (120)	108 (120)	108 (120)	140	140	140	140	176	176	176
I	6xM8	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10
J mm	3x9	-	-	3x11	3x11	-	-	3x11	3x11	-

Complete with cam locking bolts

Intermediate flange



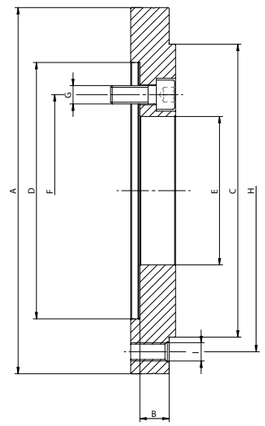


A09
Steel Intermediate flange according to **DIN ISO 702-3** (DIN 55027) / cylindrical mount on chuck side according to DIN 6350

Size	32	32	32	42/52	42/52	42/52	42/52	65/80	65/80	65/80
Short taper size	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 8**	**Gr. 5**	**Gr. 6**	**Gr. 8**
Intermediate flange	**183014**	**183016**	**183018**	**183022**	**183024**	**183026**	**183028**	**183032**	**183034**	**183036**
A mm	140	140	170	160	160	170	220	200	200	220
B mm	16,5	16,5	27	21,5	21,5	18	31,5	21,5	21,5	21,5
C mm	95	95	95	125	125	125	125	160	160	160
D mm	63,513	82,563	106,375	63,513	82,563	106,375	139,719	82,563	106,375	139,719
E mm	61	79,6	80	61	79,6	103,2	100	79,6	103,2	136,2
F mm	85	104,8	133,4	85	104,8	133,4	171,4	104,8	133,4	171,4
G	M10	M10	M12	M10	M10	M12	M16	M10	M12	M16
H mm	108 (120)	108 (120)	108 (120)	140	140	140	140	176	176	176
I	6xM8	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10
J mm	3x9	-	-	3x11	3x11	-	-	3x11	3x11	3x11

Complete with studs and collar nuts





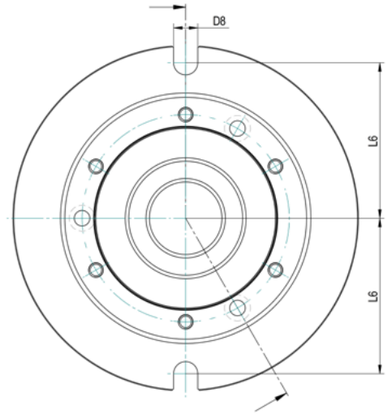
A09
Steel Intermediate flange according to **DIN ISO 702-4** (DIN 55028) / cylindrical mount on chuck side according to DIN 6350

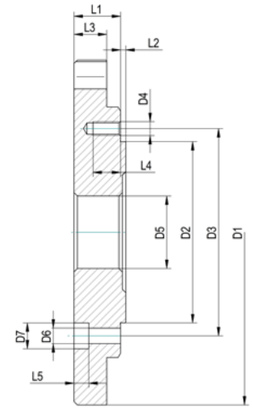
Size	32	32	32	42/52	42/52	42/52	42/52	65/80	65/80
Flange	**Gr. 3**	**Gr. 4**	**Gr. 5**	**Gr. 3**	**Gr. 4**	**Gr. 5**	**Gr. 6**	**Gr. 5**	**Gr. 6**
Cylindrical mount	**90**	**115**	**140**	**90**	**115**	**140**	**170**	**140**	**170**
Intermediate flange	**1349459**	**1349461**	**1349463**	**1349465**	**1349467**	**1349469**	**1349471**	**1349473**	**1349475**
A mm	140	140	150	160	160	160	180	200	200
B mm	13	20	18	13	13	15	20	16	18
C mm	95	95	95	125	125	125	125	160	160
D mm	90 + 0,022/0	115 + 0,022/0	140 + 0,025/0	90 + 0,022/0	115 + 0,022/0	140 + 0,025/0	170 + 0,025/0	140 + 0,025/0	170 + 0,025/0
E mm	43	53	81	43	53	81	81	81	81
F mm	70,6	82,6	104,8	70,6	82,6	104,8	133,4	104,8	133,4
G mm	3xM10	3xM10	3xM10	6xM10	6xM10	6xM10	3xM12	6xM10	6xM12
H mm	120	120	120	140	140	140	140	176	176
I	6xM8	6xM8	6xM8	6xM10	6xM10	6xM10	6xM10	6xM10	6xM10

Complete with fastening screws

Base plate





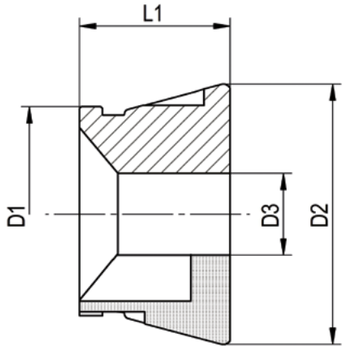


A09
Base plates for CAPTIS-M and lathe chucks with **cylindrical centre mount,** DIN 6350

Size	32	42/52	65/80
Base plate	**1406406**	**162793**	**162401**
D1 mm	220	240	280
D2 mm	95	125	160
D3 mm	120	140	176
D4 mm	6xM8	6xM10	6xM10
D5 mm	40	42	55
D6 mm	14	14	14
D7 mm	28	28	28
D8 mm	3x9	3x11	3x11
D9 mm	3x15	3x18	3x18
D10 mm	190	212	252
L1 mm	27	27	27
L2 mm	3	3	3
L3 mm	16	16	16
L4 mm	14	17	17
L5 mm	10	11	11

CAPTIS collet





(G): Smooth — from 4-7 mm smooth
(LQ): Longitudinal and transverse grooves — from 8-10 mm with trans. grooves
(Q): Transverse grooves — caused by production
(W): Soft

* Please specify clamping diameters D3 in the order, valid for collet chucks type LQ + Q

Clamping of macined and unmachined parts with extension and without extension

Size	D1	D2	L1	Longitu-dinal and transverse	Transvers grooves	Smooth	Soft	Round	Hexagon	Square	Raising	Order No.
32	46,2	57,7	44	X				8-32mm			1	CAPTIS-32-47-RLQ / D3*
32	46,2	57,7	44		X				7-27mm		1	CAPTIS-32-47-SQ / D3*
32	46,2	57,7	44		X					7-22mm	1	CAPTIS-32-47-VQ / D3*
32	46,2	57,7	44			X		4-32mm			1	CAPTIS-32-44-RG / D3*
32	46,2	57,7	44				X	5,15,20mm			1	CAPTIS-32-44-WG / D3*
Size												
42	54	79,5	47	X				8-42mm			0,5	CAPTIS-42-47-RLQ / D3*
42	54	79,5	47		X				7-36mm		1	CAPTIS-42-47-SQ / D3*
42	54	79,5	47		X					7-30mm	1	CAPTIS-42-47-VQ / D3*
42	54	79,5	42			X		4-42mm			0,5	CAPTIS-42-42-RG / D3*
42	54	79,5	42				X	8,15,30mm			0,5	CAPTIS-42-42-WG / D3*
Size												
52	65,7	79,5	46	X				8-52mm			0,5	CAPTIS-52-46-RLQ / D3*
52	65,7	79,5	46		X				7-45mm		1	CAPTIS-52-46-SQ / D3*
52	65,7	79,5	46		X					8-36mm	1	CAPTIS-52-46-VQ / D3*
52	65,7	79,5	46			X		4-52mm			0,5	CAPTIS-52-46-RG / D3*
52	65,7	79,5	46				X	8,15,30mm			0,5	CAPTIS-52-46-WG / D3*
Size												
65	80	99,5	58	X				8-65mm			0,5	CAPTIS-65-58-RLQ / D3*
65	80	99,5	58		X				7-56mm		1	CAPTIS-65-58-SQ / D3*
65	80	99,5	58		X					7-46mm	1	CAPTIS-65-58-VQ / D3*
65	80	99,5	53			X		5-65mm			0,5	CAPTIS-65-53-RG / D3*
65	80	99,5	53				X	8,20,40mm			0,5	CAPTIS-65-53-WG / D3*
Size												
80	94,5	114,5	53	X				11-80mm			1	CAPTIS-80-53-RLQ / D3*
80	94,5	114,5	53		X				7-68mm		1	CAPTIS-80-53-SQ / D3*
80	94,5	114,5	53		X					8-42mm	1	CAPTIS-80-53-VQ / D3*
80	94,5	114,5	53			X		5-80mm			1	CAPTIS-80-53-RG / D3*
80	94,5	114,5	53				X	20,30,40, 60mm			1	CAPTIS-80-53-WG / D3*
Size												
100	121	144,5	59	X				42-100mm			1	CAPTIS-100-59-RLQ / D3*
100	121	144,5	59		X				50-86mm		1	CAPTIS-100-59-SQ / D3*
100	121	144,5	59		X					50-70mm	1	CAPTIS-100-59-VQ / D3*
100	121	144,5	59			X		42-100mm			1	CAPTIS-100-59-RG / D3*
100	121	144,5	59				X	30,45,65, 90mm			1	CAPTIS-100-59-WG / D3*

