

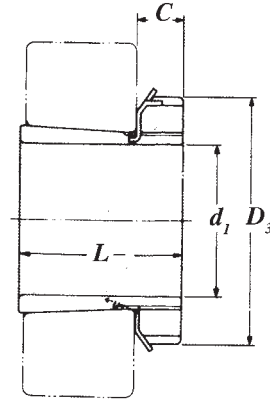
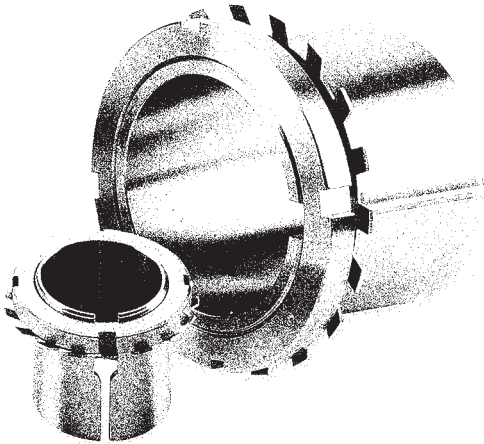
# 軸承套筒 · 螺母華司



# ADAPTERS

## SERIES

### H2



Adapter <sup>*1)</sup>	$d_1$					$L$		$D^3$	$C$	Weight	
	$H$		$HE^{*2)}$	$HS^{*3)}$	$HA^{*4)}$						
No.	mm	in.	in.	in.	in.	mm	in.	mm	mm	kg	lbs.
<b>H204</b>	17	0.669	—	—	—	24	0.945	32	7	0.041	0.090
<b>H205</b>	20	0.787	3/4	7/8	13/16	26	1.024	38	8	0.070	0.154
<b>H206</b>	25	0.984	1	7/8	15/16	27	1.063	45	8	0.099	0.218
<b>H207</b>	30	1.181	1 1/4	1 1/8	1 3/16	29	1.142	52	9	0.125	0.276
<b>H208</b>	35	1.378	1 1/4	1 3/8	1 5/16	31	1.220	58	10	0.174	0.384
<b>H209</b>	40	1.575	1 1/2	1 5/8	1 7/16	33	1.299	65	11	0.227	0.500
<b>H210</b>	45	1.772	1 3/4	1 5/8	1 11/16	35	1.378	70	12	0.274	0.604
<b>H211</b>	50	1.969	2	1 7/8	1 15/16	37	1.457	75	12	0.308	0.679
<b>H212</b>	55	2.165	2 1/4	2 1/8	2 1/16	38	1.496	80	13	0.346	0.763
<b>H213</b>	60	2.362	2 1/4	2 3/8	2 3/16	40	1.575	85	14	0.401	0.884
<b>H214</b>	60	2.362	—	—	—	41	1.614	92	14	0.593	1.305
<b>H215</b>	65	2.559	2 1/2	2 5/8	2 7/16	43	1.693	98	15	0.707	1.56
<b>H216</b>	70	2.756	2 3/4	2 7/8	2 11/16	46	1.811	105	17	0.882	1.94
<b>H217</b>	75	2.953	3	—	2 15/16	50	1.969	110	18	1.02	2.25
<b>H218</b>	80	3.150	3 1/4	3 1/8	3 3/16	52	2.047	120	18	1.19	2.62
<b>H219</b>	85	3.346	3 1/4	—	3 5/16	55	2.165	125	19	1.37	3.02
<b>H220</b>	90	3.543	3 1/2	—	3 7/16	58	2.283	130	20	1.49	3.28
<b>H221</b>	95	3.740	—	—	—	60	2.362	140	20	1.72	3.784
<b>H222</b>	100	3.937	4	—	3 15/16	63	2.480	145	21	1.93	4.25

\*1) Adapter No. includes adapter sleeve, locknut and lockwasher or lockplate.

2) Adapters for these bores are designated HE, e.g. HE 3024.

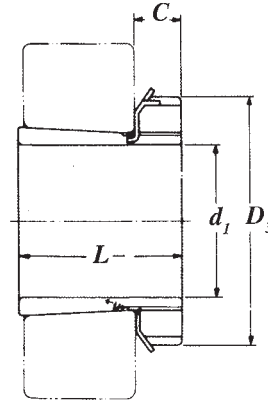
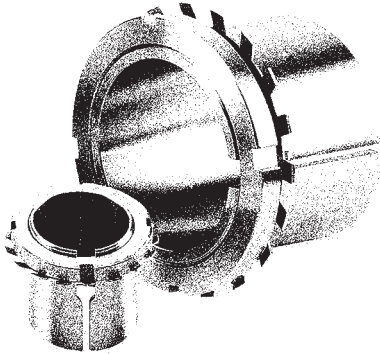
3) Adapters for these bores are designated HS, e.g. HS 3024.

4) Adapters for these bores are designated HA, e.g. HA 3024.

