

# EM-B

Expanding mandrel  
Manual or power operated

## Expanding mandrels $\varnothing$ 16 - 129.5 mm

- size 0 - 4
- large expansibility



### Application/customer benefits

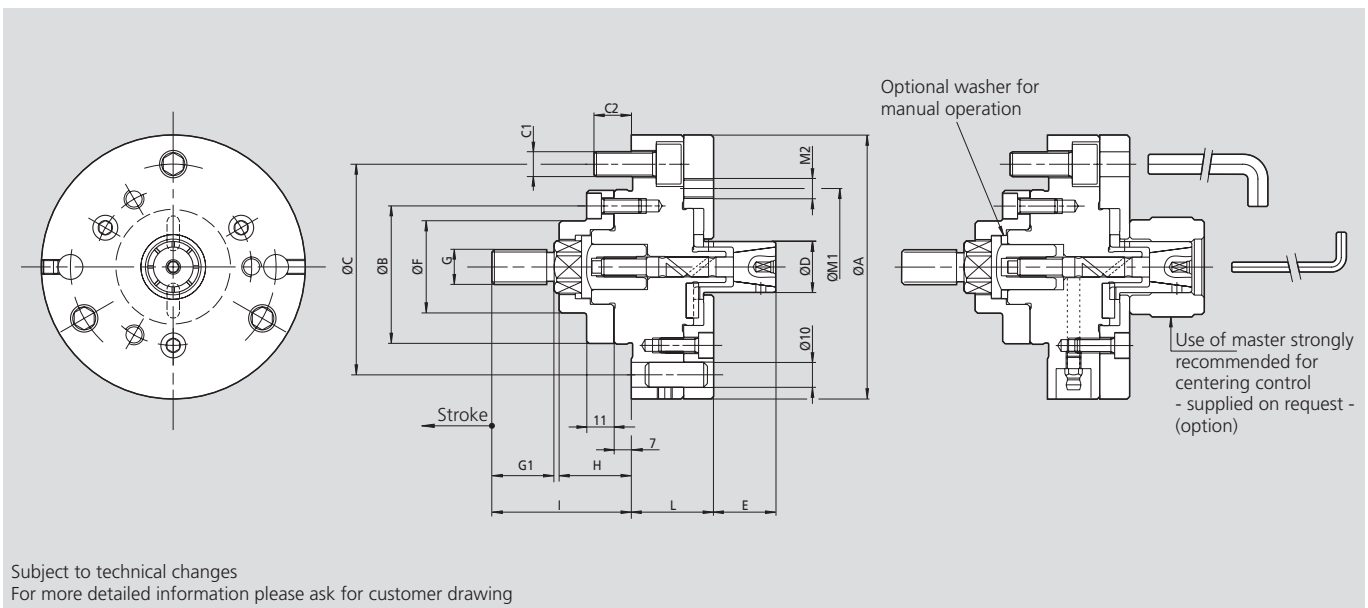
- For turning, milling, grinding and gear cutting operations
- High flexibility by means of modular system
- High torque transmission and concentricity
- No axial movement of clamping sleeve during operation
- Clamping of very short workpieces on the front section of the sleeve possible

### 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

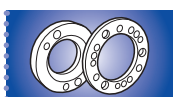
### Standard equipment

Basic mandrel with draw bolt for power operation  
Mounting bolts



Subject to technical changes  
For more detailed information please ask for customer drawing

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	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	see tables	see tables	see tables	see tables	see tables
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
Axial stroke	mm	2.5	2.5	2.5	5	6.5
Sleeve expansion on $\varnothing$	mm	0.5	0.5	0.5	1	1.5
Clamping range $\varnothing$	mm	16-25.5	20-40.5	35-60.5	55-81	80-131
Max. axial force	kN	7	12	20	20	25
<b>Recommended</b>	<b>CSN</b>	<b>150</b>	<b>200</b>	<b>200</b>	<b>200</b>	<b>250</b>
<b>actuating cylinders</b>	<b>SIN-S</b>	<b>70</b>	<b>70</b>	<b>85</b>	<b>85</b>	<b>100</b>

