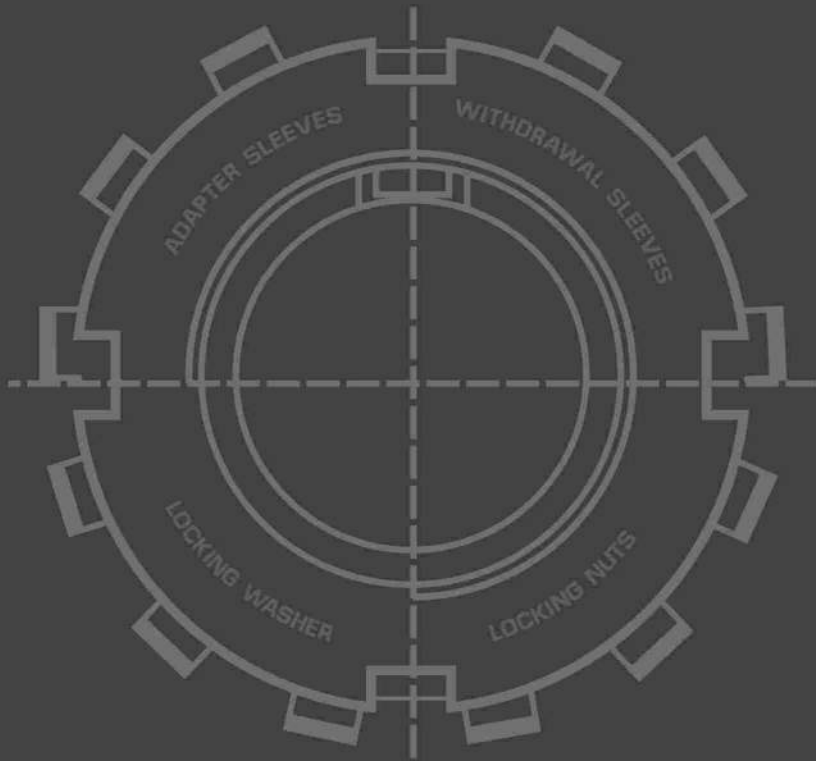


# Product Catalogue



# **KETCO**

**Precision Bearing Accessories**

An ISO 9001 : 2008 Certified Company

### Company Profile

Merchant Engg. Pvt. Ltd. company is manufacturing adapter sleeves, withdrawal sleeves, Lock nuts, Lock washers since long time under the brand name KETCO and we are producing precision quality and maintaining the tolerance of run out as per requirement.

The material used i.e. C20 or C30 of IS 2073-1970 For the manufacturing of our product on CNC Machines to achieve the highest level of accuracy and every component passes through the stringent quality controls from raw materials to final dimensional accuracy, factory is well equipped with inspection equipment and gauges and we regularly celebrate all the equipment and gauges from the technical institutions and our main objective is to full fill all customers demand as earliest as possible. We also have technical staff to provide the technical support to our customers at their end.

### About Sleeves

Adapter Sleeves are used to secure having a tapered bore bearing on cylindrical shaft seatings. Whereas, Withdrawal Sleeves can be used to mount bearings with a tapered bore bearing on cylindrical seats of stepped shafts. The tensile strength of the material is at least 430 N/mm<sup>2</sup>. The outside surface of the sleeve has a taper of 1:12. In series H240 and H 241, the taper is 1:30.

The dimension table depicts adapter sleeve for metric/inch, shafts, fitting and dismantling of large bearing that requires high mounting forces is made easier by using hydraulic method.

In the case of adapter sleeve and withdrawal sleeve with oil slot on the tapered outside surface and a pump connector on thread side and in case of withdrawal sleeves with oil slots on the taper on side surface and two pump connectors of sets to each other than 90°. In the case of lock nuts and retailing plates, the tensile strength of the material is at least 350N/mm<sup>2</sup> and 300N/mm<sup>2</sup> respectively.

### Product Specifications

#### Adapter Sleeves

The dimensions and material conform to DIN 5415/ISO 2982-1. The bore tolerance before slitting is in the tolerance zone JS9 for the 1:12 and JS7 for 1:30 taper. The thread conform tolerance grade 6g to din/ISO 965-3 upto M 200 size, trapezoidal threads are used over M200.

#### Withdrawal Sleeves

The dimension and material conform to DIN 5416/ISO 2982-1. The bore tolerance before slitting is in the tolerance zone JS9 for the 1:12 and JS7 for 1:30 taper. The thread conform tolerance grade 6g to DIN/ISO 965-3 upto M 200 size, trapezoidal threads are used over M200.

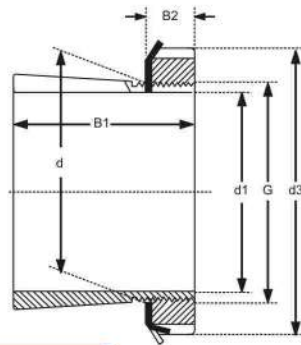
#### Lock Nuts

The dimension and material conform to DIN 981/ISO 2982-2. The metric precision thread upto 200 mm diameters and above larger lock nuts have trapezoidal threads.

## CONTENTS

Adapter sleeves with metric dimensions (H, OH)	01
Adapter sleeves with inch shaft (HA, HE, HS)	16
Withdrawal sleeves with metric dimensions (Ah, AOH)	21
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Lock nuts with inch threads (Ligh section) (N)	33
Locking washers metric (MB, MBL, AW, AWL)	34
Locking washers inch (W)	35

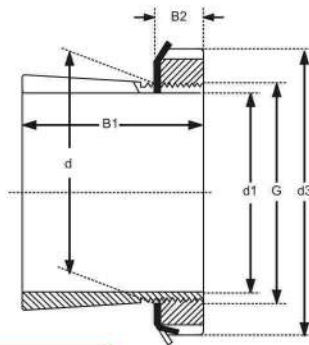
## ADAPTER SLEEVES d1 17-135 mm



DIMENSIONS						MASS	DESIGNATIONS			
d1	d	d3	B1	B2	G		Adapter Sleeve Complete Set	Lock Nut	Locking device	Appropriate bearing
mm						kg				
17	20	32	24	7	M 20x1	0.036	<b>H 204</b>	KM 4	MB 4	1204 K
		32	28	7	M 20x1	0.04	<b>H 304</b>	KM 4	MB 4	2204 K,1304 K
		32	31	7	M 20x1	0.05	<b>H 2304</b>	KM 4	MB 4	2304 K
20	25	38	26	8	M 25x1.5	0.064	<b>H 205</b>	KM 5	MB 5	1205 K
		38	29	8	M 25x1.5	0.071	<b>H 305</b>	KM 5	MB 5	2205 K,1305 K,22205 K,UK205
		38	29	8	M 25x1.5	0.071	<b>H 305C</b>	KM 5	MB 5 C	2205E-2RS1K
		38	35	8	M 25x1.5	0.085	<b>H 2305</b>	KM 5	MB 5	2305 K,UK205,UKX05,UK305
25	30	45	27	8	M 30x1.5	0.086	<b>H 206</b>	KM 6	MB 6	1206 K
		45	31	8	M 30x1.5	0.095	<b>H 306</b>	KM 6	MB 6	2206 K,1306 K,22206 K,UK206
		45	31	8	M 30x1.5	0.095	<b>H 306C</b>	KM 6	MB 6 C	2206E-2RS1K
		45	38	8	M 30x1.5	0.11	<b>H 2306</b>	KM 6	MB 6	2306 K,UK206,UKX06,UK306
30	35	52	29	9	M 35x1.5	0.12	<b>H 207</b>	KM 7	MB 7	1207 K
		52	35	9	M 35x1.5	0.14	<b>H 307</b>	KM 7	MB 7	2207 K,1307 K,22207 K,UK207
		52	35	9	M 35x1.5	0.14	<b>H 307C</b>	KM 7	MB 7 C	2207E-2RS1K
		52	43	9	M 35x1.5	0.16	<b>H 2307</b>	KM 7	MB 7	2307 K,UK207,UKX07,UK307
35	40	58	31	10	M 40x1.5	0.16	<b>H 208</b>	KM 8	MB 8	1208 K
		58	36	10	M 40x1.5	0.17	<b>H 308</b>	KM 8	MB 8	2208 K,1308 K,22208 K,UK208
		58	36	10	M 40x1.5	0.17	<b>H 308C</b>	KM 8	MB 8 C	2208E-2RS1K
		58	46	10	M 40x1.5	0.22	<b>H 2308</b>	KM 8	MB 8	2308 K,22308 K,UK208,UKX08,UK308
40	45	65	33	11	M 45x1.5	0.21	<b>H 209</b>	KM 9	MB 9	1209 K
		65	39	11	M 45x1.5	0.23	<b>H 309</b>	KM 9	MB 9	2209 K,1309 K,22209 K,UK209
		65	39	11	M 45x1.5	0.23	<b>H 309C</b>	KM 9	MB 9 C	2209E-2RS1K
		65	50	11	M 45x1.5	0.27	<b>H 2309</b>	KM 9	MB 9	2309 K,22309 K,UK209,UKX09,UK309
45	50	70	35	12	M 50x1.5	0.24	<b>H 210</b>	KM 10	MB 10	1210 K
		70	42	12	M 50x1.5	0.27	<b>H 310</b>	KM 10	MB 10	2210 K,1310 K,22210 K,UK210
		70	42	12	M 50x1.5	0.27	<b>H 310C</b>	KM 10	MB 10 C	2210-2RS1K
		70	55	12	M 50x1.5	0.34	<b>H 2310</b>	KM 10	MB 10	2310 K,22310 K,UK210,UKX10,UK310
50	55	75	37	12.5	M 55x2	0.28	<b>H 211</b>	KM 11	MB 11	1211 K
		75	45	12.5	M 55x2	0.32	<b>H 311</b>	KM 11	MB 11	2211 K,1311 K,22211 K,UK211
		75	45	12.5	M 55x2	0.32	<b>H 311C</b>	KM 11	MB 11 C	2211E-2RS1K
		75	59	12.5	M 55x2	0.39	<b>H 2311</b>	KM 11	MB 11	2311 K,22311 K,UK210,UKX10,UK310



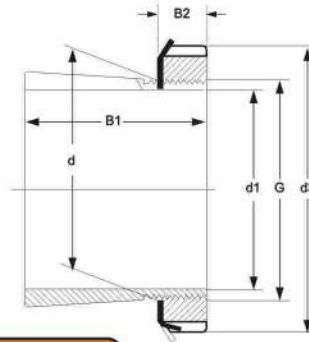
## ADAPTER SLEEVES d1 17-135 mm



DIMENSIONS					MASS	DESIGNATIONS					
d1	d	d3	B1	B2	G	Adapter Sleeve Complete Set	Lock Nut	Locking device	Appropriate bearing		
mm						kg					
55	60	80	38	13	M 60x2	0.31	H 212	KM 12	MB 12	1212 K	
		80	47	13	M 60x2	0.36	H 312	KM 12	MB 12	2212 K, 1312 K, 22212 K, UK212 21312 K	
		80	62	13	M 60x2	0.45	H 2312	KM 12	MB 12	2312 K, 22312 K, UK212, UKX12, UK312	
60	65	85	40	14	M 65x2	0.36	H 213	KM 13	MB 13	1213 K	
		85	50	14	M 65x2	0.42	H 313	KM 13	MB 13	2213 K, 1313K, 22213K, 21313 K, UK213	
		85	65	14	M 65x2	0.52	H 2313	KM 13	MB 13	2313 K, 22313K	
	70	92	52	14	M 70x2	0.67	H 314	KM 14	MB 14	22214, 21314 K	
		92	68	14	M 70x2	0.88	H 2314	KM 14	MB 14	22314 K	
65	75	98	43	15	M 75x2	0.66	H 215	KM 15	MB 15	1215 K	
		98	55	15	M 75x2	0.78	H315	KM 15	MB 15	2215 K, 1315 K, 22215 K, 21315 K, UK215	
		98	73	15	M 75x2	1.10	H2315	KM 15	MB 15	2315 K, 22315 K, UK215, UKX15, UK315	
70	80	105	46	17	M 80x2	0.81	H 216	KM 16	MB 16	1216 K	
		105	59	17	M 80x2	0.95	H 316	KM 16	MB 16	2216 K, 1316 K, 22216 K, 21316 K, UK216	
		105	78	17	M 80x2	1.20	H 2316	KM 16	MB 16	2316 K, 22316 K, UK216, UKX16, UK316	
75	85	110	50	18	M 85x2	0.94	H 217	KM 17	MB 17	1217 K	
		110	63	18	M 85x2	1.10	H 317	KM 17	MB 17	2217 K, 1317 K, 22217 K, 21317 K, UK217	
		110	82	18	M 85x2	1.35	H 2317	KM 17	MB 17	2317 K, 22317 K, UK217, UKX17, UK317	
80	90	120	52	18	M 90x2	1.10	H 218	KM 18	MB 18	1218 K	
		120	65	18	M 90x2	1.30	H 318	KM 18	MB 18	2218 K, 1318 K, 22218 K, 21318 K, UK218	
		120	86	18	M 90x2	1.60	H 2318	KM 18	MB 18	2318 K, 23218 K, 22318 K, UK218, UKX18 UK318	
85	95	125	55	19	M 95x2	1.25	H 219	KM 19	MB 19	1219K	
		125	68	19	M 95x2	1.40	H 319	KM 19	MB 19	2219 K, 1319 K, 22219 K, 21319 K	
		125	90	19	M 95x2	1.80	H 2319	KM 19	MB 19	2319 K, 22319 K, UK319	
90	100	130	58	20	M 100x2	1.40	H 220	KM 20	MB 20	1220K	
		130	71	20	M 100x2	1.60	H 320	KM 20	MB 20	2220 K, 1320 K, 22220 K, 21320 K	
		130	97	20	M 100x2	2.00	H 2320	KM 20	MB 20	2320 K, 23220 K, 22320 K, UKX20, UK320	
		130	76	20	M 100x2	1.80	H 3120	KM 20	MB 20	23120 K	
95	105	140	60	20	M 105x2	1.60	H 221	KM 21	MB 21	1221 K	
		140	74	20	M 105x2	1.85	H 321	KM 21	MB 21	2221 K, 1321 K	
100	110	145	63	21	M 110x2	1.80	H 222	KM 22	MB 22	1222 K	
		145	77	21	M 110x2	2.05	H 322	KM 22	MB 22	2222 K, 1322 K, 23022 K, 22222 K, 21322 K	

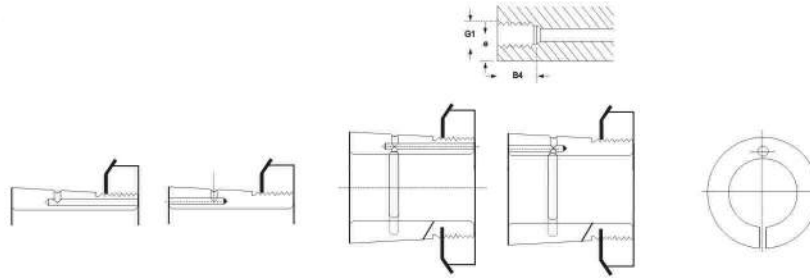
## ADAPTER SLEEVES

d1 17-135 mm



DIMENSIONS			MASS		DESIGNATIONS						
d1	d	d3	B1	B2	G	Adapter Sleeve Complete Set	Lock Nut	Locking device	Appropriate bearing		
mm						kg					
<b>100</b>	110	145	105	21	M 110X2	2.75	<b>H 2322</b>	KM 22	MB 22	2322 K,23222 K,22322 KUK322	
			145	81	21	M 110X2	2.10	<b>H 3122</b>	KM 22	MB 22	23122 K
<b>110</b>	120	145	72	22	M 120X2	1.80	<b>H 3024</b>	KML24	MBL24	1224 K,23024 K	
			155	88	22	M 120X2	2.50	<b>H 3124</b>	KM 24	MB 24	23124 K,22224 K
			155	112	22	M 120X2	3.00	<b>H 2324</b>	KM 24	MB 24	23224 K,22324 K,UK324
<b>115</b>	130	155	80	23	M 130X2	2.80	<b>H 3026</b>	KML26	MBL26	23026 K	
			165	92	23	M 130X2	3.45	<b>H 3126</b>	KM 26	MB 26	23126 K,22226 K
			165	121	23	M 130X2	4.45	<b>H 2326</b>	KM 26	MB 26	23226 K,22326 K,UK326
<b>125</b>	140	165	82	24.0	M 140X2	3.05	<b>H 3028</b>	KML28	MBL28	23028 K	
			180	97	24.0	M 140X2	4.1	<b>H 3128</b>	KM 28	MB 28	23128 K
			180	131	24.0	M 140X2	5.4	<b>H 2328</b>	KM 28	MB 28	23228 K,UK328
<b>135</b>	150	180	87	26.0	M 150X2	3.75	<b>H 3030</b>	KML30	MBL30	23030 K	
			195	111	26.0	M 150X2	5.25	<b>H 3130</b>	KM 30	MB 30	23130K,22230 K
			195	139	26.0	M 150X2	6.4	<b>H 2330</b>	KM 30	MB 30	23230 K,22330 K

## ADAPTER SLEEVES d1 140-500 mm



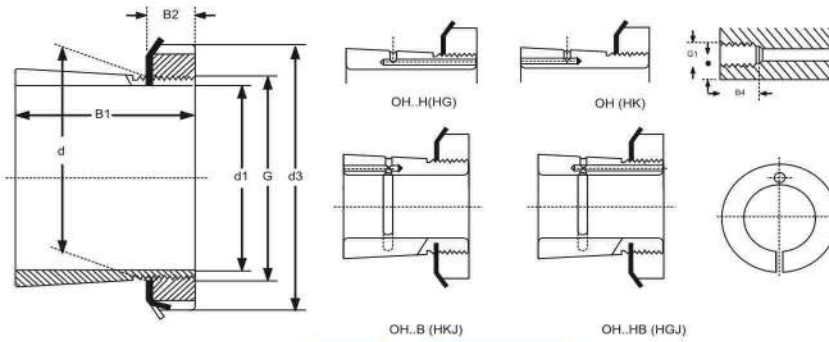
DIMENSIONS										MASS		DESIGNATIONS				
d1	d	d3	B1	B2	B3	B4	e	G	G1		Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing		
mm										in	kg					
140	160	190	93	27.5	-	-	-	M160X3	-	-	5.1	<b>H3032</b>	KML32	MBL32	23032K	
		190	93	27.5	-	9	4.2	M160X3	M6	-	5.1	<b>OH 3032H</b>	KML32	MBL32	23032K	
		190	93	27.5	-	9	4.2	M160X3	M6	-	5.1	<b>OH3032H</b>	KML32	MBL32	23032K	
		190	93	27.5	-	9	5	M160X3	M6	-	5.1	<b>OH3032HB</b>	KML32	MBL32	23032K	
		190	93	27.5	-	9	5	M160X3	M6	-	5.1	<b>OH3032</b>	KML32	MBL32	23032K	
	210	119	28.0	-	-	-	M160X3	-	-	-	7.25	<b>H3132</b>	KM32	MB32	23132K 22232K	
	210	119	28.0	-	9	4.2	M160X3	M6	-	-	7.25	<b>OH3132</b>	KM32	MB32	23132K 22232K	
	210	119	28.0	-	9	4.2	M160X3	M6	-	-	7.25	<b>OH3132HB</b>	KM32	MB32	23132K 22232K	
	210	119	28.0	-	13	6.8	M160X3	-	G 1/8	-	7.25	<b>OH3132</b>	KM32	MB32	23132K 22232K	
	210	119	28.0	-	13	6.8	M160X3	-	G 1/8	-	7.25	<b>OH3132B</b>	KM32	MB32	23132K 22232K	
	210	147	28.0	-	-	-	M160X3	-	-	-	8.8	<b>H2332</b>	KM32	MB32	23232K 22332K	
	210	147	28.0	-	9	4.2	M160X3	M6	-	-	8.8	<b>OH2332H</b>	KM32	MB32	23232K 22332K	
	210	147	28.0	-	9	4.2	M160X3	M6	-	-	8.8	<b>OH2332HB</b>	KM32	MB32	23232K 22332K	
	210	147	28.0	-	13	7	M160X3	-	G 1/8	-	8.8	<b>OH2332</b>	KM32	MB32	23232K 22332K	
	210	147	28.0	-	13	7	M170X3	-	G 1/8	-	8.8	<b>OH2332B</b>	KM32	MB32	23232K 22332K	
	150	170	200	101	28.5	-	-	-	M170X3	-	-	5.8	<b>H3034</b>	KML34	MBL34	23034K
			200	101	28.5	-	9	4.2	M170X3	M6	-	5.8	<b>OH3034H</b>	KML34	MBL34	23034K
			200	101	28.5	-	9	4.2	M170X3	M6	-	5.8	<b>OH3034HB</b>	KML34	MBL34	23034K
200			101	28.5	-	9	5	M170X3	M6	-	5.8	<b>OH3034</b>	KML34	MBL34	23034K	
200			101	28.5	-	9	5	M170X3	M6	-	5.8	<b>OH3034B</b>	KML34	MBL34	23034K	
220		122	29	-	-	-	M170X3	-	-	-	8.1	<b>H3134</b>	KM34	MB34	23134K 22234K	
220		122	29	-	9	4.2	M170X3	M6	-	-	8.1	<b>OH3134H</b>	KM34	MB34	23134K 22234K	
220		122	29	-	9	4.2	M170X3	M6	-	-	8.1	<b>OH3134HB</b>	KM34	MB34	23134K 22234K	
220		122	29	-	13	7	M170X3	-	G 1/8	-	8.1	<b>OH3134</b>	KM34	MB34	23134K 22234K	
220		122	29	-	13	7	M170X3	-	G 1/8	-	8.1	<b>OH3134B</b>	KM34	MB34	23134K 22234K	
220		154	29	-	-	-	-	-	-	-	9.9	<b>H2334</b>	KM34	MB34	23234K 22334K	





