

I.D. CLAMPING

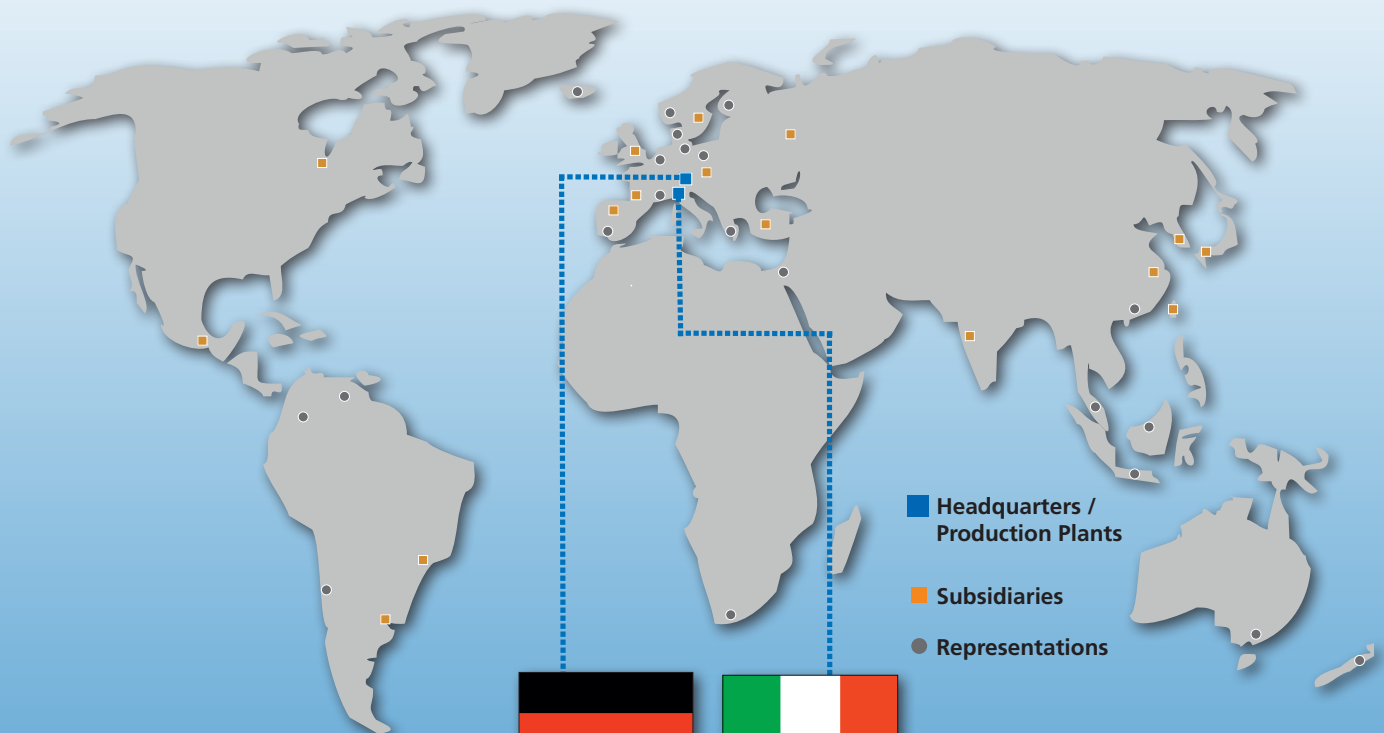
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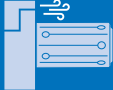
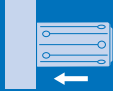
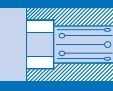


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Clamping mandrels for every machine and every application

Expanding mandrel Features	EMX-P	EMX-F	EMX-FP	EMX-C	EMX-S
Automation with air sensing 	● ●	● ●	● ●	● ●	● ●
Pull-down (b. clamping bore and contact surface right-angled) 	● ●	○ ○	● ●	● ●	● ●
Clamping sleeves cold-vulcanised against penetration of chips 	● ●	● ●	● ●	○ ○	○ ○
Segment sleeves hot-vulcanised - 60 HRC 	○ ○	○ ○	○ ○	● ●	● ●
Expanding mandrel Suitability	EMX-P	EMX-F	EMX-FP	EMX-C	EMX-S
Suitable for high quantities 	● ○	● ○	● ○	● ●	● ●
Suitable for short clamping length 	○ ○	● ●	● ●	○ ○	● ○
Suitable for low lying clamping length 	● ●	○ ○	○ ○	● ●	○ ○

Unsuitable: ○ ○ Conditionally suitable: ● ○ Very well suitable: ● ●

Manual or power operated expanding mandrels / Adapter flanges



EMX-P

Power operated sleeve expanding mandrels
Ø 14.7 - 131.7 mm

- Highest repeatability
- Size 1 - 11
- Large expansibility
- Preparation for air sensing
- Segment sleeves vulcanized (option)

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EMX-F/FP

Power operated sleeve expanding mandrels
Ø 19.7 - 132.9 mm

- Highest repeatability
- Size 1 - 6
- Large expansibility
- Preparation for air sensing
- FP: with pull-down
- Segment sleeves vulcanized (option)

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EMX-C

Power operated segment expanding mandrels
Ø 25 - 121 mm

- Highest repeatability
- Size 1 - 5
- Large expansibility
- Preparation for air sensing
- Case hardened / wear resistant segment sleeves

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Adapter flanges EMX-P, EMX-F/FP, EMX-C ISO-A

for expanding mandrels

- The expanding mandrels have a cylindrical mounting
- Flanges for machine spindle DIN 55026 / ISO-A 702/1

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EMX-S

Power operated expanding mandrels
Ø 18 - 105 mm

- For turning, grinding and milling
- Size 1 - 5
- Case hardened / wear resistant segment sleeves
- Large expansibility
- Very rigid design

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Adapter flanges EMX-S

Hand or power operated
expanding mandrels

- The expanding mandrels have a cylindrical mounting
- Flanges for machine spindle DIN 55026 / ISO-A 702/1

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EM-A, EM-AL

Hand or power operated
expanding mandrels Ø 14.7 - 129.7 mm

- Size 1 - 11
- Large expansibility
- Flange mounting
- Very rigid design

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EM-B

Hand or power operated
expanding mandrels Ø 16.0 - 129.5 mm

- Size 0 - 4
- Large expansibility
- Flange mounting
- Very rigid design

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Adapter flanges EM-A, EM-B

ISO-A

for expanding mandrels

- The expanding mandrels have a cylindrical mounting
- Flanges for machine spindle DIN 55026 / ISO-A 702/1

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KSZ-MB

Collet chuck

- For bar machining
- Push actuation

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COMOT-DZ

Hybrid collet chuck

- Use of vulcanized standard collets
- Clamping of thin walled work pieces
- Ideal for bar loader machines
- Best tool accessibility
- Seal against contamination of the collet

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COMOT-AZ

Hybrid collet chuck

- Use of vulcanized standard collet
- Optional premium adapter for the use of slotted high-precision collets
- Optional use of expanding mandrels of the connect series EMX-F-CO
- Preparation for air sensing
- Radial fine adjustment

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COMOT-NZ

Hybrid collet chuck

- Use of vulcanized standard collets
- Clamping of thin walled work pieces
- Rigid axial stop front or in the bore
- Optional use of expanding mandrels of the connect series EMX-F-CO-NZ

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Special clamping solutions

Application examples

- Special mandrels
- Sliding jaw collet chuck
- Special sleeve mandrels
- Sliding jaw mandrels
- Combination chuck

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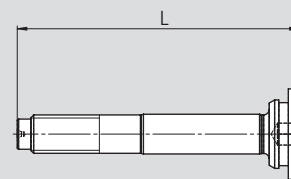
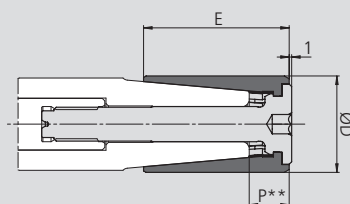
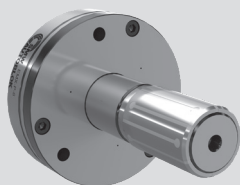
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Expanding mandrel Ø 14.7 - 131.7 mm

EMX-P

Expanding mandrel
Power operated

■ Ordering review



Basic mandrel							Clamping sleeve* with actuating screw	Actuating screw	
Type	Id. No.	Clamping range	ØD	E	Expansibility	P**	Id. No.	Id. No.	L
EMX-P-1	9310000	14.7 - 19.7	14.7	35	1	12.7	9310147	9310002000	75.5
			15.7	35	1	12.7	9310157		
			16.7	35	1	12.7	9310167		
			17.7	35	1	12.7	9310177		
			18.7	35	1	12.7	9310187		
EMX-P-2	9320000	19.7 - 24.7	19.7	40	1	14.7	9320197	9320002000	80
			20.7	40	1	14.7	9320207		
			21.7	40	1	14.7	9320217		
			22.7	40	1	14.7	9320227		
			23.7	40	1	14.7	9320237		
EMX-P-3	9330000	24.7 - 29.7	24.7	46	1	14.7	9330247	9330002000	86.5
			25.7	46	1	14.7	9330257		
			26.7	46	1	14.7	9330267		
			27.7	46	1	14.7	9330277		
			28.7	46	1	14.7	9330287		
EMX-P-4	9340000	29.7 - 34.7	29.7	50	1	15.2	9340297	9340002000	92
			30.7	50	1	15.2	9340307		
			31.7	50	1	15.2	9340317		
			32.7	50	1	15.2	9340327		
			33.7	50	1	15.2	9340337		
EMX-P-5	9350000	34.7 - 39.7	34.7	60	1	15.7	9350347	9350002000	102
			35.7	60	1	15.7	9350357		
			36.7	60	1	15.7	9350367		
			37.7	60	1	15.7	9350377		
			38.7	60	1	15.7	9350387		
EMX-P-6	9360000	39.7 - 44.7	39.7	60	1	16.2	9360397	9360002000	102
			40.7	60	1	16.2	9360407		
			41.7	60	1	16.2	9360417		
			42.7	60	1	16.2	9360427		
			43.7	60	1	16.2	9360437		
EMX-P-7	9370000	44.7 - 54.7	44.7	80	1	18.2	9370447	9370002000	116
			45.7	80	1	18.2	9370457		
			46.7	80	1	18.2	9370467		
			47.7	80	1	18.2	9370477		
			48.7	80	1	18.2	9370487		
EMX-P-8	9380000	54.7 - 64.7	49.7	80	1	18.2	9370497	9380002000	126
			50.7	80	1	18.2	9370507		
			51.7	80	1	18.2	9370517		
			52.7	80	1	18.2	9370527		
			53.7	80	1	18.2	9370537		
EMX-P-9	9390000	64.7 - 81.7	54.7	90	1	20.2	9380547	9390002000	136
			55.7	90	1	20.2	9380557		
			56.7	90	1	20.2	9380567		
			57.7	90	1	20.2	9380577		
			58.7	90	1	20.2	9380587		
			59.7	90	1	20.2	9380597		
			60.7	90	1	20.2	9380607		
			61.7	90	1	20.2	9380617		
			62.7	90	1	20.2	9380627		
			63.7	90	1	20.2	9380637		
			64.7	100	1	20.7	9390647		
			65.7	100	1	20.7	9390657		
			66.7	100	1	20.7	9390667		
			67.7	100	1	20.7	9390677		
			68.7	100	1	20.7	9390687		
			69.7	100	1	20.7	9390697		
			70.7	100	1	20.7	9390707		
			71.7	100	1	20.7	9390717		
			72.7	100	1	20.7	9390727		
			73.7	100	1	20.7	9390737		
			74.7	100	1	20.7	9390747		
			75.7	100	1	20.7	9390757		
			76.7	100	1	20.7	9390767		
			77.7	100	1	20.7	9390777		
			78.7	100	1	20.7	9390787		
			79.7	100	1	20.7	9390797		
			80.7	100	1	20.7	9390807		

* Id. No. XXXXXX-V = Clamping sleeve vulcanized.

** Clamping on area P only is not allowed.

EMX-P

Expanding mandrel
Power operated

Expanding mandrel Ø 14.7 - 131.7 mm

■ Ordering review

Basic mandrel							Clamping sleeve* with actuating screw	Actuation screw	
Type	Id. No.	Clamping range	ØD	E	Expansibility	P**	Id. No.	Id. No.	L
EMX-P-10	9300000	81.7 - 101.7	81.7	122	1	21.7	9300817	9300002000	164
			82.7	122	1	21.7	9300827		
			83.7	122	1	21.7	9300837		
			84.7	122	1	21.7	9300847		
			85.7	122	1	21.7	9300857		
			86.7	122	1	21.7	9300867		
			87.7	122	1	21.7	9300877		
			88.7	122	1	21.7	9300887		
			89.7	122	1	21.7	9300897		
			90.7	122	1	21.7	9300907		
			91.7	122	1	21.7	9300917		
			92.7	122	1	21.7	9300927		
			93.7	122	1	21.7	9300937		
			94.7	122	1	21.7	9300947		
			95.7	122	1	21.7	9300957		
			96.7	122	1	21.7	9300967		
			97.7	122	1	21.7	9300977		
			98.7	122	1	21.7	9300987		
			99.7	122	1	21.7	9300997		
			100.7	122	1	21.7	9301007		
EMX-P-11	9310010	101.7 - 131.7	101.7	140	1	26.2	9311017	9310002010	182
			102.7	140	1	26.2	9311027		
			103.7	140	1	26.2	9311037		
			104.7	140	1	26.2	9311047		
			105.7	140	1	26.2	9311057		
			106.7	140	1	26.2	9311067		
			107.7	140	1	26.2	9311077		
			108.7	140	1	26.2	9311087		
			109.7	140	1	26.2	9311097		
			110.7	140	1	26.2	9311107		
			111.7	140	1	26.2	9311117		
			112.7	140	1	26.2	9311127		
			113.7	140	1	26.2	9311137		
			114.7	140	1	26.2	9311147		
			115.7	140	1	26.2	9311157		
			116.7	140	1	26.2	9311167		
			117.7	140	1	26.2	9311177		
			118.7	140	1	26.2	9311187		
			119.7	140	1	26.2	9311197		
			120.7	140	1	26.2	9311207		
			121.7	140	1	26.2	9311217		
			122.7	140	1	26.2	9311227		
			123.7	140	1	26.2	9311237		
			124.7	140	1	26.2	9311247		
			125.7	140	1	26.2	9311257		
			126.7	140	1	26.2	9311267		
			127.7	140	1	26.2	9311277		
			128.7	140	1	26.2	9311287		
			129.7	140	1	26.2	9311297		
			130.7	140	1	26.2	9311307		

* Id. No. XXXXXX-Y = Clamping sleeve vulcanized.

** Clamping on area P only is not allowed.

Notes

EMX-F/FP

Expanding mandrel
Power operated

Expanding mandrel Ø 19.7 - 132.9 mm

- Size 1 - 6
- Highest concentricity
- Air sensing



Application/customer benefits

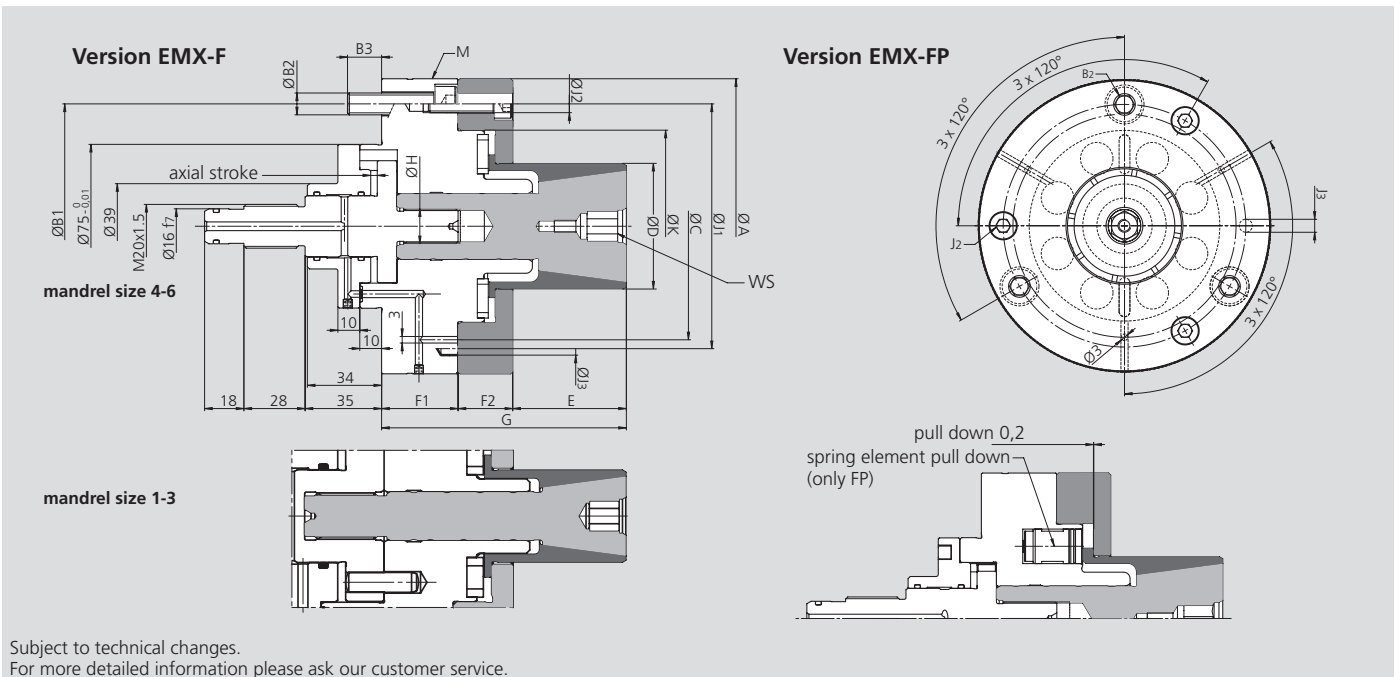
- For turning, milling, grinding and gear cutting operations
- High accuracy and torque transmission
- Clamping of very short workpieces on the front section of the sleeve possible
- FP: With axial pull down for best face run out

Technical features

- Large expansibility 0.6 - 1.2 mm depending on size
- Power operated / manual lubrication
- Flange mounting
- Very rigid design
- Vulcanized expanding sleeve for protection from the penetration of chips (option)
- Preparation for air sensing

Standard equipment

Basic mandrel with draw bolt for power operation
Mounting bolts



Subject to technical changes.
For more detailed information please ask our customer service.

SMW-AUTOBLOK Type		EMX-F/FP-1	EMX-F/FP-2	EMX-F/FP-3	EMX-F/FP-4	EMX-F/FP-5	EMX-F/FP-6
Id. No.	EMX-F	9110000	9120000	9130000	9140000	9150000	9160000
	EMX-FP	9210000	9220000	9230000	9240000	9250000	9260000
A		115	115	115	135	165	210
B1		92	92	92	112	140	182
B2		3 x M10	3 x M10	3 x M10	3 x M10	3 x M12	3 x M12
B3		15.6	15.6	15.6	15.6	17.9	17.9
C	3 x 120° Ø 3	62	62	86	112	140	182
D	Clamping range	19.7 - 30.3	27.7 - 40.3	34.7 - 55.5	49.7 - 75.5	69.7 - 95.9	89.7 - 132.9
E		27	34	38	52	69	81
F1		30	30	30	35	40	40
F2		18	18	22	25	30	33
G		75	82	90	112	139	154
H		M10 x 1	M14 x 1.5	M16 x 1.5	M16 x 1.5	M20 x 1.5	M20 x 1.5
J1		100	100	100	112	140	182
J2	3 x 120°	M6	M6	M6	M8	M8	M8
J3	H7	6	6	6	8	8	8
K	g6	42	52	65	88	112	155
M transport	3 x 120°	-	-	-	M8	M10	M10
WS (hex)		WS6	WS8	WS10	WS12	WS14	WS14

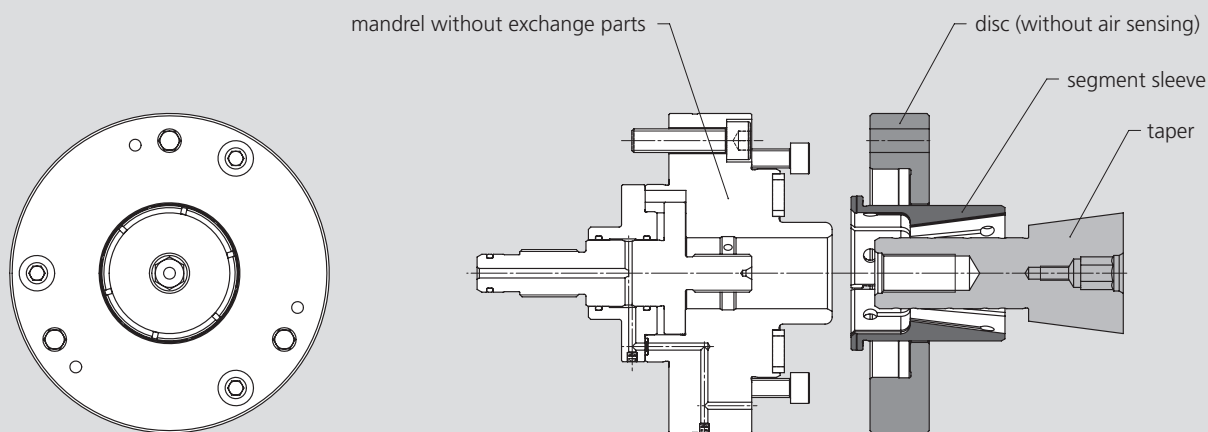
Technical data

SMW-AUTOBLOK Type		EMX-F/FP-1			EMX-F/FP-2			EMX-F/FP-3			EMX-F/FP-4			EMX-F/FP-5			EMX-F/FP-6			
Axial stroke		3.0			2.4			3.0			3.0			5.0			5.0			
Expansibility in dia.		0.6			0.6			0.8			0.8			1.2			1.2			
Max. axial force in kN		12			20			25			25			30			30			
Max. transmittable torque in Nm*		1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	4
		35	50	55	80	100	110	100	115	160	150	180	220	225	255	290	445	500	570	630
Weight in kg		3.3			3.4			3.5			5.3			8.5			14.2			
Actuating cylinders		200			200			250			250			250			250			
		70			85			100			100			125			125			

* Depending on taper size (1 / 2 / 3)

All measurements in unclamped position = Right end position.