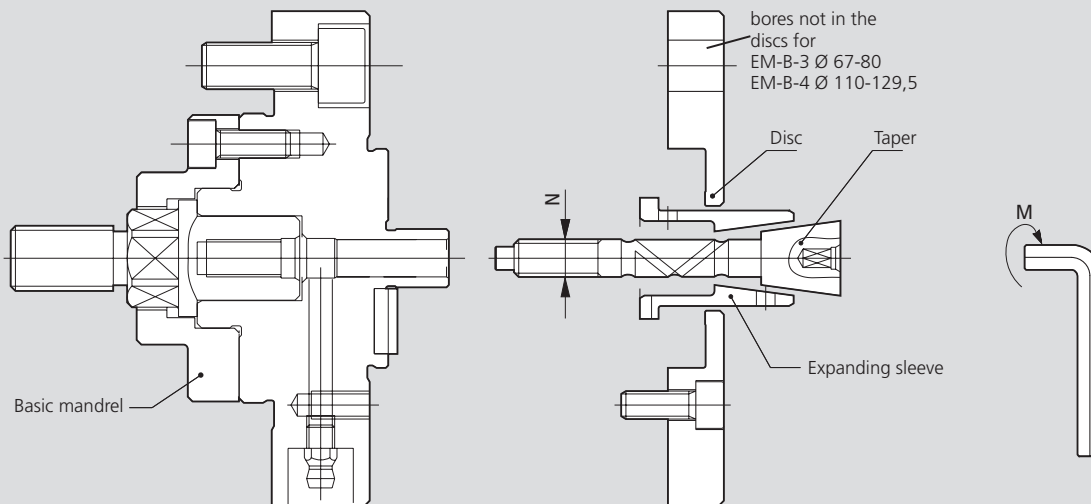


# Expanding mandrels Ø 16 - 129.5 mm

# EM-B

- size 0 - 4
- large expansibility

Expanding mandrel  
Manual or power operated



EM-B	N	M(N.m)
0	M8	23
1	M10	45
2	M14	125
3	M14	125
4	M18	250

Subject to technical changes  
For more detailed information please ask for customer drawing

EM-B-0	EM-B-1	EM-B-2	EM-B-3	EM-B-4
Basic mandrel Expanding sleeve	Basic mandrel Expanding sleeve	Basic mandrel Expanding sleeve	Basic mandrel Expanding sleeve	Basic mandrel Expanding sleeve
68100021 Ø D16-Ø D25	68101021 Ø D20-Ø D40	68102021 Ø D35-Ø D60	68103021 Ø D55-Ø D80	68104021 Ø D80-Ø D129.5

<b>Taper</b> 68020120	<b>Taper</b> 68021120	<b>Taper</b> 68022120	<b>Taper</b> 68023120	<b>Taper</b> 68024120
<b>Disc</b> 68040121 68040221 68040321	<b>Disc</b> 68041121 68041221 68041321	<b>Disc</b> 68042121 68042221	<b>Disc</b> 68043121 68043221	<b>Disc</b> 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	D21.5 68210215	D36.5 68220365	D58 68230580	D84.5 68240845
D18 68200180	D22 68210220	D37 68220370	D59 68230590	D86 68240860
D18.5 68200185	D22.5 68210225	D37.5 68220375	D60 68230600	D87.5 68240875
D19 68200190	D23 68210230	D38 68220380		D89 68240890
D19.5 68200195	D23.5 68210235	D38.5 68220385	<b>Taper</b> 68023220	D90.5 68240905
D20 68200200	D24 68210240	D39 68220390	<b>Disc</b> 68043321 68043421 68043521	
	D24.5 68210245	D39.5 68220395	D61 68230610	<b>Taper</b> 68024220
	D25 68210250	D40 68220400	D62 68230620	<b>Disc</b> 68044321 68044421
<b>Taper</b> 68020220	<b>Taper</b> 68021220	<b>Taper</b> 68022220	D63 68230630	D92 68240920
<b>Disc</b> 68040421 68040521 68040621	<b>Disc</b> 68041421 68041521 68041621	<b>Disc</b> 68042321 68042421 68042521	D64 68230640	D93.5 68240935
D20.5 68200205	D25 68210255	D40.5 68220405	D65 68230650	D95 68240950
D21 68200210	D26 68210260	D41 68220410	D66 68230660	D96.5 68240965
D21.5 68200215	D26.5 68210265	D41.5 68220415	D67 68230670	D98 68240980
D22 68200220	D27 68210270	D42 68220420	D68 68230680	D99.5 68240995
D22.5 68200225	D27.5 68210275	D42.5 68220425	D69 68230690	D101 68241010
D23 68200230	D28 68210280	D43 68220430	D70 68230700	D102.5 68241025
D23.5 68200235	D28.5 68210285	D43.5 68220435	<b>Taper</b> 68023320	<b>Taper</b> 68024320
D24 68200240	D29 68210290	D44 68220440	<b>Disc</b> 68043621 68043721 68043821	<b>Disc</b> 68044521 68044621
D24.5 68200245	D29.5 68210295	D44.5 68220445	D71 68230710	D104 68241040
D25 68200250	D30 68210300	D45 68220450	D72 68230720	D105.5 68241055
	D30.5 68210305	D45.5 68220455	D73 68230730	D107 68241070
	D31 68210310	D46 68220460	D74 68230740	D108.5 68241085
	D31.5 68210315	D46.5 68220465	D75 68230750	D110 68241100
	D32 68210320	D47 68220470	D76 68230760	D111.5 68241115
	D32.5 68210325	D47.5 68220475	D77 68230770	D113 68241130
	D33 68210330	D48 68220480	D78 68230780	D114.5 68241145
	D33.5 68210335	D48.5 68220485	D79 68230790	
	D34 68210340	D49 68220490	D80 68230800	<b>Taper</b> 68024420
	D34.5 68210345	D49.5 68220495		<b>Disc</b> 68044721 68044821
	D35 68210350	D50 68220500		D116 68241160
				D117.5 68241175
				D119 68241190
				D120.5 68241205
				D122 68241220
				D123.5 68241235
				D125 68241250
				D126.5 68241265
				D128 68241280
				D129.5 68241295
<b>Taper</b> 68021320	<b>Taper</b> 68022320			
<b>Disc</b> 68041721 68041821	<b>Disc</b> 68042621 68042721 68042821			
D35.5 68210355	D50.5 68220505			
D36 68210360	D51 68220510			
D36.5 68210365	D51.5 68220515			
D37 68210370	D52 68220520			
D37.5 68210375	D52.5 68220525			
D38 68210380	D53 68220530			
D38.5 68210385	D53.5 68220535			
D39 68210390	D54 68220540			
D39.5 68210395	D54.5 68220545			
D40 68210400	D55 68220550			
	D55.5 68220555			
	D56 68220560			
	D56.5 68220565			
	D57 68220570			
	D57.5 68220575			
	D58 68220580			
	D58.5 68220585			
	D59 68220590			
	D59.5 68220595			
	D60 68220600			

