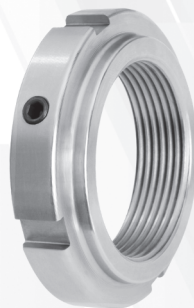




LOCK NUTS KMP

The KMP's have external slots and are tightened using hook spanners. These lock nuts come with through-body locking bolt and brass pin that is pressed against the shaft to tighten the nut. The pin has a thread profile, enabling to lock the nut without damaging the shaft thread. No keyways or lock washer required.



LOCK NUTS KMFE

KMFE lock nuts are used with adapter sleeves with E suffix instead of a KM lock nut to mount sealed toroidal roller bearings or/and on shaft end. They should be tightened using a hook spanner. It is radially locked when its bolt is tightened pressing a few threads of the nut against the shaft. It does not require a lock washer or a counter nut. To withdraw the set, the bolt should be released and a few rubber hammer hits should be applied to the bolt region to force screw to return to its original position.



LOCK NUTS ZM

A hook spanner should be used to tighten the nut. It is radially arranged and its bolt is tightened by pressing a few threads of the nut thread against the shaft. It does not require a lock washer or counter nut. To withdraw the set, the bolt should be released and a few rubber hammer hits should be applied to the bolt region to force the screw return to its original position.



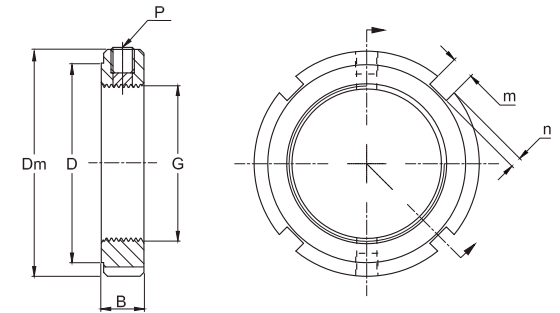
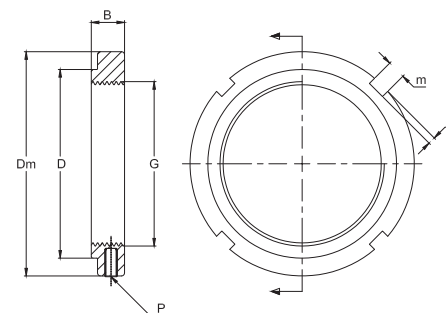
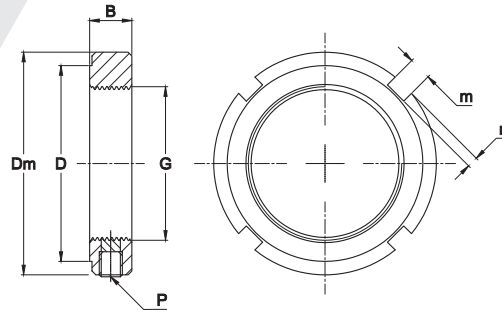
LOCK NUTS HMZ

The HMZ Lock nuts are manufactured to allow a precise and secure axial fastening of bearings or other components on cylindrical and tapered shafts and adapter sleeves. The HMZ nuts are interchangeable with locknuts HM and KM, with the advantage that it is not necessary to have key way on the shaft or other type of locking, what makes the usage more economic and safe. The HMZ nuts are locked by four or eight axial clamping screws spread around the nut's circumference for an uniform locking. HMZ Lock nuts are manufactured from steel with minimum tensile strength of 500 MPa.