Akkermans Industrial Engineering B.V. info@aiebv.com T +31 (0)165 - 224140
Collet chucks

Accessories CAPTIS



Clamping device for CAPTIS collets, manual

Size	32	42
Clamping device manual	**1283285**	**1283286**
Suitable for	round	round
Weight kg	1	1,1



Clamping device for CAPTIS collets, manual

Size	52	65	80
Clamping device manual	**1283287**	**1283288**	**1283289**
Suitable for	round	round	round
Weight kg	1,1	1,2	1,3



Clamping device for CAPTIS collets, pneumatic

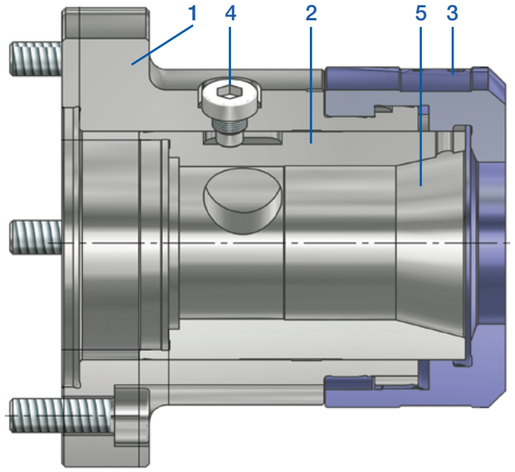
Size	80	100
Clamping device pneumatic	**1362635**	**1362636**
Suitable for	round	round
Weight kg	2,5	2,8



Clamping device for CAPTIS collets, pneumatic, 2 hand actuation

Size	120
Clamping device pneumatic (2 hand actuation)	**1362637**
Suitable for	round
Weight kg	3

KZF

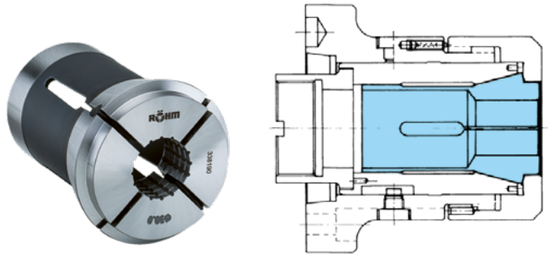


1. Body
2. Thrust sleeve for steel collets and segment collets. By replacing the thrust sleeve, duo-segment collets can be used.
3. Union nut with bayonet lock
4. Protection against torsion for thrust sleeve

- Adapter fitting must be ordered separately. Suitable for existing draw tube, glue into thrust sleeve.
- Special accessories, are not part of the scope of delivery. The workpiece stop can only be used for segment collets. Order separately: Cap screw or stud bolt with locknut acc. to DIN 55027.

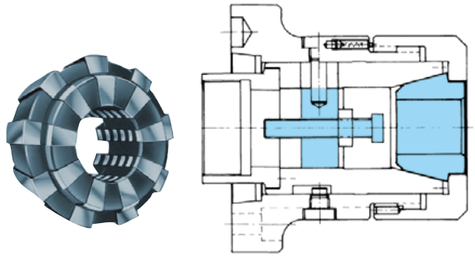
5. Protection against torsion for collet

Hollow clamping with steel collet DIN 6343



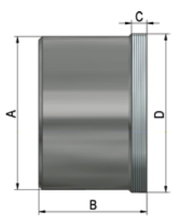
Chuck size	Collets DIN 6343					
	Type		Clamping capacity			Tolerance
KZF 40	8206-E	DIN 6343 173 E	2-42	6-36	6-29	+0,2 -0,3
KZF 60	8207-E	DIN 6343 185 E	4-60	8-52	7-42	+0,2 -0,3
KZF 80	7037-E	DIN 6343 193 E	20-80	18-69	15-56	+0,2 -0,3

Clamping with segment collet and workpiece stop



Chuck size	Segment collets DIN 6343		
	Type	Clamping capacity	Tolerance
KZF 40	Series R 36	8-42	2±0,3
KZF 60	Series R 52	19-61	2±0,3
KZF 80	-	-	-

C 15
Connecting piece for collet chuck KZF



Item no.	Größe	A	B	C	D
683648	40	62	60	8,5	M66x1,5
683649	60	85	60	8,5	M88x1,5
683652	80	100	60	12,5	M114x1,5

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Power-operated collet chucks

KZF - without axial tightening, for DIN collet chucks



APPLICATION

External clamping of round workpieces, as well as square and hexagon profiles.
Turning, milling, grinding operations as well as for measuring.
Ideal for bars and pipe machining on the main spindle. For using standardized DIN collet chucks or segment collet chucks.

TYPE

Force-actuated.
Internal workpiece stop optional in conjunction with segment collet.

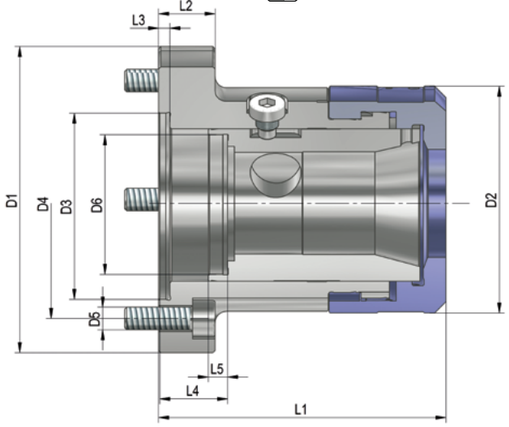
CUSTOMER BENEFITS

- Light weight and reduced height thanks to compact design
- Short setup times thanks to quick change of collet chuck
- High flexibility thanks to modular system
- Quick retrofitting to other workpieces by changing the collect chuck
- Axially fixed collect chuck, no axial tension against internal workpiece stop

TECHNICAL FEATURES

- Hardened, low-wear design
- Either DIN steel or segment collet chucks

KZF = force-actuated, collet, flange



C 15
Power-operated collet chuck KZF, with quick-acting bayonet catch, without collet
Cylindrical center mount / short taper mount, draw tube adapter available on request

	KZF 40	KZF 40	KZF 40	KZF 40	KZF 60	KZF 60	KZF 60	KZF 60	KZF 80	KZF 80
Recording	**Z-140**	**Z-88**	**KK 5**	**KK 6**	**Z-115**	**Z-170**	**KK 6**	**KK 8**	**Z-130**	**KK 8**
Components										
Collet chuck	**439989**	**439990**	**439991**	**439992**	**439993**	**439994**	**439995**	**439996**	**439997**	**439998**
Clamping & Performance data										
Clamping range mm	2-42	2-42	2-42	2-42	4-60	4-60	4-60	4-60	20-80	20-80
Elongation Ø in mm	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
Max stroke mm	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
Max actuation force kN	25	25	25	25	30	30	30	30	35	35
Max total clamping force kN	66	66	66	66	79	79	79	79	92	92
Max speed U/min	8000	8000	8000	8000	5000	5000	5000	5000	4000	4000
Moment of inertia Jkg m²	0,029	0,029	0,029	0,029	0,038	0,038	0,038	0,038	0,108	0,108
Clamping devices dimensions										
D1 mm	160	135	170	170	157	190	210	210	187	210
D2 mm	100	100	100	100	122	122	122	122	150	150
D3 mm	140	88	82,563	106,375	115	170	106,375	139,719	130	139,719
D4 mm	104,8	115	104,8	133,4	136	133,4	133,4	171,4	166	171,4
D5 mm	4xM10	6xM8	4xM10	4xM12	8xM8	6xM12	4xM12	4xM16	8xM8	4xM16
D6 mm	M66x1,5	M66x1,5	M66x1,5	M66x1,5	M88x1,5	M88x1,5	M88x1,5	M88x1,5	M88x1,5	M114x1,5
L1 mm	116	116	127	128	132	132	144	146	156	170
L2 mm	25	25	25	25	25	25	25	25	30	30
L3 mm	5	5	16	18	5	5	18	22	5	22
L4 min mm	16	16	32	33	16	16	33	35	17	36
L4 max mm	8,5	8,5	24,5	25,5	8,5	8,5	25,5	27,5	9,5	28,5
L5 mm	8,5	8,5	8,5	8,5	8,5	8,5	8,5	8,5	12,5	12,5
Weight without collet kg	7,1	5,3	7,5	7,5	9,2	9,2	10,2	14	17,5	18

Power-operated collet chucks

KZF-S - with axial tightening, bayonet quick lock



APPLICATION

External clamping of round workpieces with smooth or toothed outer geometry for turning, milling, grinding and measuring operations.
Clamping device/clamping optimal adapted to the workpiece/machining process.
Ideal for short clamping lengths.

TYPE

Force-actuated.