# ADAPTERS

## SERIES

### H3



Adapter <sup>*1)</sup>	$d_1$					$L$		$D^3$	$C$	Weight	
	$H$		$HE$ <sup>2)</sup>	$HS$ <sup>3)</sup>	$HA$ <sup>4)</sup>						
No.	mm	in.	in.	in.	in.	mm	in.	mm	mm	kg	lbs.
<b>H304</b>	17	0.669	—	—	—	28	1.102	32	7	0.045	0.099
<b>H305</b>	20	0.787	3/4	7/8	13/16	29	1.142	38	8	0.075	0.165
<b>H306</b>	25	0.984	1	7/8	15/16	31	1.220	45	8	0.109	0.240
<b>H307</b>	30	1.181	1 1/4	1 1/8	1 3/16	35	1.378	52	9	0.142	0.313
<b>H308</b>	35	1.378	1 1/4	1 3/8	1 5/16	36	1.417	58	10	0.189	0.417
<b>H309</b>	40	1.575	1 1/2	1 5/8	1 7/16	39	1.535	65	11	0.248	0.547
<b>H310</b>	45	1.772	1 3/4	1 5/8	1 11/16	42	1.654	70	12	0.303	0.668
<b>H311</b>	50	1.969	2	1 7/8	1 15/16	45	1.772	75	12	0.345	0.761
<b>H312</b>	55	2.165	2 1/4	2 1/8	2 1/16	47	1.850	80	13	0.394	0.869
<b>H313</b>	60	2.362	2 1/4	2 3/8	2 3/16	50	1.969	85	14	0.458	1.01
<b>H314</b>	60	2.362	—	—	—	52	2.047	92	14	0.723	1.591
<b>H315</b>	65	2.559	2 1/2	2 5/8	2 7/16	55	2.165	98	15	0.831	1.83
<b>H316</b>	70	2.756	2 3/4	2 7/8	2 11/16	59	2.323	105	17	1.03	2.27
<b>H317</b>	75	2.953	3	—	2 15/16	63	2.480	110	18	1.18	2.60
<b>H318</b>	80	3.150	3 1/4	3 1/8	3 3/16	65	2.559	120	18	1.37	3.02
<b>H319</b>	85	3.346	3 1/4	—	3 5/16	68	2.677	125	19	1.56	3.44
<b>H320</b>	90	3.543	3 1/2	—	3 7/16	71	2.795	130	20	1.69	3.73
<b>H321</b>	95	3.740	—	—	—	74	2.913	140	20	1.95	4.29
<b>H322</b>	100	3.937	4	—	3 15/16	77	3.031	145	21	2.18	4.81

\*1) Adapter No. includes adapter sleeve, locknut and lockwasher or lockplate.

2) Adapters for these bores are designated HE, e.g. HE305.

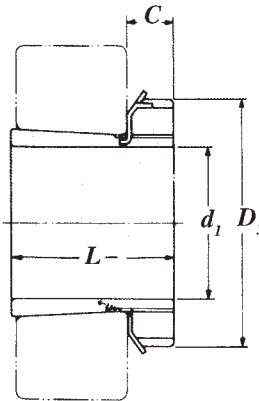
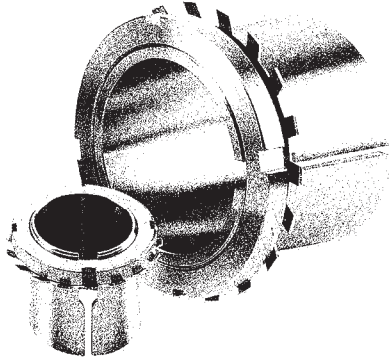
3) Adapters for these bores are designated HS, e.g. HS305.

4) Adapters for these bores are designated HA, e.g. HA305.

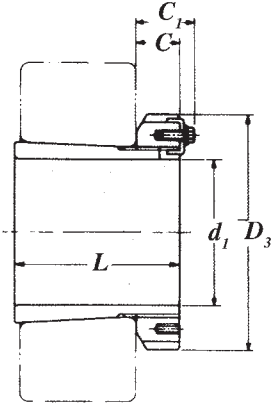
# ADAPTERS

## SERIES

### H23



$d_1 \geq 180 \text{ mm}$



$d_1 \geq 200 \text{ mm}$

Adapter <sup>*1)</sup>	$d_1$					$L$		$D_3$	$C$	$C_1$ <sup>*5)</sup>	Weight	
	$H$		$HE$ <sup>*2)</sup>	$HS$ <sup>*3)</sup>	$HA$ <sup>*4)</sup>							
No.	mm	in.	in.	in.	in.	mm	in.	mm	mm	mm	kg	lbs.
<b>H2304</b>	17	0.669	—	—	—	31	1.220	32	7	—	0.049	0.108
<b>H2305</b>	20	0.787	3/4	7/8	13/16	35	1.378	38	8	—	0.087	0.192
<b>H2306</b>	25	0.984	1	7/8	15/16	38	1.496	45	8	—	0.126	0.278
<b>H2307</b>	30	1.181	1 1/4	1 1/8	1 3/16	43	1.693	52	9	—	0.165	0.364
<b>H2308</b>	35	1.378	1 1/4	1 3/8	1 5/16	46	1.811	58	10	—	0.224	0.494
<b>H2309</b>	40	1.575	1 1/2	1 5/8	1 7/16	50	1.969	65	11	—	0.280	0.617
<b>H2310</b>	45	1.772	1 3/4	1 5/8	1 11/16	55	2.165	70	12	—	0.362	0.798
<b>H2311</b>	50	1.969	2	1 7/8	1 15/16	59	2.323	75	12	—	0.420	0.926
<b>H2312</b>	55	2.166	2 1/4	2 1/8	2 1/16	62	2.441	80	13	—	0.481	1.06
<b>H2313</b>	60	2.362	2 1/4	2 3/8	2 3/16	65	2.559	85	14	—	0.557	1.23
<b>H2314</b>	60	2.362	—	—	—	68	2.677	92	14	—	0.897	1.973
<b>H2315</b>	65	2.559	2 1/2	2 5/8	2 7/16	73	2.874	98	15	—	1.05	2.32
<b>H2316</b>	70	2.756	2 3/4	2 7/8	2 11/16	78	3.071	105	17	—	1.28	2.82
<b>H2317</b>	75	2.953	3	—	2 15/16	82	3.228	110	18	—	1.45	3.20
<b>H2318</b>	80	3.150	3 1/4	3 1/8	3 3/16	86	3.386	120	18	—	1.69	3.73
<b>H2319</b>	85	3.346	3 1/4	—	3 5/16	90	3.543	125	19	—	1.92	4.23
<b>H2320</b>	90	3.543	3 1/2	—	3 7/16	97	3.819	130	20	—	2.15	4.74
<b>H2321</b>	95	3.740	—	—	—	101	3.977	140	20	—	2.46	5.412
<b>H2322</b>	100	3.937	4	—	3 15/16	105	4.134	145	21	—	2.74	6.04
<b>H2324</b>	110	4.331	4 1/4	—	4 3/16	112	4.409	155	22	—	3.19	7.03
<b>H2326</b>	115	4.528	4 1/2	—	4 7/16	121	4.764	165	23	—	4.60	10.1
<b>H2328</b>	125	4.921	5	4 13/16	4 15/16	131	5.157	180	24	—	5.55	12.2
<b>H2330</b>	135	5.315	5 1/4	—	5 3/16	139	5.472	195	26	—	6.63	14.6
<b>H2332</b>	140	5.512	5 1/2	—	5 7/16	147	5.787	210	28	—	9.14	20.2
<b>H2334</b>	150	5.906	6	—	5 15/16	154	6.063	220	29	—	10.2	22.5
<b>H2336</b>	160	6.299	6 1/2	—	6 7/16	161	6.339	230	30	—	11.3	24.9
<b>H2338</b>	170	6.693	6 3/4	—	6 15/16	169	6.654	240	31	—	12.6	27.8
<b>H2340</b>	180	7.087	7	—	7 3/16	176	6.929	250	32	—	13.9	30.6
<b>H2344</b>	200	7.874	—	—	—	183	7.205	280	32	44	16.7	36.8
<b>H2348</b>	220	8.661	—	—	—	196	7.717	300	34	46	19.7	43.4
<b>H2352</b>	240	9.449	—	—	—	208	8.189	330	36	49	24.2	53.4
<b>H2356</b>	260	10.236	—	—	—	221	8.701	350	38	51	27.8	61.3

