

PMI Precision Ground BallScrew

13.1 Internal Ball Circulation Nuts

Features:

The advantage of internal ball circulation nut is that the outer diameter is smaller than that of external ball circulation nut. Hence it is suitable for the machine with limit space for Ballscrew installation.

It is strictly required that there is at least one end of screw shaft with complete threads. Reference A47 Also the rest area next to this complete thread must be with smaller diameter than the nominal diameter of the screw shaft. Above are required for easy assembling the ballnut onto the screw shaft.

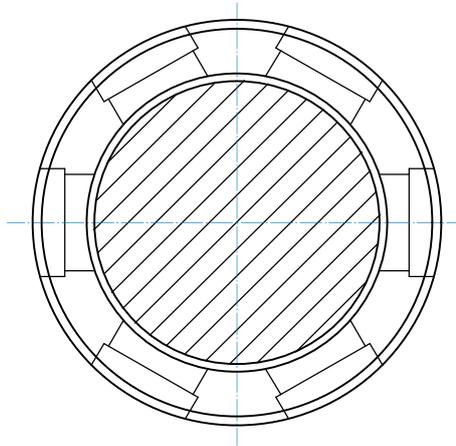
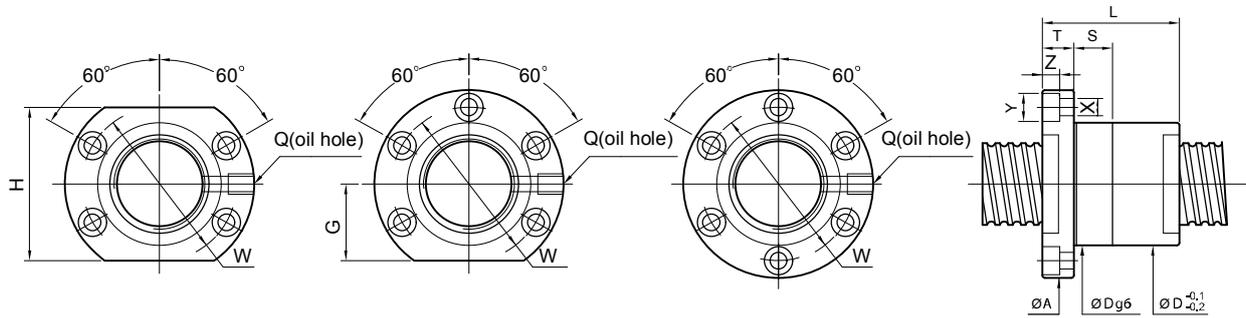
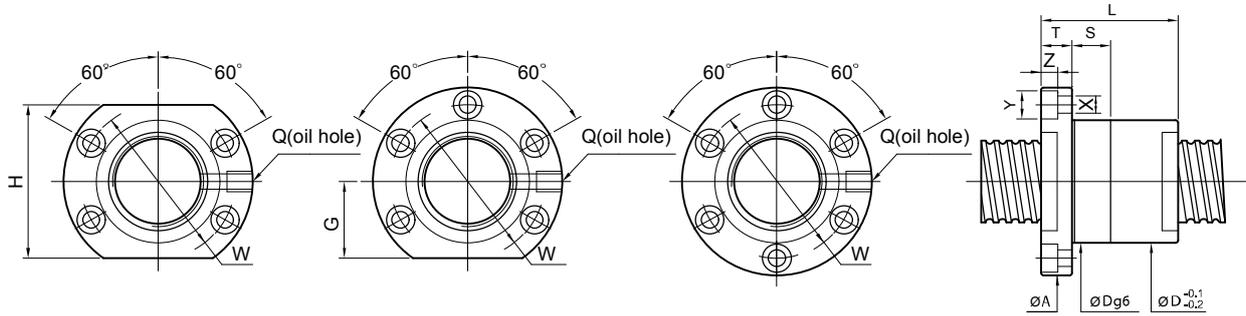