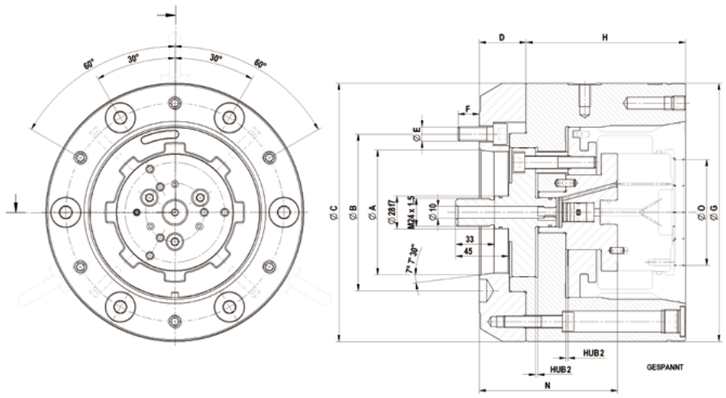
CUSTOMER BENEFITS

- Sturdy clamping of the workpiece thanks to axial tension against the workpiece stop
- Quick change of collet chuck by bayonet lock
- High concentricity, axial run-out and repeatability
- High flexibility thanks to modular system

TECHNICAL FEATURES

- Manual lubrication/low-maintenance
- Prepared for internal media feed-through, e.g. air and coolant
- Prepared for internal workpiece stop
- Collet chucks and internal workpiece stop can be individually adapted to the workpiece
- Sealing against chips

KZF-S = force-actuated, collet, flange, quick-change function



C 18
Power-operated collet chuck KZF-S, for external clamping

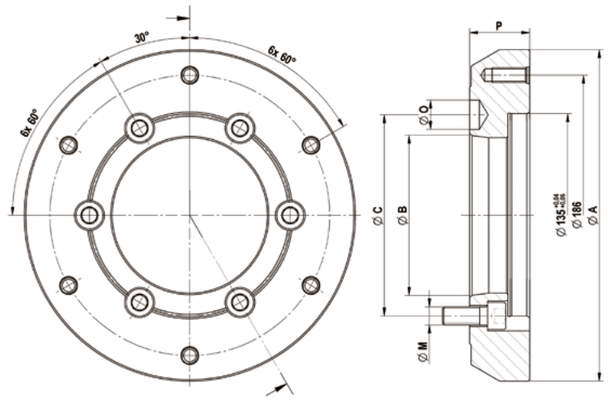
	KZF-S 80	KZF-S 120	KZF-S 180
Components			
Collet chuck	**1117832**	**1117830**	**1125403**
Base bolt	1117833	1072101	1125404
Draw piece	1117837	1117827	1125408
Fastening plate	1117835	1072105	1125406
Bolt space	1117836	1072103	1072103
Ground stop for reverse valve cartridge	1117839	1072113	1125410
Ground stop for ermeto pipe	1117841	1117824	1125412
Reverse valve cartridge 1 Bar	756641	863134	863134
Reverse valve cartridge 3 Bar	843866	889894	889894
Clamping & Performance data			
Clamping range mm	30 - 80	60 - 120	100 - 180
Elongation Ø in mm	1,4	1,4	1,4
Max stroke mm	4	4	4
Max actuation force kN	30	40	40
Max total clamping force kN	106	142	142
Max speed U/min	6000	5000	3500
Clamping devices dimensions			
Ø G mm	170	220	285
H mm	125	136	136

Infos: kzf@roehm.biz

Power-operated collet chucks

Accessories KZF-S





C 18
Intermediate flange ISO 702-1 (DIN 55028)

	A 05	Nr. 5 (A5)	A 05	Nr. 6 (A6)	A 06	A 08	Nr. 8 (A8)	A 08
Intermediate flange	**1117843**	**1072115**	**1117845**	**1072117**	**1125416**	**1117847**	**1072119**	**1125418**
For	KZF-S 80	KZF-S 80/AGILIS 05-07	KZF-S 81	KZF-S 120/ AGILIS 05-07	KZF-S 180	KZF-S 82	KZF-S 120/ AGILIS 05-07	KZF -S 180
Short-taper-Ø B	82,563	82,563	106,375	106,375	106,375	139,719	139,719	139,719
Short-taper pitch circle Ø C	104,8	104,8	133,4	133,4	133,4	171,4	171,4	171,4
Flange outer-Ø A	170	220	170	220	285	210	220	285
Ø D	105	135	105	135	200	105	135	200
Ø F mm	143	186	143	186	250	143	186	250
Ø O mm	16,3	16,3	19,45	19,45	19,45	24,2	24,2	24,2
Thread-Ø M	M10	M10	M12	M12	M12	M16	M16	M16
Total length flange P	35	40	35	40	45	35	40	45

Special solutions KFG



Sliding clamping mandrel KFG

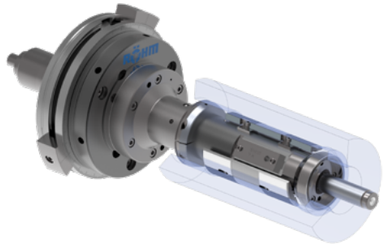
APPLICATION

Turning of tubes and shafts

Clamping via sliding jaws on two compensating clamping planes. The right-hand side is power-actuated, while the left-hand side is spring-actuated for workpiece tolerance compensation with a front stop.

CUSTOMER BENEFITS

- Very large expansion range of approx. 6 mm and large compensation between the clamping zones
- Version with serrated sliding jaws can be used as can be used for raw part clamping
- Concentricity of 0.05 mm



Sliding clamping mandrel KFG

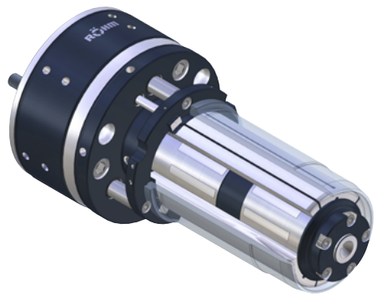
APPLICATION

Turning of stator housings

Clamping via bridge jaws, power-operated without compensation.

CUSTOMER BENEFITS

- Very large expansion range of approx. 5 mm
- Interchangeable bridge jaws and balancing weights, Support via tailstock
- Large clamping surfaces due to wide bridge jaws
- Concentricity of 0.05 mm



Sliding clamping mandrel KFG with intermediate sleeve Ø 104-120 mm

APPLICATION

Turning of cylinder liners, final machining.

Left clamping plane power-actuated via the draw bar. Right clamping plane power-actuated via the tailstock. Retractable stop with air contact control. Different workpiece diameters can be clamped by changing the intermediate sleeve.

CUSTOMER BENEFITS

- Interchangeable intermediate sleeve
- High concentricity of 0.05 mm

Special solutions KFG



Sliding clamping mandrel KFG clamping range from 98-113 mm

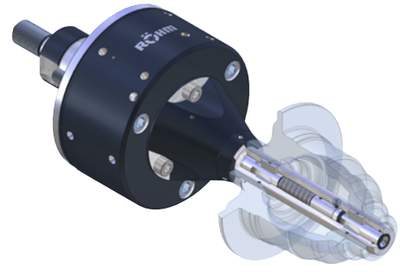
APPLICATION

Turning of clamping cylinder liners, raw part

Left clamping plane force-actuated by draw bar. Right clamping plane spring-actuated to compensate for workpiece tolerances. Stop can be pulled back. Different workpiece diameters can be clamped by changing the top jaws.

CUSTOMER BENEFITS

- Large clamping range elongation of 7 mm
- Large torque transmission from corrugation of the top jaws



Sliding clamping mandrel KFG clamping-Ø 30 mm

APPLICATION

Turning of a differential housing

Clamping of a differential housing in two clamping planes. Diameter difference between the clamping planes are compensated. The workpiece stop is equipped with an air sensing. The entire clamping mandrel is sealed with purge air.

CUSTOMER BENEFITS

- Two compensating clamping planes
- Concentricity of 0.02 mm



Sliding clamping mandrel KFG clamping-Ø 39 mm / clamping-Ø 40 mm

APPLICATION

Turning

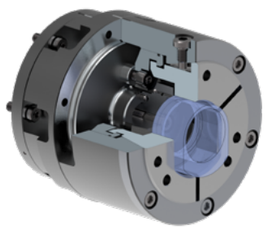
The clamping in clamping zone 1 is done by the draw bar with serrated jaws for high torque transmission. Clamping zone 2 is actuated by springs and is equipped with an intermediate sleeve.

CUSTOMER BENEFITS

- Intermediate sleeve protects the workpiece surface
- Concentricity of 0.01 mm

Special solutions KFG

Special solutions CAPTIS



CAPTIS A-80
Collet chuck with profile collet

APPLICATION

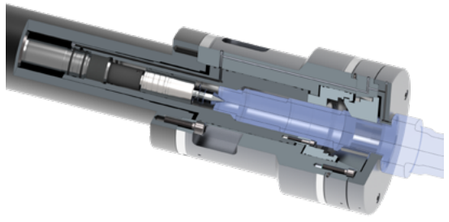
Turning of aluminum profiles

Pneumatic clamping via pistons integrated into the chuck, using a collet adapted to the workpiece profile.

CUSTOMER BENEFITS

- Compatible with standard collet chucks
- Both centric and eccentric collets available
- Suitable for a wide range of profile shapes
- Concentricity of 0.01 mm

CAPTIS A-120
Collet chuck with front stop and movable live center



APPLICATION

Power-actuated clamping via draw bar.

Workpieces are supported by a movable live center integrated within the clamping cylinder.