\*1) Adapter No. includes adapter sleeve, locknut and lockwasher or lockplate.

2) Adapters for these bores are designated HE, e.g. HE2308.

3) Adapters for these bores are designated HS, e.g. HS2308.

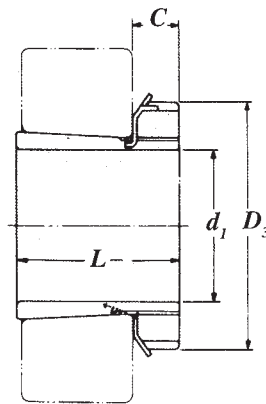
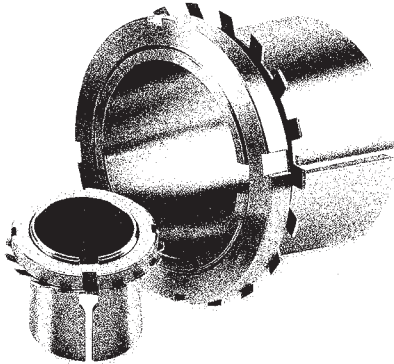
4) Adapters for these bores are designated HA, e.g. HA2308.

5) Adapters with the dimension C1 have a locking device as shown in the right hand illustration above.

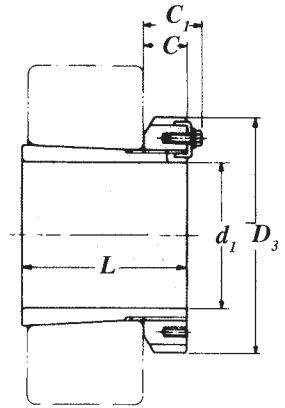
# ADAPTERS

## SERIES

### H30



$d_1 \geq 180 \text{ mm}$



$d_1 \geq 200 \text{ mm}$

Adapter <sup>*1)</sup>	$d_1$				$L$		$D_3$	$C$	$C_1$ <sup>*4)</sup>	Weight	
	$H$		$HE$ <sup>2)</sup>	$HA$ <sup>3)</sup>							
No.	mm	in.	in.	in.	mm	in.	mm	mm	mm	kg	lbs.
<b>H3024</b>	110	4.331	4 1/4	4 3/16	72	2.835	145	22	—	1.93	4.26
<b>H3026</b>	115	4.528	4 1/2	4 7/16	80	3.150	155	23	—	2.85	6.28
<b>H3028</b>	125	4.921	5	4 15/16	82	3.228	165	24	—	3.16	6.97
<b>H3030</b>	135	5.315	5 1/4	5 3/16	87	3.425	180	26	—	3.89	8.58
<b>H3032</b>	140	5.512	5 1/2	5 7/16	93	3.661	190	28	—	5.21	11.5
<b>H3034</b>	150	5.906	6	5 15/16	101	3.976	200	29	—	5.99	13.2
<b>H3036</b>	160	6.299	6 1/2	6 7/16	109	4.291	210	30	—	6.83	15.1
<b>H3038</b>	170	6.693	6 3/4	6 15/16	112	4.409	220	31	—	7.45	16.4
<b>H3040</b>	180	7.087	7	7 3/16	120	4.724	240	32	—	9.19	20.3
<b>H3044</b>	200	7.874	—	7 15/16	128	5.039	260	30	41	10.3	22.7
<b>H3048</b>	220	8.661	—	8 15/16	133	5.236	290	34	46	13.2	29.1
<b>H3052</b>	240	9.449	—	9 7/16	147	5.787	310	34	46	15.3	33.7
<b>H3056</b>	260	10.236	—	10 7/16	152	5.984	330	38	50	17.7	39.0
<b>H3056</b>	280	11.024	—	10 15/16	168	6.614	360	42	54	22.8	50.3
<b>H3064</b>	300	11.811	—	11 15/16	171	6.732	380	42	55	24.6	54.2
<b>H3068</b>	320	12.598	—	12 7/16	187	7.362	400	45	58	28.7	63.3
<b>H3072</b>	340	13.386	—	13 7/16	188	7.402	420	45	58	30.5	67.3
<b>H3076</b>	360	14.173	—	13 15/16	193	7.598	450	48	62	35.8	78.9
<b>H3080</b>	380	14.961	—	—	210	8.268	470	52	66	41.3	91.1
<b>H3084</b>	400	15.748	—	—	212	8.346	490	52	66	43.7	96.4
<b>H3088</b>	410	16.142	—	—	228	8.976	520	60	77	65.2	144
<b>H3092</b>	430	16.929	—	—	234	9.213	540	60	77	69.5	153
<b>H3096</b>	450	17.717	—	—	237	9.331	560	60	77	73.3	162
<b>H30/500</b>	470	18.504	—	—	247	9.724	580	68	85	81.8	180

