

Adapter and Withdrawal Sleeves

General

Adapter and Withdrawal Sleeves are devices using to mount and secure rolling element bearings with tapered bores onto cylindrical shaft seats.

This enables the mounting or dismounting of rolling element bearings in a simple and effective way to for a variety of applications.

Since, adapter and withdrawal sleeves are able to adapt to shaft diameter variations within certain limits, larger than normal **shaft diameter tolerances** are accomodated.

The **geometrical accuracy**, however, must be more closely defined, as the forms errors of the shaft affect the running accuracy of the total bearing arrangement in a direct way.

Furthermore, using adapter or withdrawal sleeves allows bearing seats with lower surface qualities, (e.g. turned surfaces) to be acceptable. For applications where no accurate shaft guidance of bearings is required, bright drawn round bar stock may also be used.

Generally the following tolerances may be used for guidance:

Expected running accuracy	Diameter tolerance	Form accuracy
Normal	h7, h8, h9	$\frac{IT5}{2}$
Low	h10, h11	$\frac{IT7}{2}$

Adapter sleeves

Standards, boundary, dimensions

Adapter Sleeves

DIN 5415

General

Adapter sleeves (see sketch below) are slotted steel sleeves that have a tapered outer diameter, taper 1:12 on one side and a thread on the opposite side.

Small adapter sleeves may have phosphated surfaces, normally they are only oil preserved.

URB adapter sleeves are supplied complete with lock nut and locking washer as standard.

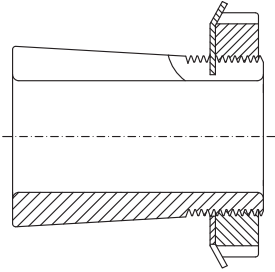
Beside the standard design (see figure **a**), there are also larger adapter sleeves available with oil bores and oil distribution ducts, (prefix **OH**) as required for applying the oil injection method as shown in figure **b**.

On smooth straight shafts, (e.g. on a drawn round stock), adapter sleeves allow a simple positioning of bearings in any position, (see figure c).

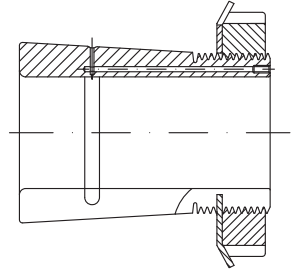
In applications where bearings with adapter sleeves are mounted on straight shafts without axial support, (see figure c), their ability to accept axial forces is limited by the friction between the adapter sleeve and the shaft.

In the case of higher axial forces, the bearing needs to be secured additionally by **supporting rings** (see figure **d**).

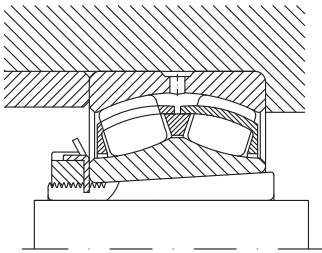
When designing such supporting rings, however, the abutment dimensions recommended by the product tables must be considered.



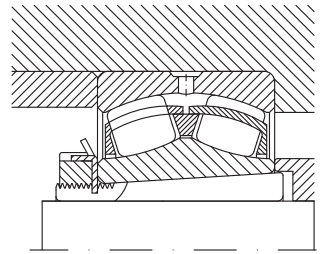
a



b



c



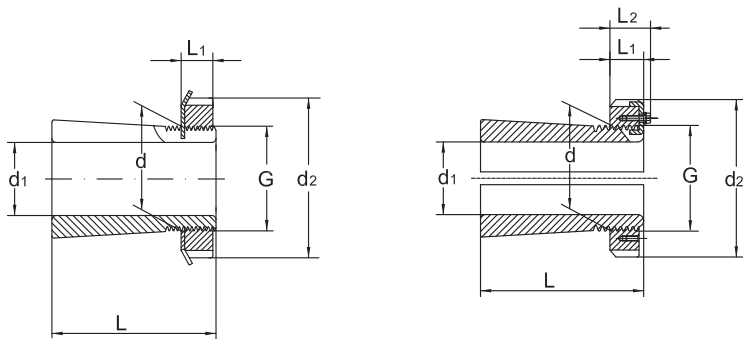
d

URB



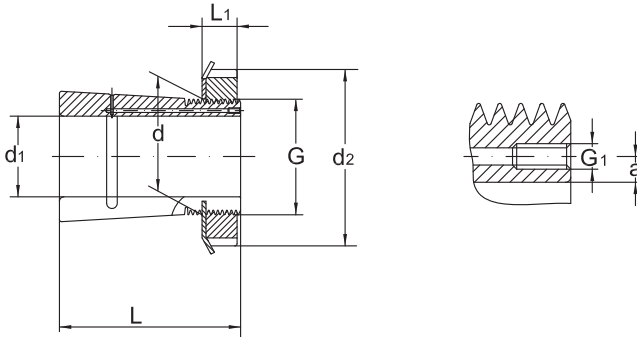


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
17	20	32	24	H204	0,04
		32	28	H304	0,04
		32	31	H2304	0,05
20	25	38	26	H205	0,06
		38	29	H305	0,07
		38	35	H2305	0,09
25	30	45	27	H206	0,09
		45	31	H306	0,10
		45	38	H2306	0,11
30	35	52	29	H207	0,12
		52	35	H307	0,14
		52	43	H2307	0,15
35	40	58	31	H208	0,16
		58	36	H308	0,18
		58	46	H2308	0,22
40	45	65	33	H209	0,21
		65	39	H309	0,23
		65	50	H2309	0,27
45	50	70	35	H210	0,24
		70	42	H310	0,27
		70	55	H2310	0,34
50	55	75	37	H211	0,28
		75	45	H311	0,32
		75	59	H2311	0,39