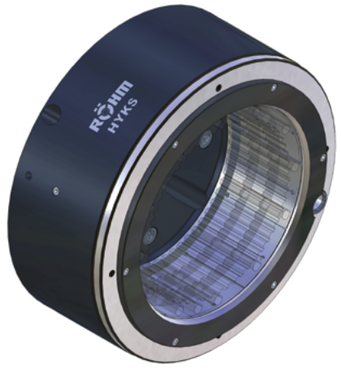
CUSTOMER BENEFITS

- Accommodates different workpiece lengths due to the movable live center
- Enhanced workpiece support for improved stability
- Quick change of collet chuck
- Concentricity of 0.015 mm

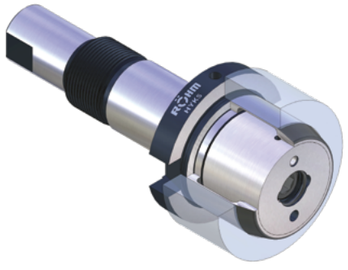
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Notes

Special solution HYKS







Hydraulically actuated clamping mandrel for internal and external clamping

APPLICATION

Grinding, turning, milling, measuring

The hydraulic medium is put under pressure by a piston or by system pressure. The elongation can be up to 0.3 % (up to 1 % for special materials) of the diameter of the extension sleeve. Clamping directly by extension sleeve or indirectly by a slotted intermediate sleeve.

CUSTOMER BENEFITS

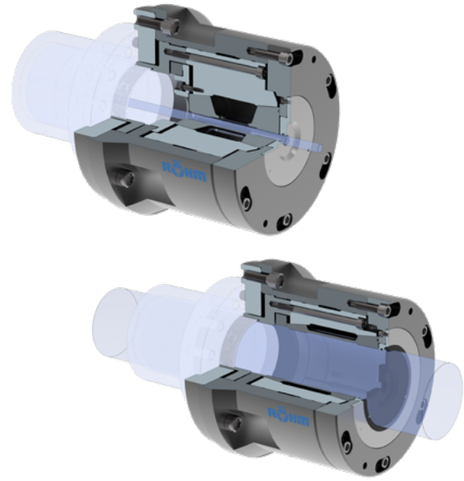
- Cylindrical and round elongation over the entire clamping range for a maximum concentricity tolerance of 0.003 mm
- Very high clamping force in the clamping zone
- Optimum damping, extremely quiet machining and significantly higher service life of the tool due to precisely fitted clamping sleeve

TECHNICAL FEATURES

Force-actuated or manual actuation. Wear-resistant surface.
The clamping systems can be put under pressure by hydraulic or pneumatic cylinders, by the machine hydraulics directly or even manually by using a screw. Different stops (optional): fixed, withdrawable, external, oscillating, etc.

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Special solutions

Special solutions



Double cone collet chuck Ø16mm-Ø110mm

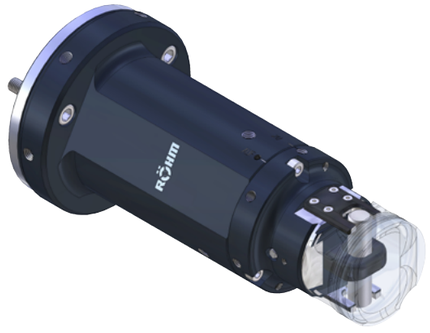
APPLICATION

Machining of piston rods.

Power-actuated clamping via draw bar, with both clamping planes engaging in parallel without compensation. By changing the clamping cone and the collet chuck workpieces of Ø15mm to Ø110mm can be clamped.

CUSTOMER BENEFITS

- Extremely large clamping range with extended clamping length
- Low surface pressure protects the workpiece surface
- The two conical surfaces ensure a more even distribution of the clamping force over the collet chuck, leading to better centering and reducing the risk of the workpiece tilting or inaccurate clamping.
- Concentricity accuracy of 0.01 mm



Special mandrels

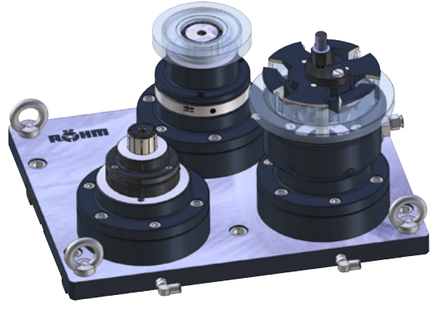
APPLICATION

Grinding, milling

Basic take-up with different replaceable head for clamping of pistons.
Face clamping using internal draw piece. Position orientation using centering forks.
An insertion securing device prevents incorrect loading. The actuation is done using OVS70 RÖHM clamping cylinders. The entire external contour can be machined.

CUSTOMER BENEFITS

- Clamping head with quick change system
- Concentricity of 0.005 mm



Clamping fixture

APPLICATION

Milling, drilling

Clamping device with three basic units. Pneumatically release; Clamping via spring force. Two basic units equipped with KFR clamping mandrels. A basic unit equipped with a power chuck.

CUSTOMER BENEFITS

- Basic units can be equipped with different clamping systems

The headquarters: our main plant in Sontheim/Brenz

The RÖHM main plant is located in Sontheim/Brenz. In this ultra-modern production facility comprising 41,000 m² optimum conditions have been achieved in order to solve the extensive range of discerning construction and production tasks making the company even better, faster and more efficient in the future.





Sontheim/Brenz

Sontheim I All national and international activities are planned and coordinated at the administrative headquarters in Sontheim. Thanks to the excellent infrastructure and transport routes, this location is ideal for a company relying on perfect product quality as well as maximum flexibility. Furthermore, the region around Sontheim offers another key basis for the success of our company: it is rich in quality awareness and motivated employees with the result that we are ideally prepared for the challenges of the future. The main plant uniquely unites mass production, serial production and customised individual production under a single roof.

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Key locations for the company: Dillingen and St. Georgen

Such strong growth on the part of the RÖHM Group is also obviously associated with higher requirements on development and production capacities. The demands of today and tomorrow can be complied with the two facilities in Dillingen and St. Georgen.



Dillingen/Danube



St. Georgen

Plant Dillingen/Danube | This branch plant in Dillingen was put into operation by the RÖHM Group as early as 1953. Thanks to extremely positive development, the plant is subject to constant expansion and modernisation. For this reason, new modern production facilities were built in 1982 and 1991. In 2007 RÖHM built a new production hall for two portal turning and milling machines. This enables machining of workpieces up to 4 metres in length which will secure a leading market position for RÖHM in the future. More than 300 employees are primarily involved in engineering and manufacturing lathechucks, machine vices and special clamping equipment for turning and milling machinery as well as for machining centres.

Engineering and sales department St. Georgen | Apart from standard mandrels, tailor-made solutions for a wide variety of requirements are also manufactured here in this small but accomplished high-tech forge. RÖHM retains mechanical or power-operated mandrels, sliding jaw mandrels and hydraulic mandrels for its customers for tensioning workpieces in drill holes or interior contours.

Always close to our customers. With locations all around the world.



Customer orientation at RÖHM has less to do with marketing than with attitude. We consider customer proximity as an intensive dialogue with our partners as well as direct presence on key international markets.

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General Terms of Sale and Delivery

§ 1 Offer, conclusion of contract and contractual contents
1. Our Terms of Sale shall apply exclusively; we do not recognise contradictory terms and conditions or terms and conditions which deviate from our Terms of Sale unless we had explicitly approved their validity in writing. Our Terms of Sale shall also apply if we carry out the delivery to the buyer without reservation in the knowledge of contradictory terms and conditions of the buyer or terms and conditions which deviate from our Terms of Sale.
2. Our Terms of Sale shall only apply towards an entrepreneur within the meaning of Section 14 BGB [German Civil Code].
3. Our General Service Terms shall apply with precedence over these Terms of Sale in the respective valid version in cases, which comprise the service offer of RÖHM GmbH.
4. Our offers are always to be understood as invitatio ad offerendum and are therefore without obligation insofar as they have not explicitly been described as binding. The contract shall only be concluded with our written confirmation and in line with its contents and – if a written confirmation is missing – by the service/delivery. If a delivery/service is carried out immediately without a confirmation then the invoice shall at the same time be deemed as an order confirmation.
5. Costs for the production of drawings for special constructions are to be borne by the orderer insofar as the offer does not lead to an order for reasons, for which we are not responsible.
6. All details concerning weights, dimensions, services and technical data, which are contained in our printed material, catalogues, price lists or in other contractual documents, merely serve for purposes of information and are only binding insofar as they are explicitly described as binding.
7. We reserve the right to make construction and form changes to the object of contract insofar as no changes are made hereto, which are deemed unreasonable for the orderer.
8. The documentation consists of the compilation drawing, the BOM with marking of the parts subject to wear and tear and spare parts as well as assembly instructions upon request. Respectively in German and/or, upon request, in English. This free documentation will be supplied in a digital form. The PDF format shall apply to drawings, BOMs and texts. Any scope of documentation beyond this is liable to costs respectively requires a special agreement. The documents may not be reproduced in full or in part, not made accessible to third parties or used for any other purpose apart from that for which they were handed over to the customer without our prior written authorization.
9. The corresponding measurement methods for tests, with which certain temperatures, times and other measured or control values should apply, must be stipulated before start of delivery and recognised by both parties. If no stipulation is made the measurement methods usually applied by RÖHM shall apply, we shall provide the details thereof upon request.
10. Samples will only be supplied against payment and owing to a separately placed order.
11. Assurances, collateral agreements and amendments to the contract require a written form in order to be valid. This requirement cannot be waived orally.
12. Placed orders are irrevocable unless the supplier has approved the revocation in writing.
13. In case of export business the delivery is carried out at the conditions agreed on the order confirmation, the international regulations for the interpretation of customary contractual forms shall apply in addition (incoterms 2010 of the International Chamber of Commerce, respective valid status).
14. Our General Business Terms shall apply to the RÖHM online shop with the following supplementations:
a) The offer on the part of the customer is submitted binding as soon as the customer orders the products in the shopping basket by using the function „binding order".
b) A purchase in the online shop is only possible if the customer actively agrees to our General Business Terms.
c) Mistakes and errors with regard to the goods availability, prices and other details and data excepted. Diagrams in the online shop are merely for the purpose of illustration respectively as visual aids; the description is binding.
d) We will inform the customer if the product ordered by the customer is temporarily or permanently not available.
15. Our „product information", technical information leaflets as well as other product-specific publications shall apply in addition to the General Business Terms. These are always to be complied with in their current version.
16. When a contract is concluded between Röhm and the buyer, both parties undertake to observe and comply with the applicable laws and regulations as well as the current RÖHM code of conduct. You can find the code of conduct at:
https://www.roehm.biz/unternehmen/code-of-conduct/