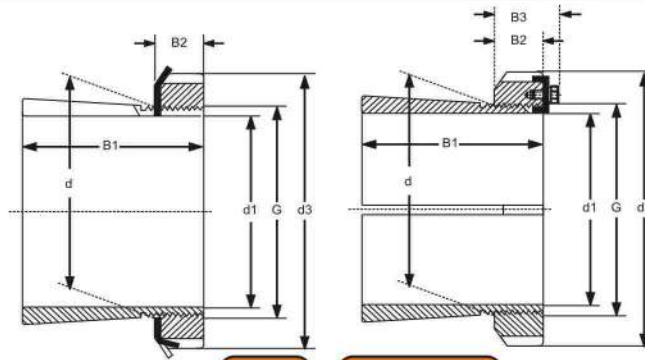


## ADAPTER SLEEVES d1 140-500 mm



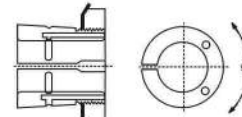
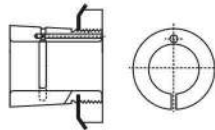
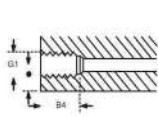
DIMENSIONS										Type H	MASS	DESIGNATIONS				
d1	d	d3	B1	B2	B3	B4	e	G	G1			Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing	
mm											in	kg				
170	190	240	141	31	-	9	4.2	M190X3	M6	-	10.5	<b>OH3138H</b>	KM38	MB38	23138K 22238K	
			240	141	31	-	9	4.2	M190X3	M6	-	10.5	<b>OH3138HB</b>	KM38	MB38	23138K 22238K
	240	141	31	-	13	7	M190X3	-	G 1/8	10.5	<b>OH3138</b>	KM38	MB38	23138K 22238K		
														<b>OH3138B</b>	23138K 22238K	
	240	169	31	-	-	-	M190X3	-	-	-	12	<b>H2338</b>	KM38	MB38	23238K 22338K	
															<b>OH2338H</b>	23238K 22338K
	240	169	31	-	9	4.2	M190X3	M6	-	-	12	<b>OH2338HB</b>	KM38	MB38	23238K 22338K	
															<b>OH2338</b>	23238K 22338K
	240	169	31	-	13	7	M190X3	-	G 1/8	12	<b>OH2338HB</b>	KM38	MB38	23238K 22338K		
														<b>OH2338</b>	23238K 22338K	
180	200	240	120	31.5	-	-	-	M200X3	-	-	8.9	<b>H3040</b>	KML40	MBL40	23040K	
												<b>OH3040H</b>	KML40	MBL40	23040K	
												<b>OH3040HB</b>	KML40	MBL40	23040K	
												<b>OH3040</b>	KML40	MBL40	23040K	
												<b>OH3040B</b>	KML40	MBL40	23040K	
	250	150	32	-	-	-	-	M200X3	-	-	12	<b>H3140</b>	KM40	MB40	23140K 22240K	
												<b>OH3140H</b>	KM40	MB40	23140K 22240K	
												<b>OH3140HB</b>	KM40	MB40	23140K 22240K	
												<b>OH3140</b>	KM40	MB40	23140K 22240K	
												<b>OH3140B</b>	KM40	MB40	23140K 22240K	
		250	176	32	-	-	-	-	M200X3	-	-	13.5	<b>H2340</b>	KM40	MB40	23240K 22340K
													<b>OH2340H</b>	KM40	MB40	23240K 22340K
													<b>OH2340HB</b>	KM40	MB40	23240K 22340K
													<b>OH2340</b>	KM40	MB40	23240K 22340K
													<b>OH2340B</b>	KM40	MB40	23240K 22340K
													<b>OH2340</b>	KM40	MB40	23240K 22340K

## ADAPTER SLEEVES d1 140-500 mm



DIMENSIONS				Type H				MASS		DESIGNATIONS				Type H																																																								
d1	d	d3	B1	B2	B3	B4	e	G	G1	Sleeve Complete Set		Lock Nut	Locking washer	Appropriate bearing																																																								
mm										in	kg																																																											
180	200	250	176	32	-	13	8	M200X3	-	G 1/8	13.5	<b>OH2340B</b>	KM40	MB40	23240K 22340K																																																							
200	220	260	96	30	41	9	4.2	Tr220x4	M6	-	7.95	<b>OH3944H</b>	HM3044	MS3044	23944K																																																							
		260	96	30	41	9	4.2	Tr220x4	M6	-	7.95	<b>OH3944HB</b>	HM3044	MS3044	23944K																																																							
		260	96	30	41	9	5	Tr220x4	M6	-	7.95	<b>OH3944</b>	HM3044	MS3044	23944K																																																							
		260	96	30	41	9	5	Tr220x4	M6	-	7.95	<b>OH3944B</b>	HM3044	MS3044	23944K																																																							
		260	96	30	41	-	-	Tr220x4	-	-	-	7.95	<b>H3944</b>	HM3044	MS3044	23944K																																																						
		260	126	30	-	9	4.2	Tr220x4	M6	-	9.9	<b>OH3044H</b>	HM3044	MS3044	23044K																																																							
	260	126	30	-	9	4.2	Tr220x4	M6	-	9.9	<b>OH3044HB</b>	HM3044	MS3044	23044K																																																								
	260	126	30	-	13	7	Tr220x4	-	G 1/8	9.9	<b>OH3044</b>	HM3044	MS3044	23044K																																																								
	260	126	30	-	13	7	Tr220x4	-	G 1/8	9.9	<b>OH3044B</b>	HM3044	MS3044	23044K																																																								
	260	126	30	-	-	-	Tr220x4	-	-	-	9.9	<b>H3044</b>	HM3044	MS3044	23044K																																																							
	280	161	35	-	9	4.2	Tr220x4	M6	-	15	<b>OH3144H</b>	HM44T	MB44	23144K 22244K																																																								
															161	35	-	9	4.2	Tr220x4	M6	-	15	<b>OH3144HB</b>	HM44T	MB44	23144K 22244K																																											
		161	35	-	13	8	Tr220x4	-	G 1/8	15	<b>OH3144</b>	HM44T	MB44	23144K 22244K																																																								
															161	35	-	13	8	Tr220x4	-	G 1/8	15	<b>OH3144B</b>	HM44T	MB44	23144K 22244K																																											
161		35	-	-	-	Tr220x4	-	-	15	<b>H3144</b>	HM44T	MB44	23144K 22244K																																																									
														186	35	-	9	4.2	Tr220x4	M6	-	17	<b>OH2344H</b>	HM44T	MB44	23244K 22344K																																												
186		35	-	9	4.2	Tr220x4	M6	-	17	<b>OH2344HB</b>	HM44T	MB44	23244K 22344K																																																									
														186	35	-	13	8.5	Tr220x4	-	G 1/8	17	<b>OH2344</b>	HM44T	MB44	23244K 22344K																																												
186		35	-	13	8.5	Tr220x4	-	G 1/8	17	<b>OH2344B</b>	HM44T	MB44	23244K 22344K																																																									
														186	35	-	-	-	Tr220x4	-	-	17	<b>H2344</b>	HM44T	MB44	23244K 22344K																																												
240		290	101	34	46	9	4.2	Tr240x4	M6	-	11	<b>OH3948H</b>	HM3048														MS3052-48	23948K																																										
														290	101	34	46	9	4.2	Tr240x4	M6	-	11	<b>OH3948HB</b>	HM3048	MS3052-48			23948K																																									
																														290	101	34	46	13	6.5	Tr240x4	-	G 1/8	11	<b>OH3948</b>	HM3048	MS3052-48	23948K																											
																																												290	101	34	46	13	6.5	Tr240x4	-	G 1/8	11	<b>OH3948B</b>	HM3048	MS3052-48	23948K													
	290																																																									101	34	46	-	-	Tr240x4	-	-	11	<b>H3948</b>	HM3048	MS3052-48	23948K
290		101	34	46	9	4.2	Tr240x4	M6	-	12	<b>OH3048HB</b>	HM3048	MS3052-48														23048K																																											
														290	101	34	46	13	7	Tr240x4	-	G 1/8	12	<b>OH3048</b>	HM3048	MS3052-48		23048K																																										

## ADAPTER SLEEVES d1 140-500 mm



Type OH..HB (HGJ) Size 40 and uner

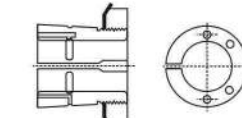
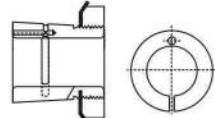
Type OH..HB (HGJ) Size 44 and uner



Type OH..H (HG)



Type OH..B (HKJ) Size 40 and uner



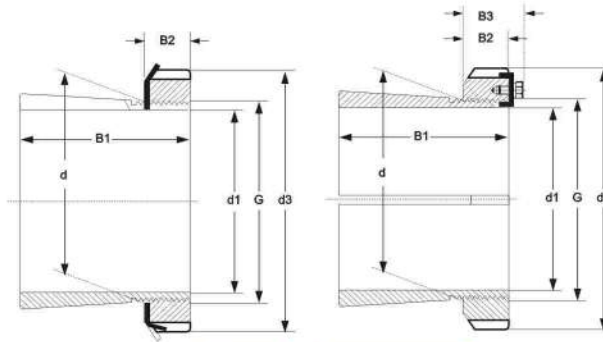
Type OH..B (HKJ) Size 44 and uner

Type OH (HK)

DIMENSIONS										MASS	DESIGNATIONS	Lock Nut	Locking washer	Appropriate bearing		
d1	d	d3	B1	B2	B3	B4	e	G	G1		Sleeve Complete Set					
mm										in	kg					
220	240	290	133	34	46	13	7	Tr240x4	-	G 1/8	12	<b>OH3048B</b>	HM3048	MS3052-48	23048K	
		290	133	34	46	-	-	Tr240x4	-	-	12	<b>H3048</b>	HM3048	MS3052-48	23048K	
		300	172	37	-	9	4.2	Tr240x4	M6	-	16	<b>OH3148H</b>	HM48T	MB48	23148K 22248K	
		300	172	37	-	9	4.2	Tr240x4	M6	-	16	<b>OH3148HB</b>	HM48T	MB48	23148K 22248K	
		300	172	37	-	13	8	Tr240x4	-	G 1/8	16	<b>OH3148</b>	HM48T	MB48	23148K 22248K	
		300	172	37	-	13	8	Tr240x4	-	G 1/8	16	<b>OH3148B</b>	HM48T	MB48	23148K 22248K	
		300	172	37	-	-	-	Tr240x4	-	-	16	<b>H3148</b>	HM48T	MB48	23148K 22248K	
		300	199	37	-	9	4.2	Tr240x4	M6	-	19	<b>OH2348H</b>	HM48T	MB48	23248K 22348K	
		300	199	37	-	9	4.2	Tr240x4	M6	-	19	<b>OH2348HB</b>	HM48T	MB48	23248K 22348K	
		300	199	37	-	13	9.5	Tr240x4	-	G 1/8	19	<b>OH2348</b>	HM48T	MB48	23248K 22348K	
		300	199	37	-	13	9.5	Tr240x4	-	G 1/8	19	<b>OH2348B</b>	HM48T	MB48	23248K 22348K	
		300	199	37	-	-	-	Tr240x4	-	-	19	<b>H2348</b>	HM48T	MB48	23248K 22348K	
	240	260	310	116	34	46	9	4.2	Tr260x4	M6	-	11.7	<b>OH3952H</b>	HM3052	MS3052-48	23952K
			310	116	34	46	13	4.2	Tr260x4	M6	-	11.7	<b>OH3952HB</b>	HM3052	MS3052-48	23952K
		310	116	34	46	13	7	Tr260x4	-	G 1/8	11.7	<b>OH3952</b>	HM3052	MS3052-48	23952K	
		310	116	34	46	-	7	Tr260x4	-	G 1/8	11.7	<b>OH3952B</b>	HM3052	MS3052-48	23952K	
		310	116	34	46	-	-	Tr260x4	-	-	11.7	<b>H3952</b>	HM3052	MS3052-48	23952K	
		310	145	34	46	9	4.2	Tr260x4	M6	-	13.5	<b>OH3052H</b>	HM3052	MS3052-48	23052K	
		310	145	34	46	9	4.2	Tr260x4	M6	-	13.5	<b>OH3052HB</b>	HM3052	MS3052-48	23052K	
		310	145	34	46	13	7.5	Tr260x4	-	G 1/8	13.5	<b>OH3052</b>	HM3052	MS3052-48	23052K	
		310	145	34	46	13	7.5	Tr260x4	-	G 1/8	13.5	<b>OH3052B</b>	HM3052	MS3052-48	23052K	
		310	145	34	46	-	-	Tr260x4	-	-	13.5	<b>H3052</b>	HM3052	MS3052-48	23052K	
		330	190	39	-	9	4.2	Tr260x4	M6	-	21	<b>OH3052H</b>	HM52T	MB52	23152K 22252K	
		330	190	39	-	9	4.2	Tr260x4	M6	-	21	<b>OH3052HB</b>	HM52T	MB52	23152K 22252K	
		330	190	39	-	13	8	Tr260x4	-	G 1/8	21	<b>OH3152</b>	HM52T	MB52	23152K 22252K	
		330	190	39	-	13	8	Tr260x4	-	G 1/8	21	<b>OH3052B</b>	HM52T	MB52	23152K	

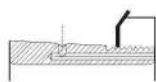
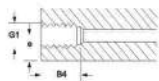


## ADAPTER SLEEVES d1 140-500 mm

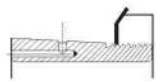


DIMENSIONS				Type H				MASS		DESIGNATIONS						
d1	d	d3	B1	B2	B3	B4	e	G	G1	Sleeve Complete Set		Lock Nut	Locking washer	Appropriate bearing		
mm										in	kg					
240	260	330	190	39	-	13	8	Tr260X4	-	G 1/8	21	<b>OH3152B</b>	HM52T	MB52	22252K	
		330	190	39	-	-	-	Tr260X4	-	-	21	<b>H3152</b>	HM52T	MB52	23152K 22252K	
		330	211	39	-	9	4.2	Tr260X4	M6	-	23	<b>OH2352H</b>	HM52T	MB52	23252K 22352K	
		330	211	39	-	9	4.2	Tr260X4	M6	-	23	<b>OH2352HB</b>	HM52T	MB52	23252K 22352K	
		330	211	39	-	13	9	Tr260X4	-	G 1/8	23	<b>OH2352</b>	HM52T	MB52	23252K 22352K	
		330	211	39	-	13	9	Tr260X4	-	G 1/8	23	<b>OH2352B</b>	HM52T	MB52	23252K 22352K	
		330	211	39	-	-	-	Tr260X4	-	-	23	<b>H2352</b>	HM52T	MB52	23252K 22352K	
	260	280	330	121	38	50	9	4.2	Tr280X4	M6	-	15.3	<b>OH3956H</b>	HM3056	MS3056	23956K
			330	121	38	50	9	4.2	Tr280X4	M6	-	15.3	<b>OH3956HB</b>	HM3056	MS3056	23956K
			330	121	38	50	13	7	Tr280X4	-	G 1/8	15.3	<b>OH3956</b>	HM3056	MS3056	23956K
			330	121	38	50	13	7	Tr280X4	-	G 1/8	15.3	<b>OH3956B</b>	HM3056	MS3056	23956K
			330	121	38	50	-	-	Tr280X4	-	-	15.3	<b>H3956</b>	HM3056	MS3056	23956K
			330	152	38	50	9	4.2	Tr280X4	M6	-	16	<b>OH3056H</b>	HM3056	MS3056	23056K
		330	152	38	50	9	4.2	Tr280X4	M6	-	16	<b>OH3056HB</b>	HM3056	MS3056	23056K	
		330	152	38	50	13	7.5	Tr280X4	-	G 1/8	16	<b>OH3056</b>	HM3056	MS3056	23056K	
		330	152	38	50	13	7.5	Tr280X4	-	G 1/8	16	<b>OH3056B</b>	HM3056	MS3056	23056K	
		330	152	38	50	-	-	Tr280X4	-	-	16	<b>H3056</b>	HM3056	MS3056	23056K	
		350	195	41	-	9	4.2	Tr280X4	M6	-	23	<b>OH3156H</b>	HM56T	MB56	23156K 22256K	
		350	195	41	-	9	4.2	Tr280X4	M6	-	23	<b>OH3156HB</b>	HM56T	MB56	23156K 22256K	
		350	195	41	-	13	8	Tr280X4	-	G 1/8	23	<b>OH3156</b>	HM56T	MB56	23156K 22256K	
		350	195	41	-	13	8	Tr280X4	-	G 1/8	23	<b>OH3156B</b>	HM56T	MB56	23156K 22256K	
		350	195	41	-	-	-	Tr280X4	-	-	23	<b>H3156</b>	HM56T	MB56	23156K 22256K	
		350	224	41	-	9	4.2	Tr280X4	M6	-	27	<b>OH2356H</b>	HM56T	MB56	23256K 23256K	
		350	224	41	-	9	4.2	Tr280X4	M6	-	27	<b>OH2356H</b>	HM56T	MB56	23256K 23256K	
		350	224	41	-	13	9.5	Tr280X4	-	G 1/8	27	<b>OH2356</b>	HM56T	MB56	23256K 23256K	

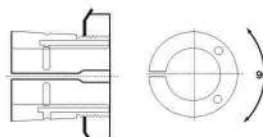
## ADAPTER SLEEVES d1 140-500mm



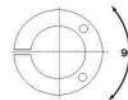
Type OH..H (HG)



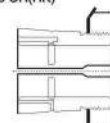
Type OH(HK)



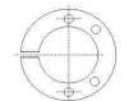
Type OH..HB (HGJ)



Type OH(HK)



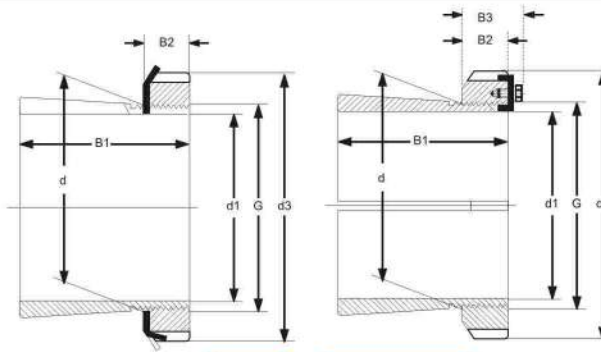
Type OH..B (HKJ)