\*1) Adapter No. includes adapter sleeve, locknut and lockwasher or lockplate.

2) Adapters for these bores are designated HE, e.g. HE 3024.

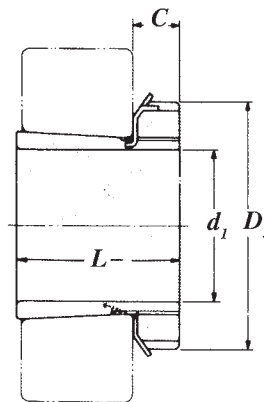
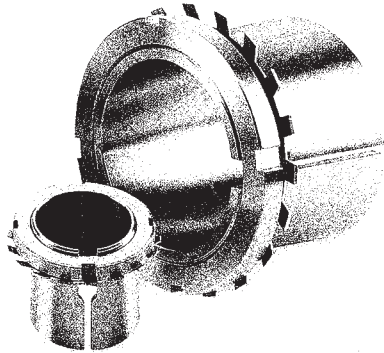
3) Adapters for these bores are designated HA, e.g. HA 3024.

4) Adapters with the dimension C1 have a locking device as shown in the right hand illustration above.

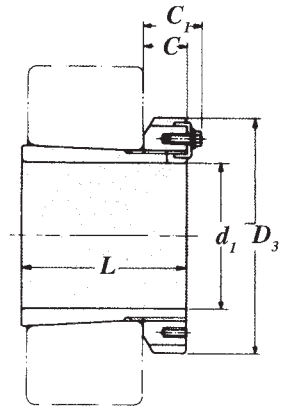
# ADAPTERS

## SERIES

### H31



$d_1 \geq 180 \text{ mm}$



$d_1 \geq 200 \text{ mm}$

Adapter <sup>*1)</sup>	$d_1$				$L$		$D_3$	$C$	$C_1$ <sup>*4)</sup>	Weight	
	$H$		$HE$ <sup>2)</sup>	$HA$ <sup>3)</sup>							
No.	mm	in.	in.	in.	mm	in.	mm	mm	mm	kg	lbs.
<b>H3120</b>	90	3.543	3 1/2	3 7/16	76	2.992	130	20	—	1.8	3.96
<b>H3122</b>	100	3.937	4	3 15/16	81	3.189	145	21	—	2.25	4.96
<b>H3124</b>	110	4.331	4 1/4	4 3/16	88	3.465	155	22	—	2.64	5.82
<b>H3126</b>	115	4.528	4 1/2	4 7/16	92	3.622	165	23	—	3.66	8.07
<b>H3128</b>	125	4.921	5	4 15/16	97	3.819	180	24	—	4.34	9.57
<b>H3130</b>	135	5.315	5 1/4	5 3/16	111	4.370	195	26	—	5.52	12.2
<b>H3132</b>	140	5.512	5 1/2	5 7/16	119	4.685	210	28	—	7.67	16.9
<b>H3134</b>	150	5.906	6	5 15/16	122	4.803	220	29	—	8.38	18.5
<b>H3136</b>	160	6.299	6 1/2	6 7/16	131	5.157	230	30	—	9.50	20.9
<b>H3138</b>	170	6.693	6 3/4	6 15/16	141	5.551	240	31	—	10.8	23.8
<b>H3140</b>	180	7.087	7	7 3/16	150	5.906	250	32	—	12.1	26.7
<b>H3144</b>	200	7.874	—	7 15/16	158	6.220	280	32	44	14.7	32.4
<b>H3148</b>	220	8.661	—	—	169	6.654	300	34	46	17.3	38.1
<b>H3152</b>	240	9.449	—	—	187	7.362	330	36	49	22.0	48.5
<b>H3156</b>	260	10.236	—	—	192	7.559	350	38	51	24.5	54.0
<b>H3160</b>	280	11.024	—	—	208	8.189	380	40	53	30.2	66.6
<b>H3164</b>	300	11.811	—	—	226	8.898	400	42	56	34.9	77.0
<b>H3168</b>	320	12.598	—	—	254	10.000	440	55	72	49.5	109
<b>H3172</b>	340	13.386	—	—	259	10.197	460	58	75	54.2	120
<b>H3176</b>	360	14.173	—	—	264	10.394	490	60	77	61.7	136
<b>H3180</b>	380	14.961	—	—	272	10.709	520	62	82	70.6	156
<b>H3184</b>	400	15.748	—	—	304	11.969	540	70	90	84.2	186
<b>H3188</b>	410	16.142	—	—	307	12.087	560	70	90	104	229
<b>H3192</b>	430	16.929	—	—	326	12.835	580	75	95	116	256
<b>H3196</b>	450	17.717	—	—	335	13.189	620	75	95	133	293
<b>H31/500</b>	470	18.504	—	—	356	14.016	630	80	100	143	315

\*1) Adapter No. includes adapter sleeve, locknut and lockwasher or lockplate.