Fig. 13.1 Internal ball circulation's side view



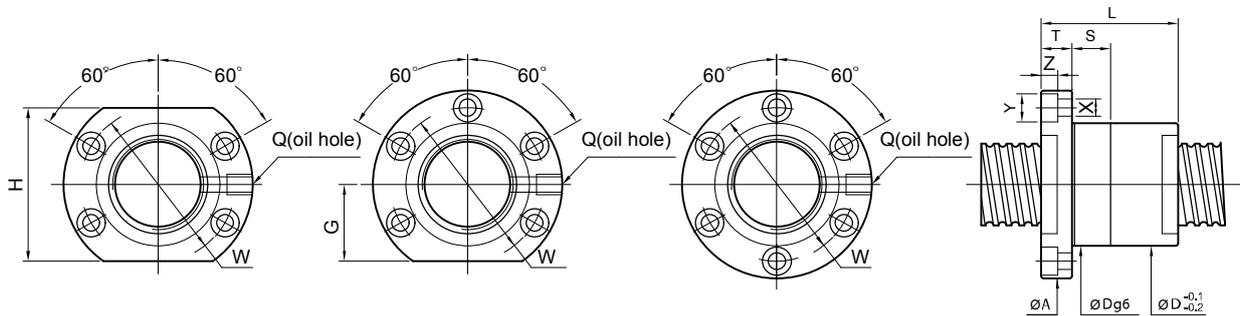
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/µm	
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
14	3	2	3	260	460	26	37	46	10	36	-	-	10	4.5	8	4.5	M6×1P	13	
	4	2.381	3	420	805	26	42	46	10	36	20	40	10	4.5	8	4.5	M6×1P	14	
		2.778	4	840	1870	26	47	46	10	36	20	40	10	4.5	8	4.5	M6×1P	21	
16	5	3.175	3	720	1010	26	42	46	10	36	20	40	10	4.5	8	4.5	M6×1P	16	
	4	2.381	3	435	920	28	42	49	10	39	20	40	10	4.5	8	4.5	M6×1P	16	
			3	765	1240	30	42	49	10	39	20	40	10	4.5	8	4.5	M6×1P	18	
20	5	3.175	4	980	1650	30	49	49	10	39	20	40	10	4.5	8	4.5	M6×1P	23	
			4	980	1650	30	55	54	12	40	20	40	12	5.5	9.5	5.5	M6×1P	23	
	4	2.381	4	600	1530	34	44	60	12	48	22	44	12	5.5	9.5	5.5	M6×1P	25	
25	5	3.175	3	860	1710	34	47	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	21	
			4	1100	2280	34	53	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	28	
	6	3.969	3	1080	2050	34	53	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	22	
			4	1380	2730	34	61	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	28	
	10	3.175	3	3	860	1710	36	66	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	21
				4	1320	2520	36	74	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	26
		4	2.381	3	500	1440	40	40	63	12	51	22	44	15	5.5	9.5	5.5	M8×1P	23
3				980	2300	40	47	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	26	
4				1250	3070	40	53	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	33	
5	3.175	3	1520	3830	40	57	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	42		
		4	1275	2740	40	53	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	26		
8	3.969	3	1630	3650	40	53	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	34		
		4	1630	3650	40	61	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	34		
	4	3.175	3	980	2300	38	70	68	15	55	26	52	15	6.6	11	6.5	M8×1P	26	
4			1250	3070	38	81	68	15	55	26	52	15	6.6	11	6.5	M8×1P	33		
10	3.175	3	1620	3205	40	80	68	15	55	26	52	15	6.6	11	6.5	M8×1P	27		
		4	2070	4270	42	85	68.5	15	55	26	52	15	6.6	11	6.5	M8×1P	35		
	5	2510	5340	42	91	68.5	15	55	26	52	15	6.6	11	6.5	M8×1P	44			
28	6	3.175	3	1030	2630	43	50	68	12	55	26	52	15	6.6	11	6.5	M8×1P	28	
	10	3.175	4	1320	3510	45	77	73	12	60	30	60	15	6.6	11	6.5	M8×1P	37	