LOCK NUTS KMP, KMFE, ZM

Nuts with Metric Thread Fixed
with Screw - mm



NUTS KMP

NUTS KMFE

NUTS ZM

Part Number	G*	Dm (mm)	B (mm)	D (mm)	m (mm)	n (mm)	P	Weight (Kg)	Hook Spanner	Basic Axial Static Load Capacity (kN)	Tightening Torque (Thread) Mvs (Nm)	Recommended Tightening Torque for Locking Screw (Nm)
ZM 6	M6x0,5	16	8	11	3	2	M4	0,01				
ZM 8	M8x0,75	16	8	11	3	2	M4	0,01				
ZM 10	M10x1	18	8	14	3	2	M4	0,01				
KMP 0	M10x0,75	22	9	16	3	2	M5	0,02	HN 1	9,8	19,6	4,5
ZM 12	M12x1	22	8	18	3	2	M4	0,02	HN 1			
KMP 1	M12x1	22	9	18	3	2	M5	0,02	HN 1	11,8	25,5	4,5
ZM 15	M15x1	25	8	21	3	2	M4	0,02	HN 2			
KMP 2	M15x1	25	9	21	4	2	M5	0,02	HN 2	14,6	46,5	4,5
KMP 3	M17x1	28	9	24	4	2	M5	0,03	HN 3	19,6	58,5	8
ZM 17	M17x1	28	10	23	4	2	M5	0,03	HN 3			
KMP 4	M20x1	32	9	28	4	2	M5	0,03	HN 4	24	78	8
KMFE 4	M20x1	32	9,5	26	4	2	M5	0,02	HN 4	24	78	4,5
ZM 20	M20x1	32	10	27	4	2	M5	0,04	HN 4			
KMP 5	M25x1,5	38	9	34	5	2	M5	0,04	HN 5	31,5	127	8
KMFE 5	M25x1,5	38	10,5	31	5	2	M5	0,05	HN 5	31,5	127	4,5
ZM 25	M25x1,5	38	12	33	5	2	M6	0,06	HN 5			
KMP 6	M30x1,5	45	9	41	5	2	M5	0,06	HN 6	36,5	176	8
KMFE 6	M30x1,5	45	10,5	36	5	2	M5	0,06	HN 6	36,5	176	4,5
ZM 30	M30x1,5	45	12	40	5	2	M6	0,08	HN 6			
KMP 7	M35x1,5	52	9	48	5	2	M5	0,08	HN 7	50	275	8
KMFE 7	M35x1,5	52	11,5	42,5	5	2	M5	0,07	HN 7	50	275	8
ZM 35	M35x1,5	52	12	47	5	2	M6	0,10	HN 7			
KMP 8	M40x1,5	58	11	53	6	2,5	M6	0,11	HN 8	62	400	18
KMFE 8	M40x1,5	58	13	47	6	2,5	M6	0,11	HN 8	52	400	8
ZM 40	M40x1,5	58	14	52	6	2,5	M6	0,14	HN 8			
KMP 9	M45x1,5	65	11	60	6	2,5	M6	0,14	HN 9	78	560	18
KMFE 9	M45x1,5	65	13	53	6	2,5	M6	0,14	HN 9	78	560	8
ZM 45	M45x1,5	65	14	59	6	2,5	M6	0,17	HN 9			
KMFE 10	M50x1,5	70	14	57,5	6	2,5	M6	0,17	HN 10	91,5	720	8
KMP 10	M50x1,5	70	14	65	6	2,5	M6	0,20	HN 10	91,5	720	18
ZM 50	M50x1,5	70	14	64	6	2,5	M6	0,19	HN 10			
KMFE 11	M55x2	75	14	64	7	3	M6	0,19	HN 11	91,5	800	8
KMFE 11x1,5	M55x1,5	75	14	64	7	3	M6	1,19	HN 11	91,5	800	8
KMP 11	M55x2	75	14	69	7	3	M8	0,19	HN 11	91,5	800	18
ZM 55	M55x2	75	16	68	7	3	M6	0,23	HN 11			
KMFE 12	M60x2	80	14	69	7	3	M6	0,20	HN 12	95	880	18
KMFE 12x1,5	M60x1,5	80	14	69	7	3	M6	0,20	HN 12	95	880	18
KMP 12	M60x2	80	15	74	7	3	M8	0,20	HN 12	95	880	18
ZM 60	M60x2	80	16	73	7	3	M6	0,25	HN 12			
KMFE 13	M65x2	85	15	76	7	3	M6	0,24	HN 13	108	1100	18