■ Ordering review



Subject to technical changes.
For more detailed information please ask our customer service.

Mandrel without exchange parts						Taper	Disc F / FP	Segment sleeve*	
without pull-down				with pull-down				Id. No.	Id. No.
Type	Id. No.	clamping range	sleeve expansion Ø	Type	Id. No.	Id. No.	Id. No.		
EMX-F-1	9110000	19.7 - 30.3	0.6	EMX-FP-1	9210000	9112016	9113021 / 9213021	9110197	19.7
							9113022 / 9213022	9110202	20.2
							9113023 / 9213023	9110207	20.7
							9113024 / 9213024	9110212	21.2
						9112020	9113025 / 9213025	9110217	21.7
							9113026 / 9213026	9110222	22.2
							9113027 / 9213027	9110227	22.7
							9113028 / 9213028	9110232	23.2
						9112023	9113029 / 9213029	9110237	23.7
							9113030 / 9213030	9110242	24.2
							9113031 / 9213031	9110247	24.7
							9123029 / 9223029	9110252	25.2
EMX-F-2	9120000	27.7 - 40.3	0.6	EMX-FP-2	9220000	9122024	9123027 / 9223027	9110257	25.7
							9123028 / 9223028	9110262	26.2
							9123029 / 9223029	9110267	26.7
							9123030 / 9223030	9110272	27.2
						9122028	9123031 / 9223031	9110277	27.7
							9123032 / 9223032	9110282	28.2
							9123033 / 9223033	9110287	28.7
							9123034 / 9223034	9110292	29.2
						9122032	9123035 / 9223035	9110297	29.7
							9123036 / 9223036	9120277	27.7
							9123037 / 9223037	9120282	28.2
							9123038 / 9223038	9120287	28.7
						9122032	9123039 / 9223039	9120292	29.2
							9123040 / 9223040	9120297	29.7
							9123041 / 9223041	9120302	30.2
							9123042 / 9223042	9120307	30.7

* Id. No. XXXXXX-y = Clamping sleeve vulcanized.

EMX-F/FP

Expanding mandrel Ø 19.7 - 132.9 mm

Expanding mandrel
Power operated

■ Ordering review

Mandrel without exchange parts						Taper	Disc F / FP	Segment sleeve*			
without pull-down				with pull-down				Id. No.	Id. No.	Id. No.	ØD
Type	Id. No.	Clamping range	Sleeve expansion Ø	Type	Id. No.						
EMX-F-3	9130000	34.7 - 55.5	0.8	EMX-FP-3	9230000	9132030	9133037 / 9233037	9130347	34.7		
							9133038 / 9233038	9130352	35.2		
								9130357	35.7		
							9133039 / 9233039	9130362	36.2		
								9130367	36.7		
							9133040 / 9233040	9130372	37.2		
								9130377	37.7		
							9133041 / 9233041	9130382	38.2		
								9130387	38.7		
							9133042 / 9233042	9130392	39.2		
								9130397	39.7		
							9133043 / 9233043	9130402	40.2		
								9130407	40.7		
						9132037	9133044 / 9233044	9130412	41.2		
								9130417	41.7		
							9133045 / 9233045	9130422	42.2		
								9130427	42.7		
							9133046 / 9233046	9130432	43.2		
								9130437	43.7		
							9133047 / 9233047	9130442	44.2		
								9130447	44.7		
							9133048 / 9233048	9130452	45.2		
								9130457	45.7		
							9133049 / 9233049	9130462	46.2		
								9130467	46.7		
							9133050 / 9233050	9130472	47.2		
							9130477	47.7			
						9132044	9133051 / 9233051	9130482	48.2		
								9130487	48.7		
							9133052 / 9233052	9130492	49.2		
								9130497	49.7		
							9133053 / 9233053	9130502	50.2		
								9130507	50.7		
							9133054 / 9233054	9130512	51.2		
								9130517	51.7		
							9133055 / 9233055	9130522	52.2		
								9130527	52.7		
							9133056 / 9233056	9130532	53.2		
								9130537	53.7		
							9133057 / 9233057	9130542	54.2		
	9130547	54.7									
EMX-F-4	9140000	49.7 - 75.5	0.8	EMX-FP-4	9240000	9142044	9143052 / 9243052	9140497	49.7		
								9140502	50.2		
							9143053 / 9243053	9140507	50.7		
								9140512	51.2		
							9143054 / 9243054	9140517	51.7		
								9140522	52.2		
							9143055 / 9243055	9140527	52.7		
								9140532	53.2		
							9143056 / 9243056	9140537	53.7		
								9140542	54.2		
							9143057 / 9243057	9140547	54.7		
								9140552	55.2		
							9143058 / 9243058	9140557	55.7		
								9140562	56.2		
							9143059 / 9243059	9140567	56.7		
								9140572	57.2		
						9142051	9143060 / 9243060	9140577	57.7		
								9140582	58.2		
							9143061 / 9243061	9140587	58.7		
								9140592	59.2		
							9143062 / 9243062	9140597	59.7		
								9140602	60.2		
							9143063 / 9243063	9140607	60.7		
								9140612	61.2		
							9143064 / 9243064	9140617	61.7		
								9140622	62.2		
							9143065 / 9243065	9140627	62.7		
								9140632	63.2		
						9142060	9143066 / 9243066	9140637	63.7		
								9140642	64.2		
							9143067 / 9243067	9140647	64.7		
								9140652	65.2		
							9143068 / 9243068	9140657	65.7		
								9140662	66.2		
							9143069 / 9243069	9140667	66.7		
								9140672	67.2		
							9143070 / 9243070	9140677	67.7		
								9140682	68.2		
							9143071 / 9243071	9140687	68.7		
								9140692	69.2		
							9143072 / 9243072	9140697	69.7		
								9140702	70.2		
							9143073 / 9243073	9140707	70.7		
								9140712	71.2		
							9143074 / 9243074	9140717	71.7		
								9140722	72.2		
						9143075 / 9243075	9140727	72.7			
							9140732	73.2			
						9143076 / 9243076	9140737	73.7			
							9140742	74.2			
						9143077 / 9243077	9140747	74.7			

* Id. No. XXXXXX-Y = Clamping sleeve vulcanized.

■ Ordering review

Mandrel without exchange parts						Taper	Disc F / FP	Segment sleeve*	
without pull-down				with pull-down		Id. No.	Id. No.	Id. No.	ØD
Type	Id. No.	Clamping range	Sleeve expansion Ø	Type	Id. No.				
EMX-F-5	9150000	69.7 - 95.9	1.2	EMX-FP-5	9250000	9152063	9153072 / 9253072 9153073 / 9253073 9153074 / 9253074 9153075 / 9253075 9153076 / 9253076 9153077 / 9253077 9153078 / 9253078 9153079 / 9253079	9150697 9150707 9150717 9150727 9150737 9150747 9150757 9150767	69.7 70.7 71.7 72.7 73.7 74.7 75.7 76.7
						9152071	9153080 / 9253080 9153081 / 9253081 9153082 / 9253082 9153083 / 9253083 9153084 / 9253084 9153085 / 9253085 9153086 / 9253086 9153087 / 9253087 9153088 / 9253088	9150777 9150787 9150797 9150807 9150817 9150827 9150837 9150847 9150857	77.7 78.7 79.7 80.7 81.7 82.7 83.7 84.7 85.7
						9152080	9153089 / 9253089 9153090 / 9253090 9153091 / 9253091 9153092 / 9253092 9153093 / 9253093 9153094 / 9253094 9153095 / 9253095 9153096 / 9253096 9153097 / 9253097	9150867 9150877 9150887 9150897 9150907 9150917 9150927 9150937 9150947	86.7 87.7 88.7 89.7 90.7 91.7 92.7 93.7 94.7
EMX-F-6	9160000	89.7 - 132.9	1.2	EMX-FP-6	9260000	9162082	9163092 / 9263092 9163093 / 9263093 9163094 / 9263094 9163095 / 9263095 9163096 / 9263096 9163097 / 9263097 9163098 / 9263098 9163099 / 9263099 9163100 / 9263100 9163101 / 9263101	9160897 9160907 9160917 9160927 9160937 9160947 9160957 9160967 9160977 9160987	89.7 90.7 91.7 92.7 93.7 94.7 95.7 96.7 97.7 98.7
						9162092	9163102 / 9263102 9163103 / 9263103 9163104 / 9263104 9163105 / 9263105 9163106 / 9263106 9163107 / 9263107 9163108 / 9263108 9163109 / 9263109 9163110 / 9263110 9163111 / 9263111 9163112 / 9263112	9160997 9161007 9161017 9161027 9161037 9161047 9161057 9161067 9161077 9161087 9161097	99.7 100.7 101.7 102.7 103.7 104.7 105.7 106.7 107.7 108.7 109.7
						9162103	9163113 / 9263113 9163114 / 9263114 9163115 / 9263115 9163116 / 9263116 9163117 / 9263117 9163118 / 9263118 9163119 / 9263119 9163120 / 9263120 9163121 / 9263121 9163122 / 9263122 9163123 / 9263123	9161107 9161117 9161127 9161137 9161147 9161157 9161167 9161177 9161187 9161197 9161207	110.7 111.7 112.7 113.7 114.7 115.7 116.7 117.7 118.7 119.7 120.7
						9162114	9163124 / 9263124 9163125 / 9263125 9163126 / 9263126 9163127 / 9263127 9163128 / 9263128 9163129 / 9263129 9163130 / 9263130 9163131 / 9263131 9163132 / 9263132 9163133 / 9263133 9163134 / 9263134	9161217 9161227 9161237 9161247 9161257 9161267 9161277 9161287 9161297 9161307 9161317	121.7 122.7 123.7 124.7 125.7 126.7 127.7 128.7 129.7 130.7 131.7

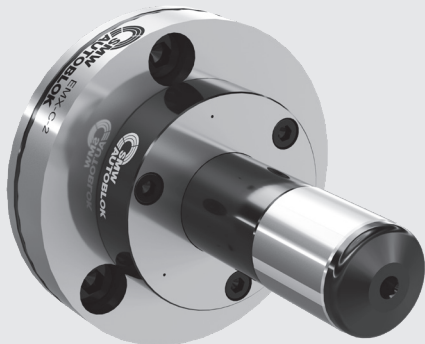
* Id. No. XXXXXX-Y = Clamping sleeve vulcanized.

EMX-C

Segment sleeve mandrel Power operated

Segment sleeve mandrel Ø 25 - 121 mm

- Size 1 - 5
- Large expansibility



Application/customer benefits

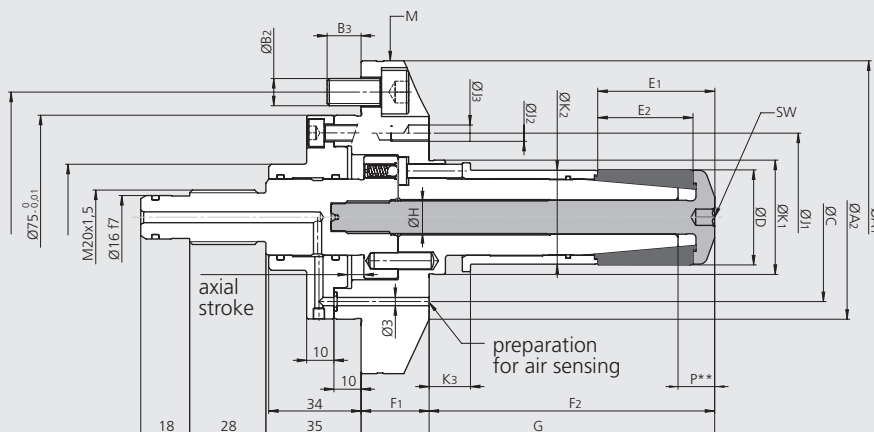
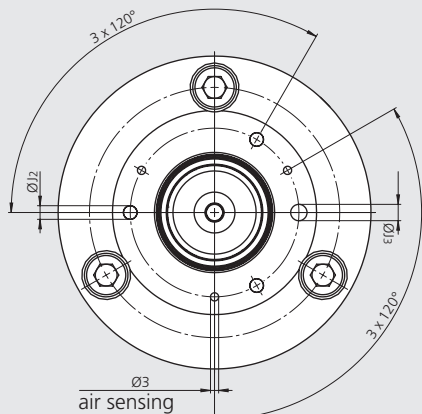
- Ideal for volume production and hard turning / grinding with wear resistant, case hardened and vulcanised clamping sleeves
- Highest accuracy and high torque transmission by means of fixed mandrel body
- Axial pull down by the axial clamping movement of the clamping sleeve = best face run out
- Clamping sleeve quick change for short setup times
- Preparation for air sensing

Technical details

- Large expansibility 1 - 1.2 mm depending on the size (-0.3 » +0.7 / -0.3 » +0.9 from nom. Ø)
- Case hardened and vulcanized segment sleeves
- Power operated / manual lubrication
- Rigid design with flange mounting

Standard equipment

Basic mandrel with draw bolt for power operation + actuating screw;
Mounting bolts



Subject to technical changes.
For more detailed information please ask our customer service.

SWM-AUTOBLOK Type	EMX-C-1	EMX-C-2	EMX-C-3	EMX-C-4	EMX-C-5
Id. No.	9410000	9420000	9430000	9440000	9450000
A1	115	115	115	135	165
A2	75	75	115	135	165
B1	92	92	92	112	140
B2	3 x M10	3 x M10	3 x M10	3 x M10	3 x M12
B3	12.5	12.5	15.6	15.6	16
C	62	62	75	95	120
D	25 - 37	35 - 53	49 - 70	66 - 95	90-120
E1	37	43	55	64	86
E2	30	35	45	50	70
F1	25	25	25	25	32
F2	94	105	131.5	150.7	185.5
G	119	130	156.5	175.7	217.5
H	M8 x 1	M12 x 1.5	M14 x 1.5	M16 x 1.5	M20 x 1.5
J1	62	62	100	115	140
J2	M6	M6	M6	M8	M8
J3	6	6	6	8	8
K1	35	42	54	73	96
K2	24.5	34.5	48.5	64.5	89.5
K3	16.2	15.2	16.5	17	22
M transport	-	-	-	M8	M8
P**	12.5	13.5	15.5	19.5	21.5
WS (hex)	WS5	WS6	WS10	WS12	WS14

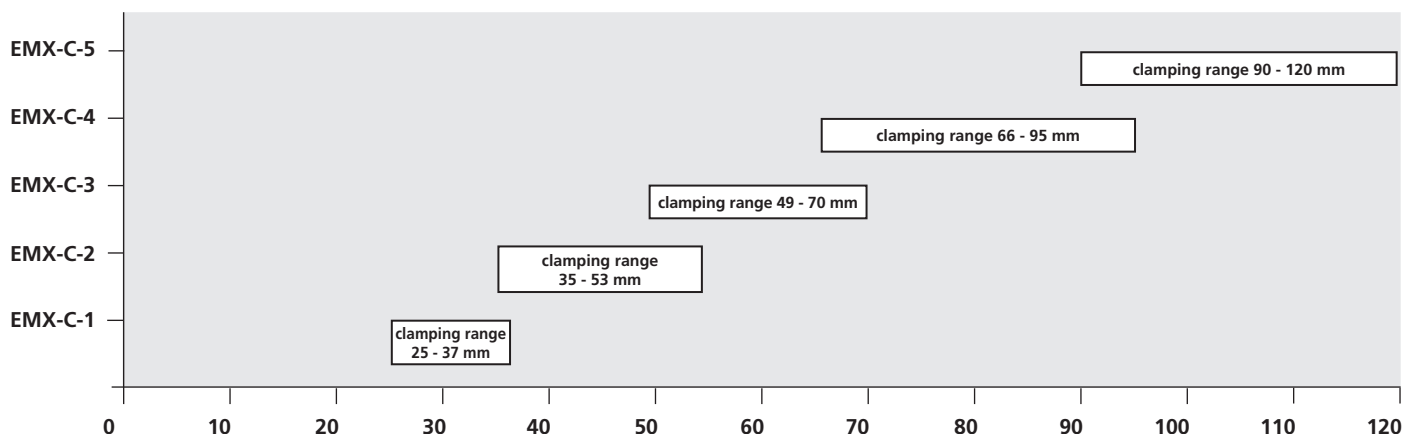
Technical data

BMW-AUTOBLOK Type	EMX-C-1	EMX-C-2	EMX-C-3	EMX-C-4	EMX-C-5
Id. No.	9410000	9420000	9430000	9440000	9450000
Axial stroke	6.0	6.0	6.0	6.0	6.0
Expansibility in dia.	1.0	1.0	1.2	1.2	1.2
Max. actuating force in kN	8	12	15	25	30
Max. transmittable torque in Nm	36	74	120	281	467
Weight in kg	2.9	3.2	4.3	6.6	13.3
Rec. clamping cylinders	SIN-S 70	SIN-S 85	SIN-S 85	SIN-S 100	SIN-S 125

All measurements in unclamped position = Right end position.

** Clamping on area P only is not allowed.

Overview clamping ranges



Clamping sleeves

EMX-C-1*

Ø	25	26	27	28	29	30	31	32	33	34	35	36	37
Id. No.	9410250	9410260	9410270	9410280	9410290	9410300	9410310	9410320	9410330	9410340	9410350	9410360	9410370

EMX-C-2*

Ø	35	36	37	38	39	40	41	42	43	44	45	46	47
Id. No.	9420350	9420360	9420370	9420380	9420390	9420400	9420410	9420420	9420430	9420440	9420450	9420460	9420470
Ø	48	49	50	51	52	53							
Id. No.	9420480	9420490	9420500	9420510	9420520	9420530							

EMX-C-3*

Ø	49	50	51	52	53	54	55	56	57	58	59	60	61
Id. No.	9430490	9430500	9430510	9430520	9430530	9430540	9430550	9430560	9430570	9430580	9430590	9430600	9430610
Ø	62	63	64	65	66	67	68	69	70				
Id. No.	9430620	9430630	9430640	9430650	9430660	9430670	9430680	9430690	9430700				

EMX-C-4*

Ø	66	67	68	69	70	71	72	73	74	75	76	77	78
Id. No.	9440660	9440670	9440680	9440690	9440700	9440710	9440720	9440730	9440740	9440750	9440760	9440770	9440780
Ø	79	80	81	82	83	84	85	86	87	88	89	90	91
Id. No.	9440790	9440800	9440810	9440820	9440830	9440840	9440850	9440860	9440870	9440880	9440890	9440900	9440910
Ø	92	93	94	95									
Id. No.	9440920	9440930	9440940	9440950									

EMX-C-5*

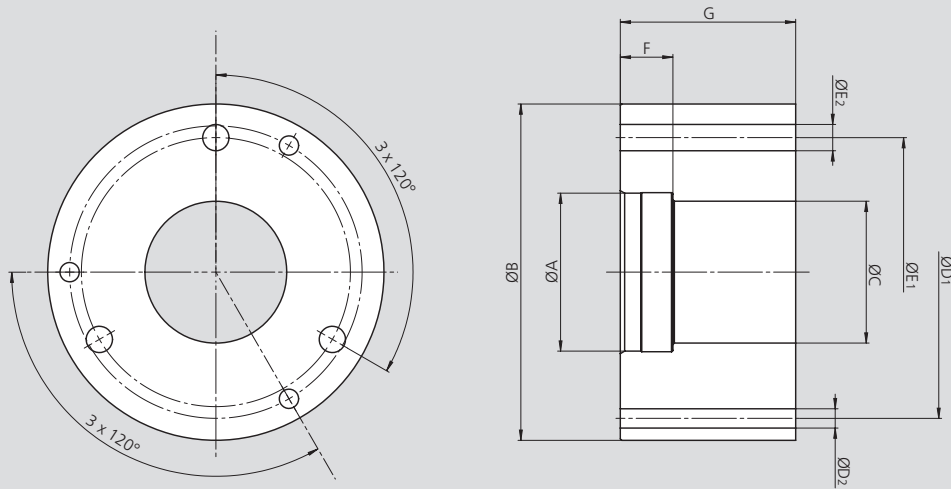
Ø	90	91	92	93	94	95	96	97	98	99	100	101	102
Id. No.	9450900	9450910	9450920	9450930	9450940	9450950	9450960	9450970	9450980	9450990	9451000	9451010	9451020
Ø	103	104	105	106	107	108	109	110	111	112	113	114	115
Id. No.	9451030	9451040	9451050	9451060	9451070	9451080	9451090	9451100	9451110	9451120	9451130	9451140	9451150
Ø	116	117	118	119	120								
Id. No.	9451160	9451170	9451180	9451190	9451200								

* The expanding sleeves have a loading clearance of 0.3 mm in dia.