2) Adapters for these bores are designated HE, e.g. HE3122.

3) Adapters for these bores are designated HA, e.g. HA3122.

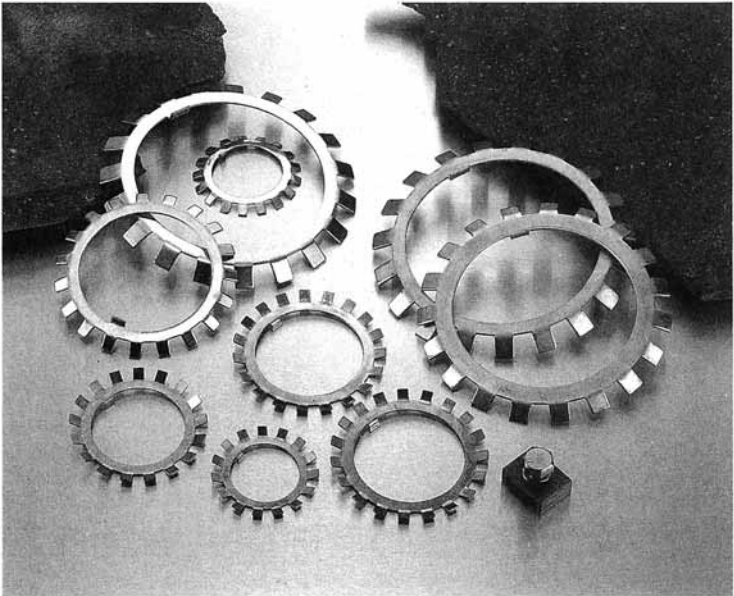
4) Adapters with the dimension C1 have a locking device as shown in the right hand illustration above.



# 螺母



# 華司

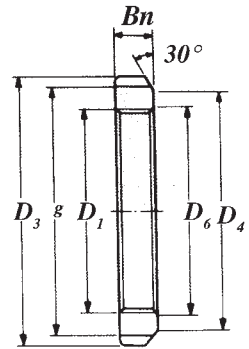
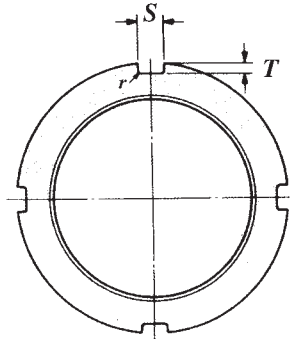
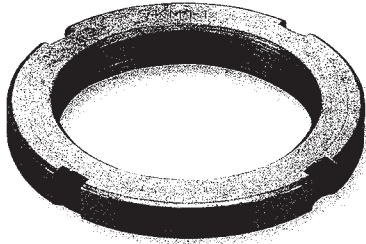


# LOCKNUTS

## SERIES

AN

ANL



Locknut No.	Series AN				Series AN				Series AN, ANL						
	$D_3$	$D_4$	$g$	Lock washer No.	Locknut No.	$D_3$	$D_4$	$g$	Lock washer No.	Thread*1)	$B_n$	$S$	$T$	$D_6$	$r$ (max.)
<b>AN00</b>	18	13	14	AW 00	—	—	—	—	—	M 10 x 0.75	4	3	2	10.5	0.3
<b>01</b>	22	17	18	AW 01	—	—	—	—	—	M 12 x 1	4	3	2	12.5	0.3
<b>02</b>	25	21	21	AW 02	—	—	—	—	—	M 15 x 1	5	4	2	15.5	0.4
<b>AN03</b>	28	24	24	AW 03	—	—	—	—	—	M 17 x 1	5	4	2	17.5	0.4
<b>04</b>	32	26	26	AW 04	—	—	—	—	—	M 20 x 1	6	4	2	20.5	0.4
<b>05</b>	38	32	34	AW 05	—	—	—	—	—	M 25 x 1.5	7	5	2	25.8	0.4
<b>AN06</b>	45	38	41	AW 06	—	—	—	—	—	M 30 x 1.5	7	5	2	30.8	0.4
<b>07</b>	52	44	48	AW 07	—	—	—	—	—	M 35 x 1.5	8	5	2	35.8	0.4
<b>08</b>	58	50	53	AW 08	—	—	—	—	—	M 40 x 1.5	9	6	2.5	40.8	0.5
<b>AN09</b>	65	56	60	AW 09	—	—	—	—	—	M 45 x 1.5	10	6	2.5	45.8	0.5
<b>10</b>	70	61	65	AW 10	—	—	—	—	—	M 50 x 1.5	11	6	2.5	50.8	0.5
<b>11</b>	75	67	69	AW 11	—	—	—	—	—	M 55 x 2	11	7	3	56	0.5
<b>AN12</b>	80	73	74	AW 12	—	—	—	—	—	M 60 x 2	11	7	3	61	0.5
<b>13</b>	85	79	79	AW 13	—	—	—	—	—	M 65 x 2	12	7	3	66	0.5
<b>14</b>	92	85	85	AW 14	—	—	—	—	—	M 70 x 2	12	8	3.5	71	0.5
<b>AN15</b>	98	90	91	AW 15	—	—	—	—	—	M 75 x 2	13	8	3.5	76	0.5
<b>16</b>	105	95	98	AW 16	—	—	—	—	—	M 80 x 2	15	8	3.5	81	0.6
<b>17</b>	110	102	103	AW 17	—	—	—	—	—	M 85 x 2	16	8	3.5	86	0.6
<b>AN18</b>	120	108	112	AW 18	—	—	—	—	—	M 90 x 2	16	10	4	91	0.6
<b>19</b>	125	113	117	AW 19	—	—	—	—	—	M 95 x 2	17	10	4	96	0.6
<b>20</b>	130	120	122	AW 20	—	—	—	—	—	M100 x 2	18	10	4	101	0.6
<b>AN21</b>	140	126	130	AW 21	—	—	—	—	—	M105 x 2	18	12	5	106	0.7
<b>22</b>	145	133	135	AW 22	—	—	—	—	—	M110 x 2	19	12	5	111	0.7
<b>23</b>	150	137	140	AW 23	—	—	—	—	—	M115 x 2	19	12	5	116	0.7
<b>AN24</b>	155	138	145	AW 24	<b>ANL24</b>	145	133	135	AWL24	M120 x 2	20	12	5	121	0.7
<b>25</b>	160	148	150	AW 25	—	—	—	—	—	M125 x 2	21	12	5	126	0.7
<b>26</b>	165	149	155	AW 26	<b>ANL26</b>	155	143	145	AWL26	M130 x 2	21	12	5	131	0.7
<b>AN27</b>	175	160	163	AW 27	—	—	—	—	—	M135 x 2	22	14	6	136	0.7
<b>28</b>	180	160	168	AW 28	<b>ANL28</b>	165	151	153	AWL28	M140 x 2	22	14	6	141	0.7
<b>29</b>	190	172	178	AW 29	—	—	—	—	—	M145 x 2	24	14	6	146	0.7
<b>AN30</b>	195	171	183	AW 30	<b>ANL30</b>	180	164	168	AWL30	M150 x 2	24	14	6	151	0.7
<b>31</b>	200	182	186	AW 31	—	—	—	—	—	M155 x 3	25	16	7	156.5	0.7
<b>32</b>	210	182	196	AW 32	<b>ANL32</b>	190	174	176	AWL32	M160 x 3	25	16	7	161.5	0.7
<b>AN33</b>	210	193	196	AW 33	—	—	—	—	—	M165 x 3	26	16	7	166.5	0.7
<b>34</b>	220	193	206	AW 34	<b>ANL34</b>	200	184	186	AWL34	M170 x 3	26	16	7	171.5	0.7
<b>36</b>	230	203	214	AW 36	<b>ANL36</b>	210	192	194	AWL36	M180 x 3	27	18	8	181.5	0.7
<b>AN38</b>	240	214	224	AW 38	<b>ANL38</b>	220	202	204	AWL38	M190 x 3	28	18	8	191.5	0.7
<b>40</b>	250	226	234	AW 40	<b>ANL40</b>	240	218	224	AWL40	M200 x 3	29	18	8	201.5	0.7