§ 2 Prices
1. In the absence of special written agreements the prices in the Federal Republic of Germany shall apply „carriage paid" recipient plus the statutory value added tax. With export business the object of delivery shall be deemed as sold „ex works" if nothing is determined in the contract concerning the type of sale. A processing fee of EUR 15.00 will be charged for individual orders with a goods value of less than EUR 150.00 net, a processing fee of EUR 30.00 for orders with a goods value of less than EUR 50.00 net respectively plus the applicable rate of value added tax. This shall apply to deliveries within the domestic country and overseas. At the customer's request the goods can be delivered to an alternative shipping address against a logistics fee in the amount of EUR 10.00.
2. We would like to point out that we will only carry out the shipment at the customer's request. This shall have no effect on the regulations according to Section 5.
3. We shall charge the prices valid upon conclusion of the contract, which are based on the cost factors which are valid at this time. Should these cost factors (in particular material, wages, energy, etc.) change between conclusion of the contract and the agreed delivery time then we are entitled to make a corresponding change to the prices. In case of export business the supplier is entitled to terminate the contract extraordinarily with regard to the part of the order that has not yet been completed or to adjust the prices for this accordingly in the event of a substantial devaluation in the currency, in which the order is concluded.
4. In case of conclusion ex works the goods will be conveyed at the costs and risk of the orderer. With all other consignments the provisions stipulated in the incoterms 2010, respective valid status, will apply with regard to insurance and the assumption of risks.
5. We will inform the buyer of our production quantity for parts/products, which are produced especially according to the buyer's requests. The buyer undertakes to purchase the quantities confirmed to him.
6. Excess and shortfalls in deliveries of up to 5 %, with special tools up to 10 %, at least however 2 pieces, are permitted and do not substantiate any quality defects. The respective delivery will be charged.

§ 3 Terms of payment
1. In the absence of a special agreement the payment is to be made without any deduction free paying agent within 10 days after the invoice date – also with partial deliveries.
2. In case of default of payment interest will be charged in the amount of the credit costs charged by banks, at least however interest in the amount of 9 % above the respective base lending rate of the ECB.
3. In case of export business the payments are to be made in line with the agreed terms of payment.
4. Costs of the payment transactions, in particular bank charges for overseas transfers to us, shall principally be for the expense of the customer.

§ 4 Delivery time
1. The start of the delivery deadline stated by us presumes the clarification of all technical questions. Delivery dates stated by us are – insofar as not explicitly agreed or described as binding – non-binding and shall merely represent an expected delivery date.
2. The compliance with our delivery obligation further presumes the timely and proper fulfilment of the buyer's obligations, in particular the compliance with the agreed terms of payment. The right is reserved to the plea of the unfulfilled contract.
This right shall also consist of obligations from previous deliveries which have not been satisfied in full.
3. The delivery deadline shall begin with the sending of the order confirmation, however not before the provision of the documents, permit, releases, etc., which are to be procured by the orderer, as well as not before the receipt of the agreed down payment.
4. If a binding delivery date has been agreed then the supplier also has to deliver within the deadline. The delivery deadline shall have been adhered to if the object of delivery has left the plant by the time it expires or notification has been given that the object is ready for delivery, the right is reserved to the timely and correct self-delivery. If the orderer changes his order with regard to parts of the delivery then the delivery deadline shall only begin to apply new again with the confirmation of the change.
5. Force majeure, war, civil commotion, strike, lock-out or measures of authorities, no matter for what reason, which oppose a delivery, as well as deficiencies of raw materials, of transport means as well as theft – also at the sub-suppliers – shall release the supplier from the obligation to deliver within the agreed deadline. The orderer is to be notified immediately of the occurrence of the event and of the expected implications.
6. Deliveries before expiry of the delivery time and in reasonable parts are permitted.
7. The adherence to the delivery time presumes the fulfilment of the orderer's contractual obligations.
8. The regulations of Article 10 shall apply in the event of the delay in delivery or impossibility.

§ 5 Passing of risk and acceptance
1. The risk shall pass to the orderer by no later than with the despatch of the delivered parts also if partial deliveries are made or we have taken over other services e.g. the shipping costs or delivery to the location and installation.
2. At the orderer's request the shipment shall be insured by us against theft, damages caused by breakage, transport, fire and water and other insurable risks at his costs.
3. If the shipment is delayed as a result of circumstances, for which the orderer is responsible, then the risk shall pass to the orderer from the day upon which the goods are ready for shipment; however we are obliged to procure the insurances, which he requests, at the request and costs of the orderer.
4. Delivered objects are, even if they feature insignificant features, to be accepted by the orderer irrespective of the rights from Section 8.

§ 6 Delay in acceptance, order on call
1. If the orderer does not accept the object of contract within the deadline we are entitled to set him a reasonable final deadline, to dispose otherwise over the object after its expiry and to supply the orderer with a reasonably extended deadline. Our rights to cancel the contract under the pre-requisites of Section 326 BGB and to request damages owing to the non-fulfilment shall remain unaffected hereby. If we request damages owing to non-fulfilment we can request 40 % of the agreed price plus value added tax as compensation unless the orderer proves less damages. We reserve the right to assert higher actual damages.
2. Orders, which are confirmed by us on call, must – insofar as nothing special has been agreed – be accepted by no later than within one year from the order date. The same shall apply in case of date reservations or sustainable „on call position". Subclause 6.1 shall apply accordingly in case the goods are not called within the stated deadline.

§ 7 Reservation of title
1. The objects of the deliveries (reserved goods) shall remain our property until the fulfilment of all claims to which we are entitled against the buyer from the business relationship. Insofar as the value of all security rights, to which we are entitled against the buyer, exceed the amount of all secured claims by more than 10 %, we will release a corresponding part of the security rights at the buyer's request.
2. During the existence of the reservation of title the buyer is prohibited from a pledge or assignment as collateral and the resale only permitted for resellers in the customary course of business and only under the condition that the reseller receives a payment from his customer or stipulates the reservation that the property shall only pass to the customer when he has satisfied his payment obligations.
3. In case of attachments, seizures or other disposals or interventions of third parties the buyer has to inform us immediately so that we can file an action according to Section 771 ZPO [German Code of Civil Procedure]. Insofar as the third party is not in the position to reimburse us the court and out-of-court costs of an action according to Section 771 ZPO, the buyer will be liable for the loss incurred to us.
4. The buyer undertakes to treat the object of purchase with due care and attention; he is in particular obliged to sufficiently insure these at the value as new at his own costs against damages caused by fire, water and theft. Insofar as maintenance and inspection work is necessary the buyer must carry this out in time at his own costs.

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General Terms of Sale and Delivery

5. In case of breaches of duty by the buyer, in particular with default of payment we are entitled to cancellation and to take the goods back; the buyer is obliged to hand the goods over. The taking back of goods respectively the assertion of the reservation of title does not require any cancellation of the supplier; these acts or an attachment of the reserved goods by us shall not represent a cancellation of the contract unless we had explicitly declared this.
6. If the buyer has resold the object of purchase in the ordinary course of business then he shall hereby now already assign all claims to us in the amount of the final invoice amount (including value added tax) of our claim, to which he is entitled from the resale against his buyers or third parties, irrespective of whether the object of purchase has been resold without or after processing. The buyer shall also remain authorized to collect this claim after the assignment. Our authorization to collect the claim ourselves shall remain unaffected hereby. However, we undertake not to collect the claim as long as the buyer satisfies his payment obligations from the collected proceedings, is not in default of payment and in particular no application has been filed for the opening of insolvency proceedings or payments have been suspended. If this is however the case we can request that the buyer announces the assigned claims and their debtors to us, provides us all details which are necessary for the collection, hands over the associated documents and informs the debtors (third parties) of the assignment.
7. The processing or conversion of the object of purchase by the buyer is always carried out on our behalf. If the object of purchase is processed with other objects, which do not belong to us, then we shall acquire the co-ownership to the new object in the ratio of the value of the object of purchase (end invoice amount, including value added tax) to the other processed objects at the time of the processing. Incidentally, the same shall apply to the object produced by processing as to the object of purchase delivered under reservation.
8. If the object of purchase is inseparably mixed with other objects that do not belong to us then we shall acquire the co-ownership to the new object in the ratio of the value of the object of purchase (end invoice amount, including value added tax) to the other mixed objects at the time of the mixing. If the mixing is carried out to the extent that the object of the buyer is to be seen as the main object then it shall be deemed as agreed that the buyer assigns us the pro rata co-ownership. The buyer shall store the thus produced sole ownership or co-ownership on our behalf.