Clamping screws

Type	Id. No.
EMX-C-1	9412000
EMX-C-2	9422000
EMX-C-3	9432000
EMX-C-4	9442000
EMX-C-5	9452000

Workstop blanks soft for EMX-C

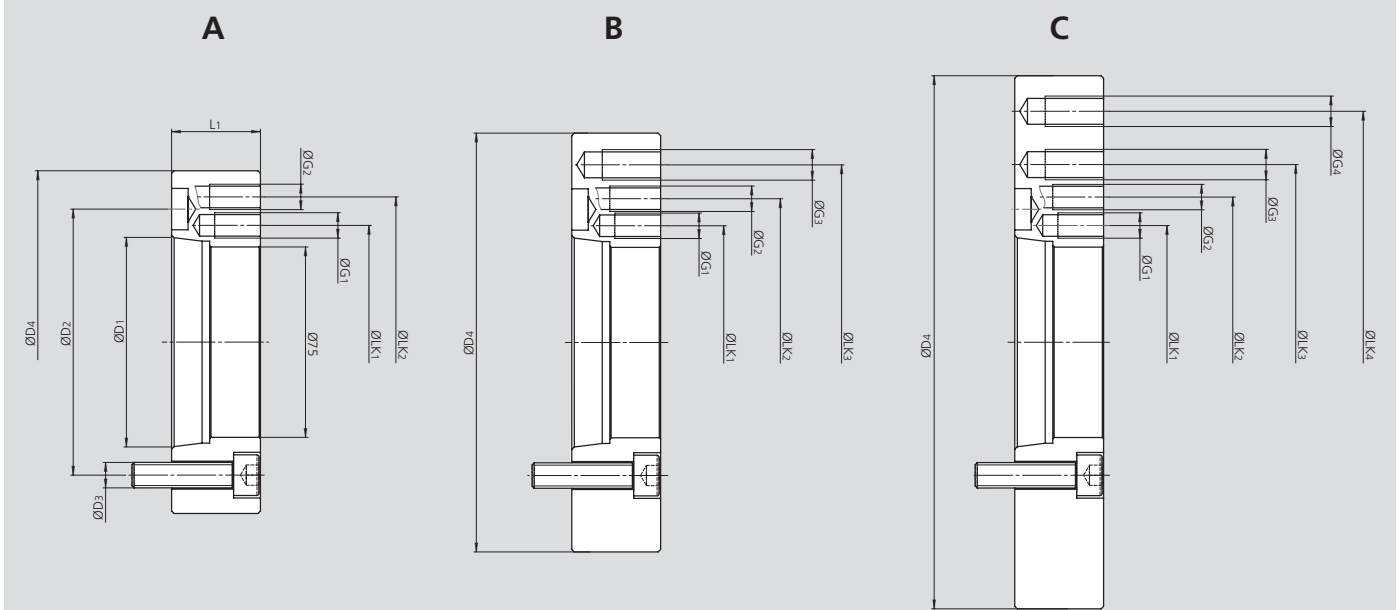


Mandrel size	EMX-C-1		EMX-C-2		EMX-C-3		EMX-C-4		EMX-C-5	
	short	long	short	long	short	long	short	long	short	long
Id. No.	9413000	9413001	9423000	9423001	9433000	9433001	9443000	9443001	9453000	9453001
ØA	35	35	42	42	54	54	73	73	96	96
ØB	75	75	75	75	115	115	135	135	165	165
ØC	24.5	24.5	34.5	34.5	48.5	48.5	64.5	64.5	89.5	89.5
ØD1	62	62	62	62	100	100	115	115	140	140
ØD2	6.6	6.6	6.6	6.6	6.6	6.6	9	9	9	9
ØE1	-	-	-	-	92	92	112	112	140	140
ØE2	-	-	-	-	9	9	9	9	12	12
F	17.2	17.2	16.2	16.2	17.5	17.5	18	18	23	23
G	40	75	45	85	60	110	70	125	85	160

Adapters

- EMX-P, EMX-F/FP, EMX-C have cylindrical mounting
- Adapters for DIN 55026 / ISO-A 702-1 spindle noses

ISO-A for sleeve expanding mandrels



Subject to technical changes.
For more detailed information please ask our customer service.

Technical data

Adapter flange Id. No.		Spindle nose ISO	D1	D2	D3	D4	L1	LK1	G1	LK2	G2	LK3	G3	LK4	G4
9000051	mm	A5	82.563	104.8	3 x M10	135	35	92	3 x M10	112	3 x M10	-	-	-	-
9000052	mm	A5	82.563	104.8	3 x M10	165	35	92	3 x M10	112	3 x M10	140	3 x M12	-	-
9000053	mm	A5	82.563	104.8	3 x M10	210	35	92	3 x M10	112	3 x M10	140	3 x M12	182	3 x M12
9000061	mm	A6	106.375	133.4	3 x M12	165	36	92	3 x M10	112	3 x M10	140	3 x M12	-	-
9000062	mm	A6	106.375	133.4	3 x M12	210	36	92	3 x M10	112	3 x M10	140	3 x M12	182	3 x M12
9000081	mm	A8	139.719	171.4	3 x M16	210	45	92	3 x M10	112	3 x M10	140	3 x M12	182	3 x M12

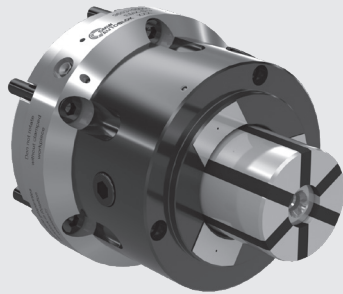
Appropriate adapter flanges	Spindle nose ISO	EMX-P	EMX-F/FP	EMX-C	Type
9000051	A5	0-1-2-3-4-5-6-7-8-9-10-11	1-2-3-4	1-2-3-4	A
9000052	A5	0-1-2-3-4-5-6-7-8-9-10-11	1-2-3-4-5	1-2-3-4-5	B
9000053	A5	0-1-2-3-4-5-6-7-8-9-10-11	1-2-3-4-5-6	1-2-3-4-5	C
9000061	A6	0-1-2-3-4-5-6-7-8-9-10-11	1-2-3-4-5	1-2-3-4-5	B
9000062	A6	0-1-2-3-4-5-6-7-8-9-10-11	1-2-3-4-5-6	1-2-3-4-5	C
9000081	A8	0-1-2-3-4-5-6-7-8-9-10-11	1-2-3-4-5-6	1-2-3-4-5	C

EMX-S

Segment sleeve mandrel
Power operated

Segment sleeve mandrel Ø 18 - 105 mm

- Size 1 - 4
- Large expansibility



Application/customer benefits

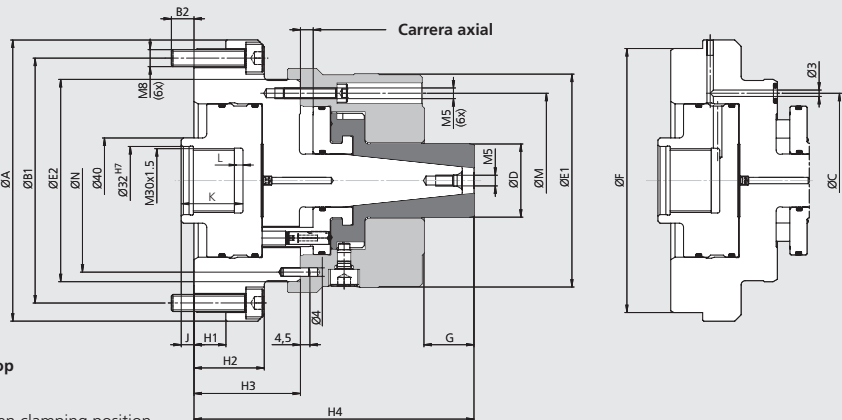
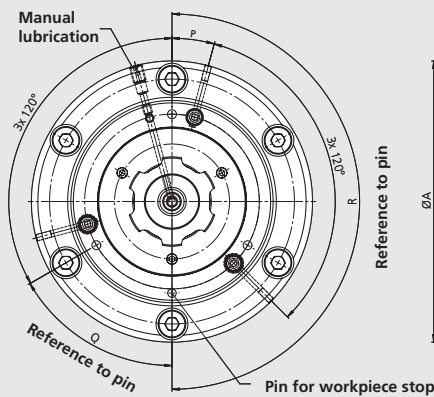
- Ideal for volume production and hard turning / grinding with wear resistant, case hardened and vulcanised clamping sleeves
- Highest accuracy and high torque transmission by means of fixed mandrel body
- Axial pull down by the axial clamping movement of the clamping sleeve = best face run out
- Clamping sleeve quick change for short setup times
- Preparation for air sensing
- With integrated manual lubrication for consistent high clamping forces and low wear

Technical details

- Large expansibility 0.8 - 1.2 mm depending on the size
(The clamping sleeves have a max. radial expansibility in diameter of ± 0.4 mm or ± 0.6 mm from the nominal diameter.)
- Power operated
- Rigid design with flange mounting
- Tapped holes in the face for axial stops

Standard equipment

Base mandrel with mounting bolts



Illustrations show mandrel variant with 1-circuit air sensing in open clamping position.
Information on the variant with 2-circuit air sensing on request.

SMW-Autoblok Type			EMX-S-1			EMX-S-2			EMX-S-3			EMX-S-4		
Id. No.	EMX-S (1-circuit-AS)		9601100000			9602100000			9603100000			9604100000		
	EMX-S (2-circuit-AS)		9621100000			9622100000			9623100000			9624100000		
3x120° Ø3,0	A	mm	132			132			132			157		
	B1	mm	115			115			115			137		
	B2	mm	13.6			10.6			12.5			12.5		
	C	mm	66			82			100			128		
	E1	mm	82			100			114			143		
f8	E2	mm	80			95			88			115		
	F	mm	124 - 0.01			124 - 0.01			124 - 0.01			147 - 0.01		
Clamping range	D	mm	18	>18 - 23	>23 - 35	30 - 55			48 - 80			70 - 105		
Clamping length max.	G _{max}	mm	10.5	17.5	23	41			51			57		
Clamping length min.	G _{min}	mm	7			8			8			8		
Ring gap	H1	mm	15			15			15			14.3		
	H2	mm	30			33			44			49		
	H3	mm	48			50			44			49		
	H4	mm	107.5			131.5			146.5			162		
	J	mm	8			6			6			6		
	K	mm	30			29			25			29		
	L	mm	4			4			4			5		
	M	mm	66			82			100			128		
Ring gap	N	mm	70			86			104			128		
	P	deg.	15			15			90			15		
	Q	deg.	30			30			15			60		
	R	deg.	180			180			30			30		

SMW-Autoblok Type			EMX-S-1			EMX-S-2			EMX-S-3			EMX-S-4		
Axial stroke	mm		4			6			6			6		
Expansion in dia.	mm		0.8			1.2			1.2			1.2		
Max. actuating force	kN		15			20			25			35		
Max. torque	Nm		50			90			160			410		
Weight	kg		3.9			4.4			5.3			9.4		
Recommended clamping cylinders			SIN-S-70			SINS-S-85			SINS-S-85			SINS-S-85		

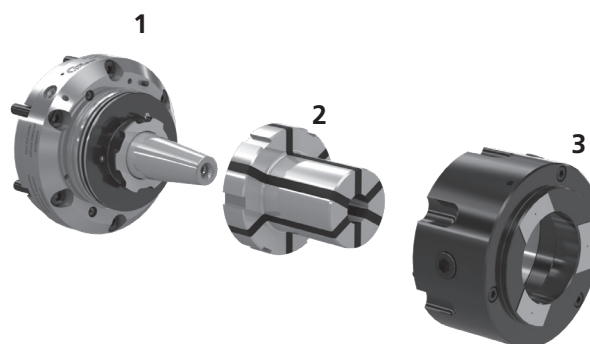
All measurements in unclamped position = Right end position.

- Size 1 - 4
- Large expansibility

Segment sleeve mandrel
Power operated

Technical design

1. Basic body EM-S with spindle adapter
2. Segment sleeve (case hardened + vulcanized) with bayonet quick change.
Clamping sleeves size EM-S-1 with three segments, clamping sleeves from size EM-S-2 on with six segments for better gripping force distribution
3. Workstop



Clamping sleeves

EMX-S-1*

Ø	18	19	20	21	22	23	24	25	26	27	28	29	30
Id. No.	9601301800	9601301900	9601302000	9601302100	9601302200	9601302300	9601302400	9601302500	9601302600	9601302700	9601302800	9601302900	9601303000
Ø	31	32	33	34	35								
Id. No.	9601303100	9601303200	9601303300	9601303400	9601303500								

EMX-S-2**

Ø	30	31	32	33	34	35	36	37	38	39	40	41	42
Id. No.	9602303000	9602303100	9602303200	9602303300	9602303400	9602303500	9602303600	9602303700	9602303800	9602303900	9602304000	9602304100	9602304200
Ø	43	44	45	46	47	48	49	50	51	52	53	54	55
Id. No.	9602304300	9602304400	9602304500	9602304600	9602304700	9602304800	9602304900	9602305000	9602305100	9602305200	9602305300	9602305400	9602305500

EMX-S-3**

Ø	45	46	47	48	49	50	51	52	53	54	55	56	57
Id. No.	9603304500	9603304600	9603304700	9603304800	9603304900	9603305000	9603305100	9603305200	9603305300	9603305400	9603305500	9603305600	9603305700
Ø	58	59	60	61	62	63	64	65	66	67	68	69	70
Id. No.	9603305800	9603305900	9603306000	9603306100	9603306200	9603306300	9603306400	9603306500	9603306600	9603306700	9603306800	9603306900	9603307000
Ø	71	72	73	74	75	76	77	78	79	80			
Id. No.	9603307100	9603307200	9603307300	9603307400	9603307500	9603307600	9603307700	9603307800	9603307900	9603308000			

EMX-S-4**

Ø	70	71	72	73	74	75	76	77	78	79	80	81	82
Id. No.	9604307000	9604307100	9604307200	9604307300	9604307400	9604307500	9604307600	9604307700	9604307800	9604307900	9604308000	9604308100	9604308200
Ø	83	84	85	86	87	88	89	90	91	92	93	94	95
Id. No.	9604308300	9604308400	9604308500	9604308600	9604308700	9604308800	9604308900	9604309000	9604309100	9604309200	9604309300	9604309400	9604309500
Ø	96	97	98	99	100	101	102	103	104	105			
Id. No.	9604309600	9604309700	9604309800	9604309900	9604310000	9604310100	9604310200	9604310300	9604310400	9604310500			

* The clamping sleeves have a max. radial expansibility in diameter of ± 0.4 mm from the nominal diameter.

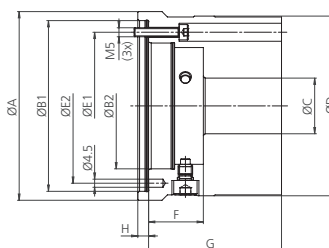
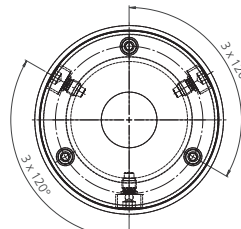
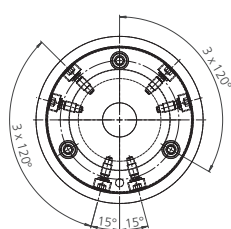
** The clamping sleeves have a max. radial expansibility in diameter of ± 0.6 mm from the nominal diameter.

Soft work stop blanks

Type	EMX-S-1	EMX-S-2	EMX-S-3	EMX-S-4
Id. No.*	9100321	9100322	9100323	9100324
Id. No.**	5301416	5301417	5301418	5301419
A	93	105	113	142
B1	80	95	-	-
B2	-	-	88	115
C	19	31	46	71
D	82	100	114	143
E1	66	82	100	128
E2	70	86	104	128
F	27.5	30.5	41	45
G	53	74	95	105
H	6	6	-	-

EMX-S-1

EMX-S-2 / -3 / -4

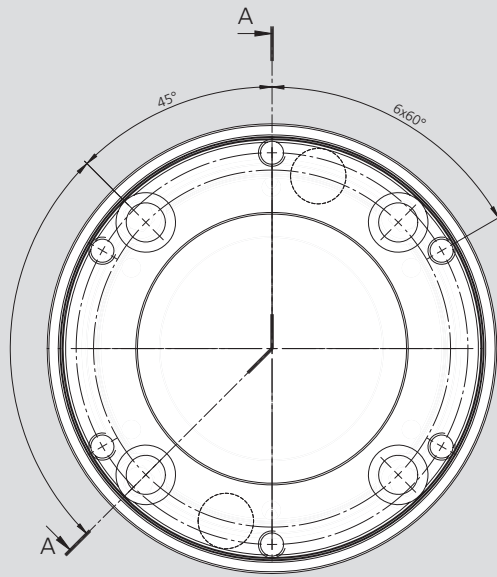


Adapters

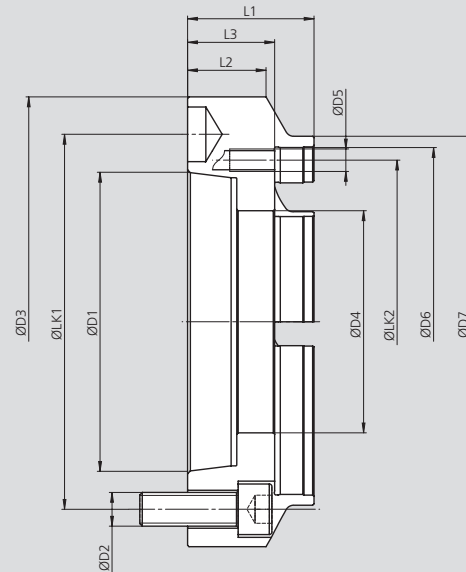
ISO-A for expanding mandrels

- Mandrels EMX-S have cylindrical mounting
- Adapters for DIN 55026 / ISO-A 702-1 / ISO-A 702-1 spindle noses

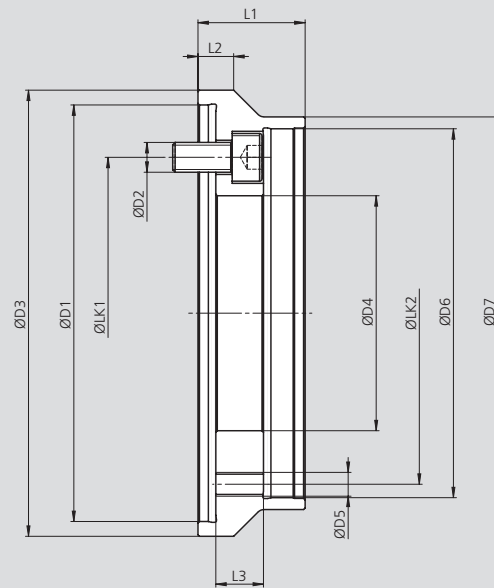
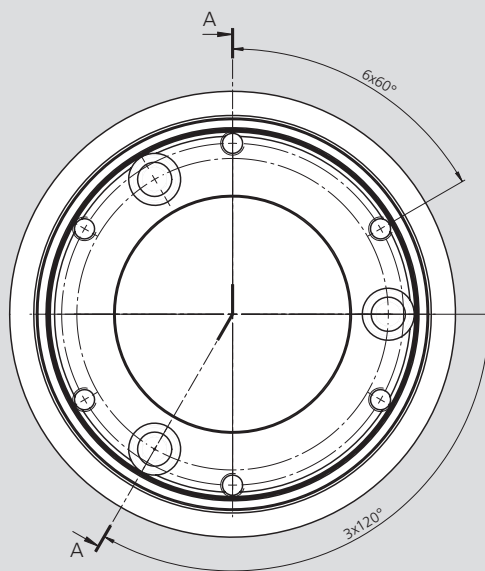
A



SECTION A-A



ZA



Subject to technical changes.
For more detailed information please ask our customer service.

Technical data

Flange Id. No.	Mandrel size		Spindle nose ISO 702-1 (A)	Spindle nose ISO 702-4 (ZA)	D1	LK1	D2	D3	D4	LK2	D5	D6	D7	L1	L2	L3
9600200005	EMX-S-1 / 2 / 3	mm	A5	-	82.563	104.8	4 x M10	132	79	115	6 x M8	124	D3	45	-	31
9600200006		mm	A6	-	106.375	133.4	4 x M12	160	79	115	6 x M8	124	132	45	28	31
9600200008		mm	A8	-	139.719	171.4	4 x M16	202	79	115	6 x M8	124	140	47	29	33
9600200140		mm	-	140	140	104.8	3 x M10	150	79	115	6 x M8	124	132	36	12	16
9600200170		mm	-	170	170	133.4	6 x M12	180	79	115	6 x M8	124	157	36	24.5	16
9604200005	EMX-S-4	mm	A5	-	82.563	104.8	4 x M10	157	79	137	6 x M8	147	D3	45	-	31
9604200006		mm	A6	-	106.375	133.4	4 x M12	157	102.5	137	6 x M8	147	D3	43	-	29
9604200008		mm	A8	-	139.719	171.4	4 x M16	202	103	137	6 x M8	147	157	47	17	33
9604200140		mm	-	140	140	104.8	3 x M10	157	80	137	6 x M8	147	D3	50	-	31
9604200170		mm	-	170	170	133.4	6 x M12	180	103	137	6 x M8	147	157	48	11.5	29

Notes

EM-A / EM-AL

Expanding mandrel
Manual or power operated

Expanding mandrel Ø 14.7 - 129.7 mm

- Size 1 - 11
- Large expansibility
- EM-AL: Body lengthened



Application/customer benefits

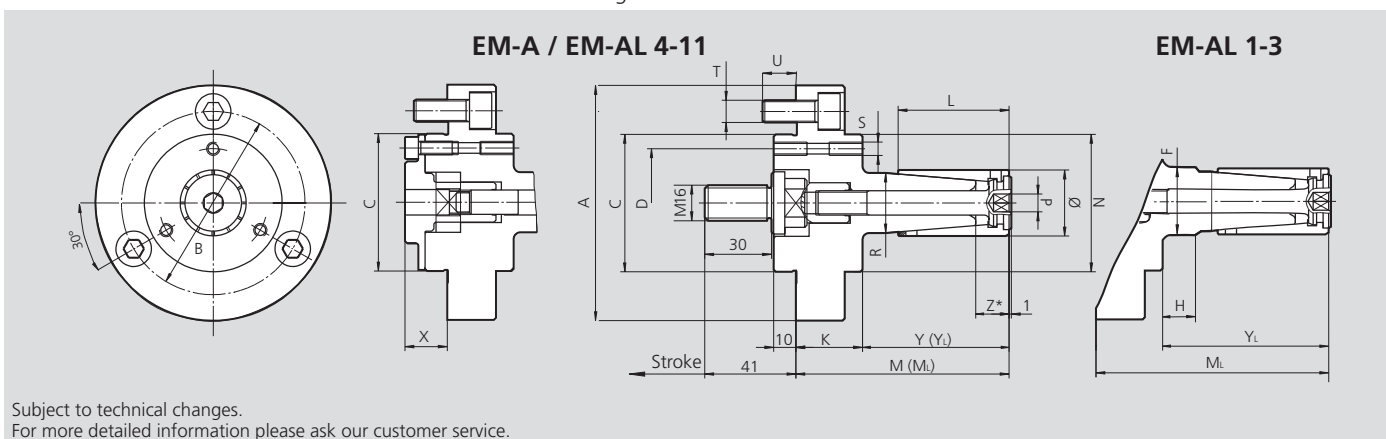
- For turning, milling, grinding and gear cutting operations
- High accuracy and torque transmission because of fixed arbor
- Axial pull down by axial movement of the clamping sleeve during actuation
- Quick set-up

Technical features

- Large expansibility 1 - 2 mm depending on size
- Hand or power operated
- Flange mounting
- Very rigid design
- Tapped holes at the front face to mount axial stops
- Clamping sleeves are also available in siliconized version
- EM-AL: Clamping mandrel with extra long body

Standard equipment

Basic mandrel with draw bolt for power operation
Mounting bolts



Subject to technical changes.