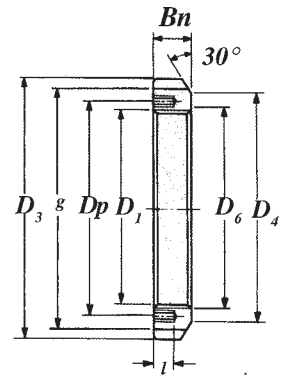
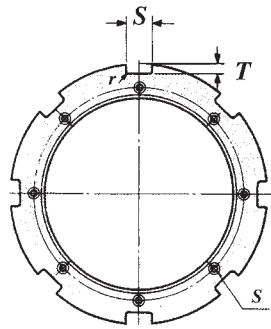
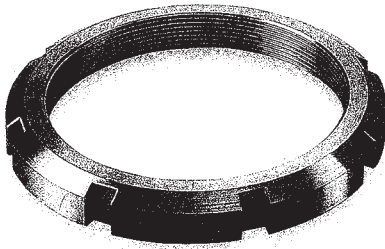
\*1) M means metric thread and the digits are major diameter of thread and pitch.  
For weight of Locknut see page 25.



# LOCKNUTS

## SERIES

AN  
ANL



in mm

Locknut No.	$D_1^{*1)}$	$D_3$	$D_4$	$g$	$S$	$T$	$D_6$	$Bn$	$r$ (max.)	Tapped Hole			Suitable Lockplate No.
										$l$	$S$ Threads	$Dp$	
<b>AN 44</b>	TM220 x 4	280	250	260	20	10	222	32	0.8	15	M 8 x 1.25	238	AL 44
<b>48</b>	TM240 x 4	300	270	280	20	10	242	34	0.8	15	M 8 x 1.25	258	AL 44
<b>52</b>	TM260 x 4	330	300	306	24	12	262	36	0.8	18	M10 x 1.5	281	AL 52
<b>AN 56</b>	TM280 x 4	350	320	326	24	12	282	38	0.8	18	M10 x 1.5	301	AL 52
<b>60</b>	TM300 x 4	380	340	356	24	12	302	40	0.8	18	M10 x 1.5	326	AL 60
<b>64</b>	TM320 x 5	400	360	376	24	12	322.5	42	0.8	18	M10 x 1.5	345	AL 64
<b>AN 68</b>	TM340 x 5	440	400	410	28	15	342.5	55	1	21	M12 x 1.75	372	AL 68
<b>72</b>	TM360 x 5	460	420	430	28	15	362.5	58	1	21	M12 x 1.75	392	AL 68
<b>76</b>	TM380 x 5	490	450	454	32	18	382.5	60	1	21	M12 x 1.75	414	AL 76
<b>AN 80</b>	TM400 x 5	520	470	484	32	18	402.5	62	1	27	M16 x 2	439	AL 80
<b>84</b>	TM420 x 5	540	490	504	32	18	422.5	70	1	27	M16 x 2	459	AL 80
<b>88</b>	TM440 x 5	560	510	520	36	20	442.5	70	1	27	M16 x 2	477	AL 88
<b>AN 92</b>	TM460 x 5	580	540	540	36	20	462.5	75	1	27	M16 x 2	497	AL 88
<b>96</b>	TM480 x 5	620	560	580	36	20	482.5	75	1	27	M16 x 2	527	AL 96
<b>100</b>	TM500 x 5	630	580	584	40	23	502.5	80	1	27	M16 x 2	539	AL 100