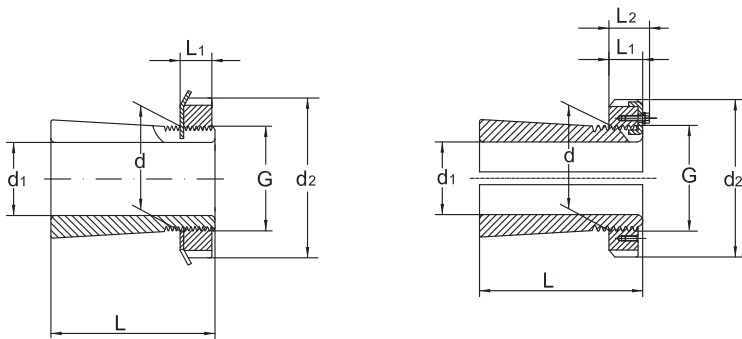
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		d ₁	G	L ₁	L ₂		
mm							
17	M 20 X 1	7	-	-	-	KM4	MB4
	M 20 X 1	7	-	-	-	KM4	MB4
	M 20 X 1	7	-	-	-	KM4	MB4
20	M 25 X 1,5	8	-	-	-	KM5	MB5
	M 25 X 1,5	8	-	-	-	KM5	MB5
	M 25 X 1,5	8	-	-	-	KM5	MB5
25	M 30 X 1,5	8	-	-	-	KM6	MB6
	M 30 X 1,5	8	-	-	-	KM6	MB6
	M 30 X 1,5	8	-	-	-	KM6	MB6
30	M 35 X 1,5	9	-	-	-	KM7	MB7
	M 35 X 1,5	9	-	-	-	KM7	MB7
	M 35 X 1,5	9	-	-	-	KM7	MB7
35	M 40 X 1,5	10	-	-	-	KM8	MB8
	M 40 X 1,5	10	-	-	-	KM8	MB8
	M 40 X 1,5	10	-	-	-	KM8	MB8
40	M 45 X 1,5	11	-	-	-	KM9	MB9
	M 45 X 1,5	11	-	-	-	KM9	MB9
	M 45 X 1,5	11	-	-	-	KM9	MB9
45	M 50 X 1,5	12	-	-	-	KM10	MB10
	M 50 X 1,5	12	-	-	-	KM10	MB10
	M 50 X 1,5	12	-	-	-	KM10	MB10
50	M 55 X 2	12,5	-	-	-	KM11	MB11
	M 55 X 2	12,5	-	-	-	KM11	MB11
	M 55 X 2	12,5	-	-	-	KM11	MB11

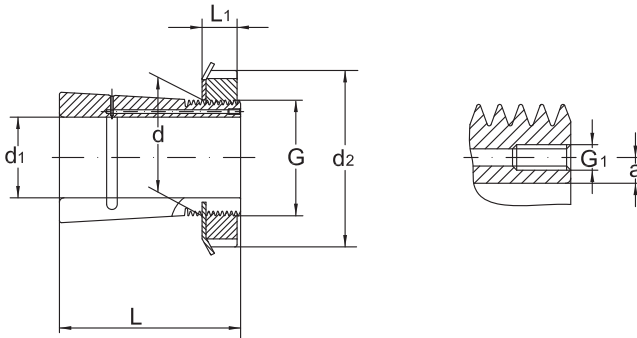


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
55	60	80	38	H212	0,31
		80	47	H312	0,35
		80	62	H2312	0,45
60	65	85	40	H213	0,36
		85	50	H313	0,42
		85	65	H2313	0,52
	70	92	52	H314	0,68
92		68	H2314	0,88	
65	75	98	43	H215	0,66
		98	55	H315	0,78
		98	73	H2315	1,1
70	80	105	46	H216	0,81
		105	59	H316	0,95
		105	78	H2316	1,2
75	85	110	50	H217	0,94
		110	63	H317	1,1
		110	82	H2317	1,35
80	90	120	52	H218	1,1
		120	65	H318	1,3
		120	86	H2318	1,6
85	95	125	55	H219	1,25
		125	68	H319	1,4
		125	90	H2319	1,8
90	100	130	58	H220	1,4

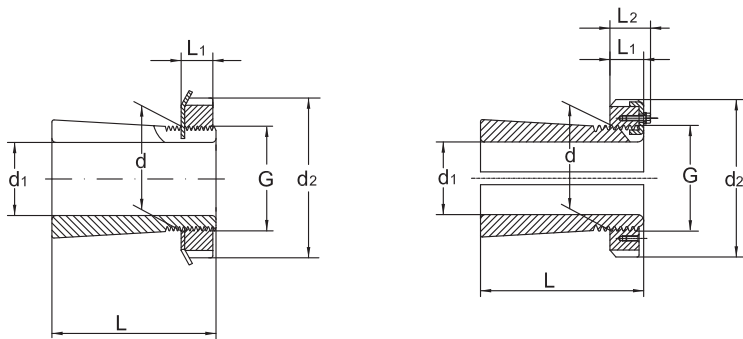
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		d ₁	G	L ₁	L ₂		
mm							
55	M 60 X 2	13	-	-	-	KM12	MB 12
	M 60 X 2	13	-	-	-	KM12	MB12
	M 60 X 2	13	-	-	-	KM12	MB12
60	M 65 X 2	14	-	-	-	KM13	MB13
	M 65 X 2	14	-	-	-	KM13	MB13
	M 65 X 2	14	-	-	-	KM13	MB13
	M 70 X 2	14	-	-	-	KM14	MB14
	M 70 X 2	14	-	-	-	KM14	MB14
65	M 75 X 2	15	-	-	-	KM15	MB15
	M 75 X 2	15	-	-	-	KM15	MB15
	M 75 X 2	15	-	-	-	KM15	MB15
70	M 80 X 2	17	-	-	-	KM16	MB16
	M 80 X 2	17	-	-	-	KM16	MB16
	M 80 X 2	17	-	-	-	KM16	MB16
75	M 85 X 2	18	-	-	-	KM17	MB17
	M 85 X 2	18	-	-	-	KM17	MB17
	M 85 X 2	18	-	-	-	KM17	MB17
80	M 90 X 2	18	-	-	-	KM18	MB18
	M 90 X 2	18	-	-	-	KM18	MB18
	M 90 X 2	18	-	-	-	KM18	MB18
85	M 95 X 2	19	-	-	-	KM19	MB19
	M 95 X 2	19	-	-	-	KM19	MB19
	M 95 X 2	19	-	-	-	KM19	MB19
90	M 100 X 2	20	-	-	-	KM20	MB20