DIMENSIONS										MASS		DESIGNATIONS			
d1	d	d3	B1	B2	B3	B4	e	G	G1	Sleeve Complete Set		Lock Nut	Locking washer	Appropriate bearing	
mm										in	kg				
260	280	350	224	41	-	13	9.5	Tr280x4	G1	G 1/8	27	<b>OH2356B</b>	HM56T	MB56	23256K
			350	224	41	-	-	-	Tr280x4	-	-	27	<b>H2356</b>	HM56T	MB56
280	300	360	140	42	54	9	4.2	Tr300x4	M6	-	20	<b>OH3960H</b>	HM3060	MS3060	23960K
												<b>OH3960HB</b>	HM3060	MS3060	23960K
		360	140	42	54	13	7	Tr300x4	-	G 1/8	20	<b>OH3960</b>	HM3060	MS3060	23960K
												<b>OH3960B</b>	HM3060	MS3060	23960K
		360	140	42	54	-	-	Tr300x4	-	-	20	<b>H3960</b>	HM3060	MS3060	23960K
												<b>OH3060H</b>	HM3060	MS3060	23060K
		360	168	42	54	9	4.2	Tr300x4	M6	-	20.5	<b>OH3060HB</b>	HM3060	MS3060	23060K
												<b>OH3060</b>	HM3060	MS3060	23060K
		360	168	42	54	13	7.5	Tr300x4	-	G 1/8	20.5	<b>OH3060B</b>	HM3060	MS3060	23060K
												<b>H3060</b>	HM3060	MS3060	23060K
		360	168	42	54	13	7.5	Tr300x4	-	G 1/8	20.5	<b>OH3160H</b>	HM3160	MS3160	23160K
												<b>OH3160HB</b>	HM3160	MS3160	22260K
		380	208	40	53	9	4.2	Tr300x4	M6	-	29	<b>OH3160</b>	HM3160	MS3160	23160K
												<b>OH3160B</b>	HM3160	MS3160	22260K
		380	208	40	53	13	9	Tr300x4	-	G 1/8	29	<b>H3160</b>	HM3160	MS3160	23160K
												<b>OH3160B</b>	HM3160	MS3160	22260K
380	208	40	53	13	9	Tr300x4	-	G 1/8	29	<b>OH3260H</b>	HM3160	MS3160	23260K		
										<b>OH3260HB</b>	HM3160	MS3160	23260K		
380	240	40	53	15	9	Tr300x4	-	G 1/4	32	<b>OH3260</b>	HM3160	MS3160	23260K		
										<b>OH3260B</b>	HM3160	MS3160	23260K		
380	240	40	53	-	-	Tr300x4	-	-	32	<b>H3260</b>	HM3160	MS3160	23260K		
										<b>OH3964H</b>	HM3064	MS3068-64	23964K		
300	320	380	140	42	55	9	4	Tr320x5	M6	-	21.5	<b>OH3964HB</b>	HM3064	MS3068-64	23964K
												<b>OH3964</b>	HM3064	MS3068-64	23964K
		380	140	42	55	13	7	Tr320x5	-	G 1/8	21.5	<b>OH3964B</b>	HM3064	MS3068-64	23964K
												<b>H3964</b>	HM3064	MS3068-64	23964K
		380	140	42	55	13	7	Tr320x5	-	G 1/8	21.5	<b>OH3064H</b>	HM3064	MS3068-64	23064K
												<b>OH3064HB</b>	HM3064	MS3068-64	23064K
		380	171	42	55	9	4	Tr320x5	M6	-	22.0	<b>OH3064</b>	HM3064	MS3068-64	23064K
												<b>OH3064B</b>	HM3064	MS3068-64	23064K
		380	171	42	55	13	7.5	Tr320x5	-	G 1/8	22.0	<b>OH3064H</b>	HM3064	MS3068-64	23064K
												<b>OH3064B</b>	HM3064	MS3068-64	23064K



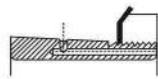
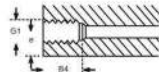
## ADAPTER SLEEVES d1 140-500 mm



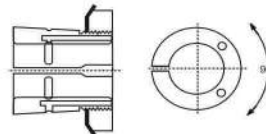
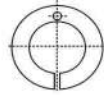
DIMENSIONS				Type H		MASS		DESIGNATIONS							
d1	d	d3	B1	B2	B3	B4	e	G	G1	Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing		
mm										in	kg				
300	320	380	171	42	55	-	-	Tr320x5	-	-	22.0	<b>H3064</b>	HM3064	MS3068	23064K
	400	226	42	56	9	4.0	Tr320x5	M6	-	32.0	<b>OH3164H</b>	HM3164	MS3164	23164K	
	400	226	42	56	9	4.0	Tr320x5	M6	-	32.0	<b>OH3164HB</b>	HM3164	MS3164	22264K	
	400	226	42	56	13	9.5	Tr320x5	-	G 1/8	32.0	<b>OH3164</b>	HM3164	MS3164	23164K	
	400	226	42	56	13	9.5	Tr320x5	-	G 1/8	32.0	<b>OH3164B</b>	HM3164	MS3164	22264K	
	400	226	42	56	-	-	Tr320x5	-	-	32.0	<b>H3164</b>	HM3164	MS3164	23164K	
	400	258	42	56	9	4.0	Tr320x5	M6	-	35.0	<b>OH3264H</b>	HM3164	MS3164	23264K	
	400	258	42	56	9	4.0	Tr320x5	M6	-	35.0	<b>OH3264HB</b>	HM3164	MS3164	23264K	
	400	258	42	56	15	9.0	Tr320x5	-	G 1/4	35.0	<b>OH3264</b>	HM3164	MS3164	23264K	
	400	258	42	56	15	9.0	Tr320x5	-	G 1/4	35.0	<b>OH3264B</b>	HM3164	MS3164	23264K	
	400	258	42	56	-	-	Tr320x5	-	-	35.0	<b>H3264</b>	HM3164	MS3164	23264K	
320	340	400	144	45	58	9	4.0	Tr340x5	M6	-	24.5	<b>OH3968H</b>	HM3068	MS3068-64	23968K
	400	144	45	58	9	4.0	Tr340x5	M6	-	24.5	<b>OH3968HB</b>	HM3068	MS3068-64	23968K	
	400	144	45	58	13	7.0	Tr340x5	-	G 1/8	24.5	<b>OH3968</b>	HM3068	MS3068-64	23968K	
	400	144	45	58	13	7.0	Tr340x5	-	G 1/8	24.5	<b>OH368B</b>	HM3068	MS3068-64	23968K	
	400	144	45	58	-	-	Tr340x5	-	-	24.5	<b>H3968</b>	HM3068	MS3068-64	23968K	
	400	187	45	58	9	4.0	Tr340x5	M6	-	27.0	<b>OH3068H</b>	HM3068	MS3068-64	23068K	
	400	187	45	58	9	4.0	Tr340x5	M6	-	27.0	<b>OH3068HB</b>	HM3068	MS3068-64	23068K	
	400	187	45	58	13	8.0	Tr340x5	-	G 1/8	27.0	<b>OH3068</b>	HM3068	MS3068-64	23068K	
	400	187	45	58	13	8.0	Tr340x5	-	G 1/8	27.0	<b>OH3068B</b>	HM3068	MS3068-64	23068K	
	400	187	45	58	-	-	Tr340x5	-	-	27.0	<b>H3068</b>	HM3068	MS3068-64	23068K	
	440	254	55	72	9	4.0	Tr340x5	M6	-	50.0	<b>OH3168H</b>	HM3168	MS3172-68	23168K	
	440	254	55	72	9	4.0	Tr340x5	M6	-	50.0	<b>OH3168HB</b>	HM3168	MS3172-68	23168K	
	440	254	55	72	15	9.5	Tr340x5	-	G 1/4	50.0	<b>OH3168</b>	HM3168	MS3172-68	23168K	
	440	254	55	72	15	9.5	Tr340x5	-	G 1/4	50.0	<b>OH3168B</b>	HM3168	MS3172-68	23168K	
	440	254	55	72	-	-	Tr340x5	-	-	50.0	<b>H3168</b>	HM3168	MS3172-68	23168K	
	440	288	55	72	9	4.0	Tr340x5	M6	-	51.5	<b>OH3268H</b>	HM3168	MS3172-68	23268K	
	440	288	55	72	9	4.0	Tr340x5	M6	-	51.5	<b>OH3268HB</b>	HM3168	MS3172-68	23268K	
	440	288	55	72	15	10.0	Tr340x5	-	G 1/4	51.5	<b>OH3268</b>	HM3168	MS3172-68	23268K	
	440	288	55	72	15	10.0	Tr340x5	-	G 1/4	51.5	<b>OH3268B</b>	HM3168	MS3172-68	23268K	
	440	288	55	72	-	-	Tr340x5	-	-	51.5	<b>H3268</b>	HM3168	MS3172-68	23268K	
340	360	420	144	45	58	9	4.0	Tr360x5	M6	-	25.2	<b>OH3972H</b>	HM3072	MS3072	23972K
	420	144	45	58	9	4.0	Tr360x5	M6	-	25.2	<b>OH3972HB</b>	HM3072	MS3072	23972K	



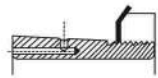
## ADAPTER SLEEVES d1 140-500 mm



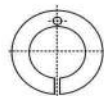
Type OH..H (HG)



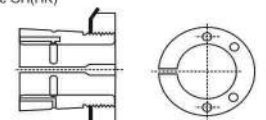
Type OH..HB (HGJ)



Type OH(HK)



Type OH(HK)

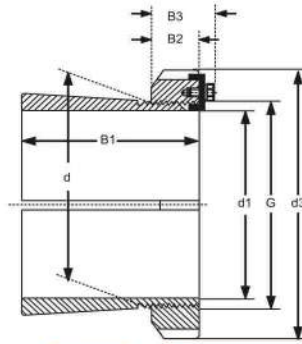


Type OH..B (HKJ)

DIMENSIONS										Type H		MASS		DESIGNATIONS			
d1	d	d3	B1	B2	B3	B4	e	G	G1	Sleeve Complete Set		Lock Nut	Locking washer	Appropriate bearing			
mm										in	kg						
340	360	420	144	45	58	13	7.0	Tr360x5	-	G 1/8	25.2	<b>OH3972</b>	HM3072	MS3072	23972K		
		420	144	45	58	13	7.0	Tr360x5	-	G 1/8	25.2	<b>OH3972B</b>	HM3072	MS3072	23972K		
		420	144	45	58	-	-	Tr360x5	-	-	25.2	<b>H3972</b>	HM3072	MS3072	23972K		
	420	188	45	58	9	4.0	Tr360x5	M6	-	29.0	<b>OH3072H</b>	HM3072	MS3072	23072K			
			45	58	9	4.0	Tr360x5	M6	-	29.0	<b>OH3072HB</b>	HM3072	MS3072	23072K			
		188	45	58	13	8.0	Tr360x5	-	G 1/8	29.0	<b>OH3072</b>	HM3072	MS3072	23072K			
				58	13	8.0	Tr360x5	-	G 1/8	29.0	<b>OH3072B</b>	HM3072	MS3072	23072K			
		188	45	58	-	-	Tr360x5	-	-	29.0	<b>H3072</b>	HM3072	MS3072	23072K			
				58	-	-	Tr360x5	-	-	29.0	<b>H3072</b>	HM3072	MS3072	23072K			
	460	259	58	75	9	4.0	Tr360x5	M6	-	56.0	<b>OH3172H</b>	HM3172	MS3172-68	23172K			
			58	75	9	4.0	Tr360x5	M6	-	56.0	<b>OH3172HB</b>	HM3172	MS3172-68	23172K			
		259	58	75	15	9.5	Tr360x5	-	G 1/4	56.0	<b>OH3172</b>	HM3172	MS3172-68	23172K			
75				15	9.5	Tr360x5	-	G 1/4	56.0	<b>OH3172B</b>	HM3172	MS3172-68	23172K				
259		58	75	-	-	Tr360x5	-	-	56.0	<b>H3272</b>	HM3172	MS3172-68	23172K				
			75	-	-	Tr360x5	-	-	56.0	<b>H3272</b>	HM3172	MS3172-68	23172K				
460	299	58	75	9	4.0	Tr360x5	M6	-	60.5	<b>OH3272H</b>	HM3172	MS3172-68	23272K				
		58	75	9	4.0	Tr360x5	M6	-	60.5	<b>OH3272HB</b>	HM3172	MS3172-68	23272K				
	299	58	75	15	10.0	Tr360x5	-	G 1/4	60.5	<b>OH3272</b>	HM3172	MS3172-68	23272K				
			75	15	10.00	Tr360x5	-	G 1/4	60.5	<b>OH3272B</b>	HM3172	MS3172-68	23272K				
	299	58	75	-	-	Tr360x5	-	-	60.5	<b>H3272</b>	HM3172	MS3172-68	23272K				
			75	-	-	Tr360x5	-	-	60.5	<b>H3272</b>	HM3172	MS3172-68	23272K				
360	380	450	164	48	62	9	4.0	Tr380x5	M6	-	31.5	<b>OH3976H</b>	HM3076	MS3080-76	23976K		
		450	164	48	62	9	4.0	Tr380x5	M6	-	31.5	<b>OH3976HB</b>	HM3076	MS3080-76	23976K		
		450	164	48	62	13	7.5	Tr380x5	-	G 1/8	31.5	<b>OH3976</b>	HM3076	MS3080-76	23976K		
		450	164	48	62	13	7.5	Tr380x5	-	G 1/8	31.5	<b>OH3976B</b>	HM3076	MS3080-76	23976K		
		450	164	48	62	-	-	Tr380x5	-	-	31.5	<b>H3976</b>	HM3076	MS3080-76	23976K		
	450	193	48	62	9	4.0	Tr380x5	M6	-	35.5	<b>OH3076H</b>	HM3076	MS3080-76	23076K			
			48	62	9	4.0	Tr380x5	M6	-	35.5	<b>OH3076HB</b>	HM3076	MS3080-76	23076K			
		193	48	62	13	8.0	Tr380x5	-	G 1/8	35.5	<b>OH3076</b>	HM3076	MS3080-76	23076K			
				62	13	8.0	Tr380x5	-	G 1/8	35.5	<b>OH3076B</b>	HM3076	MS3080-76	23076K			
		193	48	62	-	-	Tr380x5	-	-	35.5	<b>H3076</b>	HM3076	MS3080-76	23076K			
				62	-	-	Tr380x5	-	-	35.5	<b>H3076</b>	HM3076	MS3080-76	23076K			
	490	264	60	77	9	4.0	Tr380x5	M6	-	61.5	<b>OH3176H</b>	HM3176	MS3176	23176K			
			60	77	9	4.0	Tr380x5	M6	-	61.5	<b>OH3176HB</b>	HM3176	MS3176	23176K			
			60	77	15	9.5	Tr380x5	-	G 1/4	61.5	<b>OH3176</b>	HM3176	MS3176	23176K			
		264	60	77	15	9.5	Tr380x5	-	G 1/4	61.5	<b>OH3176B</b>	HM3176	MS3176	23176K			
				77	-	-	Tr380x5	-	-	61.5	<b>H3176</b>	HM3176	MS3176	23176K			
		264	60	77	9	4.0	Tr380x5	M6	-	69.5	<b>OH3276H</b>	HM3176	MS3176	23276K			
	77			9	4.0	Tr380x5	M6	-	69.5	<b>OH3276HB</b>	HM3176	MS3176	23276K				
77	15			10.5	Tr380x5	-	G 1/4	69.5	<b>OH3276</b>	HM3176	MS3176	23276K					

## ADAPTER SLEEVES

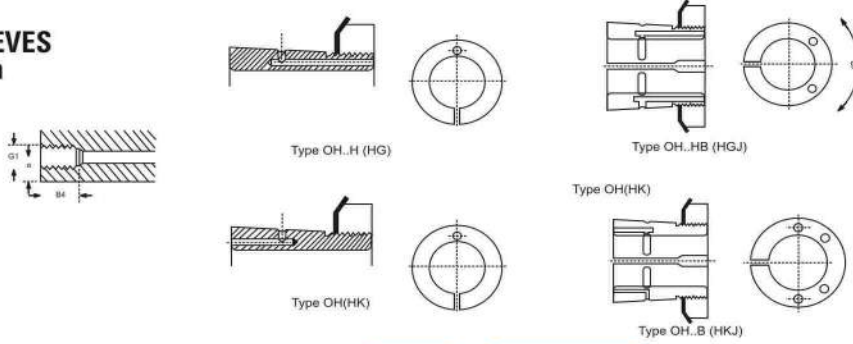
d1 140-500 mm



DIMENSIONS										MASS	DESIGNATIONS				
d1	d	d3	B1	B2	B3	B4	e	G	G1		Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing	
mm										in	kg				
360	380	490	310	60	77	15	10.5	Tr380x5	-	G 1/4	69.5	<b>OH3276B</b>	HM3176	MS3176	23276K
		490	310	60	77	-	-	Tr380x5	-	-	69.5	<b>H3276</b>	HM3176	MS3176	23276K
380	400	470	168	52	66	9	4.0	Tr400x5	M6	-	35.5	<b>OH3980H</b>	HM3080	MS3080-76	23980K
		470	168	52	66	9	4.0	Tr400x5	M6	-	35.5	<b>OH3980HB</b>	HM3080	MS3080-76	23980K
		470	168	52	66	13	7.5	Tr400x5	-	G 1/8	35.5	<b>OH3980</b>	HM3080	MS3080-76	23980K
		470	168	52	66	13	7.5	Tr400x5	-	G 1/8	35.5	<b>OH3980B</b>	HM3080	MS3080-76	23980K
	470	168	52	66	-	-	Tr400x5	-	-	35.5	<b>H3980</b>	HM3080	MS3080-76	23980K	
	470	210	52	66	9	4.0	Tr400x5	M6	-	40.0	<b>OH3080H</b>	HM3080	MS3080-76	23080K	
	470	210	52	66	9	4.0	Tr400x5	M6	-	40.0	<b>OH3080HB</b>	HM3080	MS3080-76	23080K	
	470	210	52	66	13	8.5	Tr400x5	-	G 1/8	40.0	<b>OH3080</b>	HM3080	MS3080-76	23080K	
	470	210	52	66	13	8.5	Tr400x5	-	G 1/8	40.0	<b>OH3080B</b>	HM3080	MS3080-76	23080K	
	470	210	52	66	-	-	Tr400x5	-	-	40.0	<b>H3080</b>	HM3080	MS3080-76	23080K	
	520	272	62	82	9	4.0	Tr400x5	M6	-	73.0	<b>OH3180H</b>	HM3180	MS3184-80	23180K	
	520	272	62	82	9	4.0	Tr400x5	M6	-	73.0	<b>OH3180HB</b>	HM3180	MS3184-80	23180K	
	520	272	62	82	15	9.5	Tr400x5	-	G 1/4	73.0	<b>OH3180</b>	HM3180	MS3184-80	23180K	
	520	272	62	82	15	9.5	Tr400x5	-	G 1/4	73.0	<b>OH3180B</b>	HM3180	MS3184-80	23180K	
	520	272	62	82	-	-	Tr400x5	-	-	73.0	<b>H3180</b>	HM3180	MS3184-80	23180K	
	520	328	62	82	9	4.0	Tr400x5	M6	-	87.0	<b>OH3280H</b>	HM3180	MS3184-80	23280K	
520	328	62	82	9	4.0	Tr400x5	M6	-	87.0	<b>OH3280HB</b>	HM3180	MS3184-80	23280K		
520	328	62	82	15	11.0	Tr400x5	-	G 1/4	87.0	<b>OH3280</b>	HM3180	MS3184-80	23280K		
520	328	62	82	15	11.0	Tr400x5	-	G 1/4	87.0	<b>OH3280B</b>	HM3180	MS3184-80	23280K		
520	328	62	82	-	-	Tr400x5	-	-	87.0	<b>H3280</b>	HM3180	MS3184-80	23280K		
400	420	490	168	52	66	9	4.0	Tr420x5	M6	-	36.0	<b>OH3984H</b>	HM3084	MS3084	23984K
		490	168	52	66	9	4.0	Tr420x5	M6	-	36.0	<b>OH3984HB</b>	HM3084	MS3084	23984K
		490	168	52	66	13	7.5	Tr420x5	-	G 1/8	36.0	<b>OH3984</b>	HM3084	MS3084	23984K
		490	168	52	66	13	7.5	Tr420x5	-	G 1/8	36.0	<b>OH3984B</b>	HM3084	MS3084	23984K
	490	168	52	66	-	-	Tr420x5	-	-	36.0	<b>H3984</b>	HM3084	MS3084	23984K	
	490	212	52	66	9	4.0	Tr420x5	M6	-	47.0	<b>OH3084H</b>	HM3084	MS3084	23084K	
	490	212	52	66	9	4.0	Tr420x5	M6	-	47.0	<b>OH3084HB</b>	HM3084	MS3084	23084K	
	490	212	52	66	13	8.5	Tr420x5	-	G 1/8	47.0	<b>OH3084</b>	HM3084	MS3084	23084K	
	490	212	52	66	13	8.5	Tr420x5	-	G 1/8	47.0	<b>OH3084B</b>	HM3084	MS3084	23084K	
	490	212	52	66	-	-	Tr420x5	-	-	47.0	<b>H3084</b>	HM3084	MS3084	23084K	
	540	304	70	90	9	4.0	Tr420x5	M6	-	80.0	<b>OH3184H</b>	HM3184	MS3184-80	23184K	
	540	304	70	90	9	4.0	Tr420x5	M6	-	80.0	<b>OH3184HB</b>	HM3184	MS3184-80	23184K	
	540	304	70	90	15	10.5	Tr420x5	-	G 1/4	80.0	<b>OH3184</b>	HM3184	MS3184-80	23184K	
	540	304	70	90	15	10.5	Tr420x5	-	G 1/4	80.0	<b>OH3184B</b>	HM3184	MS3184-80	23184K	
	540	304	70	90	-	-	Tr420x5	-	-	80.0	<b>H3184</b>	HM3184	MS3184-80	23184K	