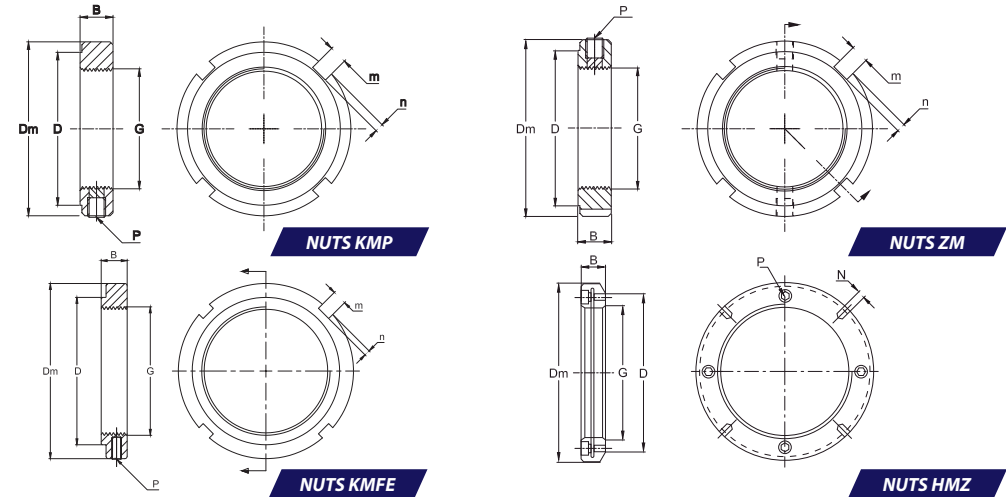
* Example of thread part number: M 50 x 1.5. M: Metric Thread - mm, 50: Thread diameter, 1.5: Thread pitch.