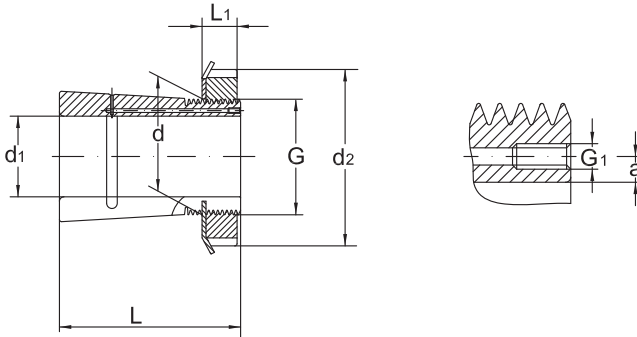


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
90	100	130	71	H320	1,6
		130	97	H2320	2
		130	76	H3120	1,8
95	105	140	60	H221	1,6
		140	74	H321	1,85
100	110	145	63	H222	1,8
		145	77	H322	2,05
		145	105	H2322	2,75
		145	81	H3122	2,1
110	120	155	112	H2324	3
		145	72	H3024	1,8
		155	88	H3124	2,5
115	130	165	121	H2326	4,45
		155	80	H3026	2,8
		165	92	H3126	3,45
125	140	180	131	H2328	5,4
		165	82	H3028	3,05
		180	97	H3128	4,1
135	150	195	139	H2330	6,4
		180	87	H3030	3,75
		195	111	H3130	5,25
140	160	210	147	H2332	8,8
		210	147	OH2332 H	8,8
		190	93	H3032	5,1

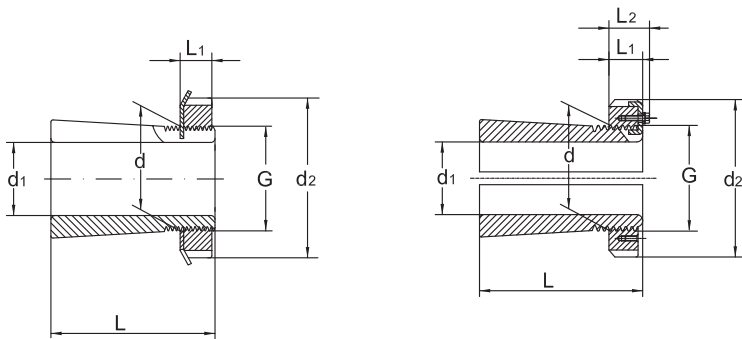
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		d ₁	G	L ₁	L ₂		
mm							
90	M 100 X 2	20	-	-	-	KM20	MB20
	M 100 X 2	20	-	-	-	KM20	MB20
	M 100 X 2	20	-	-	-	KM20	MB20
95	M 105 X 2	20	-	-	-	KM21	MB21
	M 105 X 2	20	-	-	-	KM21	MB21
100	M 110 X 2	21	-	-	-	KM22	MB22
	M 110 X 2	21	-	-	-	KM22	MB22
	M 110 X 2	21	-	-	-	KM22	MB22
	M 110 X 2	31	-	-	-	KM22	MB22
110	M 120 X 2	22	-	-	-	KM24	MB24
	M 120 X 2	22	-	-	-	KML24	MBL24
	M 120 X 2	22	-	-	-	KM24	MB24
115	M 130 X 2	23	-	-	-	KM26	MB26
	M 130 X 2	23	-	-	-	KML26	MBL26
	M 130 X 2	23	-	-	-	KM26	MB26
125	M 140 X 2	24	-	-	-	KM28	MB28
	M 140 X 2	24	-	-	-	KML28	MBL28
	M 140 X 2	24	-	-	-	KM28	MB28
135	M 150 X 2	26	-	-	-	KM30	MB30
	M 150 X 2	26	-	-	-	KML30	MBL30
	M 150 X 2	26	-	-	-	KM30	MB30
140	M 160 X 3	28	-	-	-	KM32	MB32
	M 160 X 3	28	-	M 6	4,2	KM32	MB32
	M 160 X 3	27,5	-	-	-	KML32	MBL32

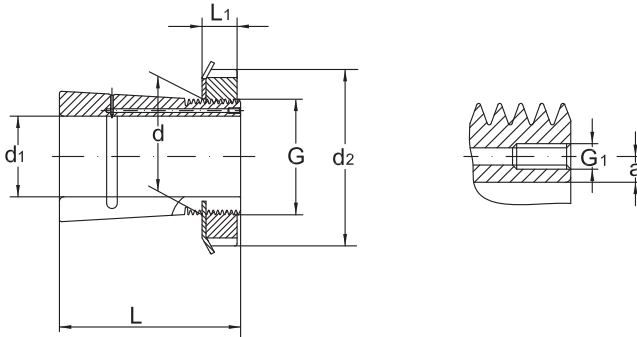


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
140	160	190	93	OH3032 H	5,1
		210	119	H3132	7,25
		210	119	OH3132 H	7,25
150	170	220	154	H2334	9,9
		220	154	OH2334 H	9,9
		200	101	H3034	5,8
		200	101	OH3034 H	5,8
		220	101	H3134	8,1
		220	101	OH3134 H	8,1
		220	122	OH3134 H	8,1
160	180	230	161	H2336	11
		230	161	OH2336 H	11
		210	109	H3036	6,7
		210	109	OH3036 H	6,7
		230	131	H3136	9,15
		230	131	OH3136 H	9,15
170	190	240	169	H2338	12
		240	169	OH2338 H	12
		220	112	H3038	7,25
		220	112	OH3038 H	7,25
		240	141	H3138	10,5
		240	141	OH3138 H	10,5
180	200	250	176	H2340	13,5
		250	176	OH2340 H	13,5
		240	120	H3040	8,9