§ 8 Quality defects
We shall be liable for quality defects as follows:
1. All those parts or services are to be subsequently improved free of charge at our choice, delivered or provided new, which – irrespective of the operating duration – feature a quality defect if this cause existed already at the time when the risk was passed.
2. Claims for quality defects shall become statute-barred in 12 months. The deadline will begin with the passing of the risk (Article 5).
3. The buyer has to report quality defects to us immediately in writing.
4. In case of reports of defects payments of the buyer may be withheld in a scope, which is in reasonable relation to the occurred quality defects. If the defect is unjustifiably reported we are entitled to request reimbursement of the expenses incurred to us by the buyer.
5. We are first of all always to be granted the opportunity for the subsequent fulfilment within a reasonable period of time.
6. If the subsequent fulfilment fails the buyer can – irrespective of possible claims for damages – cancel the contract or reduce the remuneration. The buyer can only request reimbursement for fruitless expenses if we are responsible for the defect owing to wilful intent or gross negligence.
7. Defects shall not exist with an only insignificant deviation from the agreed conditions, with an only insignificant impairment to the usability, with natural wear and tear or damages, which are caused after the risk has passed as a result of faulty or negligent treatment, excessive use, unsuitable operating equipment or owing to special external influences, which are not presumed according to the contract, as well as with software faults that cannot be reproduced. If improper changes or repair work is carried out by the buyer or by third parties then this and the thus incurred consequences shall not substantiate any defects either. The same shall apply if our stipulations concerning the handling and other instructions are not complied with and a proper maintenance is not carried out.
8. Claims of the buyer owing to the expenses, which are necessary for the purpose of the subsequent fulfilment, in particular transport, route, labour and material costs, are excluded if the expenses increase, because the object of the delivery has subsequently been taken to another location than the buyer's branch unless the transportation corresponds with its use as intended.
9. Statutory claims for recourse of the buyer against us shall only exist to the extent that the buyer has not reached any agreements with its buyer that go beyond the statutory claims for defects.
10. Article 10 shall apply to claims for damages. Further or other than claims regulated in this Article or in Article 10 owing to a quality defect are excluded.

§ 9 Industrial property rights and copyrights, defects of title
Insofar as not otherwise agreed, we are obliged to merely provide the delivery in the country of the place of delivery free of industrial property rights and copyrights of third parties (hereinafter property rights). Insofar as a third party asserts justified claims owing to the infringement of property rights due to deliveries provided by us and used as per contract against the buyer, we shall be liable towards the buyer as follows within the deadline determined in Subclause 8.2:
1. We will, at our choice and at our costs, either obtain a right of use for the deliveries concerned, change these so that the property right is not infringed, or exchange these. If this is not possible for us at reasonable conditions, the buyer shall be entitled to the statutory rights to cancellation or reduction. The buyer can only request reimbursement for fruitless expenses if we are responsible for wilful intent or gross negligence. Our obligation to pay compensation is oriented to Article 10.
2. The afore-mentioned obligations shall only exist if the buyer informs us immediately in writing about the claims asserted by third parties, does not recognise an infringement and we reserve the right to all defence measures and settlement negotiations. If the buyer discontinues the use of the delivery for reasons to minimise damages or for other important reasons he undertakes to inform the third party that the discontinuation of the use is not associated with a recognition of an infringement of a property right.
3. Claims of the buyer are excluded insofar as he is responsible for the infringement of property right.
4. Claims of the buyer are further excluded insofar as the infringement of property right is caused by special stipulations of the buyer, due to an application that is not foreseeable for us or by the fact that the delivery is changed by the buyer or is used together with products not delivered by us.
5. In the event of infringements of property rights the provisions of Subclauses 8.4, 8.5 and 8.9 shall apply accordingly to the claims of the buyer regulated in Article 10.
6. Further or other claims of the buyer against us or our vicarious agents owing to a defect of title than those regulated in this Article 9 are excluded.

§ 10 Joint and several liability
1. Claims of the buyer for damages – irrespective of the legal nature of the asserted claim – are excluded.
2. Excluded from this are:
a) Damages owing to the breach of essential contractual obligations. Deemed as essential are such contractual obligations, the fulfilment of which makes the proper execution of the contract possible at all and on the compliance with which the contractual partner may as a rule rely and depend on.
b) Damages from the injury to life, the body or the health if we are responsible for the breach of obligation.
c) For other damages, which are due to a wilful or grossly negligent breach of duty, whereby our breach of duty is deemed equivalent to that of our legal representatives or vicarious agents.
d) Liability according to the ProdHaftG [German Product Liability Act]
3. A change to the burden of proof for the disadvantage of the buyer is not associated with the afore-mentioned regulations.
4. Insofar as the liability for damages is excluded or limited against us, this shall also apply with regard to the personal liability for damages of our employees, our commercial agents and our vicarious agents.

§ 11 Obligations of the buyer to provide assistance
1. Assistance services of the buyer, which are explicitly or tacitly agreed within the framework of the contract, shall be carried out without a special remuneration unless explicitly otherwise agreed.
2. The buyer is obliged to inform us about all facts in time, from which it can be derived that goods and products in stock in our company, which we have made available with regard to the production capacities reported to us, cannot be used or not used in full. If residual stocks remain the buyer shall take over the stocks and the, if applicable incurred destruction costs in the event of a premature change to its material scheduling. This shall also apply to products, with which we had to order minimum quantities on the part of our suppliers if we have informed the customer hereof in advance.
3. The buyer guarantees that the products supplied by him for processing are suitable for this purpose. We are not obliged to examine the products supplied by the buyer for the condition and the suitability for the further processing. Within the framework of ongoing business relationships as well as if an object for processing has initially been inspected, tested and released, the buyer undertakes to inform us of each product change without request in writing. In the case of regular processing of objects the buyer is further obliged to examine the object that is to be processed by us for deviations and changes for each change to the production conditions and in his company, in particular with the exchange of tools, machines or with the introduction of new production processes and to notify us of such changes and modifications in writing.
4. We do not have to examine the instructions of our buyers, the material selection or other regulations, which are made by our buyer, for their accuracy.
5. Therefore, the buyer has to examine all instructions, which he issues as well as the quality of the materials stipulated or made available to us for the compliance with the statutory and technical regulations.
6. If the buyer is in default with regard to his obligation for provision or to provide assistance after a written warning we are entitled to the statutory rights.
7. Goods may only be returned with the supplier's express permission. Any returned goods must be delivered free in their original packaging and must be accompanied by the return receipt provided by the supplier. The goods must be in their original state, i.e. undamaged and fully functional. Returned goods will no longer be accepted when six months have lapsed from the date of delivery. Returns of specially designed or custom-made items, as well as used goods will not be accepted. We will charge a handling fee of 20 % - 40 % of the value of the goods, however, at least EUR 100 per item plus statutory VAT. Following presentation of appropriate evidence, the supplier reserves the right to charge a higher amount to the purchaser in individual cases; the purchaser is free to prove that the damage was lower.

§ 12 Place of performance, Choice of Law and Place of Jurisdiction
1. The place of performance and place of payment is the registered seat of our company in Sontheim/Brenz.
2. The law of the Federal Republic of Germany is to be exclusively applied to the contractual relationship. The application of the Convention of the United Nations of 11 April 1980 concerning Contracts for the International Sale of Goods (CISG „Law governing the sale of goods of Vienna") is excluded.
3. With all disputes ensuing from the contractual relationship, if the orderer is a merchant, a legal entity under public law or a special fund under public law, the action is to be filed at the court that has jurisdiction for our headquarters. We are also entitled to file action at the headquarters of the orderer.

§ 13 Data protection
We process personal data in accordance with the General Data Protection Regulation (GDPR) and the Federal Data Protection Act (BDSG).

RÖHM GmbH
89565 Sontheim (Germany)

Status: July 2024

General Service Terms (ASB) of RÖHM GmbH, Sontheim

1. Validity
1.1 These ASB form the basis for all business transactions with our customers, which refer to the repair or maintenance of the products manufactured or delivered by us insofar as these customers concern entrepreneurs within the meaning of Section 14 BGB [German Civil Code].
1.2 Contradictory, supplementary contractual terms and conditions of the customer or those which deviate from these ASB will not be recognised.
1.3 Within the framework of a regular business relationship these ASB will also be valid after the effective inclusion for the first time if we do not explicitly refer hereto in follow-up transactions.
1.4 Insofar as the ASB do not include any regulations, the General Terms of Sale and Delivery of RÖHM GmbH shall apply.