### Ordering example:

Component ID = Ø 30

Basic mandrel EM-B-1

Expanding sleeve OD = Ø 30

Taper

Disc

Id. No. 68101021

Id. No. 68210300

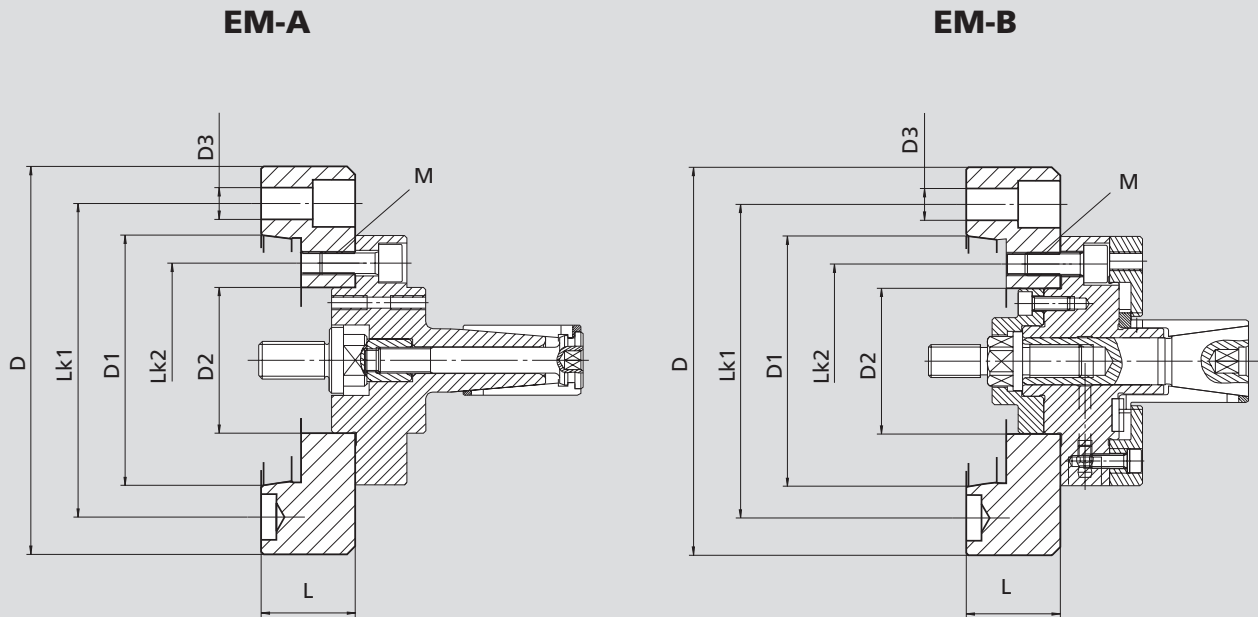
Id. No. 68021220

Id. No. 68041521

# Adapters

ISO-A for  
expanding mandrels

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



Subject to technical changes  
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## Technical data