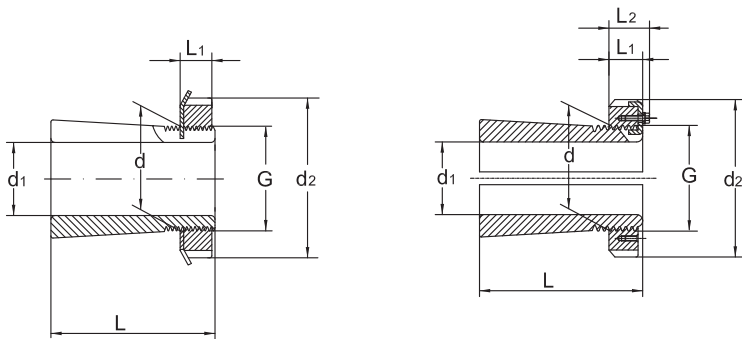
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		d ₁	G	L ₁	L ₂		
mm							
140	M 160 X 3	27,5	-	M 6	4,2	KML32	MBL32
	M 160 X 3	28	-	-	-	KM32	MB32
	M 160 X 3	28	-	M 6	4,2	KM32	MB32
150	M 170 X 3	29	-	-	-	KM34	MB34
	M 170 X 3	29	-	M 6	4,2	KM34	MB34
	M 170 X 3	28,5	-	-	-	KML34	MBL34
	M 170 X 3	28,5	-	M 6	4,2	KML34	MBL34
	M 170 X 3	29	-	-	-	KM34	MB34
	M 170 X 3	29	-	M 6	4,2	KM34	MB34
	M 170 X 3	29	-	M 6	4,2	KM34	MB34
160	M 180 X 3	30	-	-	-	KM36	MB36
	M 180 X 3	30	-	M 6	4,2	KM36	MB36
	M 180 X 3	29,5	-	-	-	KML36	MBL36
	M 180 X 3	29,5	-	M 6	4,2	KML36	MBL36
	M 180 X 3	30	-	-	-	KM36	MB36
	M 180 X 3	30	-	M 6	4,2	KM36	MB36
170	M 190 X 3	31	-	-	-	KM38	MB38
	M 190 X 3	31	-	M 6	4,2	KM38	MB38
	M 190 X 3	30,5	-	-	-	KML38	MBL38
	M 190 X 3	30,5	-	M 6	4,2	KML38	MBL38
	M 190 X 3	31	-	-	-	KM38	MB38
	M 190 X 3	31	-	M 6	4,2	KM38	MB38
180	M 200 X 3	32	-	-	-	KM40	MB40
	M 200 X 3	32	-	M 6	4,2	KM40	MB40
	M 200 X 3	31,5	-	-	-	KML40	MBL40

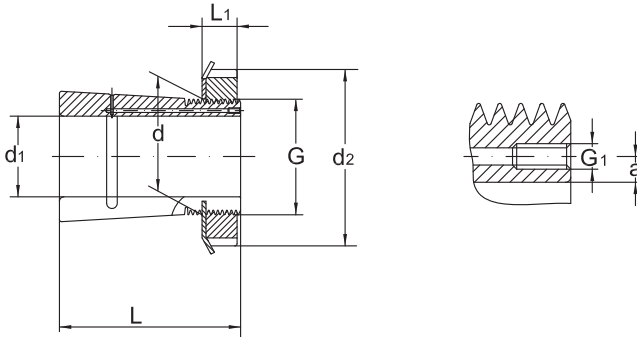


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
180	200	240	120	OH3040 H	8,9
		250	150	H3140	12
		250	150	OH3140H	12
200	220	280	186	H2344	17
		280	186	OH2344 H	17
		260	126	H3044	9,9
		260	126	OH3044 H	9,9
		280	161	H3144	15
		280	161	OH3144 H	15
		280	161	OH3144 H	15
220	240	300	199	H2348	19
		300	199	OH2348 H	19
		290	133	H3048	12
		290	133	OH3048 H	12
		300	172	H3148	16
		300	172	OH3148 H	16
240	260	330	211	H2352	23
		330	211	OH2352 H	23
		310	145	H3052	13,5
		310	145	OH3052 H	13,5
		330	190	H3152	21
		330	190	OH3152 H	21
260	280	350	224	H2356	27
		350	224	OH2356 H	27
		330	152	H3056	16