## ADAPTER SLEEVES d1 140-500 mm

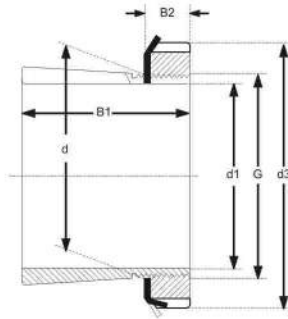


DIMENSIONS										MASS	DESIGNATIONS				
d1	d	d3	B1	B2	B4	e	G	G1		Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing		
mm										in	kg				
400	420	540	352	70	90	9	4.0	Tr420x5	M6	-	96.0	<b>OH3284H</b>	HM3184	MS3184-80	23284K
		540	352	70	90	9	4.0	Tr420x5	M6	-	96.0	<b>OH3284HB</b>	HM3184	MS3184-80	23284K
		540	352	70	90	15	11.0	Tr420x5	-	G 1/4	96.0	<b>OH3284</b>	HM3184	MS3184-80	23284K
		540	352	70	90	15	11.0	Tr420x5	-	G 1/4	96.0	<b>OH3284B</b>	HM3184	MS3184-80	23284K
		540	352	70	90	-	-	Tr420x5	-	-	96.0	<b>H3284</b>	HM3184	MS3184-80	23284K
410	440	520	189	60	77	12	6.5	Tr440x5	M8	-	58.0	<b>OH3988H</b>	HM3088	MS3092-88	23988K
		520	189	60	77	12	6.5	Tr440x5	M8	-	58.0	<b>OH3988HB</b>	HM3088	MS3092-88	23988K
		520	189	60	77	15	10.0	Tr440x5	-	G 1/4	58.0	<b>OH3988</b>	HM3088	MS3092-88	23988K
		520	189	60	77	15	10.0	Tr440x5	-	G 1/4	58.0	<b>OH3988B</b>	HM3088	MS3092-88	23988K
		520	189	60	77	-	-	Tr440x5	-	-	58.0	<b>H3988</b>	HM3088	MS3092-88	23988K
	520	228	60	77	12	6.5	Tr440x5	M8	-	65.0	<b>OH3088H</b>	HM3088	MS3092-88	23088K	
	520	228	60	77	12	6.5	Tr440x5	M8	-	65.0	<b>OH3088HB</b>	HM3088	MS3092-88	23088K	
	520	228	60	77	15	11.0	Tr440x5	-	G 1/4	65.0	<b>OH3088</b>	HM3088	MS3092-88	23088K	
	520	228	60	77	15	11.0	Tr440x5	-	G 1/4	65.0	<b>OH3088B</b>	HM3088	MS3092-88	23088K	
	520	228	60	77	-	-	Tr440x5	-	-	65.0	<b>H3088</b>	HM3088	MS3092-88	23088K	
	560	307	70	90	12	6.5	Tr440x5	M8	-	95.0	<b>OH3188H</b>	HM3188	MS3192-88	23188K	
	560	307	70	90	12	6.5	Tr440x5	M8	-	95.0	<b>OH3188HB</b>	HM3188	MS3192-88	23188K	
	560	307	70	90	15	14.0	Tr440x5	-	G 1/4	95.0	<b>OH3188</b>	HM3188	MS3192-88	23188K	
	560	307	70	90	15	14.0	Tr440x5	-	G 1/4	95.0	<b>OH3188B</b>	HM3188	MS3192-88	23188K	
	560	307	70	90	-	-	Tr440x5	-	-	95.0	<b>H3188</b>	HM3188	MS3192-88	23188K	
560	361	70	90	12	6.5	Tr440x5	M8	-	117.0	<b>OH3288H</b>	HM3188	MS3192-88	23288K		
560	361	70	90	12	6.5	Tr440x5	M8	-	117.0	<b>OH3288HB</b>	HM3188	MS3192-88	23288K		
560	361	70	90	15	16.0	Tr440x5	-	G 1/4	117.0	<b>OH3288</b>	HM3188	MS3192-88	23288K		
560	361	70	90	15	16.0	Tr440x5	-	G 1/4	117.0	<b>OH3288B</b>	HM3188	MS3192-88	23288K		
560	361	70	90	-	-	Tr440x5	-	-	117.0	<b>H3288</b>	HM3188	MS3192-88	23288K		
430	460	540	189	60	77	12	6.5	Tr460x5	M8	-	60.0	<b>OH3992H</b>	HM3092	MS3092-88	23992K
		540	189	60	77	12	6.5	Tr460x5	M8	-	60.0	<b>OH3992HB</b>	HM3092	MS3092-88	23992K
		540	189	60	77	15	10.0	Tr460x5	-	G 1/4	60.0	<b>OH3992</b>	HM3092	MS3092-88	23992K
		540	189	60	77	15	10.0	Tr460x5	-	G 1/4	60.0	<b>OH3992B</b>	HM3092	MS3092-88	23992K
		540	189	60	77	-	-	Tr460x5	-	-	60.0	<b>H3992</b>	HM3092	MS3092-88	23992K
	540	234	60	77	12	6.5	Tr460x5	M8	-	71.0	<b>OH3092H</b>	HM3092	MS3192-88	23092K	
	540	234	60	77	12	6.5	Tr460x5	M8	-	71.0	<b>OH3092HB</b>	HM3092	MS3192-88	23092K	
	540	234	60	77	15	11.0	Tr460x5	-	G 1/4	71.0	<b>OH3092</b>	HM3092	MS3192-88	23092K	
	540	234	60	77	15	11.0	Tr460x5	-	G 1/4	71.0	<b>OH3092B</b>	HM3092	MS3192-88	23092K	
	540	234	60	77	-	-	Tr460x5	-	-	71.0	<b>H3092</b>	HM3092	MS3192-88	23092K	
	580	326	75	95	12	6.5	Tr460x5	M8	-	119.0	<b>OH3192H</b>	HM3192	MS3192-88	23192K	
	580	326	75	95	12	6.5	Tr460x5	M8	-	119.0	<b>OH3192HB</b>	HM3192	MS3192-88	23192K	



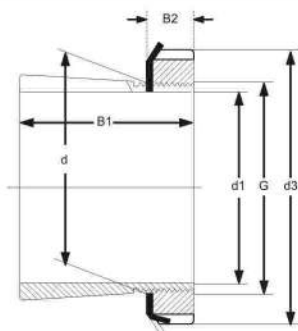


**ADAPTER SLEEVES**  
for Shaft with inch dimensions  
d1 3/4-7 3/16 in



DIMENSIONS			MASS		DESIGNATIONS						
d1	d	d3	B1	B2	G	Adapter Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing		
in						kg					
3/4	25	38	26	8	M25x1.5	0.07	<b>HE205</b>	KM 5	MB 5	1205 K	
		38	29	8	M25x1.5	0.08	<b>HE305</b>	KM 5	MB 5	2205K, 1305K, UK 205	
		38	35	8	M25x1.5	0.09	<b>HE2305</b>	KM 5	MB 5	2305K, UKX05, UK305	
7/8	30	45	27	8	M30x1.5	0.11	<b>HS206</b>	KM 6	MB 6	1206 K	
		45	31	8	M30x1.5	0.12	<b>HS306</b>	KM 6	MB 6	2206K, 1306K,	
		45	38	8	M30x1.5	0.14	<b>HS2306</b>	KM 6	MB 8	UKX06, UK206	
15/16	30	45	27	8	M30x1.5	0.1	<b>HA206</b>	KM 6	MB 6	1206K	
		45	31	8	M30x1.5	0.12	<b>HA306</b>	KM 6	MB 6	2206K, 1306K	
		45	38	8	M30x1.5	0.13	<b>HA2306</b>	KM 6	MB 6	2306K, UKX06, UK306	
1	30	45	27	8	M30x1.5	0.8	<b>HE206</b>	KM 6	MB 6	1206K	
		45	31	8	M30x1.5	0.1	<b>HE306</b>	KM 6	MB 6	2206K, 1306K UK206	
		45	38	8	M30x1.5	0.11	<b>HE2306</b>	KM 6	MB 6	2306K, UKX06, UK306	
1 1/8	35	52	29	9	M35x1.5	0.14	<b>HS207</b>	KM 7	MB 7	1207K	
		52	35	9	M35x1.5	0.16	<b>HS307</b>	KM 7	MB 7	2207K, 1307K, 22207K, UK207	
1 3/16	35	52	29	9	M35x1.5	0.12	<b>HA207</b>	KM 7	MB 7	1207K	
		52	35	9	M35x1.5	0.14	<b>HA307</b>	KM 7	MB 7	2207K, 1307K, 22207K, UK207	
		52	43	9	M35x1.5	0.16	<b>HA2307</b>	KM 7	MB 7	2307K, UKX07, UK307	
1 1/4	40	58	31	10	M40x1.5	0.19	<b>HE208</b>	KM 8	MB 8	1208K	
		58	36	10	M40x1.5	0.22	<b>HE308</b>	KM 8	MB 8	2208K, 1308K, 22208K, 21308K, UK208	
		58	46	10	M40x1.5	0.28	<b>HE2308</b>	KM 8	MB 8	2308K, 22308K, UKX08, UKX308	
1 3/8	40	58	31	10	M40x1.5	0.16	<b>HS208</b>	KM 8	MB 8	1208K	
		58	36	10	M40x1.5	0.17	<b>HS308</b>	KM 8	MB 8	2208K, 1308K, 22208K, 21308K, UK 209	
1 7/16	45	65	33	11	M45x1.5	0.26	<b>HA209</b>	KM 9	MB 9	1209K	
		65	39	11	M45x1.5	0.29	<b>HA309</b>	KM 9	MB 9	2209K, 1309K, 22209K, 21309K, UK209	
		65	50	11	M45x1.5	0.27	<b>HA2309</b>	KM 9	MB 9	2309K, 22309K, UKX09, UK309	
1 1/2	45	65	33	11	M45x1.5	0.2	<b>HE209</b>	KM 9	MB 9	1209K	
		65	39	11	M45x1.5	0.24	<b>HE309</b>	KM 9	MB 9	2209K, 1309K, 22209K, 21309K, UK209	
		65	50	11	M45x1.5	0.31	<b>HE2309</b>	KM 9	MB 9	2309K, 22309K, UKX09, UK309	
1 5/8	50	70	35	12	M50x1.5	0.31	<b>HS310</b>	KM 10	MB 10	1210K	
		70	42	12	M50x1.5	0.36	<b>HS310</b>	KM 10	MB 10	2210K, 1310K, 22210K, 21310K, UK210	
		70	55	12	M50x1.5	0.4	<b>HS2310</b>	KM 10	MB 10	2310K, 22310K	
1 11/16	50	70	35	12	M50x1.5	0.28	<b>HA310</b>	KM 10	MB 10	1210K	
		70	42	12	M50x1.5	0.32	<b>HA310</b>	KM 10	MB 10	2210K, 1310K, 22210K, 21310K, UK210	
		70	55	12	M50x1.5	0.4	<b>HA2310</b>	KM 10	MB 10	2310K, 22310K, UKX10, UK310	

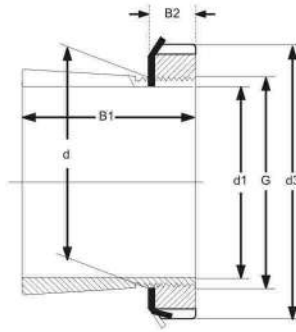
**ADAPTER SLEEVES**  
for Shaft with inch dimensions  
d1 3/4-7 3/16 in



DIMENSIONS			MASS			DESIGNATIONS				
d1	d	d3	B1	B2	G	Adapter Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing	
in						kg				
1 3/4	50	70	35	12	M50X1.5	0.26	<b>HE210</b>	KM 10	MB 10	1210K
		70	42	12	M50X1.5	0.29	<b>HE310</b>	KM 10	MB 10	2210K, 1310K, 22210K, 21310K, UK210
		70	55	12	M50X1.5	0.36	<b>HE2310</b>	KM 10	MB 10	2310K, 22310K, UKX10, UK310
1 7/8	50	75	37	12.5	M55X2	0.33	<b>HS211</b>	KM 11	MB 11	1211K
		75	45	12.5	M55X2	0.38	<b>HS311</b>	KM 11	MB 11	2211K, 1311K, 22211K, 21311K, UK211
1 15/16	55	75	37	12.5	M55X2	0.3	<b>HA211</b>	KM 11	MB 11	1211K
		75	45	12.5	M55X2	0.34	<b>HA311</b>	KM 11	MB 11	2211K, 1311K, 22211K, 21311K, UK211
		75	59	12.5	M55X2	0.42	<b>HA2311</b>	KM 11	MB 11	2311K, 22311K
2	55	75	37	12.5	M55X2	0.26	<b>HE211</b>	KM 11	MB 11	1211K
		75	45	12.5	M55X2	0.29	<b>HE311</b>	KM 11	MB 11	2211K, 1311K, 22211K, 21311K, UK211
		75	59	12.5	M55X2	0.36	<b>HE2311</b>	KM 11	MB 11	2311K, 22311K, UKX11, UK311
2 1/8	60	80	39	13	M60X2	0.35	<b>HS212</b>	KM 12	MB 12	1212K
		80	47	13	M60X2	0.4	<b>HS312</b>	KM 12	MB 12	2212K, 1312K, 22212K, 21312K, UK212
		80	62	13	M60X2	0.49	<b>HS2312</b>	KM 12	MB 12	2312K, 22312K
2 3/16	65	85	40	14	M65X2	0.49	<b>HA213</b>	KM 13	MB 13	1213K
		85	50	14	M65X2	0.58	<b>HA313</b>	KM 13	MB 13	2213K, 1313K, 22213K, 22213K, 21313K
		85	65	14	M65X2	0.75	<b>HA2313</b>	KM 13	MB 13	2313K, 22313K
2 1/4	65	85	40	14	M65X2	0.44	<b>HE213</b>	KM 13	MB 13	1213K
		85	50	14	M65X2	0.52	<b>HE313</b>	KM 13	MB 13	2213K, 1313K, 22213K, 21313K, UK213
		85	65	14	M65X2	0.65	<b>HE2313</b>	KM 13	MB 13	2313K, 22313K, UKX13, UK313
2 3/8	65	85	40	14	M65X2	0.44	<b>HS213</b>	KM 13	MB 13	1213K
		85	50	14	M65X2	0.71	<b>HS313</b>	KM 13	MB 13	2213K, 1313K, 22213K, 21313K, UK213
		85	65	14	M65X2	0.8	<b>HS2313</b>	KM 13	MB 13	2313K, 22313K
2 7/16	75	98	43	15	M75X2	0.75	<b>HA215</b>	KM 15	MB 15	1215K
		98	55	15	M75X2	0.91	<b>HA315</b>	KM 15	MB 15	2215K, 1315K, 22215K, 21315K, UK215
		98	73	15	M75X2	1.15	<b>HA2315</b>	KM 15	MB 15	2315K, 22315K
2 1/2	75	98	43	15	M75X2	0.72	<b>HE215</b>	KM 15	MB 15	1215K RL24K
		98	55	15	M75X2	0.85	<b>HE315</b>	KM 15	MB 15	2215K, 1315K, 22215K, 21315K, UK215
		98	73	15	M75X2	1.05	<b>HE2315</b>	KM 15	MB 15	2315K, 22315K
2 5/8	75	98	43	15	M75X2	0.7	<b>HS215</b>	KM 15	MB 15	1215K
		98	55	15	M75X2	0.71	<b>HS315</b>	KM 15	MB 15	2215K, 1315K, 22215K, 21315K
		98	73	15	M75X2	0.9	<b>HS2315</b>	KM 15	MB 15	2315K, 22315K
2 11/16	80	105	46	17	M80X2	0.87	<b>HA216</b>	KM 16	MB 16	1216K
		105	59	17	M80X2	1.05	<b>HA316</b>	KM 16	MB 16	2216K, 1316K, 22216K, 21316K, UK216
		105	78	17	M80X2	1.3	<b>HA2316</b>	KM 16	MB 16	2316K, 22316K
2 3/4	80	105	46	17	M80X2	0.81	<b>HE216</b>	KM 160	MB 16	1216K

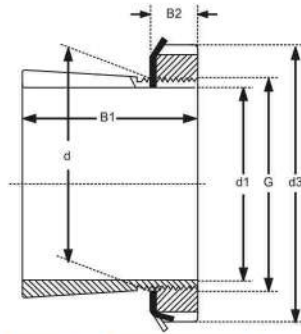


**ADAPTER SLEEVES**  
for Shaft with inch dimensions  
d1 3/4-7 3/16 in



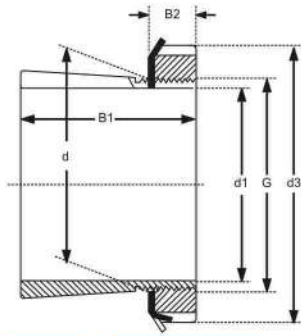
DIMENSIONS			MASS		DESIGNATIONS		Lock Nut	Locking washer	Appropriate bearing	
d1	d	d3	B1	B2	G	Adapter Sleeve Complete Set				
in						kg				
2 3/4	80	105	59	17	M80X2	0.97	<b>HE316</b>	KM16	MB 16	2216K, 12316K, 2216K, 21316K, UK216
		105	78	17	M80X2	1.2	<b>HE2316</b>	KM16	MB 16	2316K, 22316, UK316
2 15/16	85	110	50	18	M85X2	0.94	<b>HA217</b>	KM17	MB17	1217K
		110	63	18	M85X2	1.1	<b>HA317</b>	KM17	MB17	2217K, 1317K, 21317K, 21317K, UK217
		110	82	18	M85X2	1.4	<b>HA2317</b>	KM17	MB17	2317K, 22317K
3	85	110	50	18	M85X2	0.87	<b>HE217</b>	KM17	MB17	1217K
		110	63	18	M85X2	1	<b>HE317</b>	KM17	MB17	2217K, 1317K, 22217K, 21317K, UK217
		110	82	18	M85X2	1.3	<b>HE2317</b>	KM17	MB17	2317K, 22317K, UK317
3 3/16	90	120	52	18	M90X2	1.05	<b>HA218</b>	KM18	MB18	1218K
		120	65	18	M90X2	1.25	<b>HA318</b>	KM18	MB18	2218K, 1318K, 22218K, 21318K
		120	86	18	M90X2	1.5	<b>HA2318</b>	KM18	MB18	2318K, 23218K/W33, 22318K
3 1/4	90	120	52	18	M90X2	0.97	<b>HE218</b>	KM18	MB18	1218K
		120	65	18	M90X2	1.1	<b>HE318</b>	KM18	MB18	2218K, 1318K, 22218K, 21318K
		120	86	18	M90X2	1.4	<b>HE2318</b>	KM18	MB18	2318K, 232218K, 22318K, UK318
	95	125	55	19	M95X2	1.35	<b>HE219</b>	KM19	MB19	1219K
		125	68	19	M95X2	1.6	<b>HE319</b>	KM19	MB19	2219K, 1319K, 22219K, 21319K
		125	90	19	M95X2	2	<b>HE2319</b>	KM19	MB19	2319K, 22319K, UK319
3 7/16	100	130	58	20	M100X2	1.55	<b>HA220</b>	KM20	MB20	1220K
		130	71	20	M100X2	1.8	<b>HA320</b>	KM20	MB20	2220K, 1320K, 22220K, 21320K
		130	97	20	M100X2	2.35	<b>HA2320</b>	KM20	MB20	2320K, 23220K, 22320K
3 1/2	100	130	58	20	M100X2	1.45	<b>HE220</b>	KM20	MB20	1220K
		130	71	20	M100X2	1.75	<b>HE320</b>	KM20	MB20	2220K, 1320K, 22220K, 21320K
		130	97	20	M100X2	2.2	<b>HE2320</b>	KM20	MB20	2320K, 23220K, 22320K, UK320
		130	76	20	M100X2	1.8	<b>HE3120</b>	KM20	MB20	23120K
4	110	145	63	21	M110X2	1.65	<b>HE222</b>	KM22	MB22	1222K
		145	77	21	M110X2	1.9	<b>HE322</b>	KM22	MB22	2222K, 1322K, 23022K, 22222K, 21322K
		145	105	21	M110X2	2.4	<b>HE2322</b>	KM22	MB22	2322K, 232222K, 22322K, UK322
		145	81	21	M110X2	2.25	<b>HE3122</b>	KM22	MB22	23122K
4 3/16	120	145	72	22	M120X2	2.25	<b>HA3024</b>	KML24	MBL24	1224K, 23024K
		155	88	22	M120X2	2.9	<b>HA3124</b>	KM24	MB24	2224K, 23124K
		155	112	22	M120X2	3.6	<b>HA2324</b>	KM24	MB24	23224K, 22324K
4 1/4	120	145	72	22	M120X2	2	<b>HE3024</b>	KML24	MBL24	1224K, 23024K
		155	88	22	M120X2	2.8	<b>HE3124</b>	KM24	MB24	2224K, 23124K
		155	112	22	M120X2	3.35	<b>HE2324</b>	KM24	MB24	23224K, 22324K, UK324

