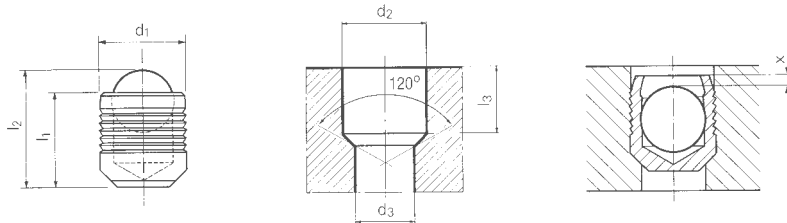


MB 600 Series Sealing Plugs

KOENIG
expander

231

HYDRAULICS



- **Sleeve**
Stainless Steel
DIN 1.4305, AISI 303
- **Hardness**
HB = 220
- **Ball**
Stainless Steel
DIN 1.4301, AISI 304

installation instructions must be followed. Anchorage between sleeve and base material is achieved when the sleeve is a minimum of HB=30 greater than the base material. If the hardness difference is less, hole roughness of 10 to 30 µm is needed to achieve indicated working pressures.

Security Range

The security range (the difference between working pressure and Test B pressure) allows for uncontrollable variations. For instance, dynamic loading at 1 million cycles and a frequency of 3-4Hz has shown that burst pressure Test A and Test B pressure are reduced about 20% after this point.



Sleeve and Ball clear passivated per MIL S 5002 Aerospace quality.
Equivalent working pressure capability can be obtained when using base materials with similar mechanical characteristics. However, the appropriate

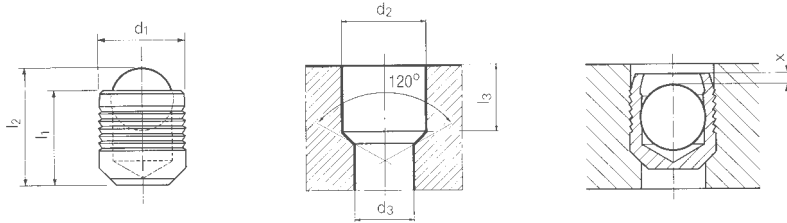
Type	Dimensions in mm						
	d ₁	l ₁	l ₂	d ₂	d ₃	l ₃	x
MB 600-030	3.0	3.6	4.6	3.0	2.2	3.4	0.4
MB 600-040	4.0	4.0	5.2	4.0	3.3	3.8	0.2
MB 600-050	5.0	5.5	7.0	5.0	4.3	5.3	0.4
MB 600-060	6.0	6.5	8.6	6.0	5.3	6.3	0.4
MB 600-070	7.0	7.5	10.1	7.0	6.4	7.3	0.4
MB 600-080	8.0	8.5	11.7	8.0	7.4	8.3	0.3
MB 600-090	9.0	10.0	13.7	9.0	8.4	9.8	0.4
MB 600-100	10.0	11.0	15.2	10.0	9.4	10.8	0.4
MB 600-120	12.0	13.0	18.0	12.0	10.6	12.8	0.4
MB 600-140	14.0	15.0	20.8	14.0	12.7	14.5	0.4

1 – Proof Pressure Test B 2 – Maximum allowable working pressure = nominal pressure

Pressure Performance

	Base Material / Minimum Hardness HB						
	High Strength Stl ETG-100 AISI 1144	Free Machining Case Hard Stl. C15 Pb	Cast Iron GG-25 DIN 1691	Ductile Cast Iron GGG-50 DIN 1693 DIN 1.0403	Aluminium Alloy Al Cu Mg 2 DIN 3.1354 AA2024	Aluminium Alloy Al Mg Si Pb DIN 3.0615 AA6262	Cast Al Alloy G-Al Si 7 Mg 3.2371 AA356-T6
	280	180	160	170	120	90	80
d1 mm	P Test B ¹ Bar	P Test B ¹ Bar		PW ² Bar	PW ² Bar	P Test B ¹ Bar	PW ² Bar
3-10	1400	1400		450	450	1200	380
12-14	1000	1000		350	350	900	280

MB 600 Series Inch Version Sealing Plugs



- **Sleeve**
Stainless Steel
DIN 1.4305, AISI 303
- **Hardness**
HB = 220
- **Ball**
Stainless Steel
DIN 1.4034, AISI 420 (.093" Dia.)
DIN 1.4301, AISI 304 (.125" to .281" Dia.)

Sleeve and ball clear passivated to MIL S 5002 Aerospace quality
Equivalent working pressure capability can be obtained when using base materials with similar

mechanical characteristics. However, the appropriate installation instructions must be followed. Anchorage between sleeve and base material is achieved when the sleeve is a minimum of HB=30 greater than the base material. If the hardness difference is less, hole roughness of 10 to 30 µm is needed to achieve indicated working pressures.