Unit: mm

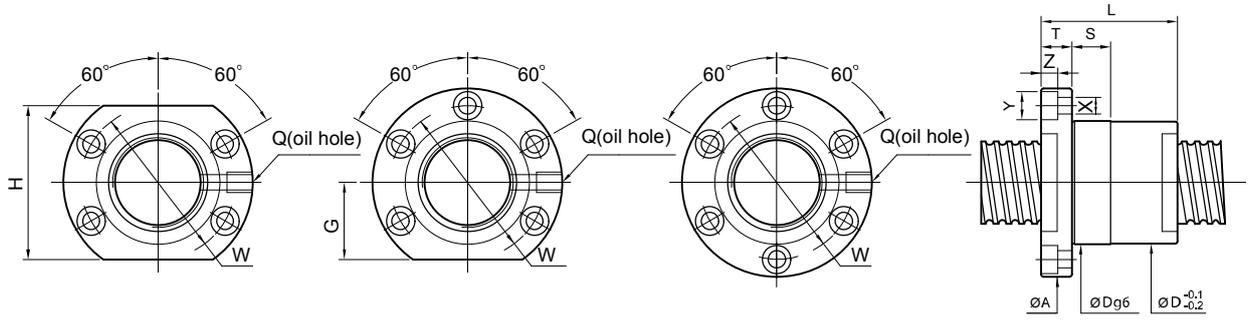
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/µm
O.D.	LEAD			Dynamic (1×10 ⁵ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
32	4	2.381	3	560	1840	43	40	68	15	55	26	52	15	6.6	11	6.5	M8×1P	28
			5	870	3070		49											45
	5	3.175	3	1095	3060	48	47	73.5	12	60	30	60	15	6.6	11	6.5	M8×1P	31
			4	1400	4080		53											41
	6	3.969	3	1500	3750	48	53	73.5	12	60	30	60	15	6.6	11	6.5	M8×1P	60
			4	1920	5000		61											43
	8	4.762	3	1820	4230	50	53	83	16	66	32	64	15	6.6	11	6.5	M8×1P	32
			4	2330	5640		77											43
	10	6.35	3	2605	5310	54	80	88	16	70	34	68	15	9	14	8.5	M8×1P	33
			4	3340	7080		90											45
	12	6.35	3	2605	5310	50	86	88	16	70	34	68	15	9	14	8.5	M8×1P	33
			4	3340	7080		90											45
36	5	3.175	4	1490	4690	52	56	88	16	70	34	68	15	9	14	8.5	M8×1P	46
			4	2530	6630		55											73
	10	6.35	3	2810	6210	58	78	98	18	77	36	72	20	11	17.5	11	M8×1P	37
4			3600	8280	89		49											
40	5	3.175	4	1575	5290	55	56	88.5	16	72	29	58	15	9	14	8.5	M8×1P	49
			5	1910	6610		61											61
	6	3.969	3	1660	4810	55	56	88.5	16	72	34	68	15	9	14	8.5	M8×1P	39
			4	2130	6410		65											65
	8	4.762	3	2120	5720	60	64	93	16	76	36	72	20	9	14	8.5	M8×1P	40
			4	2720	7620		77											77
	10	6.35	3	3010	7100	64	83	106	18	84	43	86	20	11	17.5	11	M8×1P	41
			4	3850	9470		93											93
	12	6.35	3	3010	7100	63	82	106	18	84	43	86	20	11	17.5	11	M8×1P	41
			4	3850	9470		100											100
	7.144	7.144	3	4010	9250	70	93	110	18	85	45	90	20	11	17.5	11	M8×1P	43
			4	5130	12330		103											103