2. Offer and conclusion of the contract
2.1 Our offers are – insofar as not explicitly marked as binding – without obligation and merely to be understood as invitatio ad offerendum. The right is reserved to an interim sale.
2.2 Contracts with us will only be concluded with our written acceptance declaration or – if such is not carried out – by our delivery and service. Changes and supplementations to the contracts concluded with us require a written form.
2.3 If the object of maintenance or repair was not delivered by us then the customer has to point out existing industrial property rights with regard to the object if we are not responsible for any fault the customer shall indemnify us from possible claims of third parties from industrial property rights.
2.4 Insofar as we are responsible for negligence Par. 2.3 shall apply accordingly.

3. Contractual parts
The offer and the product list respectively available to us and the customer are a part of the contract.

4. Technical documents and plans
4.1 All rights to our offer documents as well as documents, which have been handed over, shall remain reserved.
4.2 The customer shall recognise our rights and will not reproduce the documents in full or in part, not make these accessible to third parties or use these for any other purpose than that for which they were handed over to him without our prior written authorization.

5. Scope of services, maintenance, condition of device, repair
5.1 Decisive for the scope of our delivery and service is our binding offer or – if such is not available – our written declaration of acceptance. Both individual services can be agreed, which are principally to be remunerated according to Subclause 12.1, as well as the service packages described under Subclause 5.2, which are to be remunerated according to 12.2 respectively 12.3.
5.2 The following activities are a part of our service obligation with the processing of service packages:
5.2.1 Commissioning of service
- skilled execution of the necessary commissioning of the clamping device and control at the place of installation in line with the regulations of the manufacturer.
- assembly work over the course of the commissioning together with the machine manufacturer
- first instructions and operator training
- we will invoice separate requests for the training with regard to the maintenance and use as separate work.

5.2.2 Inspection service
Skilled execution of the necessary inspection of the clamping device and control at the place of installation in line with the regulations of the manufacturer. Insofar as additional maintenance or repairs become necessary at the customer's request or owing to special loads, these are to be remunerated separately by the customer.
5.2.3 Maintenance service
Skilled execution of the necessary maintenance of the clamping device and control at the place of installation in line with the regulations of the manufacturer. Insofar as additional repairs become necessary at the customer's request or owing to special loads, these are to be remunerated separately by the customer.
5.3 The service obligation shall begin with the purchase or conclusion of a service package. With the purchase or conclusion of a service package after the expiry of the warranty period the service obligation of RÖHM shall only refer to such products, which are capable of use and free of defects at the time of the conclusion or purchase of the service package. This is to be ensured by an inspection of the products; if defects are determined these are to be remedied before the start of validity of the service package by a necessary repair liable to costs; this repair is not part of the service package.
5.4 Our service obligation shall not include carrying out work on products and accessories, which was(were) not delivered by us.
5.5 Our service obligation shall lapse if the product was not subjected to the function and safety tests according to the details in the operating instructions or third parties have carried out work on the products concerned without our prior written consent unless this work has no disadvantageous influence on the provision of our service. The same shall apply if the products have been damaged due to causes for which we are not responsible, for example by water, fire, stroke of lightning or other implications of force majeure as well as with improper treatment by the customer or third parties.
5.6 Depending on the use and type of the product an overhaul may be necessary after longer use. This is the case if the costs of a repair exceed the current value of the product. Overhaul within this meaning is also the necessary new acquisition of a product in the absence of available spare parts. Overhauls are not part of the service obligation within the service packages. If we are of the opinion that a products that is to be maintained by us under a service package requires an overhaul, we will inform the customer hereof by stating the current value estimated by us and submit an offer for the overhaul to the customer with a remuneration calculated according to 12.1.

6. Repair/service that cannot be carried out
6.1 The services provided concerning the details of a cost estimate as well as the further incurred and to be proven work (fault search time equal to working hours) will be invoiced to the customer if the repair cannot be carried out due to reasons for which RÖHM GmbH is not responsible, in particular because the fault for which a complaint will be made did not occur during the inspection, spare parts cannot be procured, the customer culpably missed the agreed date or the contract was terminated during the execution.
6.2 The object of repair only needs to be restored to the original condition again at the explicit request of the customer against reimbursement of the costs unless the undertaken work was not necessary.
6.3 In case of a repair that cannot be carried out RÖHM GmbH shall not be liable subject to sentence 2 for damages to the object of repair, the breach of contractual secondary obligations and for damages, which were not suffered to the object of repair itself, no matter to which legal grounds the customer refers. RÖHM, on the other hand, will be liable in case of wilful intent, with gross negligence of the owner / the executive bodies or executives as well as with the culpable breach of essential contractual duties. Such contractual obligations are deemed essential, the fulfilment of which makes the proper execution of the contract possible at all and the compliance with which the contractual partner may as a rule rely and depend upon.

7. Duration of the service
7.1 The details with regard to the duration of repairs and services are based upon estimates and merely serve as information and a first estimate by the customer. They are therefore not binding if they have not been explicitly marked as binding.
7.2 In case of subsequently placed additional and extension orders or with necessary additional repair work the agreed repair deadline shall be extended accordingly.

8. Obligations to provide assistance of the customer
8.1 The customer has to draw our attention to the statutory, official and company safety and other regulations applicable at the place of destination of our delivery and service, which refer to the delivery, the assembly and the operation.
8.2 The customer will inform us with or immediately after his order about possible special features of the place of installation, which may have an implication on the proper function of the products, in particular about the structural condition and the concrete operating environment.
8.3 The customer shall ensure – also during the warranty period according to Subclause 17.5 – a regular and skilled maintenance of the products delivered by us insofar as this was not taken over by us as per contract.
8.4 The customer shall dispose of the goods delivered by us at his own responsibility and at his own costs according to the respective valid regulations. We are not obliged to create a possibility for the return unless this would have been stipulated by law.
8.5 The customer has to support the repair / maintenance personnel with the execution of the repair at his own costs.
8.6 The customer has to take the special measures, which are necessary for the protection of persons and objects at the workplace. He also has to inform the repair managers about existing special safety regulations insofar as these are of significance for the repair personnel. He shall inform us in case of breaches of the repair personnel of such safety regulations. In case of serious breaches he can refuse the infringing party access to the repair location by mutual agreement with the repair manager.
8.7 The customer shall bear a supervisory and assistance obligation for the compliance with the statutory working time limits. Breaches are to be reported to RÖHM GmbH.
8.8 The customer is obliged to provide the reasonable and necessary technical assistance at his costs, in particular to:
a) Provision of the necessary, suitable assistants in the number that is necessary for the repair and for the necessary time; the assistants have to follow the instructions of the repair manager. We do not assume any liability for the assistants. If a defect or damages were caused by the assistants owing to instructions of the repair manager, then the regulations of Sections 17 and 18 shall apply accordingly.
b) Undertaking of all construction, bedding and scaffolding work including the procurement of the necessary building materials.
c) Provision of the necessary devices and heavy tools as well as the necessary commodities and required materials.
d) Provision of heating, lighting, operating power, water, including the necessary connections.
e) Provision of necessary, dry rooms, which can be locked for the storage of the tool for the repair personnel.
f) Protection of the repair place and materials against harmful influences of all kinds, cleaning of the repair place.
g) Provision of suitable, theft-proof recreation rooms and work rooms (with heating, lighting, washing possibility, sanitary facilities) and First Aid for the repair personnel.
h) Provision of the materials and undertaking of all other acts, which are necessary for the adjustment of the object of repair and for carrying out a testing that is envisaged as per contract.
8.9 The technical assistance of the orderer must guarantee that the service can be started immediately after the arrival of our personnel and carried out without delay until the acceptance by the orderer. Insofar as special plans or instructions of RÖHM are necessary, RÖHM shall make these available to the orderer in time.

9. Obligations of the customer to provide assistance in case of maintenance
9.1 The products are to be used as intended and according to their protection type and in line with the operating instructions together with their annexes.
9.2 In case of an agreement of one of the service packages described in Subclause 5, the customer will place the products that are to be installed, maintained or repaired into a faultless condition, capable of use before conclusion of the contract at his own costs if the products are not already in such a condition. If the customer does not properly satisfy this obligation either after a warning on our part and within the deadline we are entitled to accordingly cancel the contract or the delivery. Further claims for damages on our part shall remain unaffected.
9.3 If the customer uses the maintenance service interferences are to be reported to us immediately in writing, in detail and in an understandable manner.
9.4 Our employees and vicarious agents are to be granted the unimpeded and safe access to the products. In case of delays for which the customer is responsible he is obliged to remunerate the waiting times of our employees and vicarious agents resulting from the delay separately.
9.5 The customer shall refrain from commission third parties with the services during the term of a service agreement, which we have to provide according to the agreement or from performing this work himself.
9.6 The customer has to draw our attention to the statutory, official and company safety regulations and other regulations applicable at the place of destination of our delivery and service, which refer to the delivery, the assembly and the operation.