Security Range

The security range (the difference between working pressure and Test B pressure) allows for uncontrollable variations. For instance, dynamic loading at 1 million cycles and a frequency of 3-4Hz has shown that burst pressure Test A and Test B pressure are reduced about 20% after this point.



Type	Dimensions in inches						
	d ₁	l ₁	l ₂	d ₂	d ₃ max.	l ₃ min.	x
MB 600-093 A	.093 (3/32")	.100	.120	.0937 ^{+0.002} ₀	.062	.095	
MB 600-125 A	.125 (1/8")	.138	.170	.1250 ^{+0.004} ₀	.093	.125	
MB 600-156 A	.156 (5/32")	.150	.195	.1562 ^{+0.004} ₀	.125	.130	.0
MB 600-187 A	.187 (3/16")	.193	.260	.1875 ^{+0.004} ₀	.156	.152	to max
MB 600-218 A	.218 (7/32")	.225	.300	.2187 ^{+0.004} ₀	.187	.187	.012
MB 600-250 A	.250 (1/4")	.260	.350	.2500 ^{+0.004} ₀	.218	.212	
MB 600-281 A	.281 (9/32")	.285	.380	.2812 ^{+0.004} ₀	.250	.250	

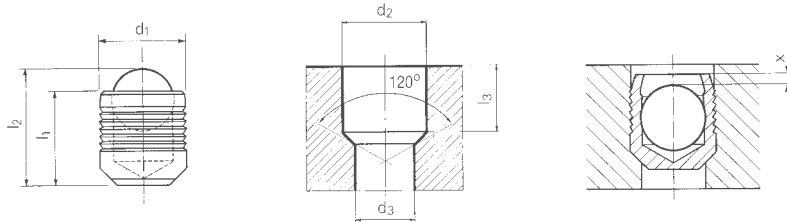
1 - Proof Pressure Test B 2 - Maximum allowable working pressure = nominal pressure

Pressure Performance

	Base Material / Minimum Hardness HB						
	High Strength Stl	Free Machining	Cast Iron	Ductile Cast Iron	Aluminium Alloy	Aluminium Alloy	Cast Al Alloy
	ETG-100 AISI 1144	Case Hard Stl. C15 Pb	GG-25 DIN 1691 DIN 1.0403	GGG-50 DIN 1693	Al Cu Mg 2 DIN 3.1354 AA2024	Al Mg Si Pb DIN 3.0615 AA6262	G-Al Si 7 Mg 3.2371 AA356-T6
	280	180	160	170	120	90	80
d1 mm	P Test B ¹ Bar	P Test B ¹ Bar		PW ² Bar	PW ² Bar	P Test B ¹ Bar	PW ² Bar
3/32 -	1400	450		450	450	1200	380
9/32	1400	450		450	450	1200	380

MB 700 Series Sealing Plug

KOENIG
expander



- **Sleeve**
Stainless Steel
DIN 1.4305, AISI 303
- **Hardness**
HB = 220
- **Ball**
Bearing Steel. Heat treated

Equivalent working pressure capability can be obtained when using base materials with similar mechanical characteristics. However, the appropriate installation instructions must be followed.

Anchorage between sleeve and base material is achieved when the sleeve is a minimum of HB=30 greater than the base material. If the hardness difference is less, hole roughness of 10 to 30 µm is needed to achieve indicated working pressures.

Security Range

The security range (the difference between working pressure and Test B pressure) allows for uncontrollable variations. For instance, dynamic loading at 1 million cycles and a frequency of 3-4Hz has shown that burst pressure Test A and Test B pressure are reduced about 20% after this point.



Type	Dimensions in mm							
	d ₁	l ₁	l ₂	d ₂ + 0.1	d ₃ max.	l ₃ min.	x ±0.2	
MB 700-030	3.0	3.6	4.6	3.0	2.2	3.4	0.4	
MB 700-040	4.0	4.0	5.2	4.0	3.3	3.8	0.2	
MB 700-050	5.0	5.5	7.0	5.0	4.3	5.3	0.4	
MB 700-060	6.0	6.5	8.6	6.0	5.3	6.3	0.4	
MB 700-070	7.0	7.5	10.1	7.0	6.4	7.3	0.4	
MB 700-080	8.0	8.5	11.7	8.0	7.4	8.3	0.3	
MB 700-090	9.0	10.0	13.7	9.0	8.4	9.8	0.4	
MB 700-100	10.0	11.0	15.2	10.0	9.4	10.8	0.4	
MB 700-120	12.0	13.0	18.0	12.0	10.6	12.8	0.4	
MB 700-140	14.0	15.0	20.8	14.0	12.7	14.5	0.4	
MB 700-160	16.0	17.0	23.7	16.0	14.7	16.5	0.6	
MB 700-180	18.0	19.0	26.3	18.0	16.7	18.5	0.6	
MB 700-200	20.0	22.0	30.5	20.0	18.7	21.5	0.8	
MB 700-220	22.0	25.0	34.2	22.0	20.7	24.5	0.8	