**ADAPTER SLEEVES**  
for Shaft with inch dimensions  
d1 3/4-7 3/16 in



DIMENSIONS			MASS			DESIGNATIONS				
d1	d	d3	B1	B2	G	Adapter Sleeve	Lock Nut	Locking	Appropriate bearing	
in						kg				
4 7/16	130	155	80	23.0	M130X2	2.85	HA3026	KML26	MBL26	23026K
		165	92	23.0	M130X2	3.75	HA3126	KM26	MB26	23126K,22226K
		165	121	23.0	M130X2	4.75	HA2326	KM26	MB26	23226K,22326K
4 1/2	130	155	80	23	M130X2	2.9	HE3026	KML26	MBL26	23026K
		165	92	23	M130X2	3.6	HE3126	KM26	MB26	23126K,22226K
		165	121	23	M130X2	4.55	HE2326	KM26	MB26	23226K,22326K,UK326
4 15/16	140	165	82	24	M140X2	3	HA3028	KML28	MBL28	23028K
		180	97	24	M140X2	4.1	HA3128	KM28	MB28	23128K,22228K
		180	133	24	M140X2	5.3	HA2328	KM28	MB28	23228K,22328K
5	140	165	82	24	M140X2	2.8	HE3028	KML28	MBL28	23028K
		180	97	24	M140X2	3.15	HE3128	KM28	MB28	23128K,22228K
		180	133	24	M140X2	5	HE2328	KM28	MB28	23228K,22328K,UK328
5 3/16	150	180	87	26	M150X2	4.7	HA3030	KML30	MBL30	23030K
		195	111	26	M150X2	5.8	HA3130	KM30	MB30	23130K,22230K
		195	139	26	M150X2	7.1	HA2330	KM30	MB30	23230K,22330K
5 1/4	150	180	87	26	M150X2	4.65	HE3030	KML30	MBL30	23030K
		195	111	26	M150X2	5.5	HE3130	KM30	MB30	23130K,22230K
		195	139	26	M150X2	6.8	HE2330	KM30	MB30	23230K,22330K
5 7/16	160	190	93	27.5	M160X3	5.2	HA3032	KML32	MBL32	23032K
		210	119	28	M160X3	7.55	HA3132	KM32	MB32	23132K,22232K
		210	147	28	M160X3	9.4	HA2332	KM32	MB32	23232K,22332K
5 1/2	160	190	93	27.5	M160X3	5.1	HE3032	KML32	MBL32	23032K
		210	119	28	M160X3	7.3	HE3132	KM32	MB32	23132K,22232K
		210	147	28	M160X3	8.8	HE2332	KM32	MB32	23232K,22332K
5 15/16	170	200	101	28.5	M170X3	5.7	HA3034	KML34	MBL34	23034K
		220	122	29	M170X3	7.8	HA3134	KM34	MB34	23134K,22234K
		220	154	29	M170X3	9.6	HA2334	KM34	MB34	23234K,22334K
6	170	200	101	28.5	M170X3	5.4	HE3034	KML34	MBL34	23034K
		220	122	29	M170X3	7.55	HE3134	KM34	MB34	23134K,22234K
		220	154	29	M170X3	9.2	HE2334	KM34	MB34	23234K,22334K
6 7/16	180	210	109	29.5	M180X3	6.85	HA3036	KML36	MBL36	23036K
		230	131	30	M180X3	8.15	HA3136	KM36	MB36	23136K,22236K
		230	161	30	M180X3	9.9	HA2336	KM36	MB36	23236K,22336K

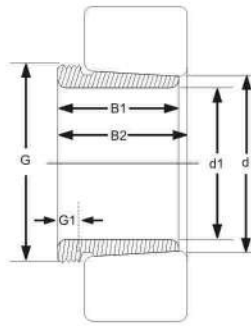
**ADAPTER SLEEVES**  
for Shaft with inch dimensions  
d1 3/4-7 3/16 in



DIMENSIONS					MASS	DESIGNATIONS				
d1	d	d3	B1	B2	G	Adapter Sleeve Complete Set	Lock Nut	Locking washer	Appropriate bearing	
in						kg				
6 1/2	180	210	109	29.5	M180X3	5.55	<b>HE3036</b>	KML36	MBL36	23036K
		230	131	30	M180X3	7.8	<b>HE3136</b>	KM36	MB36	23136K,22236K
		230	161	30	M180X3	9.35	<b>HE2336</b>	KM36	MB36	23236K,22336K
6 3/4	190	220	112	30.5	M190X3	7.2	<b>HE3038</b>	KML38	MBL38	23038K
		240	141	31	M190X3	10.2	<b>HE3138</b>	KM38	MB38	23138K,22238K
		240	169	31	M190X3	11.7	<b>HE2338</b>	KM38	MB38	23238K,22338K
6 15/16	190	220	112	30.5	M190X3	7.2	<b>HA3038</b>	KML38	MBL38	23038K
		240	141	31	M190X3	8.5	<b>HA3138</b>	KM38	MB38	23138K,22238K
		240	169	31	M190X3	10	<b>HA2338</b>	KM38	MB38	23238K,22338K
7	200	240	120	31.5	M200X3	9.35	<b>HE3040</b>	KML40	MBL40	23040K
		250	150	32	M200X3	12.3	<b>HE3140</b>	KM40	MB40	23140K,22240K
		250	176	32	M200X3	14.2	<b>HE2340</b>	KM40	MB40	23240K,22340K
7 3/16	200	240	120	31.5	M200X3	8.5	<b>HA3040</b>	KML40	MBL40	23040K
		250	150	32	M200X3	10.8	<b>HA3140</b>	KM40	MB40	23140K,22240K
		250	176	32	M200X3	12.6	<b>HA2340</b>	KM40	MB40	23240K,22340K



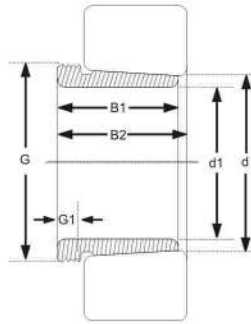
## WITHDRAWAL SLEEVES d1 35-480 mm



1) Width before the sleeve is pressed into bearing bore

DIMENSIONS				MASS				DESIGNATIONS						
d1	d	B1	B2 <sup>1)</sup>	G	G1	G2	e	Withdrawal sleeve	Appropriate extraction nut	Hydraulic Nut	Lock nut	Locking washer	Bearing	
mm							kg							
35	40	29	32	M45X1.5	6	-	-	0.09	AH 308	KM9	-	KM7	MB7	2208K,1308K
		40	43	M45X1.5	7	-	-	0.13	AH 2308	KM9	-	KM7	MB7	22208K,21308K 2308K,22308K
40	45	31	34	M50x1.5	6	-	-	0.12	AH 309	KM10	HMV10	KM8	MB8	2209K,1309K 22209K,21309K
		44	47	M50x1.5	7	-	-	0.16	AH 2309	KM10	HMV10	KM8	MB8	2309K,22309K
45	50	35	38	M55X2	7	-	-	0.13	AHX310	KM11	HMV11	KM9	MB9	2210K,1310K 22210K,21310K
		50	53	M55X2	9	-	-	0.19	AHX2310	KM11	HMV11	KM9	MB9	2310K,22310K
50	55	37	40	M60X2	7	-	-	0.16	AHX311	KM12	HMV12	KM10	MB10	2211K,1311K 22211K,21311K
		54	57	M60X2	10	-	-	0.26	AHX2311	KM12	HMV12	KM10	MB10	2311K,22311K
55	60	40	43	M65X2	8	-	-	0.19	AHX312	KM13	HMV13	KM11	MB11	2212K,1312K 22212K,21312K
		58	61	M65X2	11	-	-	0.3	AHX 2312	KM13	HMV13	KM11	MB11	2312K,22312K
60	65	42	45	M70X2	8	-	-	0.25	AH 313G	KM14	HMV14	KM12	MB12	2213K,1313K 22213K,21313K
		61	64	M75X2	12	-	-	0.39	AH 2313	KM15	HMV 15	KM12	MB12	2313K,22313K
		70	64	M80X2	12	-	-	0.7	AH 2314/60	KM16	HMV 16	KM12	MB12	22314K
65	70	43	47	M75X2	8	-	-	0.29	AH 314G	KM15	HMV 15	KM 13	MB 13	22214K,21314K
		64	68	M 80X2	12	-	-	0.45	AHX 2314	KM 16	HMV 16	KM 13	MB 13	22314K
		75	68	M85X2	12	-	-	0.81	AH 2315/65	KM 17	HMV 17	KM 13	MB 13	2315K,22315K
70	75	45	49	M 80X2	8	-	-	0.32	AH 315G	KM 16	HMV 16	KM 14	MB 14	2215K,1315K 22215K,21315K
		68	72	M85X2	12	-	-	0.53	AHX 2315	KM 17	HMV 17	KM 14	MB 14	2315K,22315K
	80	48	52	M90X2	8	-	-	0.58	AH 316/70	KM 18	HMV 18	KM 14	MB 14	2216K,1316K 22216K,21316K
		71	75	M90X2	12	-	-	0.92	AH 2316/70	KM 18	HMV 18	KM 14	MB 14	2316K,22316K
75	80	48	52	M90X2	8	-	-	0.37	AH 316	KM 18	HMV 18	KM 14	MB 14	2216K,1316K 22216K,21316K
		71	75	M90X2	12	-	-	0.57	AHX 2316	KM 18	HMV 18	KM 15	MB 15	2316K,22316K
	85	52	56	M 95X2	9	-	-	0.68	AH 317/75	KM 19	HMV 19	KM 15	MB 15	2217K,1317K 22217K,21317K
		74	78	M 95X2	13	-	-	1	AH 2317/75	KM 19	HMV 19	KM 15	MB 15	2217K,1317K

## WITHDRAWAL SLEEVES d1 35-480 mm

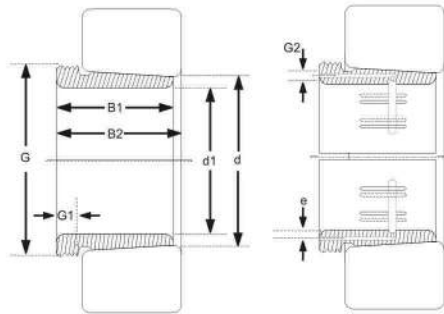


1) Width before the sleeve is pressed into bearing bore

DIMENSIONS				MASS				DESIGNATIONS						
d1	d	B1	B2 <sup>1)</sup>	G	G1	G2	<sup>e</sup>	Withdrawal sleeve	Appropriate extraction nut	Hydraulic Nut	Lock nut	Locking washer	Bearing	
mm								kg						
80	85	52	56	M 95X2	9	-	-	0.43	AHX 317	KM 19	HMV 19	KM 16	MB 16	2217K,1317K
		74	78	M 95X2	13	-	-	0.65	AHX 2317	KM 19	HMV 19	KM 16	MB 16	22217K,21317K
	90	53	57	M 100X2	9	-	-	0.73	AH 318/80	KM 20	HMV20	KM 16	MB 16	2317K,22317K
		63	67	M 100X2	10	-	-	0.57	AH 3218/80	KM 20	HMV20	KM 17	MB 17	2218K,1318K
		79	83	M 100X2	14	-	-	1.15	AH 2318/80	KM 20	HMV20	KM 16	MB 16	22218K,21318K
85	90	53	57	M 100X2	9	-	-	0.46	AHX 318	KM 20	HMV20	KM 17	MB 17	23218K
		63	67	M 100X2	10	-	-	0.57	AHX 3218	KM 20	HMV20	KM 17	MB 17	2318K,22318K
	95	57	61	M 105X2	10	-	-	0.76	AHX 2318	KM 20	HMV20	KM 17	MB 17	2219K,1319K
		85	89	M 105X2	16	-	-	1.35	AH 319/85	KM 21	HMV 21	KM 17	MB 17	22219K,21319K
		79	83	M 100X2	14	-	-	0.76	AH 2319/85	KM 21	HMV 21	KM 17	MB 17	2319K,22319K
90	95	57	61	M 105X2	10	-	-	0.54	AHX 319	KM 21	HMV 21	KM 18	MB 18	2219K,1319K
		85	89	M 105X2	16	-	-	0.9	AHX 2319	KM 21	HMV 21	KM 18	MB 18	22219K,21319K
	100	59	63	M 110X2	10	-	-	0.9	AH 320/90	KM 22	HMV 22	KM 18	MB 18	2319K,22319K
		64	68	M 110X2	11	-	-	0.66	AH 3220/90	KM 22	HMV 22	KM 19	MB 19	2220K,1320K
		73	77	M 110X2	11	-	-	0.76	AH 2320/90	KM 22	HMV 22	KM 19	MB 19	22220K,21320K
		90	94	M 110X2	16	-	-	1.5	AH 3120/90	KM 22	HMV 22	KM 18	MB 18	23120K
95	100	59	63	M 110X2	10	-	-	0.58	AHX 320	KM 22	HMV 22	KM 19	MB 19	23220K
		64	68	M 110X2	11	-	-	0.66	AHX 320	KM 22	HMV 22	KM 19	MB 19	2220K,1320K
	110	63	67	M 120X2	12	-	-	0.77	AHX 3120	KM 22	HMV 22	KM 19	MB 19	23120K
		73	77	M 110X2	11	-	-	0.76	AHX 3220	KM 22	HMV 22	KM 19	MB 19	23220K
		90	94	M 110X2	16	-	-	1	AHX 2320	KM 22	HMV 22	KM 19	MB 19	2320K,22320K
100	110	63	67	M 120X2	12	-	-	0.77	AHX 320	KM 22	HMV 22	KM 19	MB 19	2320K,22320K
		68	72	M 120X2	11	-	-	1.2	AHX 3120	KM 22	HMV 22	KM 19	MB 19	23120K
	120	82	86	M 125X2	11	-	-	1.05	AHX 3220	KM 22	HMV 22	KM 19	MB 19	23220K
		98	102	M 125X2	16	-	-	1.95	AHX 2320	KM 22	HMV 22	KM 19	MB 19	2320K,22320K
		82	86	M 125X2	11	-	-	1.05	AH 3222/100	KM 25	HMV 25	KM 21	MB 21	1322K,21322K
105	110	63	67	M 120X2	12	-	-	0.77	AH 3222/100	KM 25	HMV 25	KM 20	MB 20	2222K,23122K
		68	72	M 120X2	11	-	-	0.76	AH 3122/100	KM 24	HMV 24	KM 21	MB 21	2222K
	120	82	86	M 125X2	11	-	-	1.05	AH 3222/100	KM 25	HMV 25	KM 21	MB 21	23222K
		98	102	M 125X2	16	-	-	1.35	AHX 322	KM 24	HMV 24	KM 21	MB 21	2322K,21322K
		82	91	M 115X2	13	-	-	0.71	AHX 3122	KM 24	HMV 24	KM 21	MB 21	2222K,21322K
110	120	60	64	M 130X2	13	-	-	0.73	AHX 3222	KM 25	HMV 25	KM 21	MB 21	23222K
		75	79	M 130X2	12	-	-	1.45	AHX 2322	KM 25	HMV 25	KM 21	MB 21	2322K,22322K
	130	90	94	M 135X2	13	-	-	1.3	AH 24122	KM 23	HMV 23	KM 21	MB 21	24122K30
		105	109	M 135X2	17	-	-	2.35	AH 3024/110	KM 26	HMV 26	KM 22	MB 22	23024K
		75	79	M 130X2	12	-	-	1.45	AH 3124/110	KM 26	HMV 26	KM 22	MB 22	23124K,22224K
115	120	60	64	M 130X2	13	-	-	0.73	AH 3224/110	KM 27	HMV 27	KM 22	MB 22	23224K
		75	79	M130X2	12	-	-	0.94	AH 2324/110	KM 27	HMV 27	KM 22	MB 22	22324K