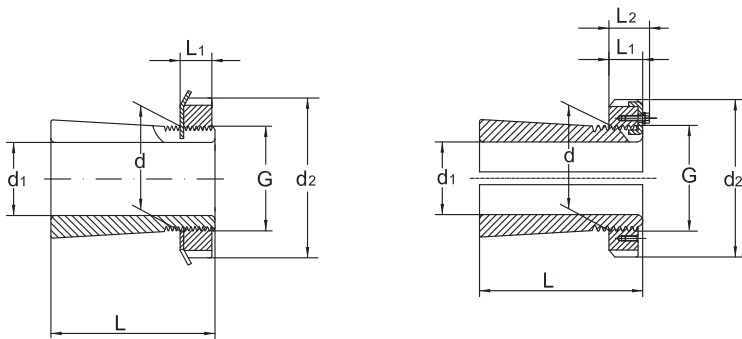
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		d ₁	G	L ₁	L ₂		
mm							
180	M 200 X 3	31,5	-	M6	4,2	KML40	MBL40
	M 200 X 3	32	-	-	-	KM40	MB40
	M 200 X 3	32	-	M6	4,2	KM40	MB40
200	Tr 220 X 4	35	-	-	-	HM44 T	MB44
	Tr 220 X 4	35	-	M6	4,2	HM44 T	MB44
	Tr 220 X 4	30	41	-	-	HM3044	MS3044
	Tr 220 X 4	30	41	M6	4,2	HM3044	MS3044
	Tr 220 X 4	35	-	-	-	HM44 T	MB44
	Tr 220 X 4	35	-	M6	4,2	HM44 T	MB44
	Tr 220 X 4	35	-	-	-	HM44 T	MB44
220	Tr 240 X 4	37	-	-	-	HM48 T	MB48
	Tr 240 X 4	37	-	M6	4,2	HM48 T	MB48
	Tr 240 X 4	34	46	-	-	HM3048	MS3052-48
	Tr 240 X 4	34	46	M6	4,2	HM3048	MS3052-48
	Tr 240 X 4	37	-	-	-	HM48 T	MB48
	Tr 240 X 4	37	-	M6	4,2	HM48 T	MB48
240	Tr 260 X 4	39	-	-	-	HM52 T	MB52
	Tr 260 X 4	39	-	M6	4,2	HM52 T	MB52
	Tr 260 X 4	34	46	-	-	HM3052	MS3052-48
	Tr 260 X 4	34	46	M6	4,2	HM3052	MS3052-48
	Tr 260 X 4	39	-	-	-	HM52 T	MB52
	Tr 260 X 4	39	-	M6	4,2	HM52 T	MB52
260	Tr 280 X 4	41	-	-	-	HM56 T	MB56
	Tr 280 X 4	41	-	M6	4,2	HM56 T	MB56
	Tr 280 X 4	38	50	-	-	HM3056	MS3056

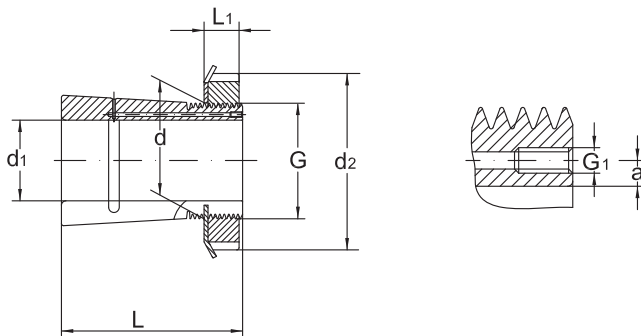


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
260	280	330	152	OH3056 H	16
		350	195	H3156	23
		350	195	OH3156 H	23
280	300	360	168	H3060	20,5
		360	168	OH3060 H	20,5
		380	208	H3160	29
		380	208	OH3160 H	29
		380	240	H3260	32
		380	240	OH3260 H	32
		380	240	OH3260 H	32
300	320	380	171	H3064	22
		380	171	OH3064 H	22
		400	226	H3164	32
		400	226	OH3164 H	32
		400	258	H3264	35
		400	258	OH3264 H	35
320	340	400	187	H3068	27
		400	187	OH3068 H	27
		440	254	H3168	50
		440	254	OH3168 H	50
		440	288	H3268	51,5
		440	288	OH3268 H	51,5
340	360	420	188	H3072	29
		420	188	OH3072 H	29
		460	259	H3172	56

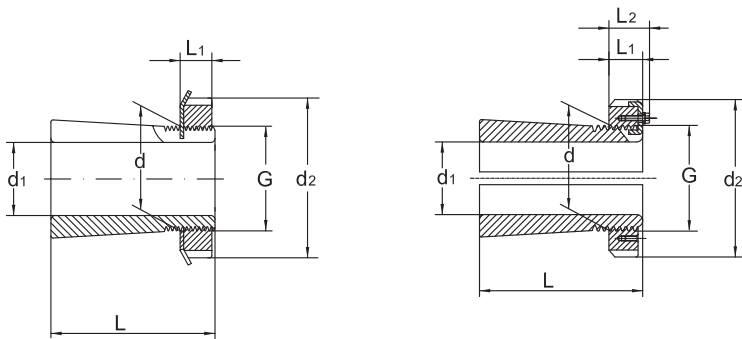
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		d ₁	G	L ₁	L ₂		
mm							
260	Tr 280 X 4	38	50	M6	4,2	HM3056	MS3056
	Tr 280 X 4	41	-	-	-	HM56 T	MB56
	Tr 280 X 4	41	-	M6	4,2	HM56 T	MB56
280	Tr 300 X 4	42	54	-	-	HM3060	MS3060
	Tr 300 X 4	42	54	M6	4,2	HM3060	MS3060
	Tr 300 X 4	40	53	-	-	HM3160	MS3160
	Tr 300 X 4	40	53	M6	4,2	HM3460	MS3460
	Tr 300 X 4	40	53	-	-	HM3160	MS3160
	Tr 300 X 4	40	53	M6	4,2	HM3160	MS3160
	Tr 300 X 4	40	53	M6	4,2	HM3160	MS3160
300	Tr 320 X 5	42	55	-	-	HM3064	MS3068-64
	Tr 320 X 5	42	55	M6	4	HM3064	MS3068-64
	Tr 320 X 5	42	56	-	-	HM3164	MS3164
	Tr 320 X 5	42	56	M6	4	HM3164	MS3164
	Tr 320 X 5	42	56	-	-	HM3164	MS3164
	Tr 320 X 5	42	56	M6	4	HM3164	MS3164
320	Tr 340 X 5	45	58	-	-	HM3068	MS3068-64
	Tr 340 X 5	45	58	M6	4	HM3068	MS3068-64
	Tr 340 X 5	55	72	-	-	HM3168	MS3172-68
	Tr 340 X 5	55	72	M6	4	HM3168	MS3172-68
	Tr 340 X 5	55	72	-	-	HM3168	MS3172-68
	Tr 340 X 5	55	72	M6	4	HM3168	MS3172-68
340	Tr 360 X 5	45	58	-	-	HM3072	MS3072
	Tr 360 X 5	45	58	M6	4	HM3072	MS3072
	Tr 360 X 5	58	75	-	-	HM3172	MS3172-68