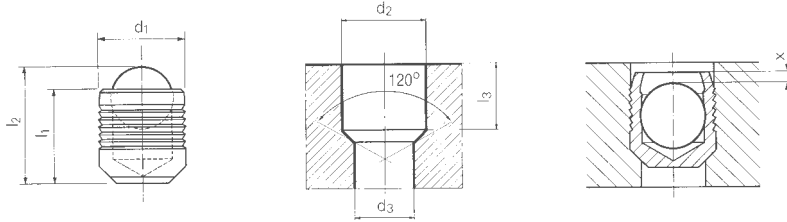
1 – Proof Pressure Test B 2 – Maximum allowable working pressure = nominal pressure

Pressure Performance

	Base Material / Minimum Hardness HB						
	High Strength Stl ETG-100 AISI 1144	Free Machining Case Hard Stl. C15 Pb	Cast Iron GG-25 DIN 1691 DIN 1.0403	Ductile Cast Iron GGG-50 DIN 1693	Aluminium Alloy Al Cu Mg 2 DIN 3.1354 AA2024	Aluminium Alloy Al Mg Si Pb DIN 3.0615 AA6262	Cast Al Alloy G-Al Si 7 Mg 3.2371 AA356-T6
	280	180	160	170	120	90	80
d1 mm	P Test ¹ Bar	P Test ¹ Bar		PW ² Bar	PW ² Bar	P Test B ¹ Bar	PW ² Bar
3-10	1400	1400		450	450	1200	380
12-22	1150	1150		350	350	900	280

MB 850 Series Sealing Plugs

KOENIG
expander



HUGE STOCKS

VOLUME DISCOUNT

- **Sleeve**
Case Hardened Steel
Passivated coating Cr6 free coating
- **Hardness**
HB = 180
- **Ball**
Bearing Steel. Heat treated

Anchorage between sleeve and base material is achieved when the sleeve is a minimum of HB=30 greater than the base material. If the hardness difference is less, hole roughness of 10 to 30 µm is needed to achieve indicated working pressures.

Security Range

The security range (the difference between working pressure and Test B pressure) allows for uncontrollable variations. For instance, dynamic loading at 1 million cycles and a frequency of 3-4Hz has shown that burst pressure Test A and Test B pressure are reduced about 20% after this point.

Equivalent working pressure capability can be obtained when using base materials with similar mechanical characteristics. However, the appropriate installation instructions must be followed.



Type	Dimensions in mm							
	d ₁	l ₁	l ₂	d ₂	d ₃	l ₃	x	
MB 850-030	3.0	3.6	4.6	3.0	2.2	3.4	0.4	
MB 850-040	4.0	4.0	5.2	4.0	3.3	3.8	0.2	
MB 850-050	5.0	5.5	7.0	5.0	4.3	5.3	0.4	
MB 850-060	6.0	6.5	8.6	6.0	5.3	6.3	0.4	
MB 850-070	7.0	7.5	10.1	7.0	6.4	7.3	0.4	
MB 850-080	8.0	8.5	11.7	8.0	7.4	8.3	0.3	
MB 850-090	9.0	10.0	13.7	9.0	8.4	9.8	0.4	
MB 850-100	10.0	11.0	15.2	10.0	9.4	10.8	0.4	
MB 850-120	12.0	13.0	18.0	12.0	10.6	12.8	0.4	
MB 850-140	14.0	15.0	20.8	14.0	12.7	14.5	0.4	
MB 850-160	16.0	17.0	23.7	16.0	14.7	16.5	0.6	
MB 850-180	18.0	19.0	26.3	18.0	16.7	18.5	0.6	
MB 850-200	20.0	22.0	30.5	20.0	18.7	21.5	0.8	
MB 850-220	22.0	25.0	34.2	22.0	20.7	24.5	0.8	

1 – Proof Pressure Test B 2 – Maximum allowable working pressure = nominal pressure

Pressure Performance

	Base Material / Minimum Hardness HB						
	High Strength Stl ETG-100 AISI 1144	Free Machining Case Hard Stl. C15 Pb	Cast Iron GG-25 DIN 1691 DIN 1.0403	Ductile Cast Iron GGG-50 DIN 1693	Aluminium Alloy Al Cu Mg 2 DIN 3.1354 AA2024	Aluminium Alloy Al Mg Si Pb DIN 3.0615 AA6262	Cast Al Alloy G-Al Si 7 Mg 3.2371 AA356-T6
	280	180	160	170	120	90	80
d1 mm	P Test B ¹ Bar	P Test B ¹ Bar		PW ² Bar	PW ² Bar	P Test B ¹ Bar	PW ² Bar
4-10	1100	1100		350	350	1000	320
12-22	900	900		280	280	800	250