Unit: mm

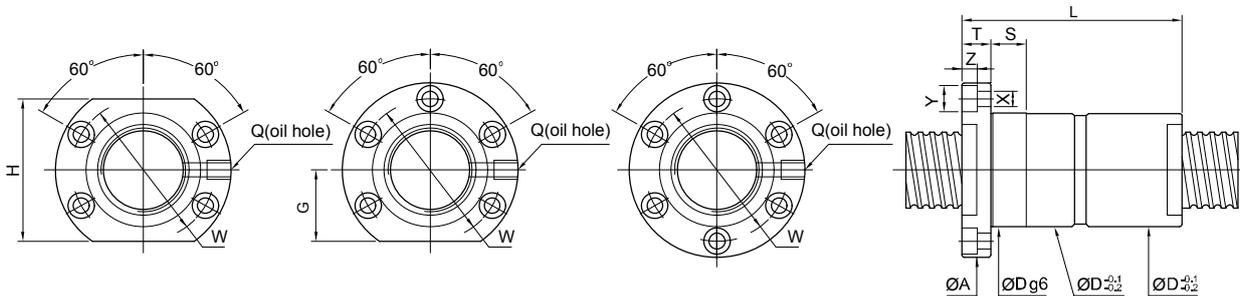
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/µm	
45	8	4.762	4	2870	8620	64	72	92	16	75	36	72	15	9	14.5	9	M6	1P	54
	12	7.144	3	4160	10750	70	86	110	16	90	42	84	20	11	17.5	11	PT1/8	8	48
			4	5330	14330		99												62
	16	6.35	3	3220	8200	70	102	110	16	90	42	84	20	11	17.5	11	PT1/8	8	45
50	5	3.175	4	1730	6760	66	55	98	16	82	36	72	20	9	14	8.5	PT1/8	8	60
			5	2100	8450		61												74
			6	2450	10140		65												86
	6	3.969	4	2380	8250	66	65	98	16	82	36	72	20	9	14	8.5	PT1/8	8	61
			5	2880	10310		64												76
			6	3370	12380		77												90
	8	4.762	4	3010	9610	70	79	113	18	90	42	84	20	11	17.5	11	PT1/8	8	63
			5	3650	12010		84												77
			6	4260	14420		96												92
	10	6.35	3	3430	9300	74	83	116	18	94	42	84	20	11	17.5	11	M8	1P	49
			4	4390	12400		93												65
			5	5320	15500		99												80
			6	6220	18600		114												95
	12	7.144	4	5520	16330	75	104	121	22	97	47	94	20	14	20	13	PT1/8	8	67
			5	6690	20410		117												84
	7.938	3	4510	11150	75	99	121	22	97	47	94	20	14	20	13	PT1/8	8	50	
		4	5770	14870		111												60	
	16	6.35	3	3430	9300	74	104	116	18	94	42	84	20	11	17.5	11	PT1/8	8	49
	20	7.938	3	4510	11150	78	146	121	28	97	47	94	20	14	20	13	PT1/8	8	50