For more detailed information please ask our customer service.

SMW-AUTOBLOK Type	EM-A-1 EM-AL-1	EM-A-2 EM-AL-2	EM-A-3 EM-AL-3	EM-A-4 EM-AL-4	EM-A-5 EM-AL-5	EM-A-6 EM-AL-6	EM-A-7 EM-AL-7	EM-A-8 EM-AL-8	EM-A-9 EM-AL-9	EM-A-10 EM-AL-10	EM-A-11 EM-AL-11
EM-A Id. No. (power operated)	68100110	68100210	68100310	68100410	68100510	68100610	68100710	68100810	68100910	68101010	68101110
EM-AL Id. No. (power operated)	68100111	68100211	68100311	68100411	68100511	68100611	68100711	68100811	68100911	68101011	68101111
A	106	106	106	106	106	106	130	130	130	130	130
B	82.6	82.6	82.6	82.6	82.6	82.6	104.8	104.8	104.8	104.8	104.8
C g5	62	62	62	62	62	62	86	86	86	86	86
D	49	49	49	49	49	49	73	73	73	100	100
F	22	23	26	-	-	-	-	-	-	-	-
H	25	30	35	-	-	-	-	-	-	-	-
K	30	30	30	30	30	30	30	30	30	30	30
L	35	40	46	50	60	60	80	90	100	122	140
M	81	86	92	96	106	106	132	142	152	174	195
M_L (Version EM-AL)	106	116	127	136	146	146	182	188	222	248	275
N	62	62	62	62	62	62	86	86	86	-	-
Ø mm	14.7-19.7	19.7-24.7	24.7-29.7	29.7-34.7	34.7-39.7	39.7-44.7	44.7-54.7	54.7-64.7	64.7-81.7	81.7-101.7	101.7-131.7
P SW	4	4	6	8	8	8	8	10	10	10	10
R h6	14	19	23	27	31.5	36	42	50	60	73	86
S (3 x 120°)	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6	M6
T (3 x 120°)	M10	M10	M10	M10	M10	M10	M10	M10	M10	M10	M10
U	15	15	15	15	15	15	15	15	15	17	17
X	19	19	19	19	19	19	13	13	13	21	21
Y	51	56	62	66	76	76	102	112	122	144	165
Y_L (Version EM-AL)	76	86	97	106	116	116	152	158	192	218	245
Z*	12.5	14.5	14.5	15	15.5	16	24	26	26.5	27.5	32
Manual kit EM-A	68110110	68110210	68110310	68110410	68110510	68110610	68110710	68110810	68110810	68111010	68111110
Manual kit EM-AL	68110111	68110211	68110311	68110411	68110511	68110611	68110711	68110811	68110811	68111011	68111111
Draw bolt power op. EM-A	68050110	68050210	68050310	68050410	68050510	68050610	68050710	68050710	68050710	68051010	68051110
Draw bolt power op. EM-AL	68050111	68050211	68050311	68050411	68050511	68050611	68050711	68050811	68050911	68051011	68051111

* Clamping on area Z only is not allowed.

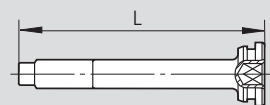
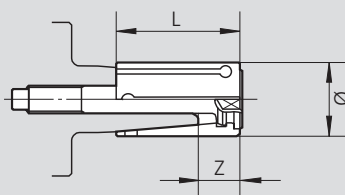
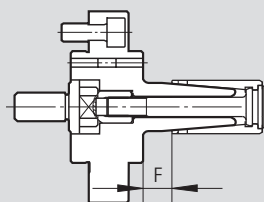
Technical data

SMW-AUTOBLOK Type	EM-A-1 EM-AL-1	EM-A-2 EM-AL-2	EM-A-3 EM-AL-3	EM-A-4 EM-AL-4	EM-A-5 EM-AL-5	EM-A-6 EM-AL-6	EM-A-7 EM-AL-7	EM-A-8 EM-AL-8	EM-A-9 EM-AL-9	EM-A-10 EM-AL-10	EM-A-11 EM-AL-11
Stroke mm	6	6	6	6	6	6	12	12	12	12	12
Max. actuating force kN	5	7	12	12	15	20	20	20	25	25	30
Max. transm. torque Nm	15	35	75	100	120	150	200	250	275	320	500
Actuating cylinder (rec.)	SIN-S 70	SIN-S 70	SIN-S 85	SIN-S 85	SIN-S 85	SIN-S 100	SIN-S 100	SIN-S 100	SIN-S 100	SIN-S 100	SIN-S 125

All dimensions in unclamped position = Right end position.

■ Ordering review

Expanding mandrel
Manual or power operated



Basic mandrel		
Type	Id. No.	F
EM-A-1	68100110	16
EM-AL-1	68100111	41
EM-A-2	68100210	16
EM-AL-2	68100211	46
EM-A-3	68100310	16
EM-AL-3	68100311	51
EM-A-4	68100410	16
EM-AL-4	68100411	56
EM-A-5	68100510	16
EM-AL-5	68100511	56
EM-A-6	68100610	16
EM-AL-6	68100611	56
EM-A-7	68100710	22
EM-AL-7	68100711	72
EM-A-8	68100810	22
EM-AL-8	68100811	68
EM-A-9	68100910	22
EM-AL-9	68100911	92
EM-A-10	68101010	22
EM-AL-10	68101011	96
EM-A-11	68101110	25
EM-AL-11	68101111	105

Clamping sleeve cpl. with actuating screw					
Id. No.	Ø	L	Expansibility	Z	
68300147	14.7	35	1	12.5	
68300157	15.7	35	1	12.5	
68300167	16.7	35	1	12.5	
68300177	17.7	35	1	12.5	
68300187	18.7	35	1	12.5	
68300197	19.7	40	1	14.5	
68300207	20.7	40	1	14.5	
68300217	21.7	40	1	14.5	
68300227	22.7	40	1	14.5	
68300237	23.7	40	1	14.5	
68300247	24.7	46	1	14.5	
68300257	25.7	46	1	14.5	
68300267	26.7	46	1	14.5	
68300277	27.7	46	1	14.5	
68300287	28.7	46	1	14.5	
68300297	29.7	50	1	15	
68300307	30.7	50	1	15	
68300317	31.7	50	1	15	
68300327	32.7	50	1	15	
68300337	33.7	50	1	15	
68300347	34.7	60	1	15.5	
68300357	35.7	60	1	15.5	
68300367	36.7	60	1	15.5	
68300377	37.7	60	1	15.5	
68300387	38.7	60	1	15.5	
68300397	39.7	60	1	16	
68300407	40.7	60	1	16	
68300417	41.7	60	1	16	
68300427	42.7	60	1	16	
68300437	43.7	60	1	16	
68300447	44.7	80	2	24	
68300467	46.7	80	2	24	
68300487	48.7	80	2	24	
68300497	49.7	80	2	24	
68300507	50.7	80	2	24	
68300527	52.7	80	2	24	
68300547	54.7	90	2	26	
68300567	56.7	90	2	26	
68300587	58.7	90	2	26	
68300597	59.7	90	2	26	
68300607	60.7	90	2	26	
68300627	62.7	90	2	26	
68300647	64.7	100	2	26.5	
68300667	66.7	100	2	26.5	
68300687	68.7	100	2	26.5	
68300697	69.7	100	2	26.5	
68300707	70.7	100	2	26.5	
68300727	72.7	100	2	26.5	
68300747	74.7	100	2	26.5	
68300767	76.7	100	2	26.5	
68300787	78.7	100	2	26.5	
68300807	80.7	100	2	26.5	
68300817	81.7	122	2	27.5	
68300837	83.7	122	2	27.5	
68300857	85.7	122	2	27.5	
68300877	87.7	122	2	27.5	
68300897	89.7	122	2	27.5	
68300917	91.7	122	2	27.5	
68300937	93.7	122	2	27.5	
68300957	95.7	122	2	27.5	
68300977	97.7	122	2	27.5	
68300997	99.7	122	2	27.5	
68301017	101.7	140	2	32	
68301037	103.7	140	2	32	
68301057	105.7	140	2	32	
68301077	107.7	140	2	32	
68301097	109.7	140	2	32	
68301117	111.7	140	2	32	
68301137	113.7	140	2	32	
68301157	115.7	140	2	32	
68301177	117.7	140	2	32	
68301197	119.7	140	2	32	
68301217	121.7	140	2	32	
68301237	123.7	140	2	32	
68301257	125.7	140	2	32	
68301277	127.7	140	2	32	
68301297	129.7	140	2	32	

Actuating screw	
Id. No.	L
68030110	76.5
68030210	81
68030310	87.5
68030410	93
68030510	103
68030610	103
68030710	117
68030810	127
68030910	137
68031010	165
68031110	183

EM-B

Expanding mandrel
Manual or power operated

Expanding mandrel Ø 16 - 129.5 mm

- Size 0 - 4
- Large expansibility

Application/customer benefits

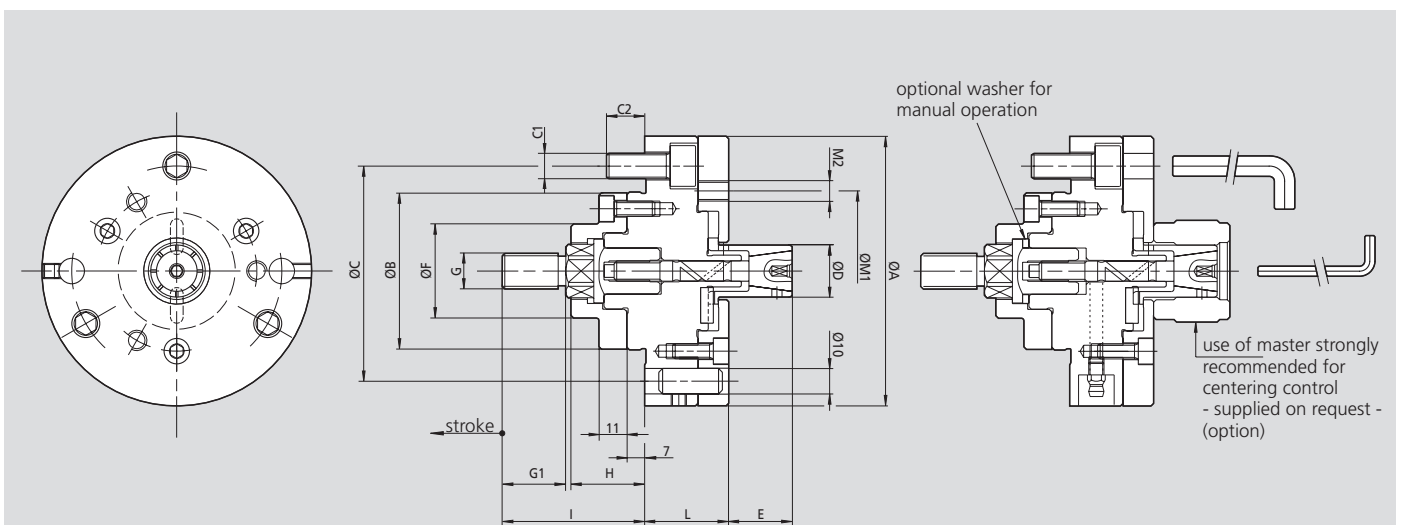
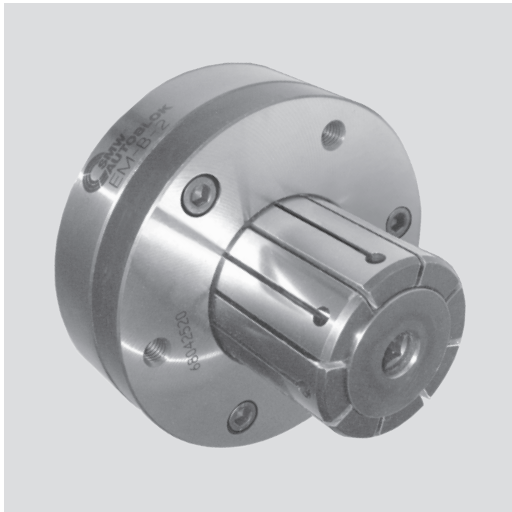
- For turning, milling, grinding and gear cutting operations
- High flexibility by means of modular system
- High torque transmission and concentricity
- No axial movement of clamping sleeve during operation
- Clamping of very short workpieces on the front section of the sleeve possible

Technical features

- Large expansibility up to 1.5 mm in diameter
- Hand or power operated
- Flange mounting
- Very rigid design
- Tapped holes at the front face to mount axial stops
- Clamping sleeves are also available in siliconized version

Standard equipment

Basic mandrel with draw bolt for power operation
Mounting bolts



Subject to technical changes.
For more detailed information please ask our customer service.

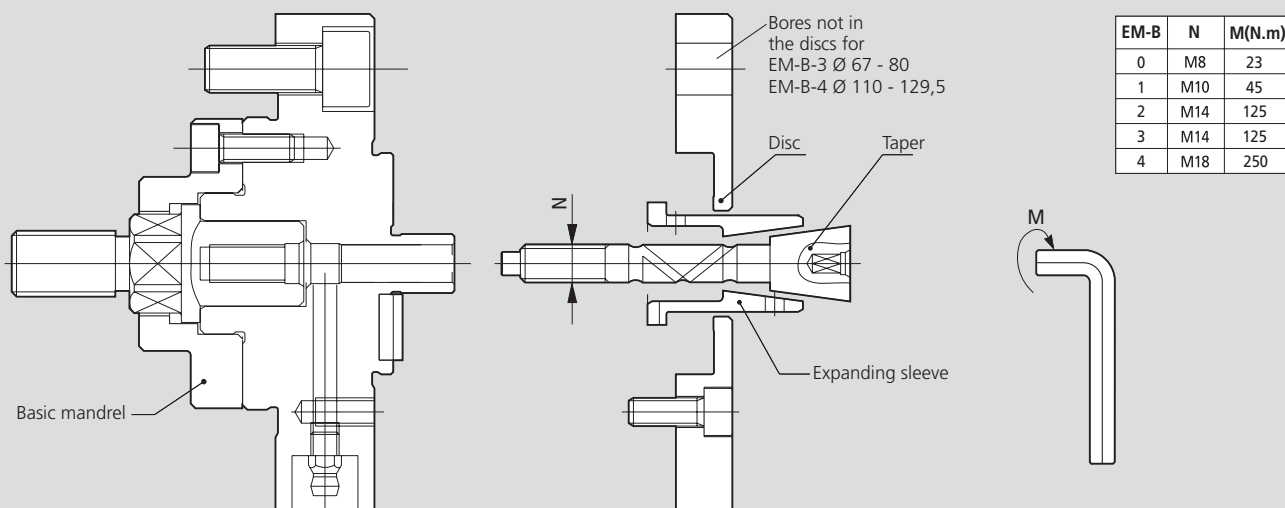
SMW-AUTOBLOK Type		EM-B 0	EM-B 1	EM-B 2	EM-B 3	EM-B 4
A	mm	106	106	106	125	180
B g5	mm	62	62	62	62	86
C	mm	82.6	82.6	82.6	82.6	133.4
C1	mm	3 x M10	3 x M10	3 x M10	3 x M10	3 x M12
C2	mm	16	16	16	16	15
D	mm	16 - 25.5	20 - 40.5	35 - 60.5	55 - 81	80 - 131
E	mm	23	28	43	58	85
F	mm	37	37	37	37	55
G	mm	M16	M16	M16	M16	M16
G1	mm	25	25	25	25	25
H	mm	29	29	29	29	36
I	mm	56	56	56	56	62
L	mm	35	37	37	37	50
M1	mm	63	68	85	104	162
M2	mm	3 x M8	3 x M8	3 x M8	6 x M8	6 x M8
N	mm	M8	M10	M14	M14	M18

Technical data

SMW-AUTOBLOK Type		EM-B 0	EM-B 1	EM-B 2	EM-B 3	EM-B 4
Axial stroke	mm	2.5	2.5	2.5	5	6.5
Sleeve expansion on Ø	mm	0.5	0.5	0.5	1	1.5
Max. axial force	kN	7	12	20	20	25
Recommended actuating cylinders	CSN	150	200	200	200	250
	SIN-S	70	70	85	85	100

All measurements in unclamped position = Right end position.

■ Ordering review



Subject to technical changes.

For more detailed information please ask our customer service.

EM-B-0				EM-B-1				EM-B-2				EM-B-3				EM-B-4			
Basic mandrel 68100021				Basic mandrel 68101021				Basic mandrel 68102021				Basic mandrel 68103021				Basic mandrel 68104021			
Expanding sleeve Ø D16 – Ø D25				Expanding sleeve Ø D20 – Ø D40				Expanding sleeve Ø D35 – Ø D60				Expanding sleeve Ø D55 – Ø D80				Expanding sleeve Ø D80 – Ø D129.5			
Taper 68020120				Taper 68021120				Taper 68022120				Taper 68023120				Taper 68024120			
Disc 68040121 68040221 68040321				Disc 68041121 68041221 68041321				Disc 68042121 68042221				Disc 68043121 68043221				Disc 68044121 68044221			
D16 68200160				D20 68210200				D35 68220350				D55 68230550				D80 68240800			
D16.5 68200165				D20.5 68210205				D35.5 68220355				D56 68230560				D81.5 68240815			
D17 68200170				D21 68210210				D36 68220360				D57 68230570				D83 68240830			
D17.5 68200175		68200175		D21.5 68210215		68210215		D36.5 68220365				D58 68230580		68230580		D84.5 68240845			
D18 68200180		68200180		D22 68210220		68210220		D37 68220370				D59 68230590		68230590		D86 68240860		68240860	
D18.5 68200185		68200185		D22.5 68210225		68210225		D37.5 68220375		68220375		D60 68230600		68230600		D87.5 68240875		68240875	
D19 68200190		68200190		D23 68210230		68210230		D38 68220380		68220380		Taper 68023220				D89 68240890		68240890	
D19.5 68200195		68200195		D23.5 68210235		68210235		D38.5 68220385		68220385		Disc 68043321 68043421 68043521				D90.5 68240905		68240905	
D20 68200200		68200200		D24 68210240		68210240		D39 68220390		68220390		D61 68230610				Taper 68024220			
Taper 68020220				D24.5 68210245		68210245		D39.5 68220395		68220395		D62 68230620				Disc 68044321 68044421			
D20.5 68200205				D25 68210250		68210250		D40 68220400		68220400		D63 68230630				D92 68240920			
D21 68200210				Taper 68021220				Taper 68022220				D64 68230640		68230640		D93.5 68240935			
D21.5 68200215				Disc 68041421 68041521 68041621				Disc 68042321 68042421 68042521				D65 68230650		68230650		D95 68240950			
D22 68200220		68200220		D25.5 68210255				D40.5 68220405				D66 68230660		68230660		D96.5 68240965			
D22.5 68200225		68200225		D26 68210260				D41 68220410				D67 68230670		68230670		D98 68240980		68240980	
D23 68200230		68200230		D26.5 68210265				D41.5 68220415				D68 68230680		68230680		D99.5 68240995		68240995	
D23.5 68200235		68200235		D27 68210270				D42 68220420				D69 68230690		68230690		D101 68241010		68241010	
D24 68200240		68200240		D27.5 68210275				D42.5 68220425				D70 68230700		68230700		D102.5 68241025		68241025	
D24.5 68200245		68200245		D28 68210280				D43 68220430				Taper 68023320				Taper 68024320			
D25 68200250		68200250		D28.5 68210285		68210285		D43.5 68220435		68220435		Disc 68043621 68043721 68043821				Disc 68044521 68044621			
				D29 68210290		68210290		D44 68220440		68220440		D71 68230710				D104 68241040			
				D29.5 68210295		68210295		D44.5 68220445		68220445		D72 68230720				D105.5 68241055			
				D30 68210300		68210300		D45 68220450		68220450		D73 68230730				D107 68241070			
				D30.5 68210305		68210305		D45.5 68220455		68220455		D74 68230740		68230740		D108.5 68241085			
				D31 68210310		68210310		D46 68220460		68220460		D75 68230750		68230750		D110 68241100		68241100	
				D31.5 68210315		68210315		D46.5 68220465		68220465		D76 68230760		68230760		D111.5 68241115		68241115	
				D32 68210320		68210320		D47 68220470		68220470		D77 68230770		68230770		D113 68241130		68241130	
				D32.5 68210325		68210325		D47.5 68220475		68220475		D78 68230780		68230780		D114.5 68241145		68241145	
				D33 68210330		68210330		D48 68220480		68220480		D79 68230790		68230790		Taper 68024420			
				D33.5 68210335		68210335		D48.5 68220485		68220485		D80 68230800		68230800		Disc 68044721 68044821			
				D34 68210340		68210340		D49 68220490		68220490						D116 68241160			
				D34.5 68210345		68210345		D49.5 68220495		68220495						D117.5 68241175			
				D35 68210350		68210350		D50 68220500		68220500						D119 68241190			
				Taper 68021320				Taper 68022320								D120.5 68241205			
				Disc 68041721 68041821				Disc 68042621 68042721 68042821								D122 68241220		68241220	
				D35.5 68210355				D50.5 68220505								D123.5 68241235		68241235	
				D36 68210360				D51 68220510								D125 68241250		68241250	
				D36.5 68210365				D51.5 68220515								D126.5 68241265		68241265	
				D37 68210370				D52 68220520								D128 68241280		68241280	
				D37.5 68210375				D52.5 68220525								D129.5 68241295		68241295	
				D38 68210380				D53 68220530											
				D38.5 68210385		68210385		D53.5 68220535		68220535									
				D39 68210390		68210390		D54 68220540		68220540									
				D39.5 68210395		68210395		D54.5 68220545		68220545									
				D40 68210400		68210400		D55 68220550		68220550									
								D55.5 68220555		68220555									
								D56 68220560		68220560									
								D56.5 68220565		68220565									
								D57 68220570		68220570									
								D57.5 68220575		68220575									
								D58 68220580		68220580									
								D58.5 68220585		68220585									
								D59 68220590		68220590									
								D59.5 68220595		68220595									
								D60 68220600		68220600									