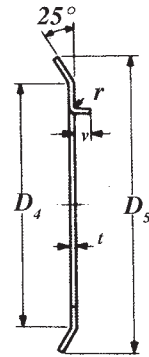
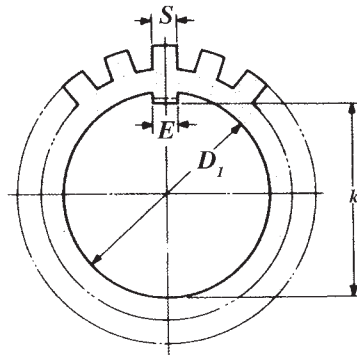
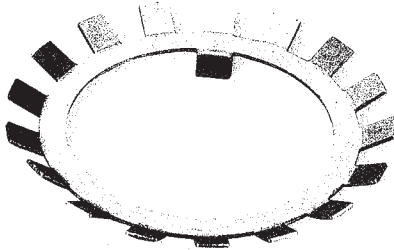
<b>ANL 44</b>	TM220 x 4	260	242	242	20	9	222	30	0.8	12	M 6 x 1	229	ALL 44
<b>48</b>	TM240 x 4	290	270	270	20	10	242	34	0.8	15	M 8 x 1.25	253	ALL 48
<b>52</b>	TM260 x 4	310	290	290	20	10	262	34	0.8	15	M 8 x 1.25	273	ALL 48
<b>ANL 56</b>	TM280 x 4	330	310	310	24	10	282	38	0.8	15	M 8 x 1.25	293	ALL 56
<b>60</b>	TM300 x 4	360	336	336	24	12	302	42	0.8	15	M 8 x 1.25	316	ALL 60
<b>64</b>	TM320 x 5	380	356	356	24	12	322.5	42	0.8	15	M 8 x 1.25	335	ALL 64
<b>ANL 68</b>	TM340 x 5	400	376	376	24	12	342.5	45	1	15	M 8 x 1.25	355	ALL 64
<b>72</b>	TM360 x 5	420	394	394	28	13	362.5	45	1	15	M 8 x 1.25	374	ALL 72
<b>76</b>	TM380 x 5	450	422	422	28	14	382.5	48	1	18	M10 x 1.5	398	ALL 76
<b>ANL 80</b>	TM400 x 5	470	442	442	28	14	402.5	52	1	18	M10 x 1.5	418	ALL 76
<b>84</b>	TM420 x 5	490	462	462	32	14	422.5	52	1	18	M10 x 1.5	438	ALL 84
<b>88</b>	TM440 x 5	520	490	490	32	15	442.5	60	1	21	M12 x 1.75	462	ALL 88
<b>ANL 92</b>	TM460 x 5	540	510	510	32	15	462.5	60	1	21	M12 x 1.75	482	ALL 88
<b>96</b>	TM480 x 5	560	530	530	36	15	482.5	60	1	21	M12 x 1.75	502	ALL 96
<b>100</b>	TM500 x 5	580	550	550	36	15	502.5	68	1	21	M12 x 1.75	522	ALL 96

\*1) M means metric thread, TM means 30° trapezoid thread and the digits are major diameter of thread and pitch.  
For weight of Locknut see page 25.

# LOCKWASHERS

SERIES

AW



in mm

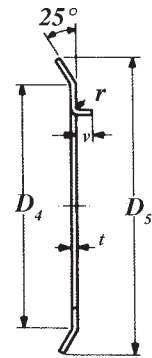
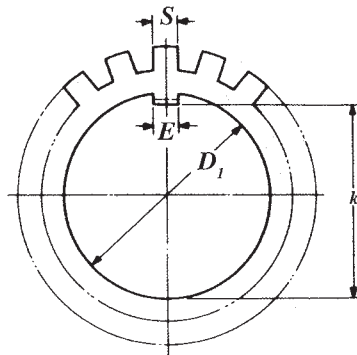
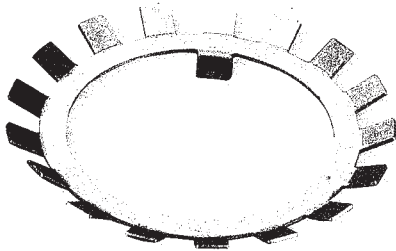
Locknut No.	$D_1$	$k$	$E$	$t$	$S$	$D_4$	$D_5$	$r$	$v$	Number of tongues	Suitable Locknut No.
<b>AW 00</b>	10	8.5	3	1	3	13	21	0.5	2	9	AN 00
<b>01</b>	12	10.5	3	1	3	17	25	0.5	2	9	AN 01
<b>02</b>	15	13.5	4	1	4	21	28	1	2.5	13	AN 02
<b>AW 03</b>	17	15.5	4	1	4	24	32	1	2.5	13	AN 03
<b>04</b>	20	18.5	4	1	4	26	36	1	2.5	13	AN 04
<b>05</b>	25	23	5	1.2	5	32	42	1	2.5	13	AN 05
<b>AW 06</b>	30	27.5	5	1.2	5	38	49	1	2.5	13	AN 06
<b>07</b>	35	32.5	6	1.2	5	44	57	1	2.5	15	AN 07
<b>08</b>	40	37.5	6	1.2	6	50	62	1	2.5	15	AN 08
<b>AW 09</b>	45	42.5	6	1.2	6	56	69	1	2.5	17	AN 09
<b>10</b>	50	47.5	6	1.2	6	61	74	1	2.5	17	AN 10
<b>11</b>	55	52.5	8	1.2	7	67	81	1	4	17	AN 11
<b>AW 12</b>	60	57.5	8	1.5	7	73	86	1.2	4	17	AN 12
<b>13</b>	65	62.5	8	1.5	7	79	92	1.2	4	19	AN 13
<b>14</b>	70	66.5	8	1.5	8	85	98	1.2	4	19	AN 14
<b>AW 15</b>	75	71.5	8	1.5	8	90	104	1.2	4	19	AN 15
<b>16</b>	80	76.5	10	1.8	8	95	112	1.2	4	19	AN 16
<b>17</b>	85	81.5	10	1.8	8	102	119	1.2	4	19	AN 17
<b>AW 18</b>	90	86.5	10	1.8	10	108	126	1.2	4	19	AN 18
<b>19</b>	95	91.5	10	1.8	10	113	133	1.2	4	19	AN 19
<b>20</b>	100	96.5	12	1.8	10	120	142	1.2	6	19	AN 20
<b>AW 21</b>	105	100.5	12	1.8	12	126	145	1.2	6	19	AN 21
<b>22</b>	110	105.5	12	1.8	12	133	154	1.2	6	19	AN 22
<b>23</b>	115	110.5	12	2	12	137	159	1.5	6	19	AN 23
<b>AW 24</b>	120	115	14	2	12	138	164	1.5	6	19	AN 24
<b>25</b>	125	120	14	2	12	148	170	1.5	6	19	AN 25
<b>26</b>	130	125	14	2	12	149	175	1.5	6	19	AN 26
<b>AW 27</b>	135	130	14	2	14	160	185	1.5	6	19	AN 27
<b>28</b>	140	135	16	2	14	160	192	1.5	8	19	AN 28
<b>29</b>	145	140	16	2	14	172	202	1.5	8	19	AN 29
<b>AW 30</b>	150	145	16	2.5	14	171	205	1.5	8	19	AN 30
<b>31</b>	155	147.5	16	2.5	16	182	212	1.5	8	19	AN 31
<b>32</b>	160	154	18	2.5	16	182	217	1.5	8	19	AN 32
<b>AW 33</b>	165	157.5	18	2.5	16	193	222	1.5	8	19	AN 33
<b>34</b>	170	164	18	2.5	16	193	232	1.5	8	19	AN 34
<b>36</b>	180	174	20	2.5	18	203	242	1.5	8	19	AN 36
<b>AW 38</b>	190	184	20	2.5	18	214	252	1.5	8	19	AN 38
<b>40</b>	200	194	20	2.5	18	226	262	1.5	8	19	AN 40