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Unit: mm

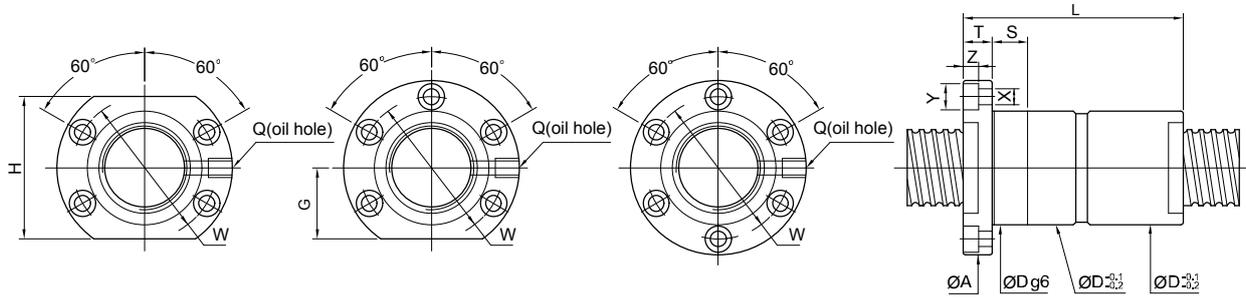
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS
O.D.	LEAD			Dynamic (10° REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/µm
63	6	3.969	4	2610	10550	80	67	122	18	100	45	90	20	11	17.5	11	PT1/8	73
			6	3700	15830	80	80	122	18	100	45	90	20	11	17.5	11	PT1/8	107
	8	4.762	4	3375	12200	82	80	124	18	102	46	92	20	11	17.5	11	PT1/8	76
			6	4780	18300	82	96	124	18	102	46	92	20	11	17.5	11	PT1/8	111
	10	6.35	4	5020	16450	85	98	132	22	107	48	96	20	14	20	13	PT1/8	79
			6	7110	24680	85	118	132	22	107	48	96	20	14	20	13	PT1/8	116
12	7.938	4	6580	19430	90	111	136	22	112	52	104	20	14	20	13	PT1/8	80	
		6	9320	29150	90	136	136	22	112	52	104	20	14	20	13	PT1/8	111	
20	9.525	3	8490	23610	95	146	153	28	123	59	118	20	18	26	17.5	PT1/8	79	
		4	10870	31480	95	156	153	28	123	59	118	20	18	26	17.5	PT1/8	89	
80	10	6.35	4	5510	21200	98	98	151	22	127	57	114	20	14	20	13	PT1/8	95
			5	6670	26500	105	105	151	22	127	57	114	20	14	20	13	PT1/8	118
			6	7810	31800	105	118	151	22	127	57	114	20	14	20	13	PT1/8	140
	12	7.938	4	7500	25700	110	111	156	22	132	59	118	20	14	20	13	PT1/8	98
			6	10620	38550	110	136	156	22	132	59	118	20	14	20	13	PT1/8	143
	20	9.525	3	9770	31700	115	146	173	28	143	66	132	20	18	26	17.5	PT1/8	97
4			12510	42270	115	168	173	28	143	66	132	20	18	26	17.5	PT1/8	127	
100	10	6.35	3	4760	20090	125	84	171	22	147	67	134	25	14	20	13	PT1/8	91
			4	6090	26790	125	95	171	22	147	67	134	25	14	20	13	PT1/8	120
			5	7380	33490	125	104	171	22	147	67	134	25	14	20	13	PT1/8	148
			6	8630	40190	125	115	171	22	147	67	134	25	14	20	13	PT1/8	176
	16	9.525	4	14440	54960	135	140	205	28	169	73	146	30	18	26	17.5	PT1/8	140
			5	17490	68700	135	157	205	28	169	73	146	30	18	26	17.5	PT1/8	173
			6	20460	82440	135	175	205	28	169	73	146	30	18	26	17.5	PT1/8	205
	20	9.525	4	14440	54960	135	159	205	28	169	73	146	30	18	26	17.5	PT1/8	140
			5	17490	68700	135	180	205	28	169	73	146	30	18	26	17.5	PT1/8	173
			6	20460	82440	135	200	205	28	169	73	146	30	18	26	17.5	PT1/8	205