LOCK NUTS

KMP, KMFE, ZM, HMZ

Nuts with Metric Thread Fixed with Screw - mm



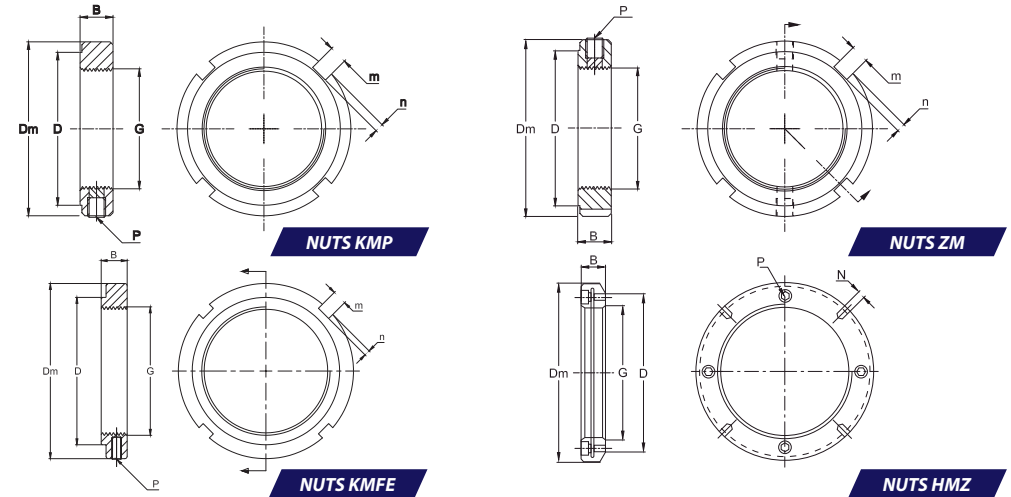
Part Number	G*	Dm (mm)	B (mm)	D (mm)	m (mm)	n (mm)	P	Weight (Kg)	Hook Spanner	Basic Axial Static Load Capacity (kN)	Tightening Torque (Thread) Mvs (Nm)	Recommended Tightening Torque for Locking Screw (Nm)
KMFE 13x1,5	M65x1,5	85	15	76	7	3	M6	0.24	HN 13	108	1100	18
KMP 13	M65x2	85	15	79	7	3	M8	0.26	HN 13	108	1100	18
ZM 65	M65x2	85	16	78	7	3	M6	0.27	HN 13			
KMFE 14	M70x2	92	15	79	8	3.5	M6	0.28	HN 14	118	1290	18
KMP 14	M70x2	92	15	85	8	3.5	M8	0.28	HN 14	118	1290	18
ZM 70	M70x2	92	18	85	8	3.5	M8	0.36	HN 14			
KMP 15	M75x2	98	15	91	8	3.5	M8	0.32	HN 15	134	1600	18
KMFE 15	M75x2	98	16	85	8	3.5	M6	0.32	HN 15	134	1600	18
ZM 75	M75x2	98	18	90	8	3.5	M8	0.40	HN 15			
KMFE 16	M80x2	105	18	91.5	8	3.5	M8	0.48	HN 16	173	2160	18
KMP 16	M80x2	105	18	98	8	3.5	M10	0.48	HN 16	173	2160	18
ZM 80	M80x2	105	18	95	8	3.5	M8	0.46	HN 16			
KMP 17	M85x2	110	18	103	8	3.5	M10	0.52	HN 17	190	2500	35
ZM 85	M85x2	110	18	102	8	3.5	M8	0.49	HN 17			
KMFE 17	M85x2	110	19	98	8	3.5	M8	0.53	HN 17	190	2500	35
HMZ 18	M90x2	120	16	108			M5	0.60				
KMP 18	M90x2	120	18	112	10	4	M10	0.65	HN 18	216	3050	35
KMFE 18	M90x2	120	19	102	10	4	M8	0.65	HN 18	216	3050	35
ZM 90	M90x2	120	20	108	10	4	M8	0.70	HN 18			
HMZ 19	M95x2	125	17	113			M5	0.70				
KMFE 19	M95x2	125	20	110	10	4	M8	0.76	HN 19	236	3450	35
KMP 19	M95x2	125	20	117	10	4	M10	0.79	HN 19	236	3450	35
ZM 95	M95x2	125	20	113	10	4	M8	0.78	HN 19			
HMZ 20	M100x2	130	18	120			M6	0.80				
KMP 20	M100x2	130	20	122	10	4	M10	0.80	HN 20	255	4000	35
ZM 100	M100x2	130	20	120	10	4	M8	0.77	HN 20			
KMFE 20	M100x2	130	21	112	10	4	M8	0.77	HN 20	255	4000	35
HMZ 21	M105x2	140	18	126			M6	0.90				
KMFE 21	M105x2	140	21	112	12	5	M8	0.93	HN 21	290	4750	35
ZM 105	M105x2	140	22	126	12	5	M10	1.05	HN 21			
HMZ 22	M110x2	145	19	133			M6	1.00				
KMFE 22	M110x2	145	21.5	122	12	5	M8	1.00	HN 22	310	5300	35
ZM 110	M110x2	145	22	133	12	5	M10	1.09	HN 22			
HMZ 23	M115x2	150	19	137			M6	1.10				
ZM 115	M115x2	150	22	137	12	5	M10	1.13	HN 23			
HMZ 24	M120x2	155	20	138			M6	1.10				
ZM 120	M120x2	155	24	138	12	5	M10	1.28	HN 24			
KMFE 24	M120x2	155	26	130	12	5	M10	1.20	HN 24	340	6200	35
HMZ 25	M125x2	160	21	148			M6	1.30				
ZM 125	M125x2	160	24	148	12	5	M10	1.33	HN 25			