## WITHDRAWAL SLEEVES d1 35-480 mm

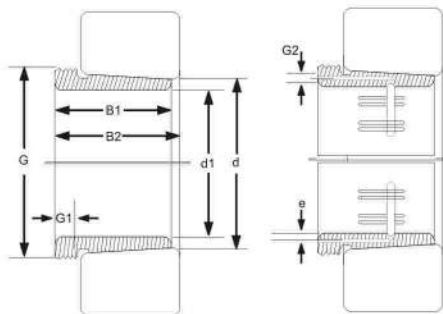


1) Width before the sleeve is pressed into bearing bore

DIMENSIONS				MASS			DESIGNATIONS								
d1	d	B1	B2 <sup>1)</sup>	G	G1	G2	<sup>e</sup>	Withdrawal sleeve	Appropriate extraction nut	Hydraulic Nut	Lock nut	Locking washer	Bearing		
mm							kg								
115	120	90	94	M 135X2	13	-	-	1.3	AHX 3224	KM 27	HMV 27	KM 22	MB 22	23224K	
		105	109	M 135X2	17	-	-	1.65	AHX 2324	KM 27	HMV 27	KM 22	MB 22	22324K	
		73	82	M 125X2	13	-	-	0.7	AH 24024	KM 25	HMV 25	KM 22	MB 22	24024K30	
		93	102	M 130X2	13	-	-	1	AH 24124	KM 26	HMV 26	KM 22	MB 22	24124K30	
		130	67	71	M 140X2	14	-	-	0.91	AH 3026/115	KM 28	HMV 28	KM 24	MB 24	23026K
			78	82	M 140X2	12	-	-	2.2	AH 3126/115	KM 28	HMV 28	KM 22	MB 22	23126K,22226K
			98	102	M 145X2	15	-	-	1.55	AH 3226/115	KM 29	HMV 29	KM 24	MB 24	23226K
			115	119	M 145X2	19	-	-	3.6	AH 2326/115	KM 29	HMV 29	KM 22	MB 22	22326K
125	130	67	71	M 140X2	14	-	-	0.91	AHX 3026	KM 28	HMV 28	KM 24	MB 24	23026K	
		78	82	M 140X2	12	-	-	1.1	AHX 3126	KM 28	HMV 28	KM 24	MB 24	23126K,22226K	
		98	102	M 145X2	15	-	-	1.55	AHX 3226	KM 29	HMV 29	KM 24	MB 24	23226K	
		115	119	M 145X2	19	-	-	2	AHX 2326	KM 29	HMV 29	KM 24	MB 24	232326K	
		83	93	M 135X2	14	-	-	0.88	AH 24026	KM 27	HMV 27	KM 24	MB 24	24026K30	
		94	104	M 140X2	14	-	-	1.15	AH 24126	KM 28	HMV 28	KM 24	MB 24	24126K30	
		140	68	73	M 150X2	14	-	-	1	AH 3028/125	KM 30	HMV 30	KM 26	MB 26	23028K
			83	88	M 150X2	14	-	-	2.5	AH 3128/125	KM 30	HMV 30	KM 24	MB 24	23128K,22228K
			104	109	M 155X3	15	-	-	1.85	AH 3228/125	KM 31	HMV 31	KM 26	MB 26	23228K
			125	130	M 155X3	20	-	-	4.3	AH 2328/125	KM 31	HMV 31	KM 24	MB 24	22328K
135	140	68	73	M 150X2	14	-	-	1	AHX 3028	KM 30	HMV 30	KM 26	MB 26	23028K	
		83	88	M 150X2	14	-	-	1.3	AHX 3128	KM 30	HMV 30	KM 26	MB 26	23128K,22228K	
		104	109	M 155X3	15	-	-	1.85	AHX 3228	KM 31	HMV 31	KM 26	MB 26	23228K	
		125	130	M 155X3	20	-	-	2.35	AHX 2328	KM 31	HMV 31	KM 26	MB 26	22328K	
		83	93	M 145X2	14	-	-	0.95	AH 24028	KM 29	HMV 29	KM 26	MB 26	24028K	
		99	109	M 150X2	14	-	-	1.3	AH 24128	KM 30	HMV 30	KM 26	MB 26	24128K	
		150	72	77	M 160X3	15	-	-	1.15	AH 3030/135	KM 32	HMV 32	KM 28	MB 28	23030K
			96	101	M 165X3	15	-	-	3.4	AH 3130/135	KM 33	HMV 33	KM 26	MB 26	23130K,22230K
			114	119	M 165X3	17	-	-	2.2	AH 3230/135	KM 33	HMV 33	KM 28	MB 28	23230K
			135	140	M 165X3	24	-	-	5.1	AH 2330/135	KM 33	HMV 33	KM 26	MB 26	22330K
140	160	140	146	M 180X3	24	-	-	7.25	AH 2332/140	KM 36	HMV 36	KM 28	MB 28	22332K	
		103	108	M 180X3	16	-	-	4.25	AH 3132/140	KM 36	HMV 36	KM 28	MB 28	23132K,22230K	
145	150	72	77	M 160X3	15	-	-	1.15	AHX 3030	KM 32	HMV 32	KM 28	MB 28	23030K	
		96	101	M 165X3	15	-	-	1.8	AHX 3130	KM 33	HMV 33	KM 28	MB 28	23130K,22230K	
		114	119	M 165X3	17	-	-	2.2	AHX 3230	KM 33	HMV 33	KM 28	MB 28	23230K	
		135	140	M 165X3	24	-	-	2.8	AHX 2330	KM 33	HMV 33	KM 28	MB 28	22330K	
		90	101	M 155X3	15	-	-	1.05	AH 24030	KM 31	HMV 31	KM 28	MB 28	24030K30	
		115	126	M 160X3	15	-	-	1.55	AH 24130	KM 32	HMV 32	KM 28	MB 28	24130K30	
150	160	77	82	M 170X3	16	-	-	2.05	AH 3032	KM 34	HMV 34	KM 30	MB 30	23023K	
		77	82	M 170X3	16	M6	4	2.05	AOH 3032	KM 34	HMV 34	KM 30	MB 30	23023K	
		103	108	M 180X3	16	-	-	3.2	AH 3132	KM 36	HMV 36	KM 30	MB 30	23132K,22232K	
		103	108	M 180X3	16	M6	4.5	3.2	AOH 3132	KM 36	HMV 36	KM 30	MB 30	23132K,22232K	
		124	130	M 180X3	20	-	-	4	AH 3232	KM 36	HMV 36	KM 30	MB 30	23232K	
		124	130	M 180X3	20	M6	4.5	4	AOH 3232	KM 36	HMV 36	KM 30	MB 30	23232K	
		140	146	M 180X3	24	-	-	4.65	AH 2332	KM 36	HMV 36	KM 30	MB 30	22332K	
		140	146	M 180X3	24	M6	4.5	4.65	AOH 2332	KM 36	HMV 36	KM 30	MB 30	22332K	



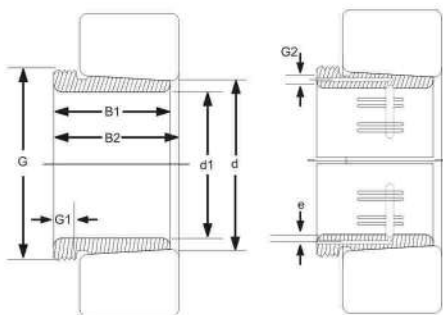
## WITHDRAWAL SLEEVES d1 35-480 mm



1) Width before the sleeve is pressed into bearing bore

DIMENSIONS				MASS				DESIGNATIONS							
d1	d	B1	B2 <sup>1)</sup>	G	G1	G2	e	Withdrawal sleeve	Appropriate extraction nut	Hydraulic Nut	Lock nut	Locking washer	Bearing		
mm							kg								
150	160	95	106	M 170X3	15	-	-	2.3	AH 24032	KM 34	HMV34	KM 30	MB 30	24032K30	
		124	135	M 170X3	15	-	-	3	AH 24132	KM 34	HMV34	KM 30	MB 30	24132K30	
	170	146	152	M 190X3	24	-	-	8.05	AH 2334/150	KM 38	HMV34	KM 30	MB 30	22334K	
		104	109	M 190X3	16	-	-	5.4	AH 3134/150	KM 38	HMV34	KM 30	MB 30	23134K,22234K	
160	170	85	90	M 180X3	17	-	-	2.45	AH 3034	KM 36	HMV 38	KM 32	MB 32	23034K	
		85	90	M 180X3	17	M6	4.5	2.45	AOH 3034	KM 36	HMV 38	KM 32	MB 32	23034K	
		104	109	M 190X3	16	-	-	3.45	AH 3134	KM 38	HMV 38	KM 32	MB 32	23134K,22234K	
		104	109	M 190X3	16	M6	4.5	3.45	AOH 3134	KM 38	HMV 38	KM 32	MB 32	23134K,22234K	
		134	140	M 190X3	24	-	-	4.8	AH 3234	KM 38	HMV 38	KM 32	MB 32	23234K	
		134	140	M 190X3	24	M6	4.5	4.8	AOH 3234	KM 38	HMV 38	KM 32	MB 32	23234K	
		146	152	M 190X3	24	-	-	5.25	AH 2334	KM 38	HMV 38	KM 32	MB 32	22334K	
		146	152	M 190X3	24	M6	4.5	5.25	AOH 2334	KM 38	HMV 38	KM 32	MB 32	22334K	
		106	117	M 180X3	16	-	-	2.7	AH 24034	KM 36	HMV 38	KM 32	MB 32	24034K30	
		125	136	M 180X3	16	-	-	3.25	AH 24134	KM 36	HMV 38	KM 32	MB 32	24134K30	
	160	180	105	110	M200X3	17	-	-	5.8	AH 2236/160	KM 40	HMV40	KM 32	MB 32	22236K
		154	160	M200X3	-	-	-	9.15	AH 2336/160	KM 40	HMV 40	KM 32	MB 32	22336K	
170	180	105	110	M200X3	17	-	-	3.75	AH 2236	KM40	HMV40	KM 34	MB 34	222236K	
		105	110	M200X3	17	M6	4.5	3.75	AOH 2236	KM 40	HMV40	KM 34	MB 34	22236K	
		154	160	M200X3	26	-	-	6.05	AH 2336	KM40	HMV40	KM 34	MB 34	22236K	
		154	160	M200X3	26	M6	4.5	6.05	AOH 2336	KM40	HMV40	KM 34	MB 34	22236K	
		92	98	M 190X3	17	-	-	2.8	AH 3036	KM38	HMV38	KM 34	MB 34	23036K	
		92	98	M 190X3	17	M6	4.5	2.8	AOH 3036	KM38	HMV38	KM 34	MB 34	23136 K	
		116	122	M200X3	19	-	-	4.25	AH 3136	KM40	HMV40	KM 34	MB 34	23136K	
		116	122	M200X3	19	M6	4.5	4.25	AOH 3136	KM40	HMV40	KM 34	MB 34	23236K	
		140	146	M200X3	24	-	-	5.25	AH3236	KM40	HMV40	KM 34	MB 34	23236K	
		140	146	M200X3	24	M6	4.5	5.25	AOH 3236	KM40	HMV40	KM 34	MB 34	23236K	
		116	127	M 190X3	16	-	-	3.2	AH24036	KM 38	HMV38	KM 34	MB 34	24036K30	
		134	145	M 190X3	16	-	-	3.75	AH 24136	KM 38	HMV38	KM 34	MB 34	24036K30	
		190	112	117	Tr 210X4	18	-	-	6.65	AH 2238/170	HM42 T	HMV 42	KM 34	MB 34	22238K
			160	167	Tr 210X4	26	-	-	10.1	AH 2338/170	HM42 T	HMV 42	KM 34	MB 34	22238K
180	190	112	117	Tr 210X4	18	-	-	4.25	AH 2238	HM42 T	HMV42	KM 36	MB 36	22238K	
		112	117	Tr 210X4	18	M6	4.5	4.25	AOH 2238	HM42 T	HMV42	KM 36	MB 36	22238K	
		160	167	Tr 210X4	26	-	-	6.7	AH 2338	HM42 T	HMV42	KM 36	MB 36	22338K	
		160	167	Tr 210X4	26	M6	4.5	6.7	AOH 2338	HM42 T	HMV42	KM 36	MB 36	22338K	
		96	102	Tr 205X4	18	-	-	3.4	AH 3038	HML41 T	HMV41	KM 36	MB 36	23038K	
		96	102	Tr 205X4	18	M6	4.5	3.4	AOH 3038	HML41 T	HMV41	KM 36	MB 36	23038K	
		125	131	Tr 210X4	20	-	-	4.9	AH 3138	HM42 T	HMV42	KM 36	MB 36	23138K	
		125	131	Tr 210X4	20	M6	4.5	4.9	AOH 3138	HM42 T	HMV42	KM 36	MB 36	23138K	
		145	152	Tr 210X4	25	-	-	5.9	AH 3238	HM42 T	HMV42	KM 36	MB 36	23238K	

## WITHDRAWAL SLEEVES d1 35-480 mm

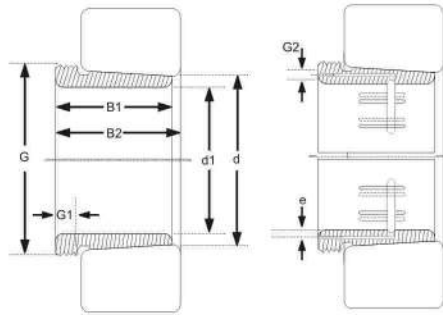


1) Width before the sleeve is pressed into bearing bore

DIMENSIONS				MASS		DESIGNATIONS								
d1	d	B1	B2 <sup>1)</sup>	G	G1	G2	e	Withdrawal sleeve	Appropriate extraction nut	Hydraulic Nut	Lock nut	Locking washer	Bearing	
mm								kg						
180	190	145	152	Tr 210x4	25	M6	4.5	5.9	<b>AOH 3238</b>	HM42 T	HMV42	KM 36	MB 36	23238K
		118	131	M 200X3	18	-	-	3.55	<b>AH 24038</b>	KM40	HMV 40	KM 36	MB 36	24038K30
		146	159	M 200X3	18	-	-	4.45	<b>AH 24138</b>	KM40	HMV 40	KM 36	MB 36	24138K30
		118	123	Tr 220X4	19	-	-	7.4	<b>AH 2240/180</b>	HM44 T	HMV 44	KM 36	MB 36	22240K
		170	177	Tr 220x4	30	-	-	11.5	<b>AH 2340/180</b>	HM44 T	HMV 44	KM 36	MB 36	22340K
190	200	118	123	Tr 220x4	19	-	-	4.7	<b>AH 2240</b>	HM44 T	HMV44	KM 38	MB 38	22240K
		118	123	Tr 220x4	19	M6	4.5	4.7	<b>AOH 2240</b>	HM 44T	HMV44	KM 38	MB 38	22240K
		170	177	Tr 220x4	30	-	-	7.6	<b>AH 2340</b>	HM 44T	HMV44	KM 38	MB 38	22340K
		170	177	Tr 220x4	30	M6	4.5	7.6	<b>AOH 2340</b>	HM 44T	HMV44	KM 38	MB 38	22340K
		102	108	Tr 215X4	19	-	-	3.85	<b>AH 3040</b>	HML43 T	HMV43	KM 38	MB 38	23040K
		102	108	Tr 215X4	19	M6	4	3.85	<b>AOH 3040</b>	HML43 T	HMV43	KM 38	MB 38	23040K
		134	140	Tr 220x4	21	-	-	5.65	<b>AH 3140</b>	HM44 T	HMV44	KM 38	MB 38	23140K
		134	140	Tr 220x4	21	M6	4.5	5.65	<b>AOH 3140</b>	HM44 T	HMV44	KM 38	MB 38	23140K
		153	160	Tr 220x4	25	-	-	6.6	<b>AH 3240</b>	HM44 T	HMV44	KM 38	MB 38	23240K
		153	160	Tr 220x4	25	M6	4.5	6.6	<b>AOH 3240</b>	HM44T	HMV44	KM 38	MB 38	23240K
		127	140	Tr 210x4	18	-	-	4	<b>AH 24040</b>	HM42T	HMV42	KM 38	MB 38	24040K30
		158	171	Tr 210x4	18	-	-	5.05	<b>AH 24140</b>	HM42T	HMV42	KM 38	MB 38	24140K30
200	220	181	189	Tr 240x4	30	G 1/4	9	13.5	<b>AOH 2344</b>	HM48 T	HMV48	KM 40	MB 40	23244K 22344K
		111	117	Tr 235x4	20	G 1/8	7.5	7.4	<b>AOH 3044</b>	HML47 T	HMV47	KM40	MB40	23044K
		145	151	Tr 240x4	23	G 1/4	9	9.3	<b>AOH 3144</b>	HM48 T	HMV48	KM40	MB40	23144K 22244K
		138	152	Tr230X4	20	G 1/8	6.5	8.2	<b>AOH 24044</b>	HM46 T	HMV 46	KM 40	MB 40	24044K30
		170	184	Tr230X4	20	G 1/8	6.5	10	<b>AOH 24144</b>	HM46 T	HMV 46	KM 40	MB 40	24144K30
220	240	189	197	Tr 260x4	30	G 1/4	9	14	<b>AOH 2348</b>	HM52 T	HMV52	HM44 T	MB 44	23248K 22348K
		116	123	Tr 260x4	21	G 1/4	9	7.95	<b>AOH 3048</b>	HM3052	HMV52	HM44 T	MB 44	23048K
		154	161	Tr 260x4	25	G 1/4	9	1.2	<b>AOH 3148</b>	HM52 T	HMV52	HM44 T	MB44	23148K 22248K
		138	153	Tr 250x4	20	G 1/8	6.5	8.05	<b>AOH 24048</b>	HM50 T	HMV50	HM44 T	MB 44	24048K30
		180	195	Tr 260x4	20	G 1/4	9	11.5	<b>AOH 24148</b>	HM52T	HMV52	HM44T	MB 44	24148K30
		240	260	155	161	Tr 290x4	23	G 1/4	9.5	12.5	<b>AOH 2252</b>	HM58 T	HMV58 T	HM48 T
205	213			Tr 290x4	30	G 1/4	10.5	17.5	<b>AOH 2352</b>	HM58 T	HMV58 T	HM48 T	MB 48	23252K3 22325K
128	135			Tr 280x4	23	G 1/4	9	9.6	<b>AOH 3052</b>	HM3056	HMV56	HM48 T	MB 48	23052K
172	179			Tr 290x4	26	G 1/4	9.5	16	<b>AOH 3152</b>	HM58 T	HMV58	HM48 T	MB 48	23152K
162	178			Tr 270x4	22	G 1/8	6.5	10.5	<b>AOH 24052</b>	HM54 T	HMV54	HM48 T	MB 48	24052K30
202	218			Tr 280x4	22	G 1/4	9	14	<b>AOH 24152</b>	HM56 T	HMV56	HM48 T	MB 48	24152K30



## WITHDRAWAL SLEEVES d1 35-480 mm

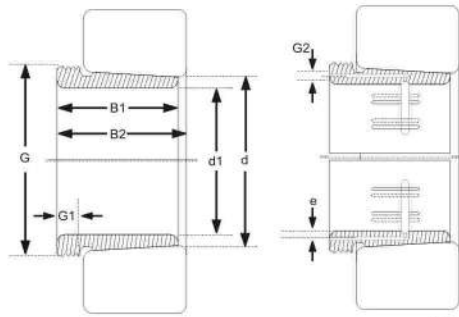


1) Width before the sleeve is pressed into bearing bore

DIMENSIONS				MASS		DESIGNATIONS								
d1	d	B1	B2 <sup>1)</sup>	G	G1	G2	e	Withdrawal sleeve	Appropriate extraction nut	Hydraulic Nut	Lock nut	Locking washer	Bearing	
mm								kg						
260	280	155	163	Tr 310x5	24	G 1/4	9.5	15	<b>AOH 2256</b>	HM62 T	HMV62	HM52T	MB 52	22256K
		212	220	Tr 310x5	30	G 1/4	11	19.5	<b>AOH 2356</b>	HM62 T	HMV 62	HM52T	MB 52	23256K 22356K
		131	139	Tr 300x4	24	G 1/4	9	11	<b>AOH 3056</b>	HM3060	HMV 60	HM52T	MB 52	23056K
		175	183	Tr 310x5	28	G 1/4	9.5	15.5	<b>AOH 3156</b>	HM62 T	HMV 62	HM52T	MB 52	23156K
		162	179	Tr 290x4	22	G 1/8	6.5	11.5	<b>AOH 24056</b>	HM58 T	HMV 58	HM52T	MB 52	24056K30
		202	219	Tr 300x4	22	G 1/4	9	15	<b>AOH 24156</b>	HM3160	HMV 60	HM52T	MB 52	24156K30
280	300	170	178	Tr 330x5	26	G 1/4	10	18	<b>AOH 2260</b>	HM66 T	HMV66	HM56 T	MB 56	22260K
		145	153	Tr 320x5	26	G 1/4	9	13	<b>AOH 3060</b>	HM3064	HMV64	HM56 T	MB 56	23060K
		192	200	Tr 330x5	30	G 1/4	10.5	19	<b>AOH 3160</b>	HM66 T	HMV66	HM56 T	MB 56	23160K
		228	236	Tr 330x5	34	G 1/4	11.5	23.5	<b>AOH 3260</b>	HM66 T	HMV66	HM56 T	MB 56	23260K
		184	202	Tr 310x5	24	G 1/8	6.5	14	<b>AOH 24060</b>	HM62 T	HMV 62	HM56 T	MB 56	24060K30
		224	242	Tr 320x5	24	G 1/4	9	18.5	<b>AOH 24160</b>	HM 3164	HMV 64	HM56 T	MB 56	24160K30
300	320	180	190	Tr 350x5	27	G 1/4	10	20	<b>AOH 2264</b>	HM70T	HMV70	HM3060	MS3060	22264K
		149	157	Tr 345x5	27	G 1/4	9.5	14.5	<b>AOH 3064</b>	HML69T	HMV69	HM3060	MS3060	23064K
		209	217	Tr 350x5	31	G 1/4	10.5	22.5	<b>AOH 3164</b>	HM70 T	HMV70	HM3060	MS3060	23164K
		246	254	Tr 350x5	36	G 1/4	12	27.5	<b>AOH 3264</b>	HM70 T	HMV70	HM3060	MS3060	23264K
		184	202	Tr 330x5	24	G 1/8	6.5	15	<b>AOH 24064</b>	HM66 T	HMV66	HM3060	MS3060	2464K30
		242	260	Tr 340x5	24	G 1/4	9	20.5	<b>AOH 24164</b>	HM3168	HMV68	HM3060	MS3060	24164K30
320	340	162	171	Tr 365x5	28	G 1/4	9.5	17.5	<b>AOH 3068</b>	HML73T	HMV73	HM3064	MS3068-64	23068K
		225	234	Tr 370x5	33	G 1/4	11	26.5	<b>AOH 3168</b>	HM74T	HMV74	HM3064	MS3068-64	23168K
		264	273	Tr 370x5	38	G 1/4	12.5	32	<b>AOH 3268</b>	HM74T	HMV74	HM3064	MS3068-64	23268K
		206	225	Tr 360x5	26	G 1/4	9	18	<b>AOH 24068</b>	HM3072	HMV72	HM3064	MS3068-64	24068K30
		269	288	Tr 360x5	26	G 1/4	9	25.5	<b>AOH 24168</b>	HM3172	HMV72	HM3064	MS3068-64	24168K30
340	360	167	176	Tr 365x5	30	G 1/4	9.5	19	<b>AOH 3072</b>	HML77T	HMV77	HM3068	MS3068-64	23072K
		229	238	Tr 400x5	35	G 1/4	11	30	<b>AOH 3176</b>	HM3180	HMV80	HM3068	MS3068-64	23172K
		274	283	Tr 400x5	40	G 1/4	13	33	<b>AOH 3272</b>	HM3180	HMV80	HM3068	MS3068-64	23272K
		206	226	Tr 380x5	26	G 1/4	9	20	<b>AOH 24072</b>	HM7076	HMV76	HM3068	MS3068-64	24072K30
		269	289	Tr 380x5	26	G 1/4	9	26	<b>AOH 24172</b>	HM3176	HMV76	HM3068	MS3068-64	24172K30
360	380	170	180	Tr 410X5	31	G 1/4	9.5	23.5	<b>AOH 3076</b>	HML82T	HMV82	HM3072	MS3072	23076K
		232	242	Tr 420X5	36	G 1/4	11	38	<b>AOH 3176</b>	HM3184	HMV84	HM3072	MS3072	23176K
		284	294	Tr 420X5	42	G 1/4	13	45.5	<b>AOH 3276</b>	HM3184	HMV84	HM3072	MS3072	23276K
		208	228	Tr 400X5	28	G 1/4	9	23.5	<b>AOH 24076</b>	HM 3080	HMV80	HM3072	MS3072	24076K30
		271	291	Tr 400X5	28	G 1/4	9	31	<b>AOH 24176</b>	HM 3180	HMV80	HM3072	MS3072	24176K30
380	400	183	193	Tr 430x5	33	G 1/4	10	27	<b>AOH3080</b>	HML86T	HMV86	HM3076	MS3080-76	23080K
		240	250	Tr 440x5	38	G 1/4	11.5	39.5	<b>AOH3180</b>	HM3188	HMV88	HM3076	MS3080-76	23180K
		302	312	Tr 440x5	44	G 1/4	14	51.5	<b>AOH3280</b>	HM3188	HMV88	HM3076	MS3080-76	23280K