Ordering example:

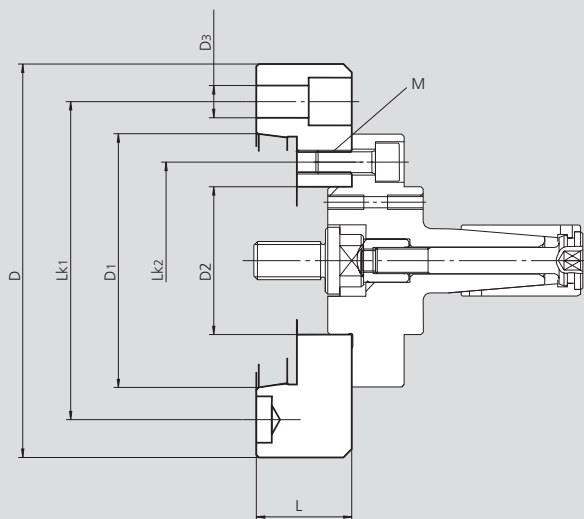
Component ID = Ø 30
 Basic mandrel EM-B-1 Id. No. 68101021
 Expanding sleeve AD = Ø 30 Id. No. 6810300
 Taper Id. No. 68021220
 Disc Id. No. 68041521

Adapters

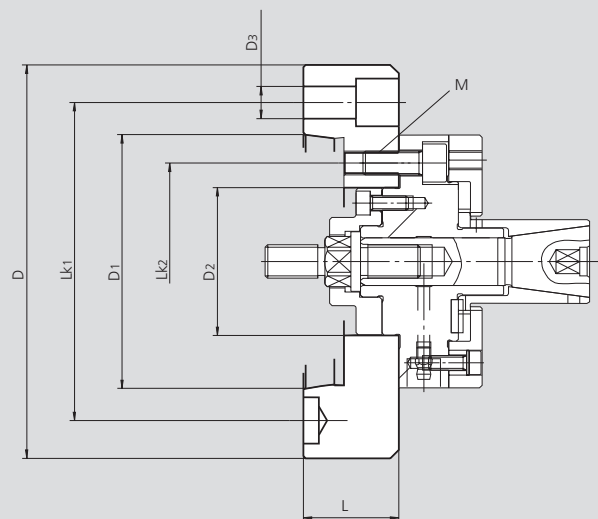
ISO-A for expanding mandrels

- Mandrels EM-A and EM-B have cylindrical mounting
- Adapters for DIN 55026 / ISO-A 702/1 spindle noses

EM-A



EM-B



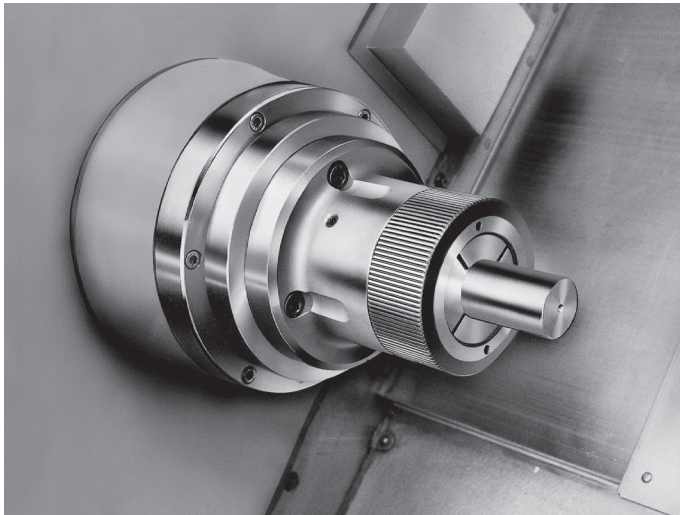
Subject to technical changes.
For more detailed information please ask our customer service.

Technical data

Adapter flange Id. No.		Spindle nose ISO	D	D1	D2	D3	LK1	LK2	L	M
24150100	mm	A5	127	82.563	62 ^{H6}	12	104.8	82.6	40	3 x M10
24150400	mm	A5	135	82.563	86 ^{H6}	12	104.8	104.8	40	3 x M10
24160100	mm	A6	165	106.375	62 ^{H6}	13.5	133.4	82.6	40	3 x M10
24160400	mm	A6	165	106.375	86 ^{H6}	13.5	133.4	104.8	40	3 x M10
24180100	mm	A8	210	139.719	62 ^{H6}	17	171.4	82.6	40	3 x M10
24180400	mm	A8	210	139.719	86 ^{H6}	17	171.4	104.8	40	3 x M10

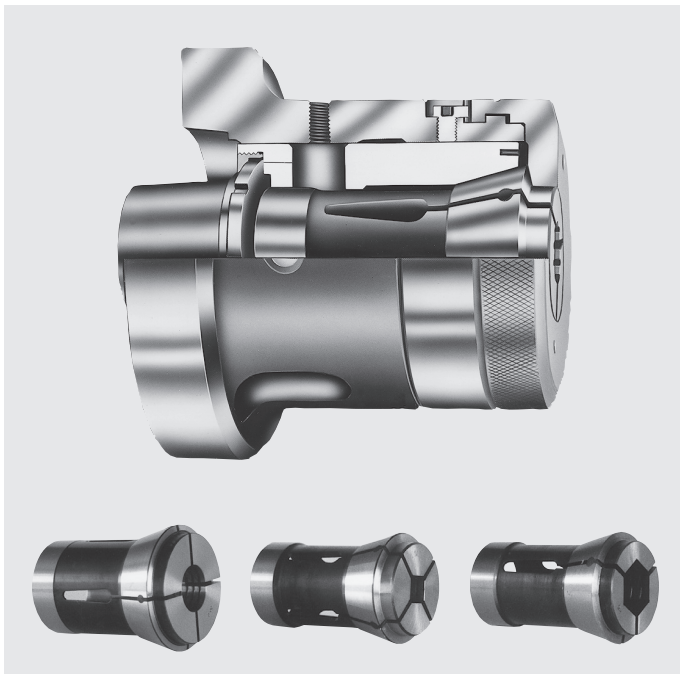
Appropriate adapter flanges	EM-A	EM-B
24150100 ISO-A5 24160100 ISO-A6 24180100 ISO-A8	1-2-3-4-5-6	0-1-2-3
24150400 ISO-A5 24160400 ISO-A6 24180400 ISO-A8	7-8-9-10-11	4

Notes



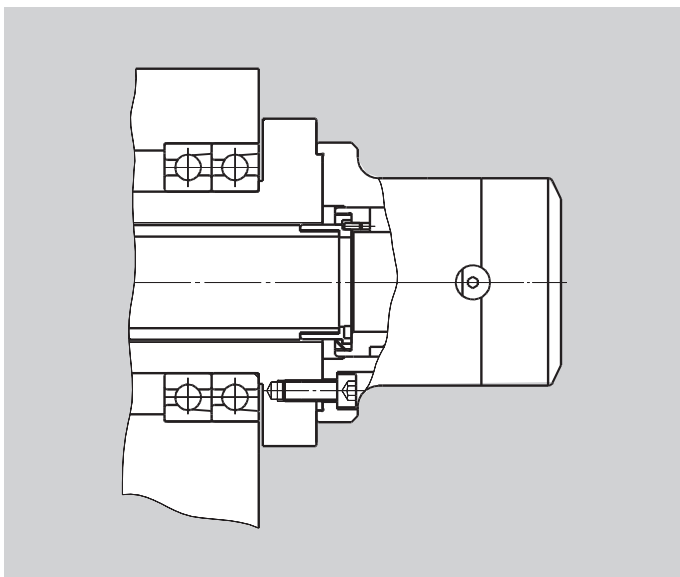
Application/customer benefits

- Efficient machining of bar material on automatic bar machines with bar feed.
- Less deformation of thin-walled components during clamping.
- Quick set-up by means of bayonet locking cap.
- For highest speeds.
- Clamping / unclamping of chuck during spindle rotation is possible.



Profitability

- Quick and simple installation to all lathes (alternating with 3-jaw chucks).
- Round, square and hexagonal material can be clamped by simply changing the collet.
- Cost effective by using standard collets DIN 6343 as well as standard Rubberflex and multi range collets.
- Collets for highest concentricity for special profiles, vulcanized, coated or ground to size are available on request.

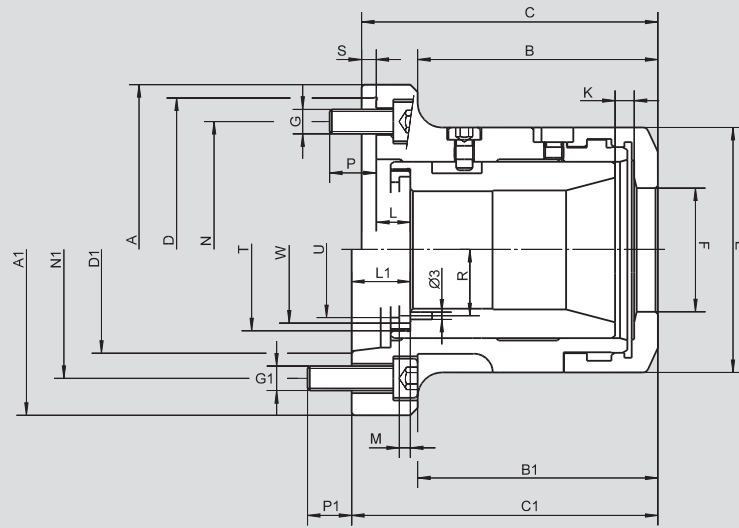


- Case hardened and ground chuck parts ensure long service life.
- Finish-machining of all parts in one set-up guarantees perfect concentricity.
- Direct mounting to the machine spindle ensures high concentricity.
- High operating reliability due to a minimum of parts.
- High axial positioning accuracy of the components by means of push type collet system.

■ Main dimensions and technical data

Collet chuck

Attention: Chuck position „open“ (left end position) is situated with end stop in actuating cylinder.
Do not actuate chuck without cap nut mounted!
Remove pin dia. 3 for rotating ring nut for direct connection in thread dimension T.



Subject to technical changes.
For more detailed information please ask our customer service.

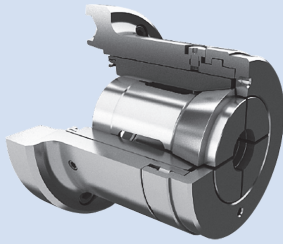
SMW-AUTOBLOK Type		KSZ-MB 40			KSZ-MB 60				KSZ-MB 80
Mounting		Z140	A5	A6	Z170	Z220	A6	A8	Z220 / A8
Id. No.		088174	088180	088179	088175	088176	088178	088177	091209
	A h6	148	-	-	185	235	-	-	-
	A1 h6	-	135	170	-	-	170	220	220
	B	90.9	-	-	108.9	108.9	-	-	-
	B1	-	96.9	91.9	-	-	117.9	108.4	147
	C	113.9	-	-	138.9	140.9	-	-	-
	C1	-	123.9	123.9	-	-	144.9	145.9	176.5
Center mounting		D	140	-	170	220	-	-	-
Short taper mounting according to DIN 55026		D1	-	A5	A6	-	A6	A8	A8
	E	102	102	102	130	130	130	130	156
	F	51	51	51	74	74	74	74	95
	G	3 x M10	-	-	6 x M12	6 x M16	-	-	-
	G1	-	4 x M10	4 x M12	-	-	4 x M12	4 x M16	6 x M16
	K _{max.}	7.5	7.5	7.5	7.5	7.5	7.5	7.5	7.5
	L	8.5	-	-	14.0	16.0	-	-	-
	L1	-	24.5	24.5	-	-	26.0	27.0	41
	M	4.5	4.5	4.5	4.5	4.5	4.5	4.5	6.0
	N	104.8	-	-	133.4	171.4	-	-	-
	N1	-	104.8	133.4	-	-	133.4	171.4	171.4
	P	18	-	-	14	20	-	-	-
	P1	-	14	14.5	-	-	16	16	27.5
	R	28	28	28	39.5	39.5	39.5	39.5	51
	S	6	-	-	6	6	-	-	-
Pressure sleeve thread / thread depth		T	M66 x 1.5 / 8			M90 x 1.5 / 8			
	U		54			77			
	W		62.5			83			
Max. speed	r.p.m.	6000	6000	6000	5000	5000	5000	5000	4000
Max. actuating force	daN	2500	2500	2500	3000	3000	3000	3000	3500
Max. gripping force	daN	5400	5400	5400	6500	6500	6500	6500	7300
Weight without collets	kg	6.1	7.7	7.8	13.6	14.2	14.1	18.1	20.8
Rec. actuating cylinders	Type	VNC-T2 102-46			VNC-T2 150-67				VNC-T2 200-86
Speed	r.p.m.	7000			5500				4000

KSZ-MB

Collet chuck

■ Ordering review

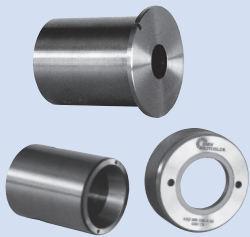
Supply range: Chuck and mounting bolts



Spindle mounting	Size	KSZ-MB 40	KSZ-MB 60	KSZ-MB 80 - 193 E
Centering rim standard		Z140 088174	Z170 088175	Z220* 091209*
Centering rim large			Z220 088176	
A 05		088180		
A 06		088179	088178	
A 08			088177	091209*

* **Attention:** KSZ-MB 80-193E with standard centering rim (Id. No. 091209) has outside centering 220 mm (and also inside taper A8).

Accessories for KSZ-MB



Accessories	Size	KSZ-MB 40	KSZ-MB 60	KSZ-MB 80
Blank adapter		0363960	0360810	
Reduction for smaller collets (comprising pressure sleeve and cap nut)		KSZ-MB size 40 to size 26 0360720 / 0361792	KSZ-MB size 60 to size 40 0360121 / 0361360	KSZ-MB size 80 to size 40 0362082 / 0360135
				KSZ-MB size 80 to size 60 0362081 / 0360134

Collets for KSZ-MB 40

Steel collets DIN 6343 series 173 E
ROUND*

Ø	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9
Id. No.	012961	012962	012963	012964	012965	012966	012967	012968	012969	012970	012971	012972	012973
Ø	9.5	10	10.5	11	11.5	12	12.5	13	13.5	14	14.5	15	15.5
Id. No.	012974	012975	012976	012977	012978	012979	012980	012981	012982	012983	012984	012985	012986
Ø	16	16.5	17	17.5	18	18.5	19	19.5	20	20.5	21	21.5	22
Id. No.	012987	012988	012989	012990	012991	012992	012993	012994	012995	012996	012997	012998	012999
Ø	22.5	23	23.5	24	24.5	25	25.5	26	26.5	27	27.5	28	28.5
Id. No.	013000	013001	013002	013003	013004	013005	013006	013007	013008	013009	013010	013011	013012
Ø	29	29.5	30	30.5	31	31.5	32	32.5	33	33.5	34	34.5	35
Id. No.	013013	013014	013015	013016	013017	013018	013019	013020	013021	013022	013023	013024	013025
Ø	35.5	36	36.5	37	37.5	38	38.5	39	39.5	40	40.5	41	41.5
Id. No.	013026	013027	013028	013029	013030	013031	013032	013033	013034	013035	013036	013037	013038
Ø	42												
Id. No.	013039												

HEXAGONAL**

Hexagon	6	7	8	9	10	11	12	13	14	15	16	17	19
Id. No.	013040	013041	013042	013043	013044	013045	013046	013047	013048	013049	013050	013051	013052
Hexagon	20	21	22	24	26	27	28	30	31	32	36		
Id. No.	016428	016429	013053	013054	016430	013055	016431	013056	016432	013057	013058		

SQUARE**

Square	6	7	8	9	10	11	12	13	14	15	16	18	20
Id. No.	013059	013060	013061	013062	013063	013064	013065	013066	013067	013068	013069	013070	013071
Square	22	25	28										
Id. No.	013072	013073	013074										

Rubberflex collets series 36 (recommended for raw part clamping)

ROUND

Ø	7-9	9-11	11-13	13-15	15-17	17-19	19-21	21-23	23-25	25-27	27-29	29-31	31-33
Id. No.	013076	013077	013078	013079	013080	013081	013082	013093	013083	013084	013085	013086	013087
Ø	33-35	35-37	37-39	39-41	41-43								
Id. No.	013088	013089	013090	013091	013092								

* Concentricity according to DIN 6343.

** Concentricity has to be agreed.

Collets for KSZ-MB 60

Steel collets DIN 6343 series 185 E ROUND*

Ø	4	5	6	7	8	9	10	11	12	13	14	15	16
Id. No.	013112	013113	013114	013115	013116	013117	013118	013119	013120	013121	013122	013123	013124
Ø	17	18	19	20	21	22	23	24	25	26	27	28	29
Id. No.	013125	013126	013127	013128	013129	013130	013131	013132	013133	016434	013134	013135	013136
Ø	30	31	32	33	34	35	36	37	38	39	40	41	42
Id. No.	013137	013138	013139	013140	013141	013142	013143	013144	016435	013145	013146	013147	013148
Ø	43	44	45	46	47	48	49	50	51	52	53	54	55
Id. No.	013149	013150	013151	013152	013153	013154	013155	013156	013157	013158	013159	013160	013161
Ø	56	57	58	59	60								
Id. No.	013162	013163	013164	013165	013166								

HEXAGONAL**

⬡	8	9	10	11	12	13	14	15	16	17	19	22	24
Id. No.	013167	013168	013169	013170	013171	013172	013173	013174	013175	013176	013177	013178	013179
⬡	27	30	32	36	41	50							
Id. No.	013180	013181	013182	013183	019312	019592							

SQUARE**

□	7	8	9	10	11	12	13	14	15	16	17	18	20
Id. No.	013184	013185	013186	013187	013188	013189	013190	013191	013192	013193	019110	013194	013195
□	22	25	28	30	32	35	36	40					
Id. No.	013196	013197	013198	013199	013200	019111	013201	017800					

Rubberflex collets series 52 (recommended for raw part clamping) ROUND

Ø	35-37	37-39	39-41	41-43	43-45	45-47	47-49	49-51	51-53	53-55	55-57	57-59	59-61
Id. No.	013203	013204	013205	013206	013207	013208	013209	013210	013211	013212	013213	013214	013215

Collets for KSZ-MB 80

Steel collets DIN 6343 series 193 E ROUND*

Ø	20	21	22	23	24	25	26	27	28	29	30	31	32
Id. No.	013237	013238	013239	013240	013241	013242	013243	013244	013245	013246	013247	013248	013249
Ø	33	34	35	36	37	38	39	40	41	42	43	44	45
Id. No.	013250	013251	013252	013253	013254	013255	013256	013257	013258	013259	013260	013261	013262
Ø	46	47	48	49	50	51	52	53	54	55	56	57	58
Id. No.	013263	013264	013265	013266	013267	013268	013269	013270	013271	013272	013273	013274	013275
Ø	59	60	61	62	63	64	65	66	67	68	69	70	71
Id. No.	013276	013277	013278	013279	013280	013281	013282	013283	013284	013285	013286	013287	013288
Ø	72	73	74	75	76	77	78	79	80				
Id. No.	013289	013290	013291	013292	013293	013294	013295	013296	013297				

Further collets are available on request.

* Concentricity according to DIN 6343.