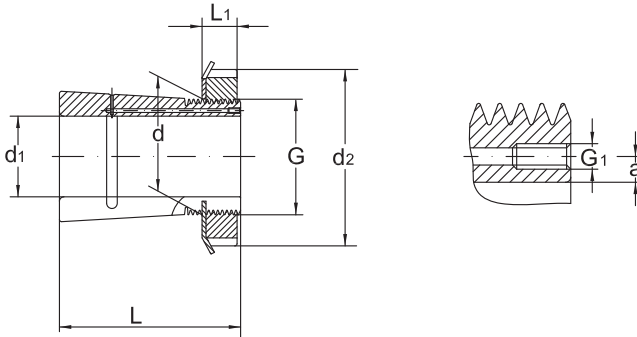


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
340	360	460	259	OH3172 H	56
		460	299	H3272	60,5
		460	299	OH3272 H	60,5
360	380	450	193	H3076	35,5
		450	193	OH3076 H	35,5
		490	264	H3176	61,5
		490	264	OH3176 H	61,5
		490	310	H3276	69,5
		490	310	OH3276 H	69,5
380	400	470	210	H3080	40
		470	210	OH3080 H	40
		520	272	H3180	73
		520	272	OH3180 H	73
400	420	490	212	H3084	47
		490	212	OH3084 H	47
		540	304	H3184	80
		540	304	OH3184 H	80
410	440	520	228	H3088	65
		520	228	OH3088 H	65
		560	307	H3188	95
		560	307	OH3188 H	95
430	460	540	234	H3092	71
		540	234	OH3092 H	71
		580	326	H3192	119

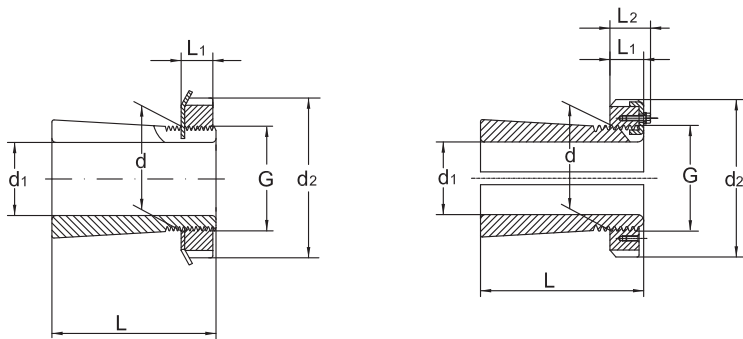
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		d ₁	G	L ₁	L ₂		
mm							
340	Tr 360 X 5	58	75	M6	4	HM3172	MS3172-68
	Tr 360 X 5	58	75	-	-	HM3172	MS3172-68
	Tr 360 X 5	58	75	-	10	HM3172	MS3172-68
360	Tr 380 X 5	48	62	-	-	HM3076	MS3080-76
	Tr 380 X 5	48	62	M6	4	HM3076	MS3080-76
	Tr 380 X 5	60	77	-	-	HM3176	MS3176
	Tr 380 X 5	60	77	M6	4	HM3176	MS3176
	Tr 380 X 5	60	77	-	-	HM3176	MS3176
	Tr 380 X 5	60	77	-	-	HM3176	MS3176
	Tr 380 X 5	60	77	-	10,5	HM3176	MS3176
380	Tr 400 X 5	52	66	-	-	HM3080	MS3080-76
	Tr 400 X 5	52	66	M6	4	HM3080	MS3080-76
	Tr 400 X 5	62	82	-	-	HM3180	MS3184-80
	Tr 400 X 5	62	82	M6	4	HM3180	MS3184-80
400	Tr 420 X 5	52	66	-	-	HM3084	MS3084
	Tr 420 X 5	52	66	M6	4	HM3084	MS3084
	Tr 420 X 5	70	90	-	-	HM3184	MS3184-80
	Tr 420 X 5	70	90	M6	4	HM3184	MS3184-80
410	Tr 440 X 5	60	77	-	-	HM3088	MS3092-88
	Tr 440 X 5	60	77	M8	6,5	HM3088	MS3092-88
	Tr 440 X 5	70	90	-	-	HM3188	MS3192-88
	Tr 440 X 5	70	90	M8	6,5	HM3188	MS3192-88
430	Tr 460 X 5	60	77	-	-	HM3092	MS3092-88
	Tr 460 X 5	60	77	M8	6,5	HM3092	MS3092-88
	Tr 460 X 5	75	95	-	-	HM3192	MS3192-88

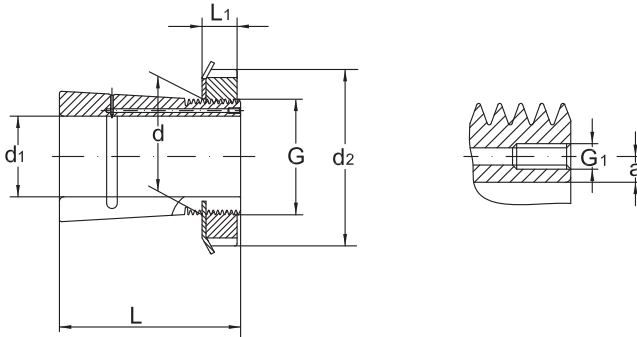


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
mm					kg
430	460	580	326	OH3192 H	119
450	480	560	237	H3096	75
		560	237	OH3096 H	75
		620	335	H3196	135
		620	335	OH3196 H	135
470	500	580	247	H30/500	82
		580	247	OH30/500 H	82
		630	356	H31/500	145
		630	356	OH31/500 H	145
500	530	630	265	H30/530	105
		630	265	OH30/530 H	105
530	560	650	282	H30/560	112
		650	282	OH30/560 H	112
560	600	700	289	H30/600	147
		700	289	OH30/600 H	147
600	630	730	301	H30/630	138
		730	301	OH30/630 H	138
630	670	780	324	H30/670	190
		780	324	OH30/670 H	190
670	710	830	342	H30/710	228
		830	342	OH30/710 H	228
710	750	870	356	H30/750	246
		870	356	OH30/750 H	246
750	800	920	366	H30/800	302