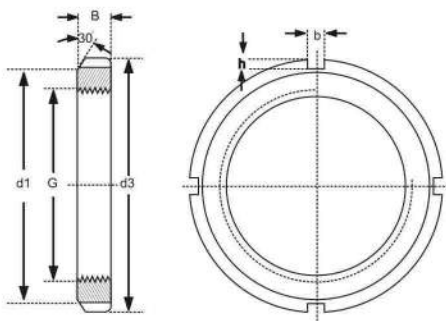
## WITHDRAWAL SLEEVES d1 35-480 mm



1) Width before the sleeve is pressed into bearing bore

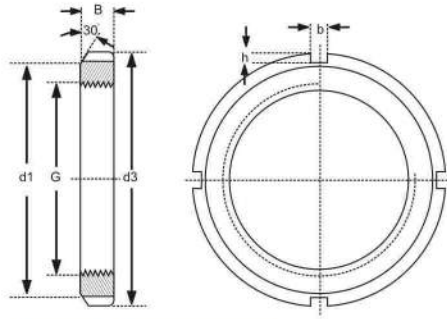
DIMENSIONS				MASS		DESIGNATIONS								
d1	d	B1	B2 <sup>1)</sup>	G	G1	G2	e	Withdrawal sleeve	Appropriate extraction nut	Hydraulic Nut	Lock nut	Locking clip	Bearing	
mm								kg						
380	400	228	248	Tr 420X5	28	G 1/4	9.0	27	<b>AOH 24080</b>	HM3084	HMV84	HM3076	MS3080-76	24080K30
		278	298	Tr 420X5	28	G 1/4	9.0	35	<b>AOH 24180</b>	HM3184	HMV84	HM3076	MS3080-76	24180K30
400	420	186	196	Tr 450X5	34	G 1/4	10.0	29	<b>AOH 3084</b>	HML90T	HMV90	HM3080	MS3080-76	23084K
		266	276	Tr 460X5	40	G 1/4	12.5	46	<b>AOH 3184</b>	HM3192	HMV92	HM3080	MS3080-76	23184K
		321	331	Tr 460X5	46	G 1/4	14.0	59	<b>AOH 3284</b>	HM3192	HMV92	HM3080	MS3080-76	23284K
		230	252	Tr 440X5	30	G 1/4	9.0	29	<b>AOH 24084</b>	HM3088	HMV88	HM3080	MS3080-76	24084K30
		310	332	Tr 440X5	30	G 1/4	9.0	39	<b>AOH 24184</b>	HM3188	HMV88	HM3080	MS3080-76	24184K30
420	440	194	205	Tr 470X5	35	G 1/4	10.5	31.9	<b>AOHX 3088</b>	HML94T	HMV94	HM3084	MS3084	23088K
		270	281	Tr 480X5	42	G 1/4	12.5	50	<b>AOHX 3188</b>	HM3196	HMV96	HM3084	MS3084	23188K
		330	341	Tr 480X5	48	G 1/4	14.5	64.4	<b>AOHX 3288</b>	HM3196	HMV96	HM3084	MS3084	23288K
		242	264	Tr 460X5	30	G 1/4	9.0	32	<b>AOH 24088</b>	HML92T	HMV92	HM3084	MS3084	24088K30
		310	332	Tr 460X5	30	G 1/4	9.0	45.5	<b>AOH 24188</b>	HM3192	HMV92	HM3084	MS3084	24188K30
440	460	202	213	Tr 490X5	37	G 1/4	11.0	35	<b>AOHX 3092</b>	HML98T	HMV98	HM3088	MS3092-88	23092K
		285	296	Tr 510X6	43	G 1/4	13.0	58	<b>AOHX 3192</b>	HM102T	HMV102	HM3088	MS3092-88	23192K
		349	360	Tr 510X6	50	G 1/4	15.0	75.3	<b>AOHX 3292</b>	HM102T	HMV102	HM3088	MS3092-88	23292K
		250	273	Tr 480X5	32	G 1/4	9.0	34.7	<b>AOH 24092</b>	HML96T	HMV96	HM3088	MS3092-88	24092K30
		332	355	Tr 480X5	32	G 1/4	9.0	50	<b>AOH 24192</b>	HM3196	HMV96	HM3088	MS3092-88	24192K30
460	480	205	217	Tr 520X6	38	G 1/4	11.0	39.6	<b>AOHX 3096</b>	HML104T	HMV104	HM3092	MS3092-88	23096K
		295	307	Tr 530X6	45	G 1/4	13.5	63	<b>AOHX 3196</b>	HM31/530	HMV 106	HM3092	MS3092-88	23196K
		364	376	Tr 530X6	52	G 1/4	15.5	82.5	<b>AOHX 3296</b>	HM31/530	HMV 106	HM3092	MS3092-88	23296K
		250	273	Tr 500x5	32	G 1/4	9.0	36.6	<b>AOH 24096</b>	HML100T	HMV 100	HM3092	MS3092-88	24096K30
		340	363	Tr 500x5	32	G 1/4	9.0	51.5	<b>AOH 24196</b>	HM31/530	HMV 100	HM3092	MS3092-88	24196K30

**LOCK NUT METRIC SIZE**  
M 10x0.75-Tr 500x5



DIMENSIONS						MASS	DESIGNATIONS			
G	d1	d3	B	b	h		Lock nut Europe	Japan	Appropriate Locking washer Europe	Bearing
mm						kg				
M 10X0.75	13.5	18	4	3	2	0.006	KM 0	AN 00	MB 0	AW 00X
M 12X1	17	22	4	3	2	0.008	KM 1	AN 01	MB 1	AW 01X
M 15X1	21	25	5	4	2	0.012	KM 2	AN 02	MB 2	AW 02X
M 17X1	24	28	5	4	2	0.012	KM 3	AN 03	MB 3	AW 03X
M 20X1	26	32	6	4	2	0.02	KM 4	AN 04	MB 4	AW 04X
M 25X1.5	32	38	7	5	2	0.028	KM 5	AN 05	MB 5	AW 05X
M 30X1.5	38	45	7	5	2	0.038	KM 6	AN 06	MB 6	AW 06X
M 35X1.5	44	52	8	5	2	0.058	KM 7	AN 07	MB 7	AW 07X
M 40X1.5	50	58	9	6	2.5	0.078	KM 8	AN 08	MB 8	AW 08X
M 45X1.5	56	65	10	6	2.5	0.11	KM 9	AN 09	MB 9	AW 09X
M 50X1.5	61	70	11	6	2.5	0.14	KM 10	AN 10	MB 10	AW 10X
M 55X2	67	75	11	7	3	0.15	KM 11	AN 11	MB 11	AW 11X
M 60X2	73	80	11	7	3	0.16	KM 12	AN 12	MB 12	AW 12X
M 65X2	79	85	12	7	3	0.19	KM 13	AN 13	MB 13	AW 13X
M 70X2	85	92	12	8	3.5	0.22	KM 14	AN 14	MB 14	AW 14X
M 75X2	90	98	13	8	3.5	0.27	KM 15	AN 15	MB 15	AW 15X
M 80X2	95	105	15	8	3.5	0.36	KM 16	AN 16	MB 16	AW 16X
M 85X2	102	110	16	8	3.5	0.42	KM 17	AN 17	MB 17	AW 17X
M 90X2	108	120	16	10	4	0.51	KM 18	AN 18	MB 18	AW 18X
M 95X2	113	125	17	10	4	0.58	KM 19	AN 19	MB 19	AW 19X
M 100X2	120	130	18	10	4	0.68	KM 20	AN 20	MB 20	AW 20X
M 105X2	126	140	18	12	5	0.81	KM 21	AN 21	MB 21	AW 21X
M 110X2	133	145	19	12	5	0.89	KM 22	AN 22	MB 22	AW 22X
M 115X2	137	150	19	12	5	0.91	KM 23	AN 23	MB 23	AW 23
M 120X2	135	145	20	12	5	0.69	KML 24	ANL 24	MBL 24	AWL 24X
	138	155	20	12	5	0.98	KM 24	AN 24	MB 24	AW 24
M 125X2	148	160	21	12	5	1.10	KM 25	AN 25	MB 25	AW 25
M 130X2	145	155	21	12	5	0.84	KML 26	ANL26	MBL 26	AWL 26X
	149	165	21	12	5	1.20	KM 26	AN 26	MB 26	AW 26X
M 135X2	160	175	22	14	6	1.40	KM 27	AN 27	MB 27	AW 27
M 140X2	155	165	22	12	5	0.92	KML 28	ANL 28	MBL 28	AWL 28X
	160	180	22	14	6	1.40	KM 28	AN 28	MB 28	AW 28X
M 145X2	171	190	24	14	6	1.85	KM 29	AN 29	MB 29	AW 29
M 150X2	170	180	24	14	5	1.30	KML 30	ANL 30	MBL 30	AWL 30X
	171	195	24	14	6	1.85	KM 30	AN 30	MB 30	AW 30X

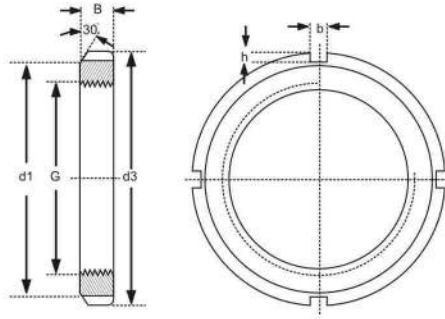
**LOCK NUT METRIC SIZE**  
M 10x0.75-Tr 500x5



DIMENSIONS			MASS			DESIGNATIONS				
G	d1	d3	B	b	h	Lock nut		Appropriate Locking	Bearing	
						Europe	Japan	washer Europe		
mm						kg				
M 155X3	182	200	25	16	7	2.05	KM 31	AN 31	MB 31	AW 31
M 160X3	180	190	25	14	5	1.40	KML 32	ANL 32	MBL 32	AWL32X
	182	210	25	16	7	2.25	KM 32	AN 32	MB 32	AW 32X
M 165X3	193	210	26	16	7	2.30	KM 33	AN 33	MB 33	AW 33
M 170X3	190	200	26	16	5	1.60	KML 34	ANL 34	MBL34	AWL34X
	193	220	26	16	7	2.55	KM 34	AN 34	MB 34	AW 34X
M 180X3	200	210	27	16	5	1.80	KML 36	ANL 36	MBL 36	AWL 36X
	203	230	27	18	8	2.70	KM 36	AN 36	MB 36	AW 36X
M 190X3	210	220	28	16	5	1.9	KML 38	ANL 38	MBL38	AWL38X
	214	240	28	18	8	3.00	KM 38	AN 38	MB 38	AW 38X
M 200X3	222	240	29	18	8	2.60	KML 40	ANL40	MBL40	AWL 40X
	226	250	29	18	8	3.30	KM 40	AN 40	MB 40	AW 40X
Tr 205x4	232	250	30	18	8	3.2	HML 41T	HNL 41	MBL 41	AWL 41
Tr 210x4	238	270	30	20	10	5.1	HM 42T	HNL 42	MBL42	AWL 42
Tr 215x4	242	260	30	20	9	3.3	HML 43T	HNL 43	MBL 43	AWL 43
Tr 220x4	250	280	32	20	10	4.75	HM 44 T	HN 44	MB 44	AW 44
Tr 230x4	260	290	34	20	10	5.45	HM 46T	HN 46	MB 46	AW 46
Tr 235x4	262	280	34	20	9	4.1	HML 47T	HNL 47	MBL 47	AWL 47
Tr 240x4	270	300	34	20	10	5.6	HM 48 T	HN 48	MB 48	AW 48
Tr 250x4	290	320	36	20	10	7.45	HM 50 T	HN 50	MB 50	AW 50
Tr 260x4	290	310	34	20	10	5.8	HML 52T	HNL 52	MBL 52	AWL 52
	300	330	36	24	12	7.55	HM 52 T	HN 52	MB 52	AW 52
Tr 270x4	310	340	38	24	12	8.3	HM 54 T	HN 54	MB 54	AW 54
Tr 280x4	310	330	38	24	10	6.72	HML 56 T	HNL 56	MBL 56	AWL 56
	320	350	38	24	12	8.65	HM 56 T	HN 56	MB 56	AW 56
Tr 290x4	330	370	40	24	12	10.5	HM 58T	HN 58	MB 58	AW 58
Tr 300x4	336	360	40	24	12	9.6	HML 60T	HNL 60	MBL 60	AWL 60
	340	380	40	24	12	12	HM 60 T	HN 60	MB 60	AW 60
Tr 310x4	350	390	42	24	12	13	HM 62 T	HN 62	-	-
Tr 320x4	356	380	42	24	12	10.5	HML 64 T	HNL 64	-	-
Tr 320X5	360	400	42	24	12	13.5	HM 64 T	HN 64	-	-
Tr 330X5	380	420	52	28	15	20.0	HM 66 T	HN 66	-	-
Tr 340X5	400	440	55	28	15	24.5	HM 68 T	HN 68	-	-
Tr 345X5	384	410	45	28	13	13	HML 69 T	HNL 69	-	-



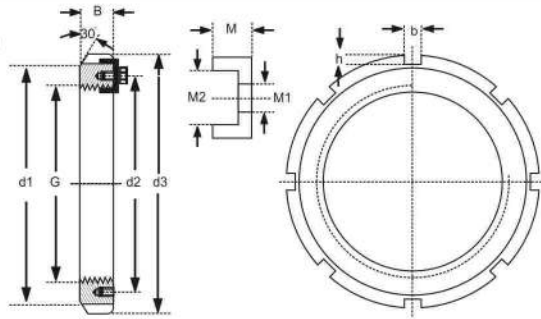
**LOCK NUT METRIC SIZE**  
M 10x0.75-Tr 500x5



DIMENSIONS						MASS	DESIGNATIONS			
G	d1	d3	B	b	h		Lock nut Europe	Japan	Appropriate Locking washer Europe	Bearing
mm						kg				
Tr 350X5	410	450	55	28	15	25	HM 70 T	HN 70	-	-
Tr 360X5	394	420	45	28	13	12.1	HML 72 T	HNL 72	-	-
	420	460	58	28	15	27.5	HM 72 T	HN 72	-	-
Tr 365X5	404	430	48	28	13	14.2	HML 73 T	HNL 73	-	-
Tr 370X5	404	430	48	28	13	14	HM 73 T	HN 73	-	-
Tr 380X5	422	450	48	28	14	16	HML 76 T	HNL 76	-	-
	422	450	48	28	14	15	HM 77 T	HN 77	-	-
Tr 385X5	422	450	48	28	14	15	HML 77 T	HNL 77	-	-
Tr 400X5	442	470	52	28	14	18.5	HML 80 T	HNL 80	-	-
	470	520	62	32	18	40	HM 80 T	HN 80	-	-
Tr 410X5	452	480	52	32	14	19	HML 82T	HNL82	-	-
Tr 420X5	462	490	52	32	14	19.4	HML 84T	HNL84	-	-
Tr 420X5	490	540	70	32	18	47	HM 84T	HN84	-	-
Tr 430X5	472	500	52	32	14	20	HML 86T	HNL86	-	-
Tr 440X5	490	520	60	32	15	27	HML 88T	HNL88	-	-
Tr 440X5	510	560	70	36	20	48.5	HM 88T	HN 88	-	-
Tr 450X5	490	520	60	32	15	24	HML 90 T	HNL 90	-	-
Tr 460X5	510	540	60	32	15	28	HML92 T	HNL 92	-	-
Tr 460X5	540	580	75	36	20	55	HM 92 T	HN 92	-	-
Tr 470X5	510	540	60	32	15	25	HML 94 T	HNL 94	-	-
Tr 480X5	530	560	60	36	15	29.5	HML96 T	HNL 96	-	-
Tr 480X5	560	620	75	36	20	67	HM 96 T	HN 96	-	-
Tr 490X5	550	580	60	36	15	34	HML 98 T	HNL 98	-	-
Tr 500X5	550	580	68	36	15	35	HML 100 T	HNL 100	-	-
Tr 500X5	590	630	80	40	23	69	HM 100T	HN 100	-	-