** Concentricity has to be agreed.

Flexible collet chuck

■ Use of standard collets

Application/customer benefits

- Use of vulcanize standard collets
- Clamping of thin walled work pieces
- Long service life due to case hardened componenets and lubrication
- Ideal for bar loader machines
- Best tool accessibility
- Seal against contamination of the collet
- Low weight = low inertia

Ordering example

Collet chuck
with bolt



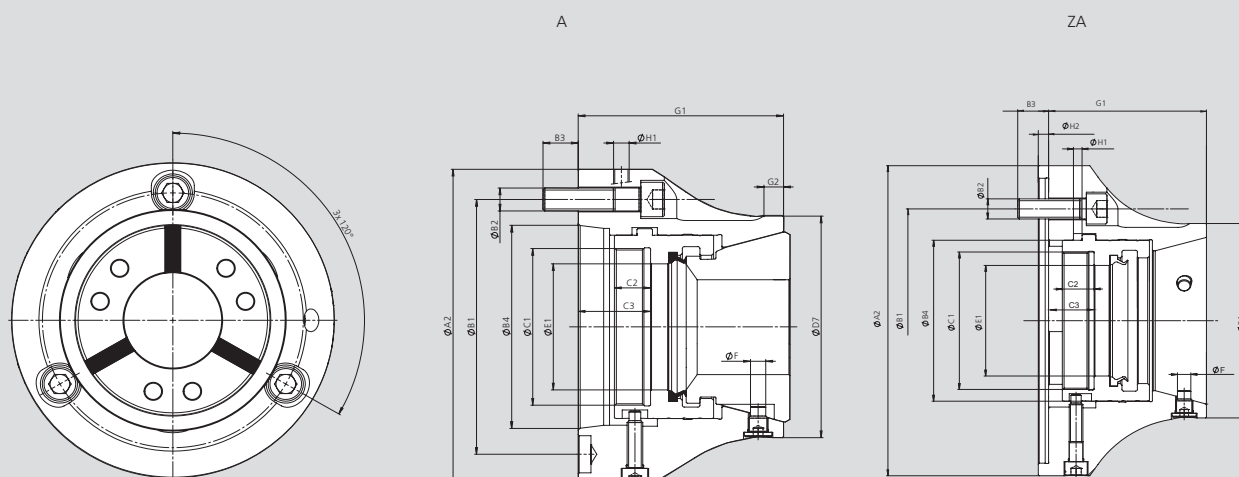
Application Examples

Collet chuck COMOT-DZ 65
with collet for O.D. Clamping



Collet chuck COMOT-DZ 65 with collet for O.D. Clamping removed with manual changing unit





* Use only with protective sleeve or workpiece stop

SMW-AUTOBLOK Type		COMOT-DZ-42		COMOT-DZ-65	
Id-No. COMOT		9710210005	9710210140	9710410006	9710410170
Spindle size		A05	Z140	A06	Z170
A2	mm	133	150	165	185
B1	mm	104,8		133,4	
B2	3 x 120°	3 x M10		3 x M12	
B3	mm	15		18	
B4	mm	A05	Z140	A06	Z170
B5	mm	-	5	-	6
C1	mm	M62 x 1,5		M82 x 1,5	
C2	mm	17		18,5	
C3 In open position (right end position)	mm	34,5	19,5	39,5	26,5
D7	mm	96		116	
E1	mm	43		66	
F	mm	5,8		7,8	
G1	mm	86	72	105	92
G2	mm	20		10	
H1	3 x 120°	-		M8	
SMW-Autoblok Type					
Axial stroke	mm	4,5		5	
Loading clearance in Ø*	mm	1		1	
Reserve stroke in Ø*	mm	1		1	
Max. Actuating force	kN	35		45	
Max. Clamping force radial	kN	80		105	
Max. Speed rpm	1/min	7000		6000	
Weight	kg	4,1	3,8	8,1	8,4

* from nominal collet dia.

- Radial fine adjustment
- Use of standard collets
- Air sensing



Application/customer benefits

- Large selection of standard collets
- Low deformation clamping of thin walled workpieces
- Rigid axial stop, central or front stop
- Long lifetime due to case hardened parts and manual lubrication
- Sealed against the ingress of chips and coolant
- Use of high-precision collets when using premium adapter PA
- Use of expanding mandrels of the „Connect“ series

Technical features

- Air sensing (central or front)
- Radial fine adjustment

Standard equipment

Collet chuck
with bolts
with basic workstop (central M12)
with protection sleeve (with through-hole)

Ordering example

COMOT-AZ-65-Z170

Application Examples

Collet chuck COMOT-AZ with standard collet for O.D. Clamping



Clamping with standard collet



Collet chuck COMOT-AZ with premium adapter PA* for O.D. Clamping



*For the premium adapters please see the page of PA-Comot

Clamping with slotted high-precision collet



Collet chuck COMOT-AZ* with extension mandrel EMX-F-CO „Connect“ for I.D. Clamping



*For the mandrels please see the page of the mandrels EMX-F-CO

Clamping with extension mandrel „Connect“

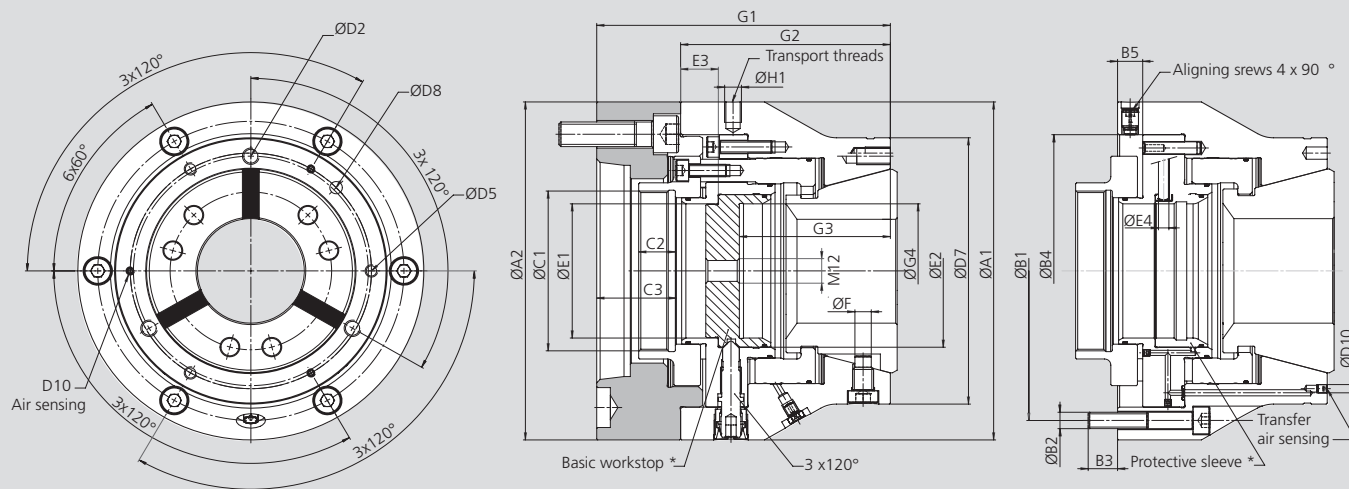


Collet chuck

- Radial fine adjustment
- Use of standard collets
- Air sensing

COMOT-AZ

Flexible collet chuck



* Use only with protective sleeve or workpiece stop

SMW-AUTOBLOK Type		COMOT-AZ-42				COMOT-AZ-65						COMOT-AZ-100				
Id-No. COMOT without flange		9700210000				9700410000						9700610000				
Spindle size**		A05	A06	Z140	Z170	A05	A06	A08	Z140	Z170	Z220	A06	A08	A11	Z170	Z220
A1	mm	144				165						230				
A2	mm	144	165	150	180	165	165	210	165	180	230	230	230	280	230	235
B1	mm	126				146						208				
B2	6 x 60°	6 x M8				6 x M8						6 x M10				
B3	mm	12				14						19.5				
B4	0.01	110				133						185				
B5	mm	12				12						12				
C1		M54 x 1.5				M78 x 1.5						M115 x 2				
C2	mm	17				17.5						24				
C3	In open position (right end position)	38	38	24	24	40	40	40	26	26	26	55	50	52	55	41
D2	Thread / depth / Pitch circle	3 x 120° M8 / 16 / 93				3 x 120° M8 / 16 / 112						3 x 120° M8 / 18 / 162				
D5	Thread / depth / Pitch circle	3 x 120° M6 / 12 / 95				3 x 120° M6 / 12 / 115						3 x 120° M8 / 18 / 162				
D7	-0,02 / -0,05	mm 110				mm 130						mm 180				
D8	Diameter / depth / pitch circle	3 x 120° Ø 6 / 10 / 95				3 x 120° Ø 6 / 10 / 115						3 x 120° Ø 6 / 10 / 162				
D10	Thread / pitch circle	3 x 120° M4 / 95				3 x 120° M4 / 115						3 x 120° M4 / 165				
E1	mm	43				65.5						101				
E2	H7	mm 49.5				mm 74.5						mm 111.5				
E3	mm	17				18						18				
E4	Orientation for workstop	mm 5				mm 5						mm 5				
F	mm	5.8				7.8						7.8				
G1	mm	126	126	112	112	140	140	140	126	126	126	174	169	171	174	160
G2	mm	88				100						115				
G3		61				72						102				
G4		43				65.5						90				
H1	3 x 120°	M8				M8						M10				

SMW-AUTOBLOK Type		COMOT-AZ-42				COMOT-AZ-65						COMOT-AZ-100				
Axial stroke	mm	5.5				5.5						8				
Loading clearance in Ø min.*	mm	1				1						2				
Reserve stroke in Ø min.*	mm	1				1						1.5				
Max. Actuating force in kN	mm	35				45						65				
Max. Clamping force radial	KN	80				105						150				
Max. Speed rpm	1/min	7000				6000						5000				
Weight without collets in kg	kg	6,9				9,2						19,8				

* from nominal collet dia.

** For complete Id. No's see the page of the flanges (ordering review chuck with flange)

- Radial fine adjustment
- Use of standard collets
- Air sensing



Application/customer benefits

- Large selection of standard collets
- Low deformation clamping of thin walled workpieces
- ohne axialen Niederzug
- Long service life due to case hardened components and lubrication
- Sealed against contamination
- Rigid axial stop front or in the bore
- Optional use of expanding mandrels of the connect series EMX-F-CO-NZ

Technical features

- Air sensing (central or front)
- Radial fine adjustment

Standard equipment

Collet chuck
with bolts
with basic workstop (central M12)
with protection sleeve (with fall through-hole)

Ordering example

COMOT-NZ-65-Z170

Application Examples

Collet chuck COMOT-NZ 65



Clamping with standard collet



Collet chuck COMOT-NZ 65 with collet



Collet chuck COMOT-NZ with extension mandrel EMX-F-CO-NZ „Connect“ for I.D. Clamping



Clamping with extension mandrel „Conect“ (quick change, spring actuated)

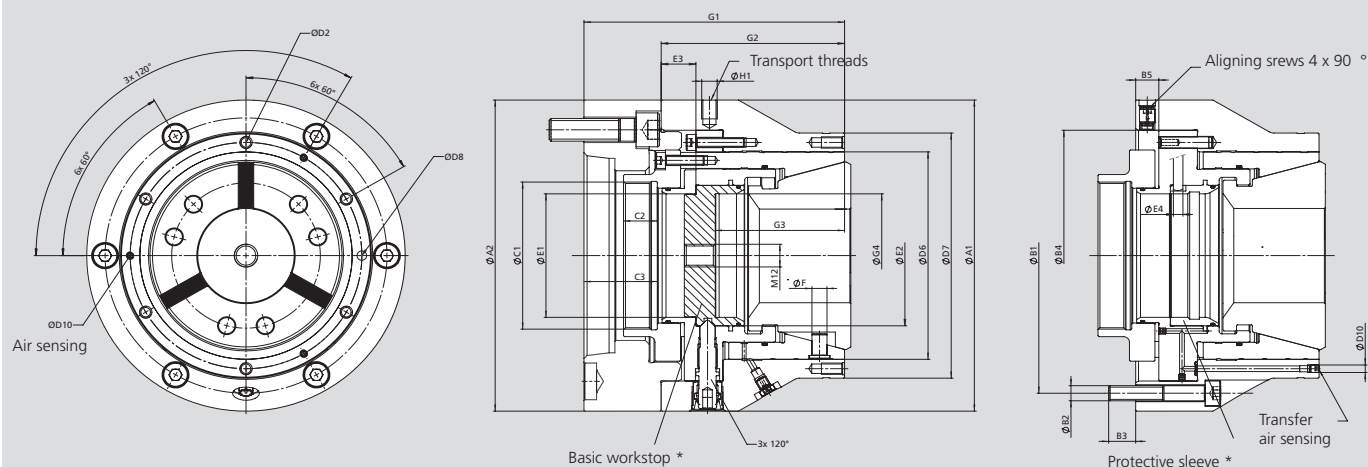


Collet chuck

- Radial fine adjustment
- Use of standard collets
- Air sensing

COMOT-NZ

Flexible collet chuck



* Use only with protective sleeve or workpiece stop

SMW-AUTOBLOK Type		COMOT-NZ-42				COMOT-NZ-65						COMOT-NZ-100					
Id-No. COMOT without flange		9720210000				9720410000						9720610000					
Spindle size**		A05	A06	Z140	Z170	A05	A06	A08	Z140	Z170	Z220	A06	A08	A11	Z170	Z220	
A1	mm	144				165						230					
A2	mm	144	165	150	180	165	165	210	165	180	230	230	230	280	230	235	
B1	mm	126				146						208					
B2	6 x 60°	6 x M8				6 x M8						6 x M10					
B3	mm	15				14						20					
B4	+0.01	110				133						185					
B5	mm	12				12						12					
C1		M54 x 1.5				M78 x 1.5						M115 x 2					
C2	mm	17				17.5						24					
C3	In open position (right end position)	mm	33,5	33,5	19,5	19,5	35,5	35,5	35,5	21,5	21,5	21,5	47	42	44	47	33
D2	Thread / depth / Pitch circle	6 x 60°	M6 / 12 / 98				M6 / 12 / 120						M8 / 18 / 173				
D6		88				110						158					
D7	-0,02 / -0,05	mm	110				130						188				
D8	mm	Ø5 / 10 / 98				Ø5 / 10 / 120						Ø6 / 12 / 173					
D10	Thread / pitch circle	3 x 120°	M4 / 98				M4 / 120						M4 / 173				
E1	mm	43				65.5						101					
E2	H7	mm	49.5				74.5						111.5				
E3	mm	17				18						18					
E4	mm	4				5						5					
F	mm	5.8				7.8						7.8					
G1	mm	123	123	109	109	135	135	135	121	121	121	169	164	166	169	155	
G2	mm	85				95						110					
G3	mm	58				67						97					
G4	mm	42,5				65.5						90					
H1	3 x 120°	M8				M8						M10					

SMW-AUTOBLOK Type		COMOT-NZ-42				COMOT-AZ-65						COMOT-AZ-100				
Axial stroke	mm	4.5				4.5						8				
Loading clearance in Ø*	mm	1				1						1				
Reserve stroke in Ø*	mm	1				1						1,5				
Max. Actuating force	kN	35				45						65				
Max. Clamping force radial	kN	80				105						150				
Max. Speed rpm	1/min	7000				6000						5000				
Weight	kg	7,0				9,1						21,5				

* from nominal collet dia.

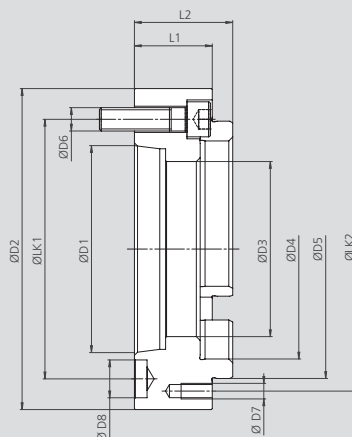
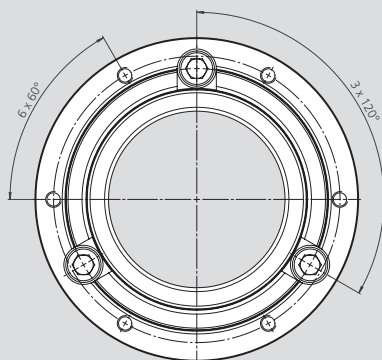
** For complete Id. No's see the page of the flanges (ordering review chuck with flange)

Adapters

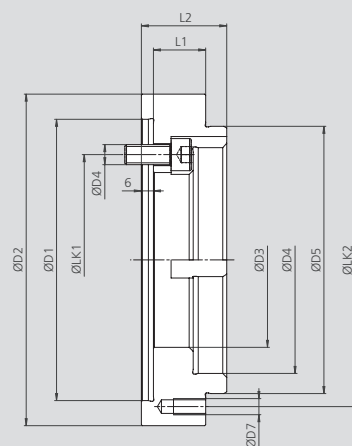
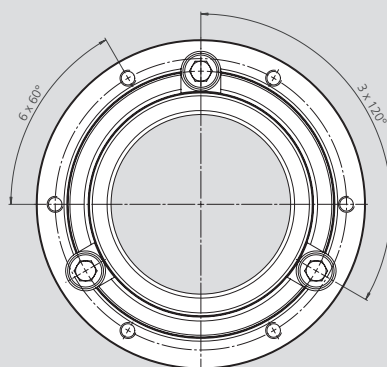
ISO-A for expanding mandrels

- COMOT have cylindrical mounting
- Adapters for DIN 55026 / ISO-A 702-1 / ISO-A 702-1 spindle noses

A



ZA



Subject to technical changes.
For more detailed information please ask our customer service.

Technical data

Id. No.	SMW-AUTOBLOK Type		Spindle head ISO 702-1 (A)	Spindle head ISO 702-4 (ZA)	D1	D2	D3	D4	D5	LK1	D6	LK2	D7	D8	L1	L2
9700220005	COMOT 42	mm	A5	-	82.563	144	65	90	110	104.8	3 x M10	126	6 x M8	16.3	38	48.5
9700220006		mm	A6	-	106.375	165	65	90	110	133.4	3 x M12	126	6 x M8	19.45	38	48.5
9700220140		mm	-	140	140	150	65	90	110	104.8	3 x M10	126	6 x M8	-	24	40.5
9700220170		mm	-	170	170	180	65	90	110	133.4	3 x M12	126	6 x M8	-	24	40.5
9700420005	COMOT 65	mm	A5	-	82.563	165	90	113	133	104.8	3 x M10	146	6 x M8	16.3	40	50.5
9700420006		mm	A6	-	106.375	165	90	113	133	133.4	3 x M12	146	6 x M8	19.45	40	50.5
9700420008		mm	A8	-	139.719	210	90	113	133	171.4	3 x M16	146	6 x M8	24.2	40	50.5
9700420140		mm	-	140	140	165	87	113	133	104.8	3 x M10	146	6 x M8	-	26	42.5
9700420170		mm	-	170	170	180	90	113	133	133.4	3 x M12	146	6 x M8	-	26	42.5
9700420220		mm	-	220	220	230	90	113	133	171.4	3 x M16	146	6 x M8	-	26	42.5
9700620006	COMOT 100	mm	A6	-	106.375	230	130 / 103	163	185	133.4	3 x M12	208	6 x M10	19.45	59	70
9700620008		mm	A8	-	139.719	230	130	163	185	171.4	3 x M16	208	6 x M10	24.2	54	65
9700620011		mm	A11	-	196.869	280	130	163	185	235	3 x M20	208	6 x M10	29.4	56	67
9700620170		mm	-	Z170	170	230	130	163	185	133.4	3 x M12	208	6 x M10	-	59	76
9700620220		mm	-	Z220	220	235	130	163	185	171.4	3 x M16	208	6 x M10	-	45	62

Ordering review (chuck with flange)

SMW-AUTOBLOK Type	COMOT-AZ-42	NZ-42	COMOT-AZ-65	NZ-65	COMOT-AZ-100	NZ-100
Id No. Chuck without flange	9700210000	9720210000	9700410000	9720410000	9700610000	9720610000
A05	9700200005	9720200005	9700400005	9720400005	-	-
A06	9700200006	9720200006	9700400006	9720400006	9700600006	9720600006
A08	-	-	9700400008	9720400008	9700600008	9720600008
A11	-	-	-	-	9700600011	9720600011
Z140	9700200140	9720200140	9700400140	9720400140	-	-
Z170	9700200170	9720200170	9700400170	9720400170	9700600170	9720600170
Z220	-	-	9700400220	9720400220	9700600220	9720600220

Parts included: Collet chuck + Standard flange + mounting bolts

Collets for COMOT 42

Steel collets with axial and radial grooves (△ smooth, △△ radial grooves)
ROUND*

Ø	4 [△]	5 [△]	6 [△]	7 [△]	8 ^{△△}	9 ^{△△}	10 ^{△△}	11	12	13	14	15	16
Id. No.	192173	192174	192175	192176	192177	192178	192179	192180	192181	192182	192183	192184	192185
Ø	17	18	19	20	21	22	23	24	25	26	27	28	29
Id. No.	192186	192187	192188	192189	192190	192191	192192	192193	192194	192195	192196	192197	192198
Ø	30	31	32	33	34	35	36	37	38	39	40	41	42
Id. No.	192199	192200	192201	192202	192203	192204	192205	192206	192207	192208	192209	192210	192211

Collets in 0.5 mm increments on request.

Steel collets with smooth clamping surface
ROUND*

Ø	4	5	6	7	8	9	10	11	12	13	14	15	16
Id. No.	192173	192174	192175	192176	192177	192178	192179	192180	192181	192182	192183	192184	192185
Ø	17	18	19	20	21	22	23	24	25	26	27	28	29
Id. No.	193144	192807	193145	192808	193146	193147	193148	193149	193150	193151	193152	193153	193154
Ø	30	31	32	33	34	35	36	37	38	39	40	41	42
Id. No.	193155	193156	193083	193157	193158	193159	193160	193161	193162	193163	193164	193165	193219

Collets in 0.5 mm increments on request.