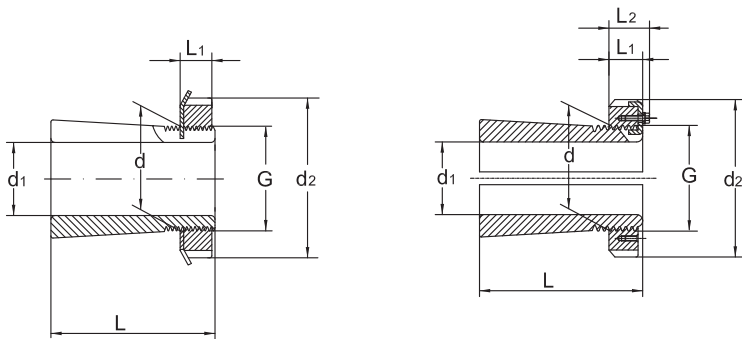
Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		L_1	L_2	G1	a		
d_1	G	L_1	L_2	G1	a		
mm							
430	Tr 460 X 5	75	95	M8	6,5	HM3192	MS3192-88
450	Tr 480 X 5	60	77	-	-	HM3096	MS30/500-96
	Tr 480 X 5	60	77	M8	6,5	HM3096	MS30/500-96
	Tr 480 X 5	75	95	-	-	HM3196	MS3196
	Tr 480 X 5	75	95	M8	6,5	HM3196	MS3196
470	Tr 500 X 5	68	85	-	-	HM30/500	MS30/500-96
	Tr 500 X 5	68	85	M8	6,5	HM30/500	MS30/500-96
	Tr 500 X 5	80	100	-	-	HM31/500	MS31/500
	Tr 500 X 5	80	100	M8	6,5	HM31/500	MS31/500
500	Tr 530 X 6	68	90	-	-	HM30/530	MS30/600-530
	Tr 530 X 6	68	90	M8	6	HM30/530	MS30/600-530
530	Tr 560 X 6	75	97	-	-	HM30/560	MS30/560
	Tr 560 X 6	75	97	M8	6	HM30/560	MS30/560
560	Tr 600 X 6	75	97	-	-	HM30/600	MS30/600-530
	Tr 600 X 6	75	97	-	8	HM30/600	MS30/600-530
600	Tr 630 X 6	75	97	-	-	HM30/630	MS30/630
	Tr 630 X 6	75	97	M8	6	HM30/630	MS30/630
630	Tr 670 X 6	80	102	-	-	HM30/670	MS30/670
	Tr 670 X 6	80	102	-	8	HM30/670	MS30/670
670	Tr 710 X 7	90	112	-	-	HM30/710	MS30/710
	Tr 710 X 7	90	112	-	8	HM30/710	MS30/710
710	Tr 750 X 7	90	112	-	-	HM30/750	MS30/800-750
	Tr 750 X 7	90	112	-	8	HM30/750	MS30/800-750
750	Tr 840 X 7	90	112	-	-	HM30/800	MS30/800-750

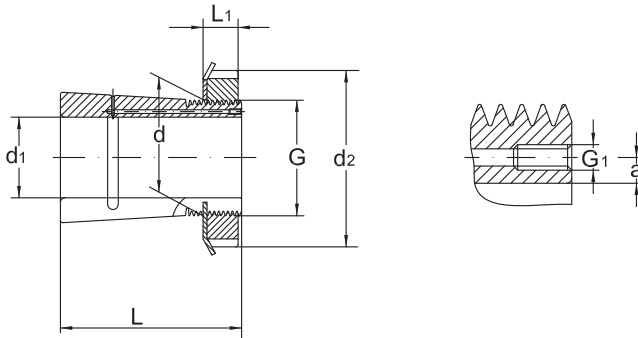


Adapter sleeves



Shaft Ø	Dimension			Designation adapter sleeve, complete	Mass
	d ₁	d	d ₂		
	mm				kg
750	800	920	366	OH30/800 H	302
800	850	980	380	H30/850	341
		980	380	OH30/850 H	341

Adapter sleeves



Shaft Ø	Thread	Dimensions				Lock nut	Locking Device
		L ₁	L ₂	G1	a		
d ₁	G	L ₁	L ₂	G1	a		
mm							
750	Tr 800 X 7	90	112	-	10	HM30/800	MS30/800-750
800	Tr 850 X 7	90	115	-	-	HM30/850	MS30/900-850
	Tr 850 X 7	90	115	-	10	HM30/850	MS30/900-850

Withdrawal Sleeves

Standards, Boundary dimensions

Withdrawal Sleeves DIN 5416

General

Withdrawal sleeves (see sketch below) are slotted steel sleeves that have a tapered outer diameter on one side and a thread on the large diameter on the opposite side.

Standard withdrawal sleeves have tapered outers, taper **1:12** except for withdrawal sleeves of series **AH 240** and **AH 241** having tapers **1:30**.

URB Withdrawal Sleeves are supplied without lock nut as standard.

URB Withdrawal Sleeves are produced in two different designs as standard.