LOCK NUTS

KMP, KMFE, ZM, HMZ

Nuts with Metric Thread Fixed with Screw - mm

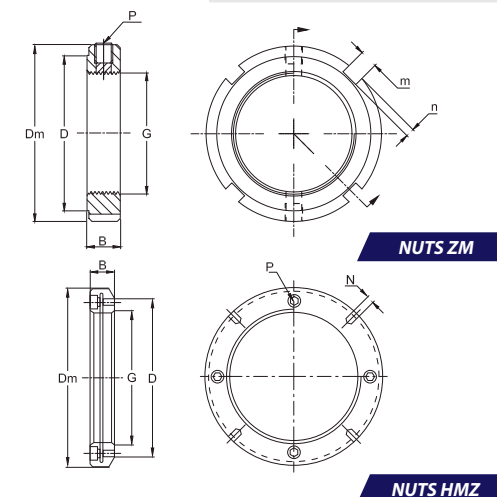
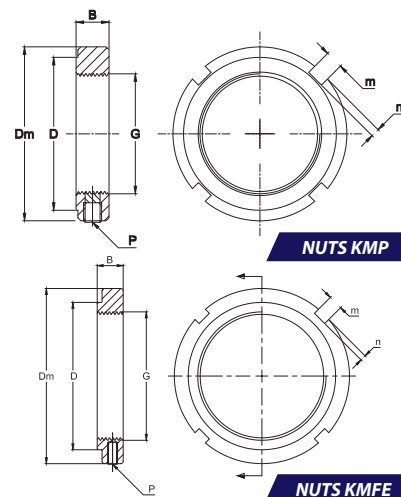


Part Number	G*	Dm (mm)	B (mm)	D (mm)	m (mm)	n (mm)	P	Weight (Kg)	Hook Spanner	Basic Axial Static Load Capacity (kN)	Tightening Torque (Thread) Mvs (Nm)	Recommended Tightening Torque for Locking Screw (Nm)
KMFE 25	M125x2	160	27	136	12	5	M10	1.33	HN 25	360	6950	35
HMZ 26	M130x2	165	21	149			M6	1.30				
ZM 130	M130x2	165	24	149	12	5	M10	1.36	HN 26			
KMFE 26	M130x2	165	28	141	12	5	M10	1.33	HN 26	365	7350	35
HMZ 27	M135x2	175	22	160			M6	1.60				
KMFE 27	M135x2	175	28	147	14	6	M10	1.33	HN 27	365	7350	35
HMZ 28	M140x2	180	22	160			M6	1.60				
ZM 140	M140x2	180	26	160	14	6	M12	1.85	HN 28			
KMFE 28	M140x2	180	28	152	14	6	M10	1.33	HN 28	420	9300	35
HMZ 29	M145x2	190	24	171			M6	2.20				
HMZ 30	M150x2	195	24	171			M6	2.20				
ZM 150	M150x2	195	26	171	14	6	M12	2.24	HN 30			
KMFE 30	M150x2	195	30	162	14	6	M10	2.17	HN 30	495	12000	35
HMZ 31	M155x3	200	25	182			M6	2.40				
HMZ 32	M160x3	210	25	182			M6	2.60				
ZM 160	M160X3	210	28	178	16	7	M12	3.08	HN 32-HN 33			
KMFE 32	M160x3	210	32	173	16	7	M10	2.60	HN 32-HN 33	540	14300	35
KMP 32	M160x3	210	32	190	16	7	M10	3.20	HN 32/33	585	14300	35
HMZ 33	M165x3	210	26	193			M8	2.80				
HMZ 34	M170x3	220	26	193			M8	2.90				
ZM 170	M170X3	220	28	189	16	7	M12	3.26	HN 34			
KMFE 34	M170x3	220	33	184	16	7	M10	1.35	HN 34	550	16300	35
HMZ 36	M180x3	230	27	203			M8	3.20				
ZM 180	M180X3	230	30	199	18	8	M12	3.63	HN 36			
KMFE 36	M180x3	230	34	194	18	8	M10	3.20	HN 36	590	18300	35
HMZ 38	M190x3	240	28	214			M8	3.50				
ZM 190	M190X3	240	30	210	18	8	M12	3.93	HN 38			
KMFE 38	M190x3	240	34	207	18	8	M10	1.43	HN 38	610	20400	35
HMZ 40	M200x3	250	29	226			M8	3.90				
ZM 200	M200X3	250	32	222	18	8	M12	4.33	HN 40			
KMFE 40	M200x3	250	34	217	18	8	M10	3.60	HN 40	625	22400	35
HMZ 3044	Tr220x4	260	30	242			M8	3.40				
HMZ 3048	Tr240x4	290	34	270			M10	5.40				
HMZ 3052	Tr260x4	310	34	290			M10	5.80				
HMZ 3056	Tr280x4	330	38	310			M10	6.90				
HMZ 3060	Tr300x4	360	42	336			M10	10.00				
HMZ 3064	Tr320x5	380	42	356			M10	10.60				
HMZ 3068	Tr340x5	400	45	376			M12	12.10				
HMZ 3072	Tr360x5	420	45	394			M12	12.50				
HMZ 3076	Tr380x5	450	48	422			M12	16.70				