SQUARE**

□	7 [△]	8 ^{△△}	9 ^{△△}	10 ^{△△}	11 ^{△△}	12 ^{△△}	13 ^{△△}	14 ^{△△}	15 ^{△△}	16 ^{△△}	17 ^{△△}	18 ^{△△}	19 ^{△△}
Id. No.	192212	192213	192214	192215	192216	192217	192218	192219	192220	192221	192222	192223	192224
□	20 ^{△△}	21 ^{△△}	22 ^{△△}	23 ^{△△}	24 ^{△△}	25 ^{△△}	26 ^{△△}	27 ^{△△}	28 ^{△△}	29 ^{△△}	30 ^{△△}		
Id. No.	192225	192226	192227	192228	192229	192230	192231	192232	192233	192234	192235		

HEXAGONAL**

⬡	7 [△]	8 ^{△△}	9 ^{△△}	10 ^{△△}	11 ^{△△}	12 ^{△△}	13 ^{△△}	14 ^{△△}	15 ^{△△}	16 ^{△△}	17 ^{△△}	18 ^{△△}	19 ^{△△}
Id. No.	192236	192237	192238	192239	192240	192241	192242	192243	192244	192245	192246	192247	192248
⬡	20 ^{△△}	21 ^{△△}	22 ^{△△}	23 ^{△△}	24 ^{△△}	25 ^{△△}	26 ^{△△}	27 ^{△△}	28 ^{△△}	29 ^{△△}	30 ^{△△}	31 ^{△△}	32 ^{△△}
Id. No.	192249	192250	192251	192252	192253	192254	192255	192256	192257	192258	192259	192260	192261

Soft steel collets (pre-bored)
ROUND

Ø	5	15	30										
Id. No.	192262	192263	192264										

Boring ring 42 for soft steel collets

Id. No.	193399												
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* Concentricity similar DIN 6343.

** Concentricity has to be agreed.

Changing unit

Accessories	Size	COMOT 42
	Manual	196842
	Pneumatic	192151

Collets for COMOT 65

Steel collets with axial and radial grooves (Δ smooth, $\Delta\Delta$ radial grooves)

ROUND*

$\emptyset$	5 Δ	6 Δ	7 Δ	8 $\Delta\Delta$	9 $\Delta\Delta$	10 $\Delta\Delta$	11	12	13	14	15	16	17
Id. No.	192265	192266	192267	192268	192269	192270	192271	192272	192273	192274	192275	192276	192277
$\emptyset$	18	19	20	21	22	23	24	25	26	27	28	29	30
Id. No.	192278	192279	192280	192281	192282	192283	192284	192285	192286	192287	192288	192289	192290
$\emptyset$	31	32	33	34	35	36	37	38	39	40	41	42	43
Id. No.	192291	192292	192293	192294	192295	192296	192297	192298	192299	192300	192301	192302	192303
$\emptyset$	44	45	46	47	48	49	50	51	52	53	54	55	56
Id. No.	192304	192305	192306	192307	192308	192309	192310	192311	192312	192313	192314	192315	192316
$\emptyset$	57	58	59	60	61	62	63	64	65				
Id. No.	192317	192318	192319	192320	192321	192322	192323	192324	192325				

Collets in 0.5 mm increments on request.

Steel collets with smooth clamping surface

ROUND*

$\emptyset$	5	6	7	8	9	10	11	12	13	14	15	16	17
Id. No.	192265	192266	192267	193172	193173	192682	193174	192787	193175	193176	193177	193169	193178
$\emptyset$	18	19	20	21	22	23	24	25	26	27	28	29	30
Id. No.	193179	193180	193181	193182	192683	193183	193170	193065	193184	193066	193068	193069	193070
$\emptyset$	31	32	33	34	35	36	37	38	39	40	41	42	43
Id. No.	193185	192684	193186	193187	193188	193189	193190	193191	193192	192685	193193	193194	193171
$\emptyset$	44	45	46	47	48	49	50	51	52	53	54	55	56
Id. No.	193196	193197	193198	193199	193200	193201	193202	193203	193204	193205	193206	193207	193208
$\emptyset$	57	58	59	60	61	62	63	64	65				
Id. No.	193195	193209	193210	193211	193212	193213	193214	193215	193216				

Collets in 0.5 mm increments on request.

SQUARE**

$\square$	8 $\Delta\Delta$	9 $\Delta\Delta$	10 $\Delta\Delta$	11 $\Delta\Delta$	12 $\Delta\Delta$	13 $\Delta\Delta$	14 $\Delta\Delta$	15 $\Delta\Delta$	16 $\Delta\Delta$	17 $\Delta\Delta$	18 $\Delta\Delta$	19 $\Delta\Delta$	20 $\Delta\Delta$
Id. No.	192326	192327	192328	192329	192330	192331	192332	192333	192334	192335	192336	192337	192338
$\square$	21 $\Delta\Delta$	22 $\Delta\Delta$	23 $\Delta\Delta$	24 $\Delta\Delta$	25 $\Delta\Delta$	26 $\Delta\Delta$	27 $\Delta\Delta$	28 $\Delta\Delta$	29 $\Delta\Delta$	30 $\Delta\Delta$	31 $\Delta\Delta$	32 $\Delta\Delta$	33 $\Delta\Delta$
Id. No.	192339	192340	192341	192342	192343	192344	192345	192346	192347	192348	192349	192350	192351
$\square$	34 $\Delta\Delta$	35 $\Delta\Delta$	36 $\Delta\Delta$	37 $\Delta\Delta$	38 $\Delta\Delta$	39 $\Delta\Delta$	40 $\Delta\Delta$	41 $\Delta\Delta$	42 $\Delta\Delta$	43 $\Delta\Delta$	44 $\Delta\Delta$	45 $\Delta\Delta$	46 $\Delta\Delta$
Id. No.	192352	192353	192354	192355	192356	192357	192358	192359	192360	192361	192362	192363	192364

HEXAGONAL**

$\hexagon$	10 $\Delta\Delta$	11 $\Delta\Delta$	12 $\Delta\Delta$	13 $\Delta\Delta$	14 $\Delta\Delta$	15 $\Delta\Delta$	16 $\Delta\Delta$	17 $\Delta\Delta$	18 $\Delta\Delta$	19 $\Delta\Delta$	20 $\Delta\Delta$	21 $\Delta\Delta$	22 $\Delta\Delta$
Id. No.	192365	192366	192367	192368	192369	192370	192371	192372	192373	192374	192375	192376	192377
$\hexagon$	23 $\Delta\Delta$	24 $\Delta\Delta$	25 $\Delta\Delta$	26 $\Delta\Delta$	27 $\Delta\Delta$	28 $\Delta\Delta$	29 $\Delta\Delta$	30 $\Delta\Delta$	31 $\Delta\Delta$	32 $\Delta\Delta$	33 $\Delta\Delta$	34 $\Delta\Delta$	35 $\Delta\Delta$
Id. No.	192378	192379	192380	192381	192382	192383	192384	192385	192386	192387	192388	192389	192390
$\hexagon$	36 $\Delta\Delta$	37 $\Delta\Delta$	38 $\Delta\Delta$	39 $\Delta\Delta$	40 $\Delta\Delta$	41 $\Delta\Delta$	42 $\Delta\Delta$	43 $\Delta\Delta$	44 $\Delta\Delta$	45 $\Delta\Delta$	46 $\Delta\Delta$	47 $\Delta\Delta$	48 $\Delta\Delta$
Id. No.	192391	192392	192393	192394	192395	192396	192397	192398	192399	192400	192401	192402	192403
$\hexagon$	49 $\Delta\Delta$	50 $\Delta\Delta$											
Id. No.	192404	192405											

Soft steel collets (pre-bored)

ROUND

$\emptyset$	8	20	40										
Id. No.	192406	192407	192408										

Boring ring 65 for soft steel collets

Id. No.	193400												
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* Concentricity similar DIN 6343.

** Concentricity has to be agreed.

Changing unit

	Size	COMOT 65
	Accessories	
	Manual	196844
	Pneumatic	192153

Collets for COMOT 100

Steel collets with axial and radial grooves ROUND*

Ø	42	43	44	45	46	47	48	49	50	51	52	53	54
Id. No.	195081	195082	195083	195084	195085	195086	195087	195088	195089	195090	195091	195092	195093
Ø	55	56	57	58	59	60	61	62	63	64	65	66	67
Id. No.	195094	195095	195096	195097	195098	195099	195100	195101	195102	195103	195104	195105	195106
Ø	68	69	70	71	72	73	74	75	76	77	78	79	80
Id. No.	195107	195108	195109	195110	195111	195112	195113	195114	195115	195116	195117	195118	195119
Ø	81	82	83	84	85	86	87	88	89	90	91	92	93
Id. No.	195120	195121	195122	195123	195124	195125	195126	195127	195128	195129	195130	195131	195132
Ø	94	95	96	97	98	99	100						
Id. No.	195133	195134	195135	195136	195137	195138	194742						

Steel collets with smooth clamping surface ROUND*

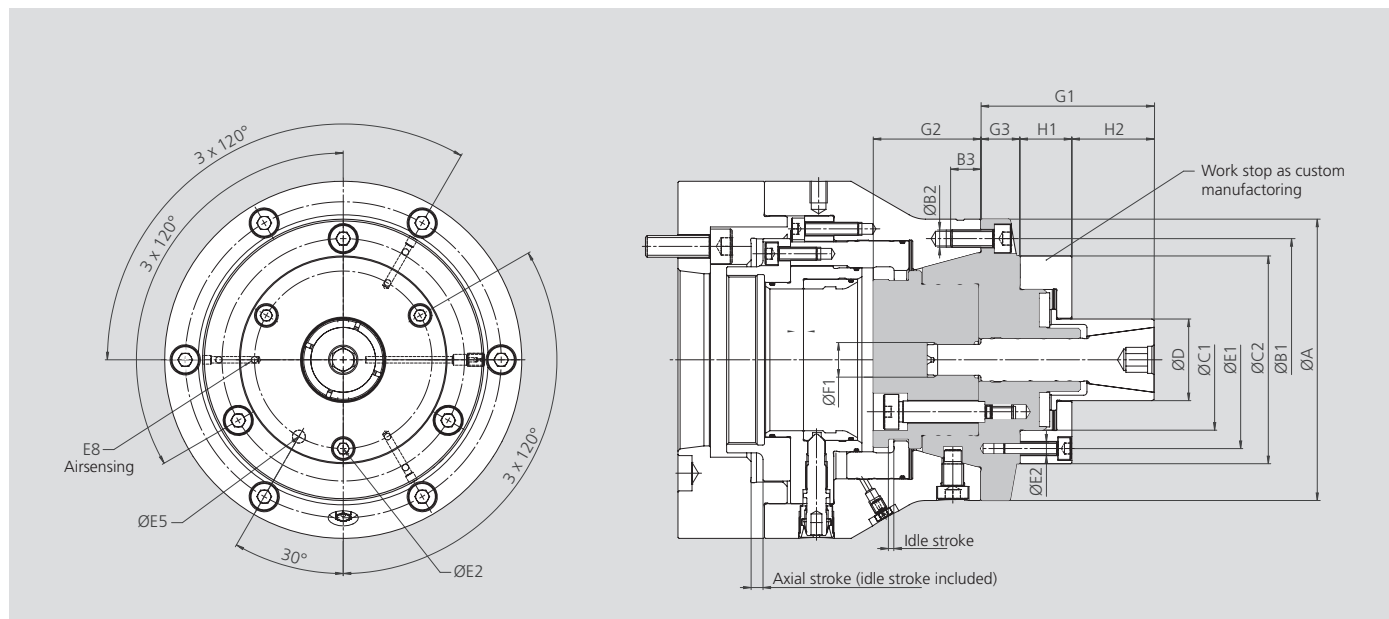
Ø	42	43	44	45	46	47	48	49	50	51	52	53	54
Id. No.	195141	195142	195143	195144	195145	195146	195147	195148	195149	195150	195151	195152	195153
Ø	55	56	57	58	59	60	61	62	63	64	65	66	67
Id. No.	195154	195155	195156	195157	195158	195159	195160	195161	195162	195163	195164	195165	195166
Ø	68	69	70	71	72	73	74	75	76	77	78	79	80
Id. No.	195167	195168	195169	195170	195171	195172	195173	195174	195175	195176	195177	195178	195179
Ø	81	82	83	84	85	86	87	88	89	90	91	92	93
Id. No.	195180	195181	195182	195183	195184	195185	195186	195187	195188	194743	195189	195190	195191
Ø	94	95	96	97	98	99	100						
Id. No.	195192	195193	195194	195195	195196	195197	195198						

* Concentricity similar DIN 6343.

Changing unit

		Size	COMOT 100
	Accessories		
	Pneumatic		194744

Extension sleeve mandrels EMX-F-CO for COMOT-AZ

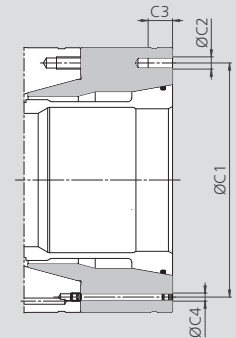
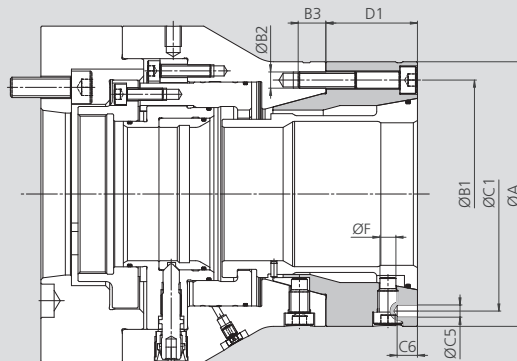
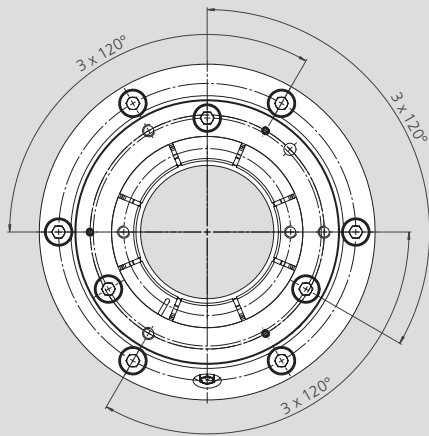


SMW-AUTOBLOK Chuck type		COMOT-AZ-42			COMOT-AZ-65				COMOT-AZ-100				
SMW-AUTOBLOK Mandrel type		EMX-F-1-CO-42	EMX-F-2-CO-42	EMX-F-3-CO-42	EMX-F-1-CO-65	EMX-F-2-CO-65	EMX-F-3-CO-65	EMX-F-4-CO-65	EMX-F1-CO-100	EMX-F2-CO-100	EMX-F3-CO-100	EMX-F4-CO-100	EMX-F5-CO-100
Id. No.		9700251100	9700251200	9700251300	9700451100	9700451200	9700451300	9700451400	9700651100	9700651200	9700651300	9700651400	9700651500
A		110			130				180				
B1		93			112				162				
B2		3 x M8			3 x M8				3 x M8	3 x M8	6 x M8	6 x M8	6 x M8
B3		12,6	12,6	14	12,6	12,6	12,6	12,6	12	12	12	12,6	12,6
C1		42	52	65	42	52	65	88	42	52	65	88	112
C2		110			130				130	130	130	180	180
D Clamping range		20 - 30	28 - 40	35 - 55	20 - 30	28 - 40	35 - 55	50 - 75	20 - 30	28 - 40	35 - 55	50 - 75	70 - 95
E1		65 / 93	75	90	65 / 112	75 / 112	90 / 112	112 / 162	65 / 112	75 / 112	90 / 112	112 / 162	162
E2 3 x 120° / depth / pitch circle E1		M6 / 12			M6 / 12			M8 / M6	M6 / 12	M6 / 12	M6 / 12	M8 / 16	M8 / 16
E4		65	75	90	65	75	90	112	65	75	90	112	135
E5 H7 / depth / pitch circle E4		Ø 6 / 12			Ø 6 / 12				Ø 6 / 12				
E7		65	75	90	65	75	90	115	65	75	90	112	135
E8 3 x 120° pitch circle E7		Ø3			Ø3				Ø3				
F1		M10 x 1	M14 x 1.5	M16 x 1.5	M10 x 1	M14 x 1.5	M16 x 1.5	M16 x 1.5	M10 x 1	M14 x 1.5	M16 x 1.5	M16 x 1.5	M20 x 1.5
G1		61	68	76	61	68	76	93	65	72	80	93	115
G2 Unclamped position		39	39,6	39	50	50,4	49,8	49,8	57	57,6	57	57	55
G3		16			16				20	20	20	16	16
H1 min.		18	18	22	18	18	22	25	18	18	22	25	30
H2 max.		27	34	38	27	34	38	52	27	34	38	52	69

SMW-AUTOBLOK Chuck type		COMOT-AZ-42			COMOT-AZ-65				COMOT-AZ-100				
Axial stroke chuck		5.5			5.5				8				
Idle stroke		2.5	2.7	2.5	2.5	2.7	2.5	2,5	5	5,6	5	5	3
Axial stroke mandrel		3	2,4	3	3	2,4	3	3	3	2,4	3	3	5
Expansion in Ø		0,6	0,6	0,8	0,6	0,6	0,8	0,8	0,6	0,6	0,8	0,8	1,2
Max. Actuating force in kN		12	20	25	12	20	25	25	12	20	25	25	30
Max. Clamping force radial in kN		61	90	113	61	90	113	113	61	90	113	113	159
Max. Speed r.p.m.		5000			4000				3500				

Note: Taper, Sleeve, disc see mandrel EMX-F.
A work stop must be specifically adapted to the workpiece.

Premium adapter PA COMOT

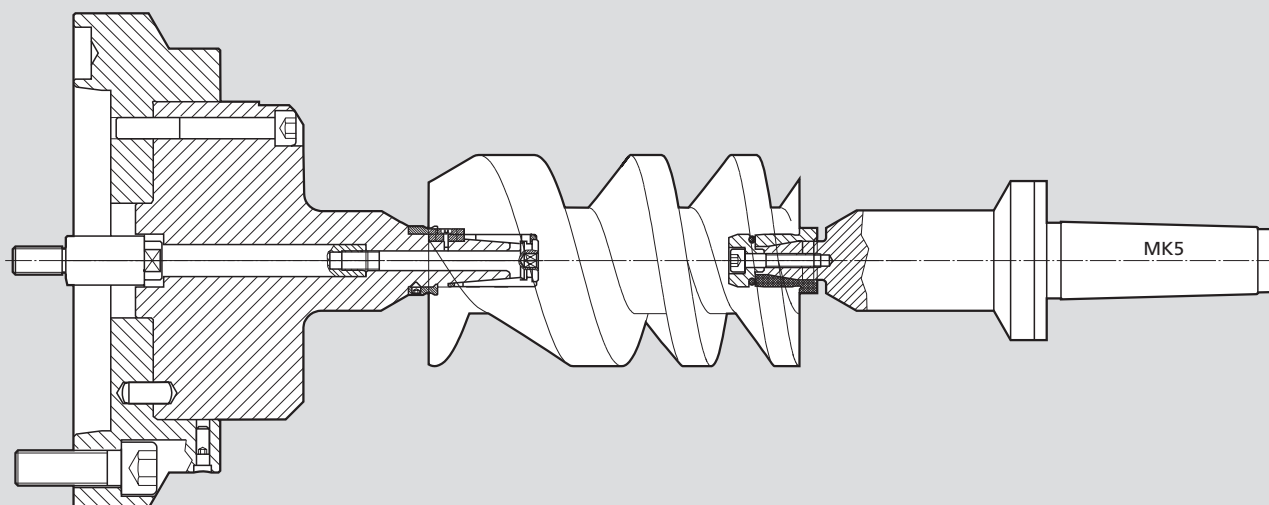


SMW-AUTOBLOK Chuck-Type			COMOT-AZ-65	COMOT-AZ-100
SMW-AUTOBLOK Premium adapter-Type			PA-65	PA-100
Id. No. Premium adapter			9700430000	9700630000
A	-0,02 / -0,05	mm	130	180
B1		mm	112	162
B2	3 x 120°		3 x M8	6 x M8
B3		mm	13.6	13.6
C1		mm	115	162
C2	3 x 120°		3 x M6	6 x M6
C3		mm	12	12
C4	3 x 120°		3 x M4	3 x M4
C5	H7	mm	6	6
C6		mm	10	10
D1		mm	45	55
F		mm	7.8	7.8

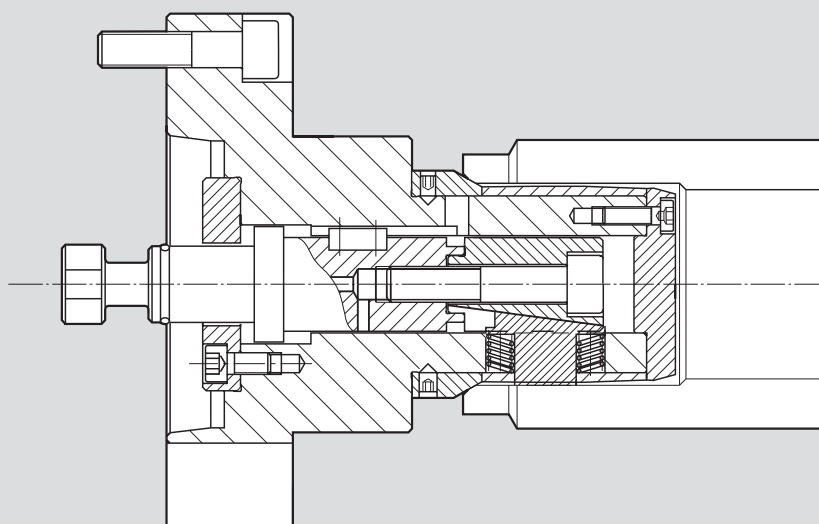
Special mandrels

Besides our standard range, we offer special solutions for your applications

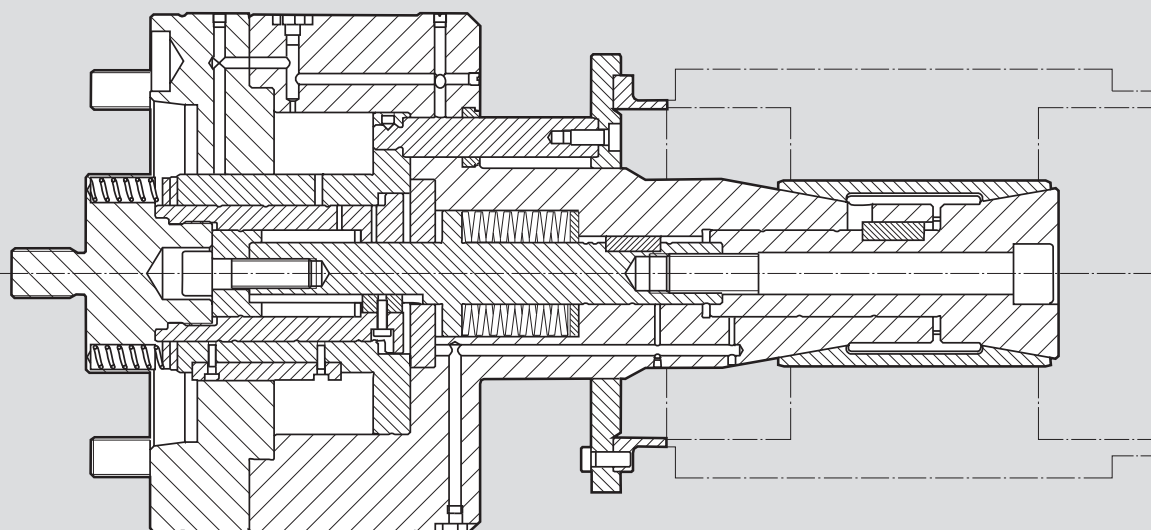
Example: Special expanding mandrel, sleeve design, on spindle and tailstock side for screw rotors