Unit: mm

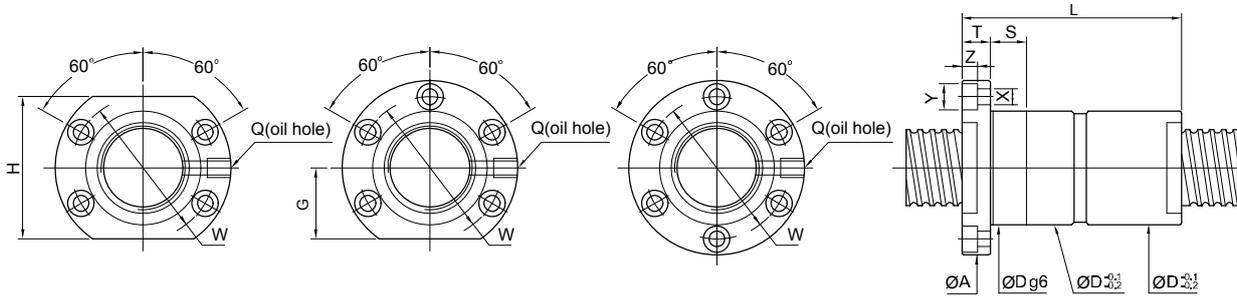
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/um
16	4	2.381	3	435	920	30	66	46.5	10	39	20	40	10	4.5	8	4.5	M6x1P	31
	5	3.175	3	765	1240	30	80	49	10	39	20	40	10	4.5	8	4.5	M6x1P	35
20	5	3.175	4	980	1650	30	89	49	10	39	20	40	10	4.5	8	4.5	M6x1P	47
			3	860	1710	34	82	57	12	45	20	40	12	5.5	9.5	5.5	M6x1P	43
20	6	3.969	4	1100	2280	34	92	57	12	45	20	40	12	5.5	9.5	5.5	M6x1P	56
			3	1080	2050	34	93	57	12	45	20	40	12	5.5	9.5	5.5	M6x1P	43
25	5	3.175	4	1250	3070	40	92	63.5	12	51	22	44	15	5.5	9.5	5.5	M8x1P	67
			3	980	2300	40	82	63.5	12	51	22	44	15	5.5	9.5	5.5	M8x1P	51
25	6	3.969	4	1630	3650	40	107	63.5	12	51	22	44	15	5.5	9.5	5.5	M8x1P	68
			3	1275	2740	40	93	63.5	12	51	22	44	15	5.5	9.5	5.5	M8x1P	52
32	10	4.762	4	2070	4270	42	155	68.5	15	55	26	52	15	6.6	11	6.5	M8x1P	70
			3	1620	3205	42	140	68.5	15	55	26	52	15	6.6	11	6.5	M8x1P	53
32	5	3.175	6	1980	6120	48	118	73.5	12	60	30	60	15	6.6	11	6.5	M8x1P	122
			3	1095	3060	48	92	73.5	12	60	30	60	15	6.6	11	6.5	M8x1P	82
32	6	3.969	6	2720	7500	48	133	73.5	12	60	30	60	15	6.6	11	6.5	M8x1P	125
			3	1500	3750	48	109	73.5	12	60	30	60	15	6.6	11	6.5	M8x1P	86
32	8	4.762	4	2330	5640	50	135	83	16	66	32	64	15	6.6	11	6.5	M8x1P	86
			3	1820	4230	50	117	83	16	66	32	64	15	6.6	11	6.5	M8x1P	66
36	10	6.35	4	3340	7080	50	160	88.5	16	70	34	68	15	9	14	8.5	M8x1P	89
			3	2605	5310	50	139	88.5	16	70	34	68	15	9	14	8.5	M8x1P	67
36	12	6.35	5	4040	8850	50	203	88	16	70	34	68	15	9	14	8.5	M8x1P	110
			3	2605	5310	50	153	88	16	70	34	68	15	9	14	8.5	M8x1P	67
36	5	3.175	4	1490	4690	52	96	88	16	70	34	68	15	9	14	8.5	M8x1P	91
			4	3600	8280	58	159	98	18	77	36	72	20	11	17.5	11	M8x1P	98
36	8	4.762	4	2530	6630	55	138	88	16	72	34	68	15	9	14	8.5	M8x1P	95
			3	2810	6210	55	138	88	16	72	34	68	15	9	14	8.5	M8x1P	75