LOCK NUTS

KMP, KMFE, ZM, HMZ

Nuts with Metric Thread Fixed with Screw - mm



Part Number	G*	Dm (mm)	B (mm)	D (mm)	m (mm)	n (mm)	P	Weight (Kg)	Hook Spanner	Basic Axial Static Load Capacity (kN)	Tightening Torque (Thread) Mvs (Nm)	Recommended Tightening Torque for Locking Screw (Nm)
HMZ 3080	Tr400x5	470	52	442			M16	19.10				
HMZ 3084	Tr420x5	490	52	462			M16	19.80				
HMZ 3088	Tr440x5	520	60	490			M16	27.80				
HMZ 3092	Tr460x5	540	60	510			M16	29.10				
HMZ 3096	Tr480x5	560	60	530			M16	30.10				
HMZ 30/500	Tr500x5	580	68	550			M20	35.70				
HMZ 30/530	Tr530x6	630	68	590			M20	46.90				
HMZ 30/560	Tr560x6	650	75	610			M20	48.50				
HMZ 30/600	Tr600x6	700	75	660			M20	58.70				
HMZ 30/630	Tr630x6	730	75	690			M20	61.20				
HMZ 30/670	Tr670x6	780	80	740			M20	77.50				
HMZ 30/710	Tr710x7	830	90	780			M20	99.50				
HMZ 30/750	Tr750x7	870	90	820			M20	104.50				
HMZ 30/800	Tr800x7	920	90	870			M20	111.30				
HMZ 30/850	Tr850x7	980	90	925			M20	118.70				
HMZ 30/900	Tr900x7	1030	100	975			M24	141.80				
HMZ 30/950	Tr950x8	1080	100	1025			M24	150.20				
HMZ 30/1000	Tr1000x8	1140	100	1085			M24	173.30				
HMZ 30/1060	Tr1060x8	1200	100	1145			M24	183.80				
HMZ 30/1120	Tr1120x8	1260	100	1205			M24	194.30				
HMZ 30/1180	Tr1180x8	1320	100	1265			M24	205.80				
HMZ 30/1250	Tr1250x8	1390	110	1335			M24	244.70				
HMZ 30/1320	Tr1320x8	1460	110	1405			M24	257.30				
HMZ 30/1400	Tr1400x8	1540	110	1485			M24	272.00				
HMZ 30/1500	Tr1500x8	1650	110	1595			M24	311.90				