Example: Special mandrel segment design for tubes



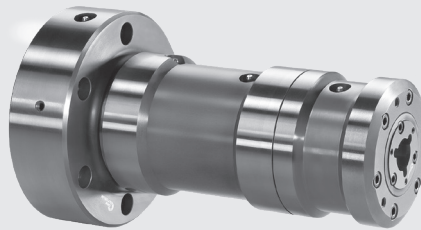
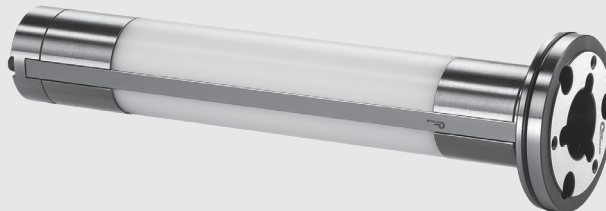
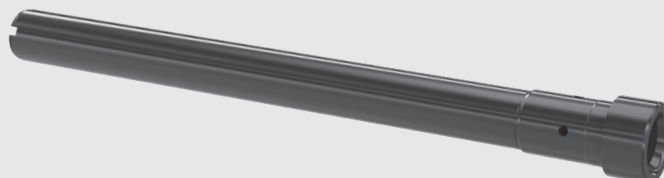
Example: Special expanding mandrel, double taper design with retractable stop, for clamping of stators

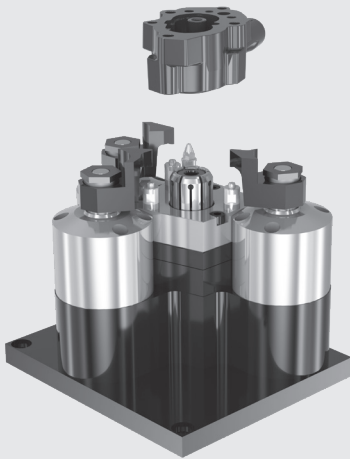


Notes

**Application/customer benefits**

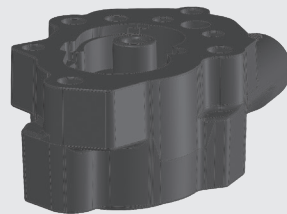
- Power operated sliding jaw collet chuck
- 2 clamping areas
- Spring compensation
- For clamping of shafts on 2 clamping levels
- Preparation for air sensing
- Exchangeable cartridge with adapter sleeve

Sliding jaw collet chuck**Exchangeable cartridge with adapter sleeve****Work piece: Camshaft tube**

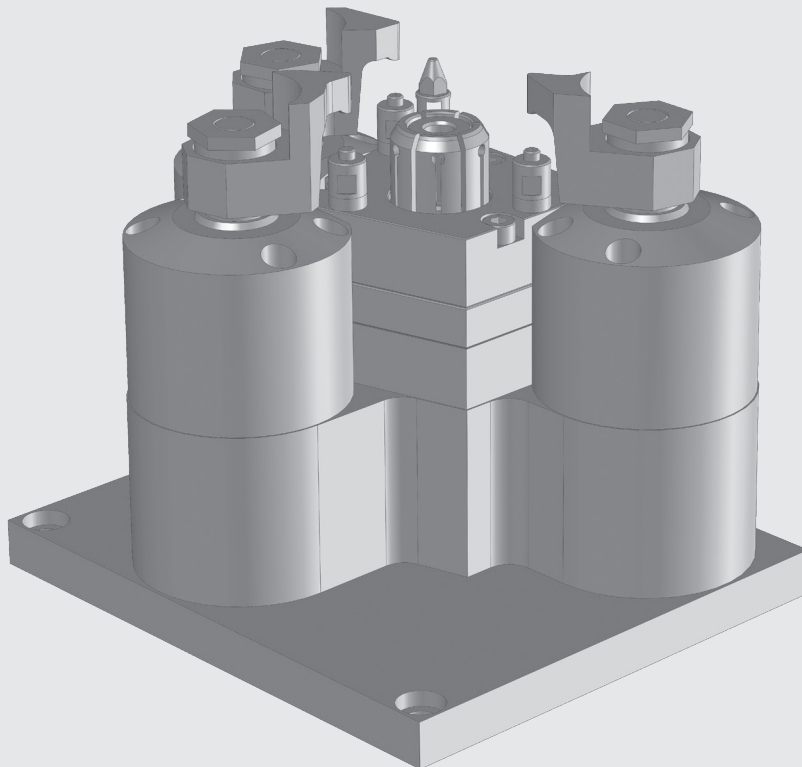


Application/customer benefits

- Hydraulic, power operated, stationary clamping via adapter sleeve in inner diameter (center of the case) without pull down with additional, hydraulic operated rotating collet fingers for pull down against 3-point-surface with position orientation and air sensing
- For drilling and milling at case

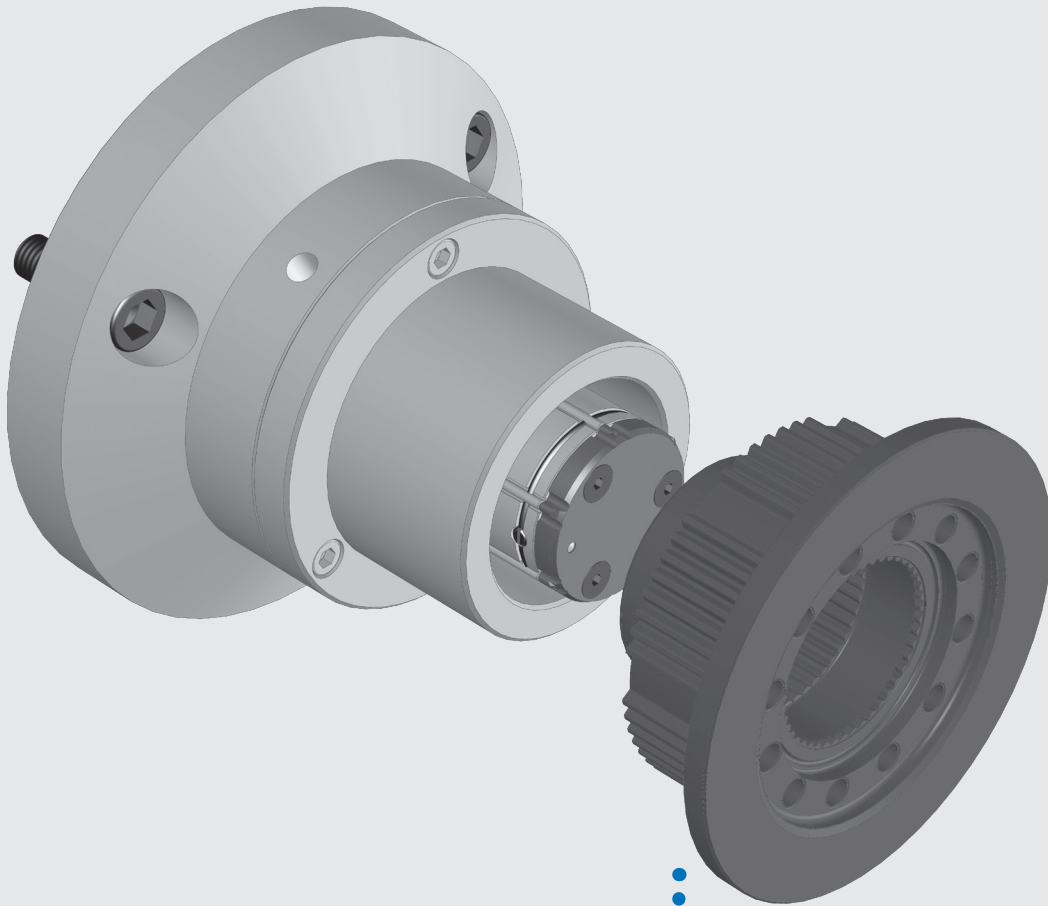
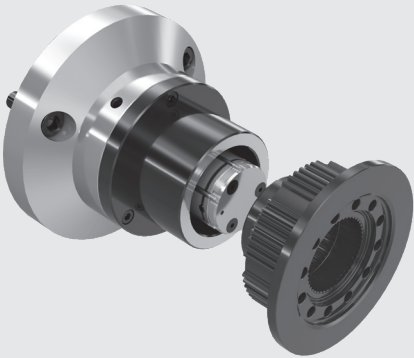


..... **Workpiece:**
Pump housing



Application/customer benefits

- Power operated, centric clamping via sliding jaws in the internal gearing without pull down
- For hard turning of the outer contour of a work piece with very high accuracy and repeatability
- Power operated clamping with profiled jaws
- High repeatability <0,005
- Insensitive to contamination
- Low maintenance

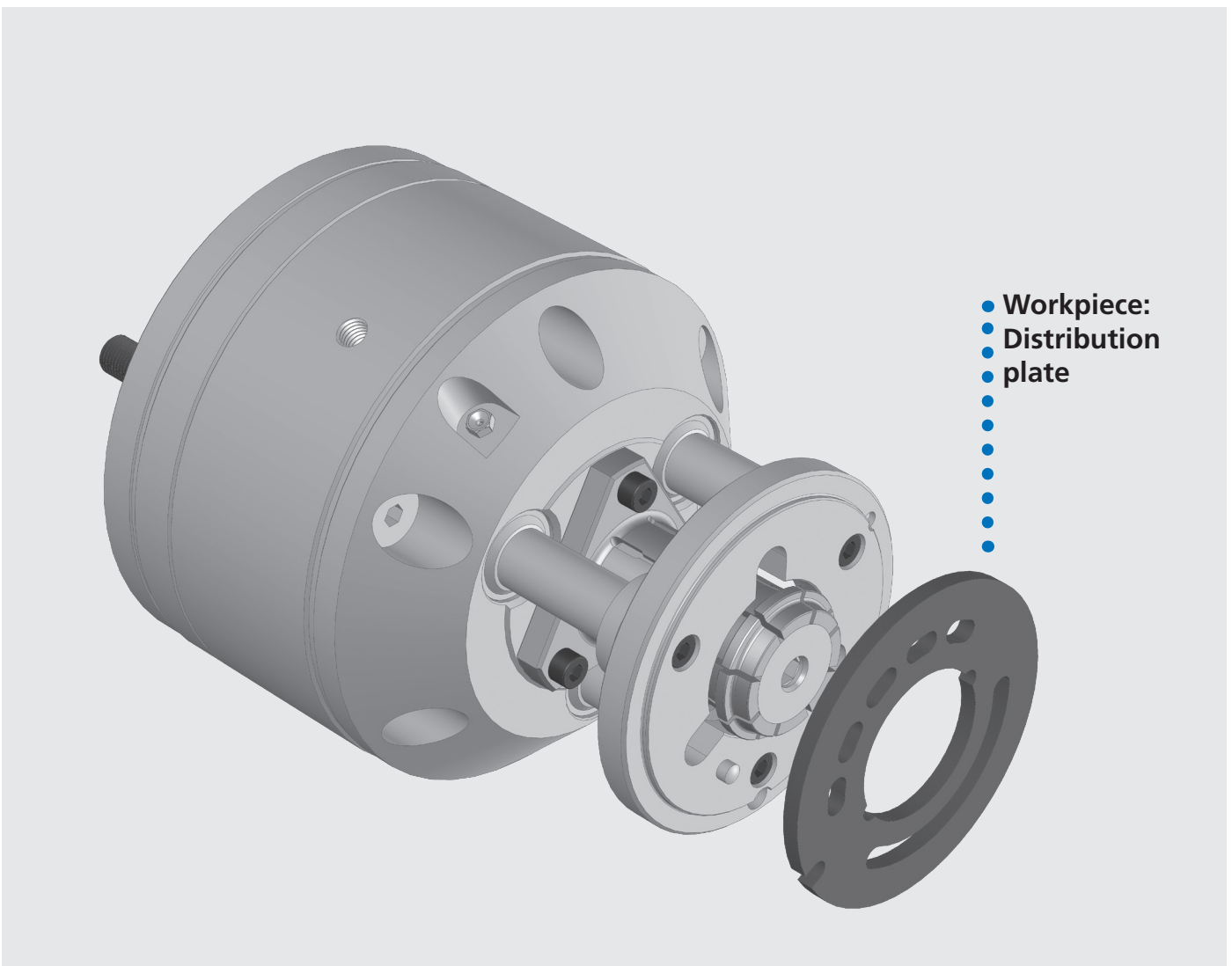


Workpiece:
Hub flange



Application/customer benefits

- Power operated, very short centric clamping via clamping sleeves in inner diameter without pull down with retractable stop and position orientation
- For rough cut turning of the frontside and outer diameter, plan sided drilling operations and following finish of the complete outer contour incl. both plan sides through retractable stop
- Power operated clamping with expanding sleeve
- Without pull down
- With retractable stop
- Two-sided plan processing possible

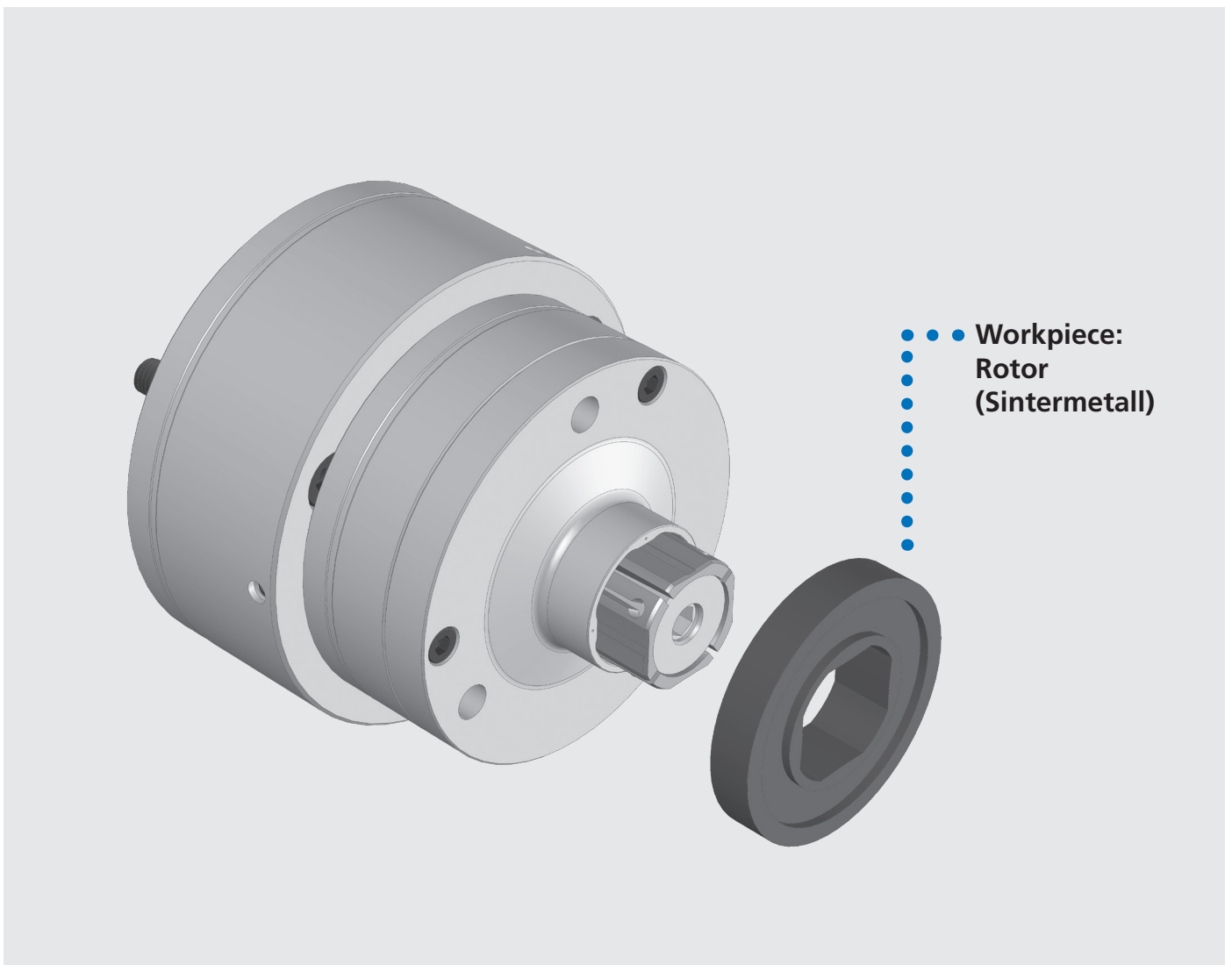


• Workpiece:
• Distribution
• plate

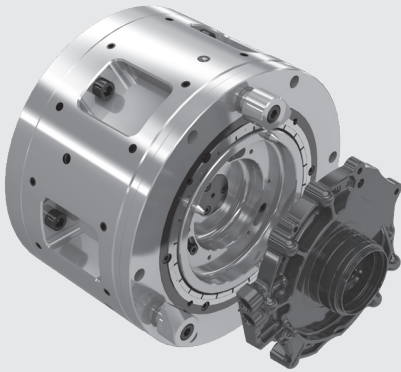


Application/customer benefits

- Power operated, centric clamping via clamping sleeve in a spherical 4-square inner contour with air sensing
- For processing of the outer contour of a Sintermetall workpiece with profiled inner contour
- Power operated clamping with profiled sleeve
- Without axial components
- Two-sided plan processing possible

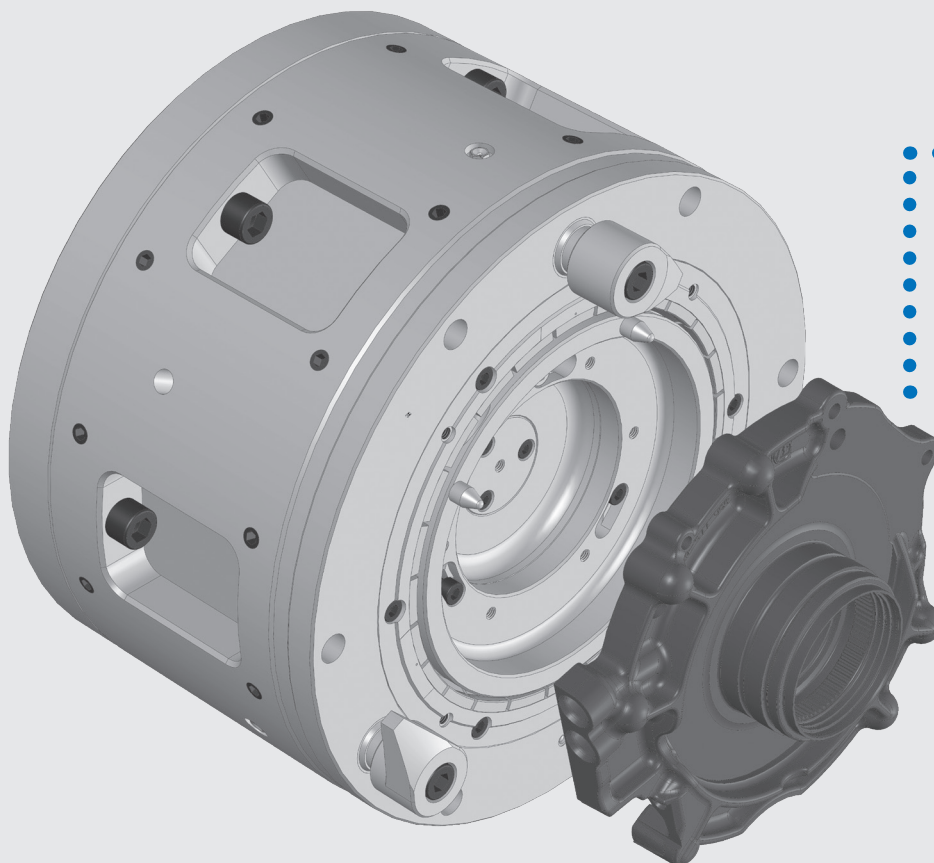


• • • Workpiece:
Rotor
(Sintermetall)



Application/customer benefits

- Pneumatic, power operated centering via collet chuck in outer diameter with pull down with additional, power operated pivot fingers with pull down against the stop, with position orientation, air purge and air sensing
- For central turning of non-symmetrical cases
- Position orientation without deforming the workpiece
- Pneumatic centering with collet chuck
- Power operated plan clamping with plan collet fingers
- Position orientation
- High repeatability
- Huge machining forces
- Insensitive to contamination



• • • Workpiece:
Bearing support



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