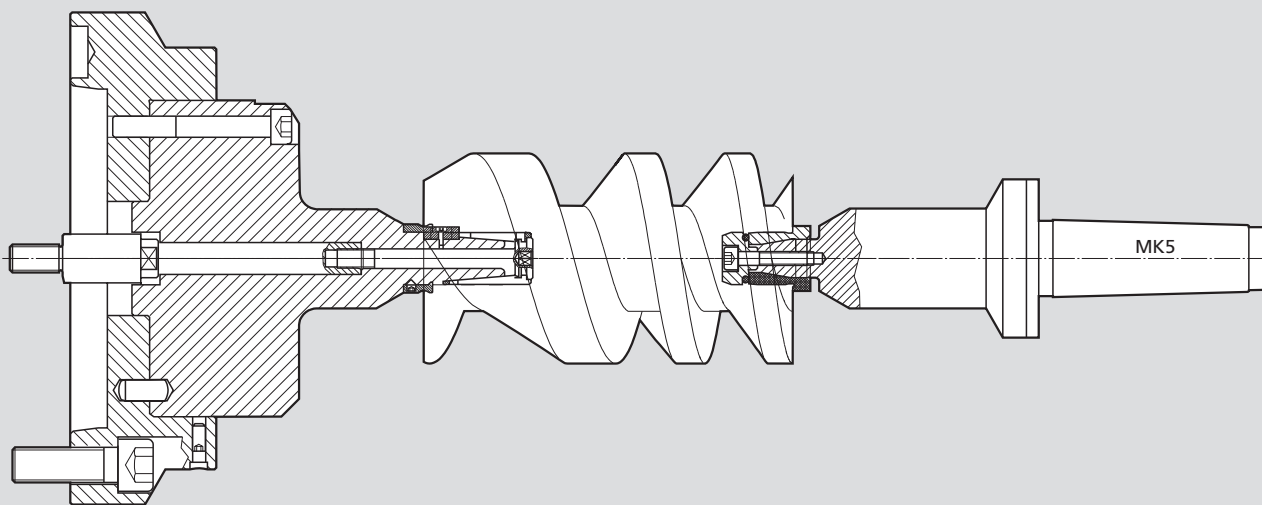
Adapter flange Id. No.		Spindle nose ISO	D	D1	D2	D3	LK1	LK2	L	M
24150100	mm	A5	127	82.563	62 <sup>H6</sup>	12	104.8	82.6	40	3 x M10
24150400	mm	A5	135	82.563	86 <sup>H6</sup>	12	104.8	104.8	40	3 x M10
24160100	mm	A6	165	106.375	62 <sup>H6</sup>	13.5	133.4	82.6	40	3 x M10
24160400	mm	A6	165	106.375	86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

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

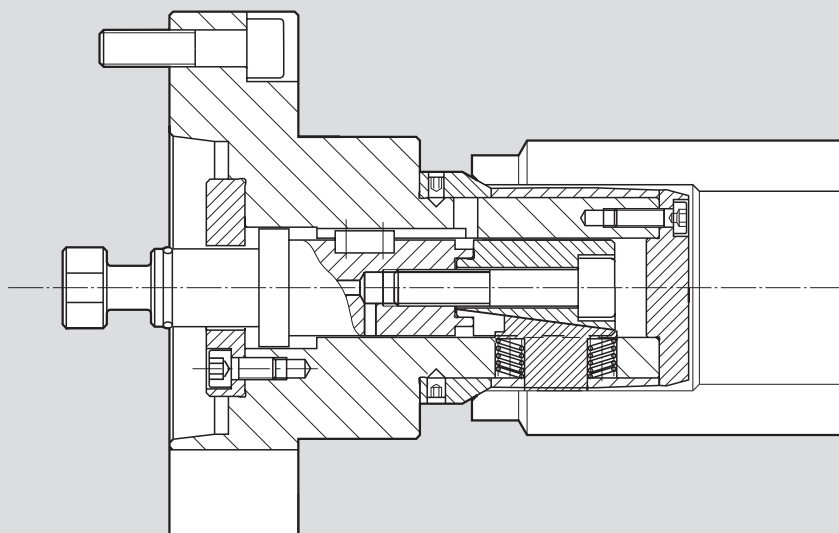
Besides our standard range, we offer special solutions for your applications

## Special mandrels

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

