

EMX-S

Segment sleeve mandrel
Power operated

Segment sleeve mandrel \varnothing 18 - 105 mm

- Size 1 - 4
- Large expansibility



Application/customer benefits

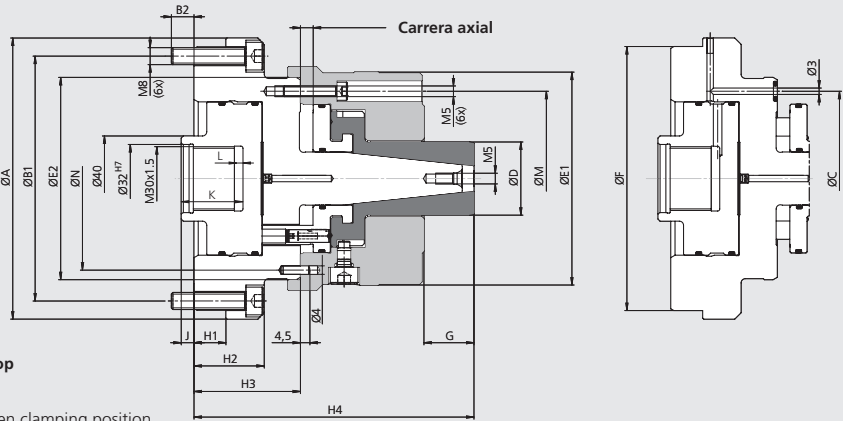
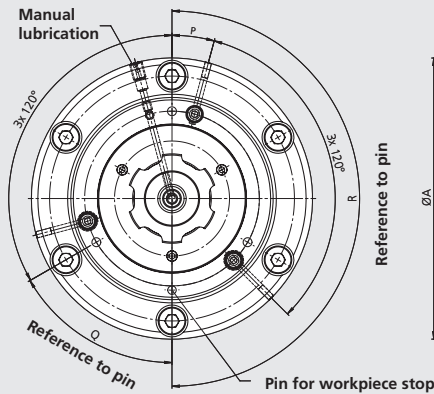
- Ideal for volume production and hard turning / grinding with wear resistant, case hardened and vulcanised clamping sleeves
- Highest accuracy and high torque transmission by means of fixed mandrel body
- Axial pull down by the axial clamping movement of the clamping sleeve = best face run out
- Clamping 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° \varnothing 3,0	A	mm	132			132			132			157		
	B1	mm	115			115			115			137		
	B2	mm	13.6			10.6			12.5			12.5		
f8	C	mm	66			82			100			128		
	E1	mm	82			100			114			143		
Clamping range	E2	mm	80			95			88			115		
	F	mm	124 - 0.01			124 - 0.01			124 - 0.01			147 - 0.01		
Clamping length max.	D	mm	18	>18 - 23	>23 - 35	30 - 55			48 - 80			70 - 105		
	G _{max}	mm	10.5	17.5	23	41			51			57		
Clamping length min.	G _{min}	mm	7			8			8			8		
	H1	mm	15			15			15			14.3		
Ring gap	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		
	N	mm	70			86			104			128		
Weight	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		

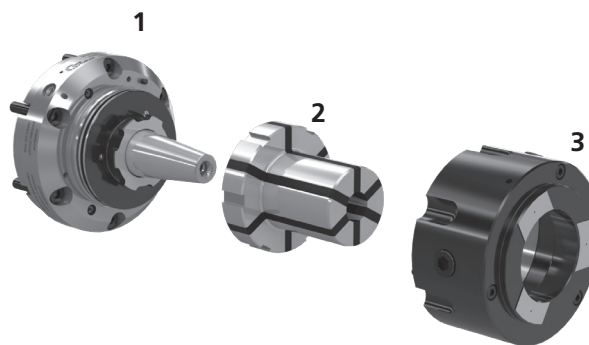
All measurements in unclamped position = Right end position.