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Unit: mm

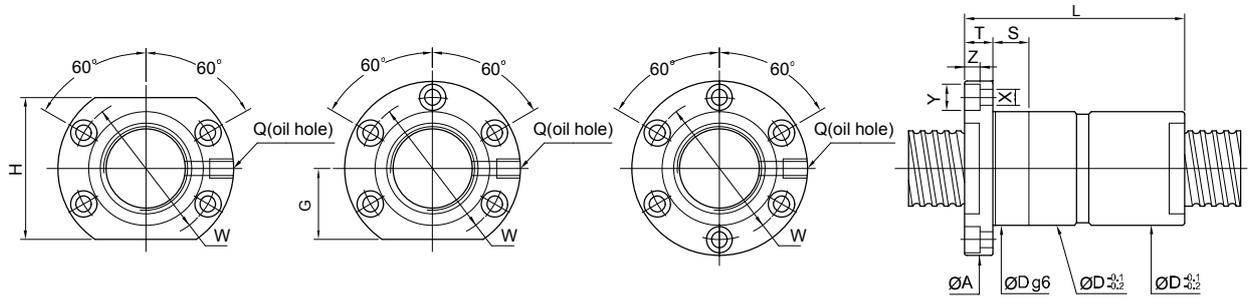
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS		
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/μm		
40	5	3.175	4	1575	5290		96												100	
			5	1910	6610	55	111	88.5	16	72	29	58	15	9	14	8.5	M8x1P	124		
			6	2230	7940		122													147
	6	3.969		3	1660	4810		97												77
				4	2130	6410	55	113	88.5	16	72	34	68	15	9	14	8.5	M8x1P	103	
				6	3020	9620		137												
	8	4.762		3	2120	5720		121												80
				4	2720	7620	60	134	93	16	76	36	72	20	9	14	8.5	M8x1P	105	
				6	3850	11430		172												
	10	6.35		3	3010	7100		142												82
				4	3850	9470	65	162	106	18	84	43	86	20	11	17.5	11	M8x1P	107	
				5	4670	11830		189												
12	6.35		3	3010	7100		154												82	
			5	4670	11830	63	204	106	18	84	43	86	20	11	17.5	11	M8x1P	133		
			7.144	3	4010	9250		160												86
45	12	7.144	4	5130	12330	70	185	110	18	85	45	90	20	11	17.5	11	M8x1P	114		
			8	4.762	4	2870	8620	64	136	92	16	75	36	72	15	9	14.5	9	M6x1P	109
			3	4160	10750		158													94
16	6.35		4	5330	14330	70	183	110	16	90	45	90	20	11	17.5	11	PT1/8x	124		
			3	3220	8200	70	198	110	16	90	45	90	20	11	17.5	11	PT1/8x	90		



Unit: mm

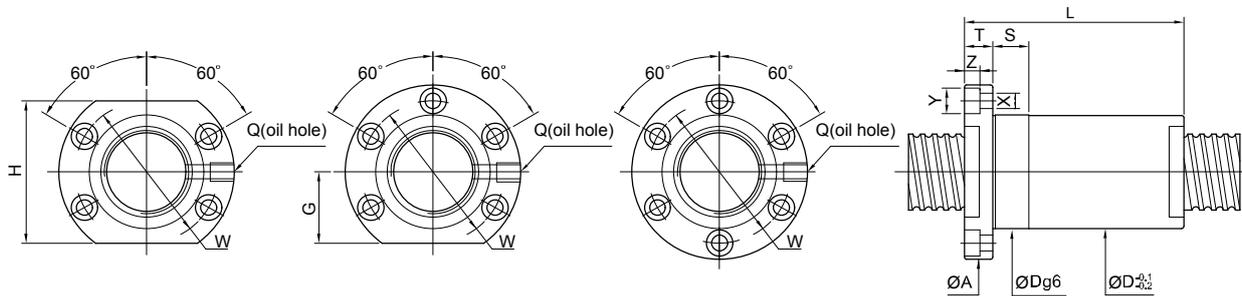
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS kgf/µm
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	
50	5	3.175	4	1730	6760	96												119
			5	2100	8450	66	111	98	16	82	36	72	20	9	14	8.5	PT1/8	148
			6	2450	10140	122												
	6	3.969	4	2380	8250	111												123
			5	2880	10310	66	122	98	16	82	36	72	20	9	14	8.5	PT1/8	151
			6	3370	12380	142												
	8	4.762	4	3010	9610	136												125
			5	3650	12010	70	157	113	18	90	42	84	20	11	17.5	11.0	PT1/8	155
			6	4260	14420	174												
	10	6.35	3	3430	9300	143												99
			4	4390	12400	74	162											129
			5	5320	15500	189		114	18	92	42	84	20	11	17.5	11	PT1/8	161
			6	6220	18600	205												
	12	7.144	5	6680	20420	75	213	121	22	97	47	94	20	14	20	13	PT1/8	166
			3	4510	11150	75	171											
	12	7.938	4	5770	14870	195		121	22	97	47	94	20	14	20	13	PT1/8	132
3			3430	9300	74	201	114	18	92	42	84	20	11	17.5	11	PT1/8	99	
16	6.35	3	3430	9300	74	201	114	18	92	42	84	20	11	17.5	11	PT1/8	99	
20	7.938	3	4510	11150	78	253	121	28	97	47	94	20	14	20	13	PT1/8	101	