For weight of lockwasher see page 26.

# LOCKWASHERS

SERIES

AWL



in mm

Lockwasher No.	$D_1$	$k$	$E$	$t$	$S$	$D_{\pm 4}$	$D_5$	$r$		Number of tongues	Suitable Locknut No.
<b>AWL24</b>	120	115	14	2	12	133	155	1.5	6	19	ANL24
<b>26</b>	130	125	14	2	12	143	165	1.5	6	19	26
<b>28</b>	140	135	16	2	14	151	175	1.5	8	19	28
<b>AWL30</b>	150	145	16	2	14	164	190	1.5	8	19	ANL30
<b>32</b>	160	154	18	2.5	16	174	200	1.5	8	19	32
<b>34</b>	170	164	18	2.5	16	184	210	1.5	8	19	34
<b>AWL36</b>	180	174	20	2.5	18	192	220	1.5	8	19	ANL36
<b>38</b>	190	184	20	2.5	18	202	230	1.5	8	19	38
<b>40</b>	200	194	20	2.5	18	218	240	1.5	8	19	40

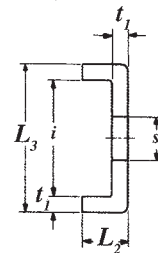
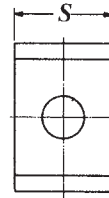
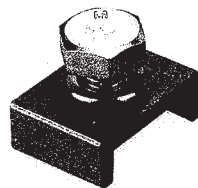
\*For weight of lockwasher see page 26.

# LOCKPLATES

SERIES

AL

ALL



in mm

Lockplate No.	$t_1$	$S$	$L_2$	$s_1$	$i$	$L_3$	Suitable Locknut No.	Lockplate No.	$t_1$	$S$	$L_2$	$s_1$	$i$	$L_3$	Suitable Locknut No.
<b>AL 44</b>	4	20	12	9	22.5	30.5	AN 44 AN 48	<b>ALL 44</b>	4	20	12	7	13.5	21.5	ANL 44
<b>52</b>	4	24	12	12	25.5	33.5	AN 52 AN 56	<b>ALL 48</b>	4	20	12	9	17.5	25.5	ANL 48 ANL 52
<b>60</b>	4	24	12	12	30.5	38.5	AN 60	<b>ALL 56</b>	4	24	12	9	17.5	25.5	ANL 56
<b>AL 64</b>	5	24	15	12	31	41	AN 64	<b>ALL 60</b>	4	24	12	9	20.5	28.5	ANL 60
<b>68</b>	5	28	15	14	38	48	AN 68 AN 72	<b>ALL 64</b>	5	24	15	9	21	31	ANL 64 ANL 68
<b>76</b>	5	32	15	14	40	50	AN 76	<b>ALL 72</b>	5	28	15	9	20	30	ANL 72
<b>AL 80</b>	5	32	15	18	45	55	AN 80 AN 84	<b>ALL 76</b>	5	28	15	12	24	34	ANL 76 ANL 80
<b>88</b>	5	36	15	18	43	53	AN 88 AN 92	<b>ALL 84</b>	5	32	15	12	24	34	ANL 84
<b>96</b>	5	36	15	18	53	63	AN 96	<b>ALL 88</b>	5	32	15	14	28	38	ANL 88 ANL 92
<b>AL100</b>	5	40	15	18	45	55	AN100	<b>ALL 96</b>	5	36	15	14	28	38	ANL 96 ANL100

\*For weight of lockwasher see page 26.