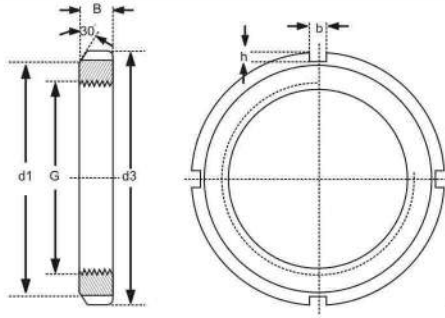
## LOCK NUT WITH LOCKING CLIP

Tr 220x4 - Tr 500x5



DIMENSIONS				MASS				DESIGNATIONS					
G	d1	d2	d3	B	B1	b	h	M	M1	M2	Lock nut+locking clip and screw	Hexagon-headed screw(DIN 933)	
mm											kg		
Tr 220x4	242	229	260	30	41	20	9	12	4	13.5	2.75	HM 3044+MS 3044	M 6X12
	250	238	280	32	43	20	10	12	4	22.5	5.27	HM 3144+MS 3144	M 6X12
Tr 240X4	270	253	290	34	46	20	10	12	4	17.5	4.5	HM 3048+ MS 3052-48	M 8X16
	270	258	300	34	46	20	10	12	4	22.5	5.98	HM 3148+MS 3148	M 8X16
Tr 260X4	290	273	310	34	46	20	10	12	4	17.5	4.8	HM 3052+MS 3052-48	M 8X16
	300	281	330	36	48	24	12	12	4	25.5	8.08	HM 3152+MS 3152	M 8X16
Tr 280X4	310	293	330	38	50	24	10	12	4	17.5	5.75	HM 3056 +MS 3056	M 8X16
	320	301	350	38	50	24	12	12	4	25.5	9.09	HM 3156 +MS 3156	M 8X16
Tr 300X4	336	316	360	42	54	24	12	12	4	20.5	8.35	HM 3060+ MS 3060	M 8X16
	340	326	380	40	53	24	12	12	4	30.5	11.5	HM 3160 + MS 3160	M 10X20
Tr 320X5	356	336	380	42	55	24	12	12	5	21	9	HM 3064 +MS 3068-64	M 8X 16
	360	346	400	42	56	24	12	12	5	31	13	HM 3164 +MS 3164	M 10X20
Tr 340X5	376	356	400	45	58	24	12	15	5	21	11	HM 3068 +MS 3068-64	M 8X 16
	400	373	440	55	72	28	15	15	5	38	24	HM 3168 + MS 3172-68	M 12X25
Tr 360X5	394	375	420	45	58	28	13	15	5	20	11.5	HM 3072 + MS 3072	M 8X16
	420	393	460	58	75	28	15	15	5	38	26.5	HM 3172 + MS 3172-68	M 12X25
Tr 380X5	422	399	450	48	62	28	14	15	5	24	15	HM 3076 + MS 3080-76	M 10X20
	450	415	490	60	77	32	18	15	5	40	32	HM 3176+ MS 3176	M 16X30
Tr 400X5	422	419	470	52	66	28	14	15	5	24	17	HM 3080 +MS 3080-76	M 10X20
	470	440	520	62	82	32	18	15	5	45	38	HM 3180 +MS 3184-80	M 16X30
Tr 420X5	462	439	490	52	66	32	14	15	5	24	18.5	HM 3084 +MS 3084	M 10X20
	490	460	540	70	90	32	18	15	5	45	45	HM 3184 +MS 3184-80	M 16X30
Tr 440X5	490	463	520	60	77	32	15	15	5	28	26	HM 3088 +MS 3092-88	M 12X25
	510	478	560	70	90	36	20	15	5	43	46.5	HM 3188 +MS 3192-88	M 16X30
Tr 460x5	510	483	540	60	77	32	15	15	5	28	27	HM 3092 +MS 3092-88	M 12X25
	540	498	580	75	95	36	20	15	5	43	50.5	HM 3192+MS 3192-88	M 16X30
Tr 480X 5	530	503	560	60	77	36	15	15	5	28	28	HM 3096+MS 30/500-96	M 12X25
	560	528	620	75	95	36	20	15	5	53	62	HM 3196+MS 3196	M 16X30
Tr 500X5	550	523	580	68	85	36	15	15	5	28	33.5	HM 30/500+MS 30/500-96	M 12X25
	580	540	630	80	100	40	23	15	5	45	63.5	HM 31/500+MS 31/500	M 16X30

**LOCK NUT WITH INCH DIMENSIONS-HEAVY SECTION G 0.391-8.628**



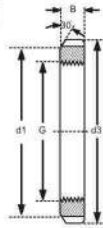
Threads : American National form NS Class 3

DIMENSIONS							AXIAL	MASS	DESIGNATIONS	
G	No. of threads per in	d1	d3	B	b	h	load carrying capacity static		Lock nut	Appropriate Locking washer
in		in					KN	kg		
0.391	32	0.625	0.755	0.229	0.120	0.073	13.2	0.007	N 00	W 00
0.469	32	0.719	0.880	0.323	0.120	0.073	23	0.015	N 01	W 01
0.586	32	0.813	1.005	0.323	0.120	0.104	26.5	0.017	N 02	W 02
0.664	32	0.938	1.130	0.354	0.120	0.104	33	0.025	N 03	W 03
0.781	32	1.125	1.380	0.385	0.178	0.104	44	0.040	N 04	W 04
0.969	32	1.281	1.568	0.416	0.178	0.104	54.5	0.050	N 05	W 05
1.173	18	1.500	1.755	0.416	0.178	0.104	57	0.058	N 06	W 06
1.376	18	1.813	2.068	0.448	0.178	0.104	73	0.089	N 07	W 07
1.563	18	2.000	2.255	0.448	0.240	0.104	77.5	0.096	N 08	W 08
1.767	18	2.281	2.536	0.448	0.240	0.104	86.5	0.120	N 09	W 09
1.967	18	2.438	2.693	0.510	0.240	0.104	101	0.150	N 10	W 10
2.157	18	2.656	2.974	0.510	0.240	0.135	113	0.170	N 11	W 11
2.360	18	2.844	3.161	0.541	0.240	0.135	122.5	0.200	N 12	W 12
2.548	18	3.063	3.380	0.573	0.240	0.135	138.5	0.240	N 13	W 13
2.751	18	3.313	3.630	0.573	0.240	0.135	147	0.270	N 14	W 14
2.933	12	3.563	3.880	0.604	0.360	0.135	153	0.320	AN 15	W 15
3.137	12	3.844	4.161	0.604	0.360	0.135	166	0.400	AN 16	W 16
3.340	12	4.031	4.411	0.635	0.360	0.166	185	0.450	AN 17	W 17
3.527	12	4.281	4.661	0.698	0.360	0.166	219	0.550	AN 18	W 18
3.730	12	4.563	4.943	0.729	0.360	0.166	245	0.700	AN 19	W 19
3.918	12	4.813	5.193	0.760	0.360	0.166	270	0.800	AN20	W 20
4.122	12	5.000	5.443	0.760	0.485	0.198	280	0.850	AN21	W 21
4.325	12	5.281	5.724	0.791	0.485	0.198	310	1.000	AN22	W 22
4.716	12	5.688	6.130	0.823	0.485	0.198	335	1.150	AN24	W 24
5.106	12	6.188	6.755	0.885	0.610	0.260	415	1.500	AN26	W 26
5.497	12	6.531	7.099	0.948	0.610	0.260	450	1.650	AN 28	W28
5.888	12	7.063	7.693	0.979	0.610	0.291	520	2.100	AN 30	W30
6.284	8	7.438	8.068	1.014	0.610	0.291	560	2.350	AN 32	W32
6.659	8	8.031	8.661	1.073	0.610	0.291	640	2.800	AN 34	W34
7.066	8	8.375	9.068	1.104	0.735	0.323	675	3.150	AN 36	W36
7.472	8	8.781	9.474	1.135	0.735	0.323	705	3.400	AN 38	W 38
7.847	8	9.156	9.849	1.198	0.735	0.323	760	3.700	AN 40	W 40
8.628	8	9.843	11.005	1.260	0.980	0.510	930	4.700	N 44 <sup>1)</sup>	W 44

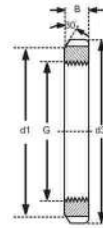
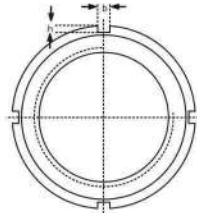
1) Nut Locking angle 30°



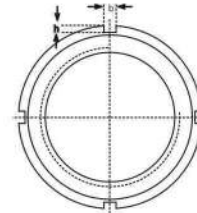
**LOCK NUT WITH INCH DIMENSIONS-LIGHT SECTION**  
G 4.325-31.504 in



Lock nut N 022 - N 044

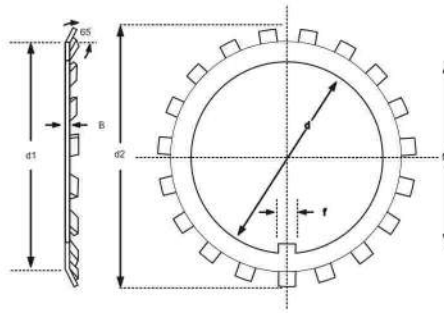


Lock nut N 048 - N 800



DIMENSIONS				MASS		DESIGNATIONS									
G	No. of threads per in	d1	d2	d3	B	B1	b	h	Lock nut	Appropriate locking washer/plate	Hexagon-headed screw(DIN 933)				
in		in							kg						
4.325	12	4.901	-	5.318	0.791	-	0.485	0.198	0.63	N 022	W 022	-			
4.716	12	5.313	-	5.693	0.823	-	0.485	0.198	0.710	N 024	W 024	-			
5.106	12	5.703	-	6.130	0.885	-	0.485	0.198	0.860	N 026	W 026	-			
5.497	12	6.109	-	6.505	0.948	-	0.485	0.198	0.980	N 028	W 028	-			
5.888	12	6.688	-	7.130	0.979	-	0.610	0.229	1.350	N 030	W 030	-			
6.284	8	7.094	-	7.505	1.041	-	0.610	0.229	1.500	N 032	W 032	-			
6.659	8	7.484	-	7.880	1.073	-	0.610	0.229	1.650	N 034	W 034	-			
7.066	8	7.875	-	8.255	1.104	-	0.610	0.229	1.750	N 036	W 036	-			
7.472	8	8.266	-	8.693	1.135	-	0.610	0.229	1.950	N 038	W 038	-			
7.847	8	8.750	-	9.443	1.198	-	0.735	0.323	2.750	N 040	W 040	-			
8.628	8	9.531	-	10.255	1.260	-	0.860	0.385	3.200	N 044	W 044	-			
9.442	6	10.625	10.423	11.443	1.354	1.698	0.860	0.385	4.500	N 048	P 48	5/16 - 18X5/8			
10.192	6	11.406	11.298	12.193	1.416	1.760	0.860	0.385	5.100	N 052	P 52	5/16 - 18X5/8			
11.004	6	12.219	12.110	13.005	1.510	1.854	0.980	0.385	5.800	N 056	P 56	5/16 - 18X5/8			
11.785	6	13.219	13.110	14.193	1.573	1.948	0.980	0.510	7.800	N 060	P 60	3/8 - 16X3/4			
12.562	6	14.031	13.860	15.005	1.666	2.041	0.980	0.510	9.000	N 064	P 64	3/8 - 16X3/4			
13.339	5	14.813	14.735	15.755	1.791	2.166	0.980	0.510	10.700	N 068	P 68	3/8 - 16X3/4			
14.170	5	15.500	15.485	16.505	1.791	2.166	1.230	0.510	10.800	N 072	P 72	3/8 - 16X3/4			
14.957	5	16.625	16.485	17.755	1.916	2.353	1.230	0.604	14.600	N 076	P 76	1/2 - 13X7/8			
15.745	5	17.438	17.235	18.505	2.073	2.500	1.230	0.604	16.500	N 080	P 80	1/2 - 13X7/8			
16.532	5	18.188	18.110	19.318	2.073	2.500	1.355	0.604	17.300	N 084	P 84	1/2 - 13X7/8			
17.319	5	19.250	19.110	20.505	2.385	2.906	1.355	0.604	24.100	N 088	P 88	5/8 - 11X1			
18.107	5	20.688	19.985	21.255	2.385	2.906	1.355	0.604	25.500	N 092	P 92	5/8 - 11X1			
18.894	5	20.750	20.673	22.068	2.385	2.937	1.480	0.604	25.900	N 096	P 96	5/8 - 11X1	1/4		
19.682	5	21.688	21.610	22.818	2.703	3.250	1.480	0.604	37.000	N 500	P 500	5/8 - 11X1	1/4		
20.867	4	23.250	23.360	24.818	2.703	3.250	1.605	0.823	49.000	N 530	P 530	5/8 - 11X1	1/4		
22.048	4	24.000	24.110	25.568	2.953	3.500	1.605	0.823	50.000	N 560	P 560	5/8 - 11X1	1/4		
23.623	4	26.000	25.923	27.568	2.953	3.500	1.605	0.823	60.500	N 600	P 600	5/8 - 11X1	1/4		
24.804	4	27.125	27.235	28.755	2.953	3.500	1.855	0.823	63.000	N 630	P 630	5/8 - 11X1	1/4		
26.379	4	29.125	28.985	30.693	3.140	3.687	1.855	0.823	78.000	N 670	P 670	5/8 - 11X1	1/4		
27.961	3	30.688	30.610	32.693	3.578	4.125	1.980	1.010	103.500	N 710	P 710	5/8 - 11X1	1/4		
29.536	3	32.313	32.235	34.255	3.578	4.156	2.230	1.010	108.500	N 750	P 750	5/8 - 11X1	1/4		
31.504	3	34.250	34.610	36.255	3.578	4.156	2.230	1.010	116.000	N 800	P 800	5/8 - 11X1	1/4		

## LOCKING WASHERS d 10-280 mm

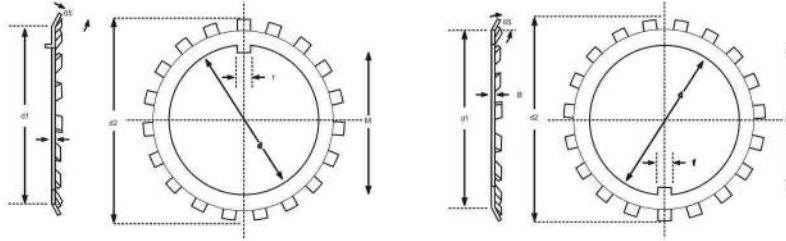


DIMENSIONS				MASS		DESIGNATIONS		
d	d1	d2	B	f	M	g	Europe	Japan
mm								
10	13.5	21	1.00	3.0	8.5	1	MB 0	AW 00X
12	17.0	25	1.00	3.0	10.5	2	MB 1	AW 01X
15	21.0	28	1.00	4.0	13.5	3	MB 2	AW 02X
17	24.0	32	1.00	4.0	15.5	3	MB 3	AW 03X
20	26.0	36	1.00	4.0	18.5	4	MB 4	AW 04X
25	32.0	42	1.25	5.0	23.0	6	MB 5	AW 05X
30	38.0	49	1.25	5.0	27.5	8	MB 6	AW 06X
35	44.0	57	1.25	6.0	32.5	11	MB 7	AW 07X
40	50.0	62	1.25	6.0	37.5	13	MB 8	AW 08X
45	56.0	69	1.25	6.0	42.5	15	MB 9	AW 09X
50	61.0	74	1.25	6.0	47.5	16	MB 10	AW 10X
55	67.0	81	1.50	8.0	52.5	22	MB 11	AW 11X
60	73.0	86	1.50	8.0	57.5	24	MB 12	AW 12X
65	79.0	92	1.50	8.0	62.5	30	MB 13	AW 13X
70	85.0	98	1.50	8.0	66.5	32	MB 14	AW 14X
75	90.0	104	1.50	8.0	71.5	35	MB 15	AW 15X
80	95.0	112	1.75	10.0	76.5	46	MB 16	AW 16X
85	102.0	119	1.75	10.0	81.5	53	MB 17	AW 17X
90	108.0	126	1.75	10.0	86.5	61	MB 18	AW 18X
95	113.0	133	1.75	10.0	91.5	66	MB 19	AW 19X
100	120.0	142	1.75	12.0	96.5	77	MB 20	AW 20X
105	126.0	145	1.75	12.0	100.5	83	MB 21	AW 21X
110	133.0	154	1.75	12.0	105.5	91	MB 22	AW 22X

DIMENSIONS				MASS		DESIGNATIONS		
d	d1	d2	B	f	M	g	Europe	Japan
mm								
115	137	159	2	12	110.5	107	MB 23	AW 23X
120	135	152	2	14	115	70	MBL 24	AWL 24X
	138	164	2	14	115	108	MB 24	AW 24X
125	148	170	2	14	120	115	MB25	AW 25X
130	145	161	2	14	125	80	MBL 26	AWL 26X
	149	175	2	14	125	115	MB 26	AW 26X
135	160	185	2	14	130	140	MB 27	AW 27X
140	155	172	2	16	135	90	MBL 28	AWL 28X
	160	192	2	16	135	135	MB 28	AW 28X
145	172	202	2	16	140	165	MB 29	AW 29X
150	170	189	2	16	145	100	MBL 30	AWL 30X
	171	205	2	16	145	180	MB 30	AW 30
155	182	212	2.5	16	147.5	200	MB 31	AW 31X
160	180	199	2.5	18	154	140	MBL 32	AWL 32X
	182	217	2.5	18	154	215	MB 32	AW 32X
165	193	222	2.5	18	157.5	240	MB 33	AW 33X
170	190	211	2.5	18	164	150	MBL34	AWL 34X
	193	232	2.5	18	164	240	MB 34	AW 34X
180	200	222	2.5	20	174	160	MBL36	AWL36X
	203	242	2.5	20	174	260	MB 36	AW 36X
190	210	232	2.5	20	184	170	MBL 38	AWL 38X
	214	252	2.5	20	184	260	MB 38	AW38X
200	222	245	2.5	20	194	220	MBL40	AWL40X
	226	262	2.5	20	194	280	MB 40	AW 40X
220	250	292	3	24	213	350	MB 44	AW 44X
240	270	312	3	24	233	450	MB 48	AW 48X
260	300	342	3	28	253	650	MB 52	AW 52X
280	320	362	3	28	273	1050	MB 56	AW 56X



**LOCKING WASHERS  
WITH INCH DIMENSIONS  
d 0.406-8.701in**



W00 - W 44

W022 - W 44

DIMENSIONS			MASS		DESIGNATIONS			
d	d1	d2	B	f	M	V		
in							G	
0.406	0.625	0.875	0.032	0.120	0.334	0.062	2	W 00
0.484	0.719	1.106	0.032	0.120	0.412	0.062	2	W 01
0.601	0.813	1.156	0.032	0.120	0.529	0.062	3	W 02
0.679	0.938	1.328	0.032	0.120	0.607	0.062	5	W 03
0.801	1.125	1.531	0.032	0.176	0.729	0.062	7	W 04
0.989	1.281	1.719	0.040	0.176	0.909	0.094	8	W 05
1.193	1.500	1.922	0.040	0.176	1.093	0.094	8	W 06
1.396	1.813	2.250	0.040	0.176	1.296	0.094	14	W 07
1.583	2.000	2.469	0.048	0.290	1.475	0.094	19	W 08
1.792	2.281	2.734	0.048	0.290	1.684	0.125	21	W 09
1.992	2.438	2.922	0.048	0.290	1.884	0.125	20	W 10
2.182	2.656	3.109	0.053	0.290	2.069	0.125	22	W 11
2.400	2.844	3.344	0.053	0.290	2.267	0.125	25	W 12
2.588	3.063	3.578	0.053	0.290	2.455	0.125	27	W 13
2.791	3.313	3.828	0.053	0.290	2.658	0.188	32	W 14
2.973	3.563	4.109	0.062	0.290	2.831	0.188	48	W 15
3.177	3.844	4.375	0.062	0.353	3.035	0.188	53	W 16
3.395	4.031	4.625	0.062	0.353	3.253	0.188	57	W 17
3.582	4.281	4.938	0.084	0.353	3.418	0.188	70	W 18
3.800	4.563	5.219	0.084	0.353	3.636	0.188	82	W 19
3.988	4.813	5.500	0.084	0.353	3.809	0.250	94	W 20
4.192	5.000	5.703	0.084	0.353	4.013	0.250	100	W 21

DIMENSIONS			MASS		DESIGNATIONS			
d	d1	d2	B	f	M	V		
in							g	
4.395	4.921	5.688	0.115	0.350	4.185	-	94	W 022
	5.281	6.063	0.115	0.353	4.185	0.250	157	W 22
4.801	5.333	6.188	0.115	0.350	4.591	-	104	W 024
	5.688	6.649	0.115	0.353	4.591	0.250	170	W 24
5.191	5.723	6.625	0.115	0.469	4.961	-	126	W 026
	6.188	7.031	0.115	0.435	4.961	0.250	220	W 26
5.582	6.129	7.094	0.115	0.594	5.352	-	154	W 028
	6.531	7.438	0.115	0.590	5.352	0.250	220	W 28
5.983	6.708	7.719	0.115	0.594	5.722	-	190	W 030
	7.063	8.063	0.146	0.590	5.722	0.313	328	W 30
6.389	7.114	8.156	0.115	0.594	6.128	-	200	W 032
	7.438	8.438	0.146	0.590	6.128	0.313	335	W 32
6.764	7.508	8.594	0.115	0.719	6.503	-	232	W 034
	8.031	9.063	0.146	0.715	6.503	0.313	417	W 34
7.171	7.899	9.000	0.115	0.719	6.910	-	238	W 036
	8.375	9.438	0.146	0.715	6.910	0.313	432	W 36
7.577	8.290	9.438	0.115	0.719	7.316	-	246	W 038
	8.781	9.875	0.146	0.715	7.316	0.313	458	W 38
7.982	8.774	9.969	0.115	0.844	7.721	-	294	W 040*
	9.156	10.313	0.146	0.840	7.721	0.313	470	W 40
8.701	9.570	10.406	0.115	0.945	8.327	-	300	W 044
	9.875	11.438	0.146	0.940	8.327	-	600	W 44





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