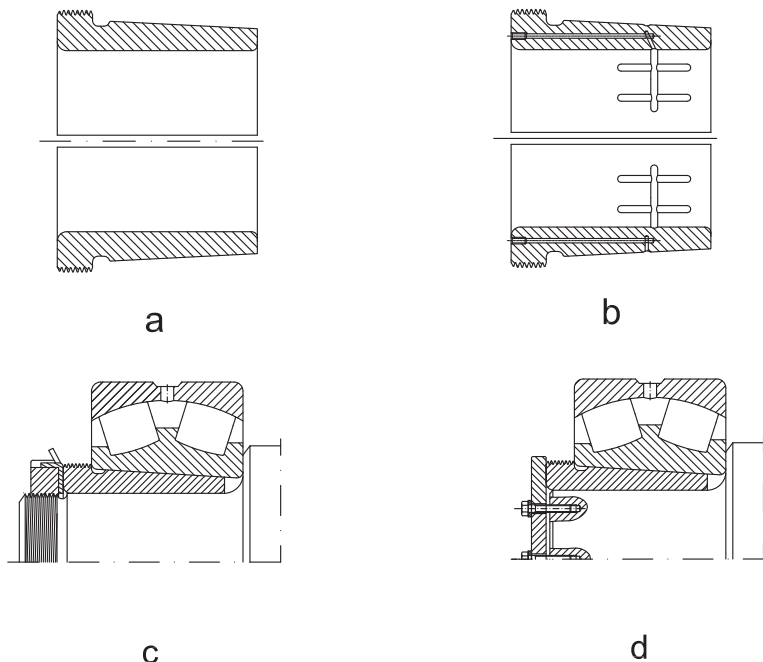
Beside the standard design (see figure **a**), larger withdrawal sleeves from bore diameter 200 mm onwards are also available with oil bores and oil distribution ducts as required for applying the oil injection method as shown in figure **b**.

URB withdrawal sleeves that are foreseen with facilities for an application of the oil injection method are designated "**AOH...**"

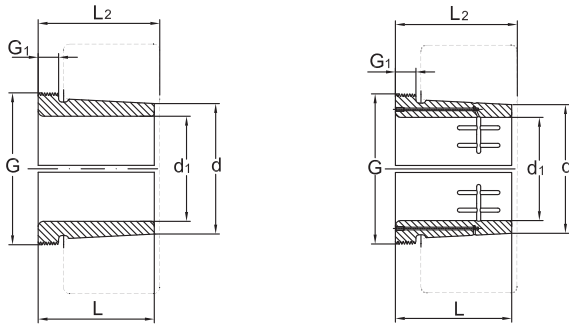
When withdrawal sleeves are used, the bearing inner ring must to be supported by an effective surface contact, such as a shaft shoulder, (see figure **a**).

Where larger radii bearing journals and shaft shoulders are necessary for strength reasons, (e.g. where such radii become larger than the bearing fillet, suitable distance rings must be applied.)

In each case the withdrawal sleeves must be secured against axial displacement loosening by means of lock nuts (see fig. c) or end plates (fig. d).



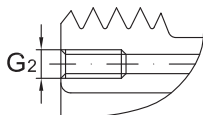
Withdrawal Sleeves



Shaft Ø	Dimension						Designation adapter sleeve, complete	Mass kg	Lock Nut
	d ₁	d	G	G ₁	G ₂	L			
mm									
35	40	M 45 X 1,5	6	-	29	32	AH308	0,09	KM 9
		M 45 X 1,5	7	-	40	43	AH2308	0,13	KM 9
40	45	M 50 X 1,5	6	-	31	34	AH309	0,12	KM 10
		M 50 X 1,5	7	-	44	47	AH2309	0,16	KM 10
45	50	M 55 X 2	7	-	35	38	AHX310	0,13	KM 11
		M 55 X 2	9	-	50	53	AHX2310	0,19	KM 11
50	55	M 60 X 2	7	-	37	40	AHX311	0,16	KM 12
		M 60 X 2	10	-	54	57	AHX2311	0,26	KM 12
55	60	M 65 X 2	8	-	40	43	AHX312	0,19	KM 13
		M 65 X 2	11	-	58	61	AHX2312	0,30	KM 13
60	65	M 70 X 2	8	-	42	45	AH313 G	0,22	KM 14
		M 75 X 2	12	-	61	64	AH2313	0,39	KM 15
65	70	M 75 X 2	8	-	43	47	AH314 G	0,24	KM 15
		M 80 X 2	12	-	64	68	AHX2314	0,45	KM 16
70	75	M 80 X 2	8	-	45	49	AH315 G	0,29	KM 16
		M 85 X 2	12	-	68	72	AHX2315	0,53	KM 17



Withdrawal Sleeves



Shaft Ø	Dimension						Designation adapter sleeve, complete	Mass kg	Lock Nut
	d ₁	d	G	G ₁	G ₂	L			
			mm						
75	80	M 90 X 2	8	-	48	52	AH316	0,37	KM 18
		M 90 X 2	12	-	71	75	AHX2316	0,57	KM 18
80	85	M 95 X 2	9	-	52	56	AHX317	0,43	KM 19
		M 95 X 2	13	-	74	78	AHX2317	0,65	KM 19
85	90	M 100 X 2	9	-	53	57	AHX318	0,46	KM 20
		M 100 X 2	10	-	63	67	AHX3218	0,57	KM 20
		M 100 X 2	14	-	79	83	AHX2318	0,76	KM 20
90	95	M 105 X 2	10	-	57	61	AHX319	0,54	KM 21
		M 105 X 2	16	-	57	61	AHX2319	0,90	KM 21
95	100	M 110 X 2	10	-	59	63	AHX320	0,58	KM 22
		M 110 X 2	11	-	64	68	AHX3120	0,66	KM 22
		M 110 X 2	11	-	73	77	AHX3220	0,76	KM 22
		M 110 X 2	16	-	90	94	AHX2320	1,00	KM 22
105	110	M 120 X 2	11	-	68	72	AHX3122	0,76	KM 24
		M 125 X 2	11	-	82	86	AHX3222	1,05	KM 25
		M 125 X 2	16	-	98	102	AHX2322	1,35	KM 25