- Size 1 - 4
- Large expansibility

Segment sleeve mandrel
Power operated

Technical design

1. Basic body EM-S with spindle adapter
2. Segment sleeve mandrel (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**

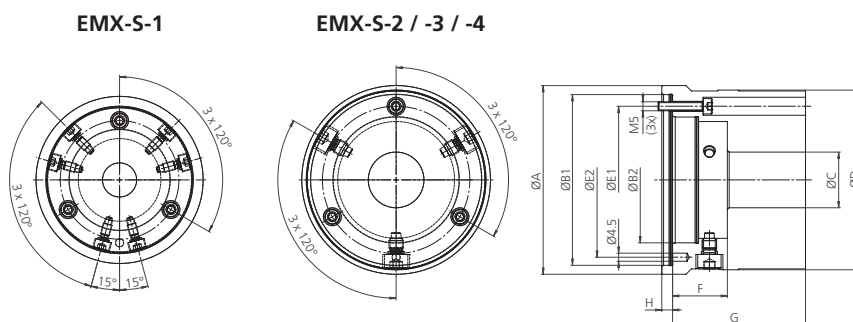
Ø	70	71	72	73	74	75	76	77	78	79	80	81	82
Id. No.	9604307000	9604307100	9604307200	9604307300	9604307400	9604307500	9604307600	9604307700	9604307800	9604307900	9604308000	9604308100	9604308200
Ø	83	84	85	86	87	88	89	90	91	92	93	94	95
Id. No.	9604308300	9604308400	9604308500	9604308600	9604308700	9604308800	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	-	-



* Soft, finish machined on mandrel side, pre machined on workpiece side.

** Soft, with stock material (0.3 mm) for case hardening and grinding

Ordering review set articles (1-circuit-AS basic mandrel + adapter)

Type	EMX-S-1	EMX-S-2	EMX-S-3	EMX-S-4
A05	9601000005	9602000005	9603000005	9604000005
A06	9601000006	9602000006	9603000006	9604000006
A08	9601000008	9602000008	9603000008	9604000008
Z140	9601000140	9602000140	9603000140	9604000140
Z170	9601000170	9602000170	9603000170	9604000170

Parts included: Basic mandrel + standard flange + mounting bolts

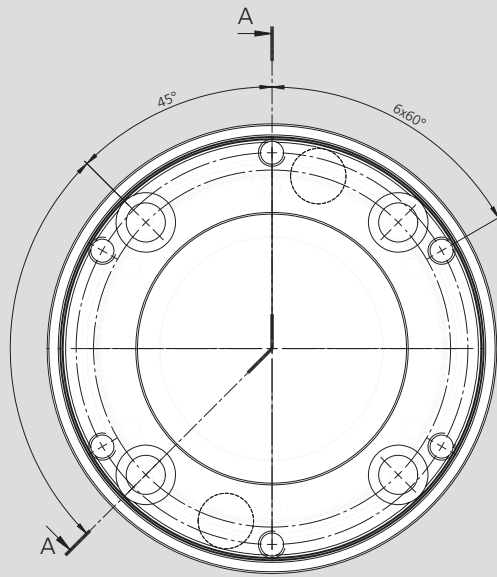
For mandrels with 2-circuit-AS use Id. No. on page 310 for basic mandrel and code for adapters on page 312!