10. Inspection and acceptance
10.1 Services will be provided by us according to the guidelines of our quality control and deliveries inspected accordingly. If the customer requests further inspections then these are to be agreed in writing and paid by the customer. This shall relate e.g. to special tests for the acceptance.

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General Service Terms (ASB) of RÖHM GmbH, Sontheim

10.2 The customer undertakes to accept our services under this contract immediately after the report that they have been completed. Upon request he has to declare their acceptance in writing towards our employees or vicarious agents insofar as there is no essential defect. This is carried out by the signing of the service report.
10.3 Our services shall be deemed as accepted free of defects with the re-commencement of the operational use of the maintained or repaired product, in particular for production purposes, if no defects have been previously reported by the customer.

11. Cost details and cost estimate
11.1 The creation of the cost estimates is liable to costs if the execution of the repair is not approved.
11.2. The costs for a cost estimate amount to the flat rates fixed in the current price list.
11.3 If the repair cannot be carried out at these costs or if our employees or vicarious agents consider the execution of additional work to be necessary during the repair the customer's consent is to be obtained if the stated costs are exceeded by more than 15%.

12. Remuneration, maturity and terms of payment
12.1 Insofar as not otherwise agreed and there is no warranty case our services are to be remunerated according to the actual work requirement pursuant to our respectively valid general price lists. The time required by our employees will be settled in time sections of 15 min. In addition to the time required for the work that is to be performed in these cases the customer will pay the travelling and waiting times, overtime surcharges, expenses, travelling and accommodation costs as well as the costs of spare parts, materials subject to wear and tear and consumables and replacement part sets according to our prices lists or in line with the offer.
12.2 Insofar as a flat rate remuneration was agreed for a service package, our work and travelling costs and expenses are thus covered, not however the costs for waiting times, overtime at the customer's request, spare parts, materials subject to wear and tear and consumables, replacement parts sets as well as other accessories. Our work for if applicable necessary repairs is to be remunerated separately by the customer according to Subclause 12.1.
12.3 The prices for our services can be derived from the respective price list valid upon conclusion of the contract and are deemed ex works plus value added tax. The calculation basis for the remuneration is the one-shift operation, i.e. a use of the products up to 160 hours in a calendar month. A surcharge to the list price of 50% is charged for the two-shift operation, a surcharge of 100% for the three-shift operation. The above two rates shall only apply to the service packages described under Subclause 5.. If the customer requests assignments outside of our normal working hours (Mo - Fr, 6:30 am - 6:30 pm, a max. of 7 h per day) surcharges will be calculated according to the respective valid price list.
12.4 If our personnel and material costs are increased then we are entitled to adjust the contractual prices after the expiry of the first year up to a maximum of 5% above the price of the previous year. Price changes will be announced to the customer at least one month before the new contractual prices come into force. The customer is entitled to terminate the contract effective as of the time at which the new price would become valid for him for the first time.

13. Transport and insurance with the repair in the plant of RÖHM GmbH
13.1 The object for repair will be delivered by the customer to us at his costs together with the repair and service form and after execution of the repair collected by the customer again or return to him at the customer's costs.
13.2 The customer shall bear the risk of transport.
13.3 At the customer's request a shipment carried out by us will be insured at the customer's costs against the insurable transport risks, e.g. theft, breakage and fire.
13.4 No insurance cover exists during the repair time in our plant. The customer has to ensure the maintenance of the existing insurance cover for the object of repair e.g. with regard to fire, pipe water, storm and machine breakage insurance. Insurance cover can only be procured for these risks at the explicit wish and costs of the customer.
13.5 In case of delay of the customer with the take-over we can charge a storage fee for the storage in our plant. The object of repair can also be stored otherwise at our discretion. The costs and risk of the storage during the delay shall be for the expense of the customer.

14. Repair deadline
14.1. The details concerning the repair deadlines are based on estimates and merely serve for the purpose of information and first orientation. They are therefore not binding unless this is explicitly agreed.
14.2. The agreement of a binding repair deadline, which must be described as binding, can only be requested by the customer if the scope of the work has been precisely determined.
14.3. The binding repair deadline will have been adhered to if by the time that it expires the object of repair is ready for take-over by the customer, in the event of a contractually envisaged testing ready for its execution.
14.4. In case of subsequently placed additional and extension orders or with necessary additional repair work the agreed repair deadline will be extended accordingly.
14.5. If the repair is delayed due to measures within the scope of industrial disputes, in particular strike and lock-out as well as the occurrence of circumstances, which were not caused by us, a reasonable extension to the repair deadline will occur insofar as such impediments have as proven a substantial influence on the completion of the repair; this shall also apply if such circumstances occur after we are in default.

15. Ban on offsetting and assignment; subcontractors
15.1 The customer is only entitled to offsetting in the event of undisputed claims or claims which have been declared final and binding. This shall not apply if the customer asserts claims in the reciprocal relationship, in particular claims for defects.
15.2 The assignment of rights of the customer from contractual relationships with us presumes our prior consent in order to be valid. This shall not apply insofar as Section 354 a HGB [German Commercial Code] applies.
15.3 We are entitled to use third parties in order to fulfil our contractual obligations.

16. Reservation of title
16.1 The goods delivered by us shall remain our property until the payment of all of our claims against the customer, no matter for what legal grounds, also future ones. In case of current account the afore-mentioned property shall be deemed as security for our balance claim.
16.2 The customer may only sell within the framework of his customary business transactions and neither pledge, nor assign the goods as collateral. The customer hereby assigns us for security of our payment claims against him, in the amount of the value of our delivery and service, all claims with all secondary rights, which he acquires against his buyer owing to such a sale.
16.3 As long as the property has not yet been assigned, the customer has to inform us immediately in writing if the delivered object is attached or is exposed to other interventions of third parties. Insofar as the third party is not in the position to reimburse us the court and out-of-court costs of an action according to Section 771 ZPO [German Code of Civil Procedure] the customer shall be liable for the loss incurred to us.
16.4. We undertake to release the securities to which we are entitled at the customer's request insofar as their value exceeds the claims which are to be secured by more than 20 %."

17. Warranty
17.1 Insofar as the creation of a work has been agreed and thus the law governing contracts for work and services applies the following shall apply: If our services are faulty then we are first of all entitled and obliged to subsequent satisfaction according to Section 634 No. 1 BGB. If the subsequent satisfaction finally fails the customer can according to Section 634 No. 3 cancel the contract or reduce the remuneration and according to Section 634 No. 4 BGB request damages. Claims of the customer for reimbursement of expenses according to Section 634 No. 2 BGB (self-execution) are excluded. Subclause 18 shall apply to claims for damages.
17.2 Insofar as we provide planning services without executing these and thus the law governing service contracts applies (e.g. in the event of a breach of our duties under Subclauses 5.2.1, 5.2.2 and 5.2.3) the following applies: If our services are faulty then we are first of all entitled and obliged to subsequent improvement. If the subsequent improvement finally fails the customer is entitled to damages according to Subclause 18.
17.3 Excluded from the warranty are damages as a result of natural wear and tear, faulty maintenance – insofar as we have not carried out this maintenance as per contract, failure to comply with operating equipment regulations, excessive use, unsuitable operating equipment, chemical or electrolytic influences, faulty construction and assembly work of third parties as well as other causes, for which we are not responsible.
17.4 The warranty shall lapse if the customer or third party makes changes or repairs to our services /products without our prior written consent unless the defect is not a result thereof.
17.5 Claims of the customer owing to defects of quality and title shall become statute-barred with the expiry of 12 months after the acceptance of the work or the knowledge of defects with the provision of planning services.

18. Liability
18.1 We shall be liable to an unlimited extent in case of wilful intent and gross negligence as well as with the injury to life, the body and the health as well as with the culpable breach of essential contractual obligations. Deemed as essential are such contractual obligations, the fulfilment of which makes the proper execution of the contract possible at all and the compliance with which the contractual partner may as a rule rely and depend on.
18.3 Incidentally our liability is excluded.
18.4 A liability according to the Product Liability Act remains unaffected.
18.5 The personal liability of our legal representatives and vicarious agents is limited as our own liability according to the afore-mentioned provisions.

19. Term of the contract; termination
19.1 Service agreements according to Subclause 5. shall come into force when signed by both parties and shall initially apply until the end of the calendar year, that follows the year in which the contract was concluded. The contractual relationship will subsequently be extended respectively by one further year unless it is terminated by one of the parties with a period of notice of 3 months to the end of the second or a following year. Contractual relationships can be terminated on the whole or only with regard to individual products.
19.2 The right to the extraordinary termination for an important reason remains unaffected.

20. Place of jurisdiction; applicable law
20.1 With all disputes ensuing from the contractual relationship if the orderer is a merchant, a legal entity under public law or a special fund under public law, the action is to be filed at the court that has jurisdiction for our headquarters. We are also entitled to file an action at the headquarters of the orderer.
20.2 The legal relationship is subject to the law of the Federal Republic of Germany. German international private law and the Viennese Convention of the United Nations concerning Contracts for the International Sale of Goods (CISG) will not apply.

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Subject to changes.
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