Adapters

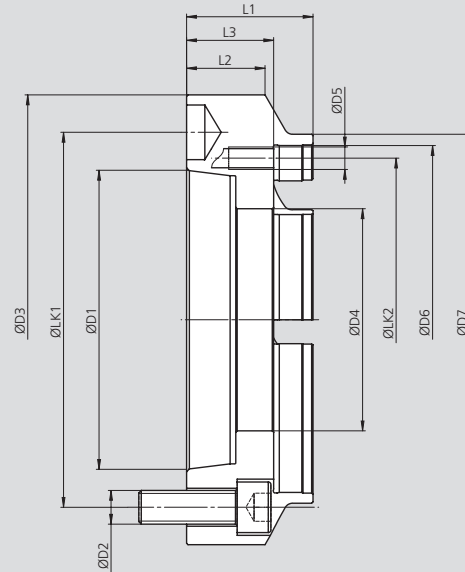
ISO-A for expanding mandrels

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

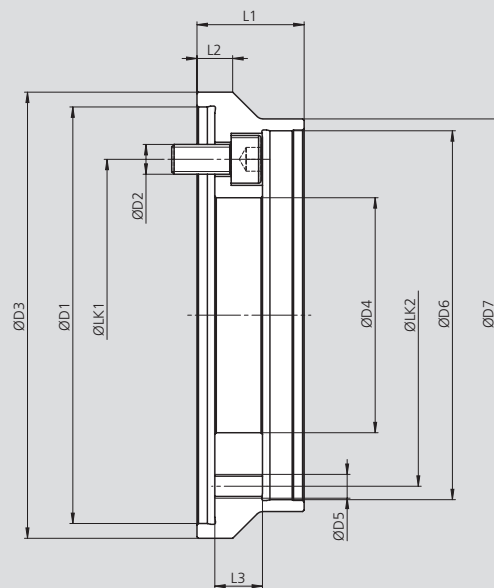
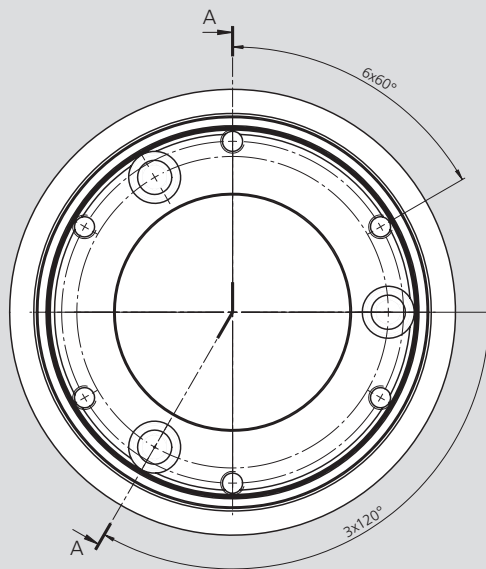
A



SECTIONE A-A



ZA



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

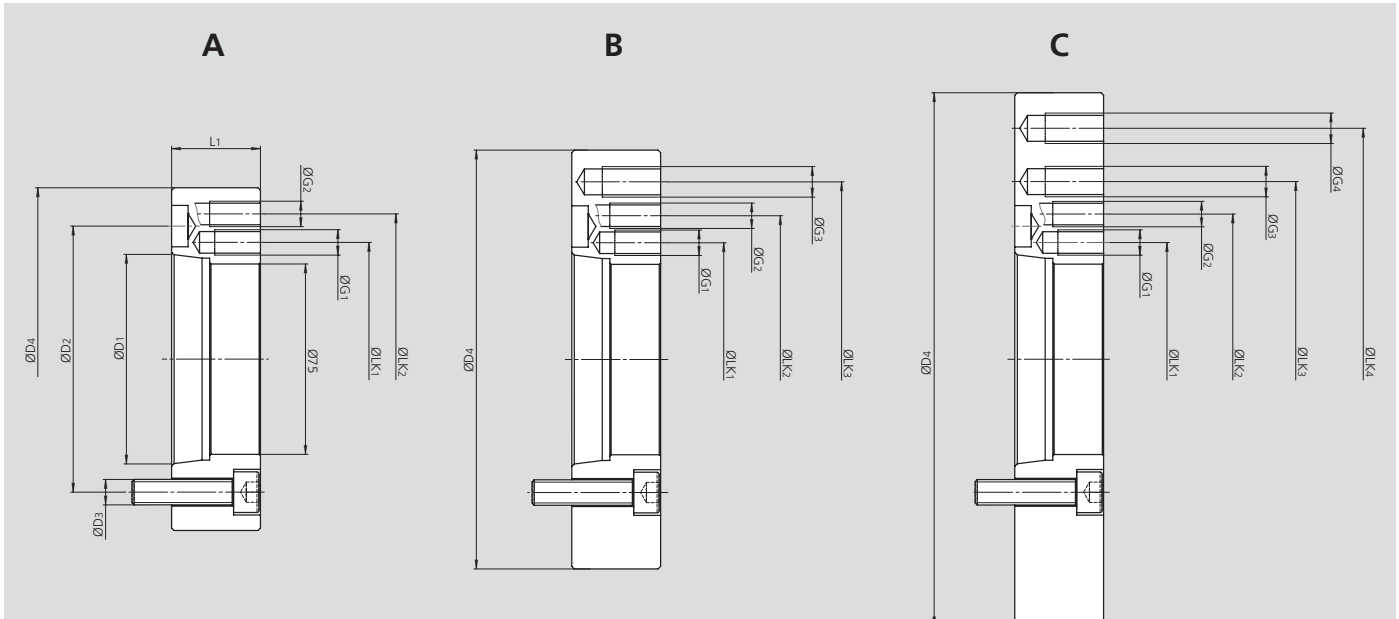
Technical data

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	-
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

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.	mm	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