FDIC



Unit: mm

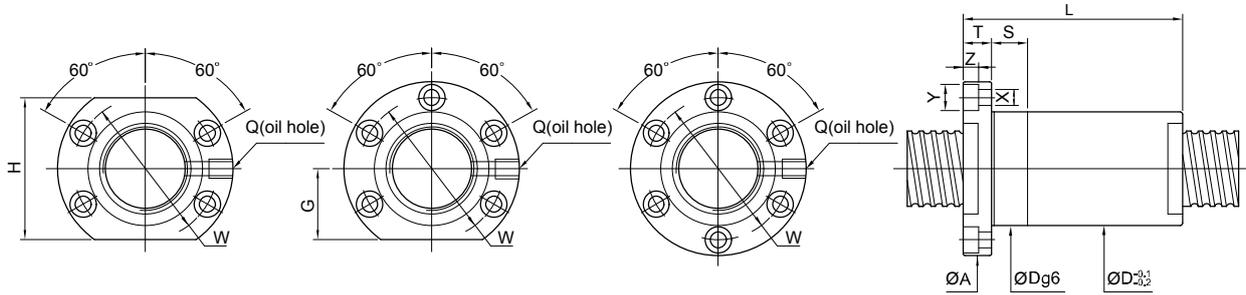
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (1x10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/μm	
63	6	3.969	4	2610	10550	80	120	122	18	100	45	90	20	11	17.5	11	PT1/8	146	
			6	3700	15830		144												217
	8	4.762	4	3375	12200	82	141	124	18	102	46	92	20	11	17.5	11	PT1/8	151	
			6	4780	18300		178												222
	10	6.35	4	5020	16450	85	166	132	22	107	48	96	20	14	20	13	PT1/8	158	
			6	7110	24680		209												232
	12	7.938	4	6580	19430	90	195	136	22	112	52	104	20	14	20	13	PT1/8	161	
			6	9320	29150		248												236
	20	9.525	3	8490	23610	95	255	153	28	123	59	118	20	18	26	17.5	PT1/8	157	
			4	10870	31480		296												207
80	10	6.35	4	5510	21200		166											190	
			5	6670	26500	105	185	151	22	127	57	114	20	14	20	13	PT1/8	235	
	6	7810	31800		209												280		
	12	7.938	4	7500	25700	110	195	156	22	132	59	118	20	14	20	13	PT1/8	196	
			6	10620	38550		248												288
	20	9.525	3	9770	31700		254												193
4			12510	42270	115	297	173	28	143	66	132	20	18	26	17.5	PT1/8	254		
6	17720	63410		376													373		
100	10	6.35	3	4760	20090		143											173	
			4	6090	26790		164												228
			5	7380	33490	125	184	171	22	147	67	134	25	14	20	13	PT1/8	281	
			6	8630	40190		210												334
	16	9.525	4	14440	54960		252												266
			5	17490	68700	135	285	205	28	169	73	146	30	18	26	17.5	PT1/8	329	
			6	20460	82440		318												391
			4	14440	54960		299												266
20	9.525	5	17490	68700	135	340	205	28	169	73	146	30	18	26	17.5	PT1/8	329		
		6	20460	82440		381												391	



Unit: mm

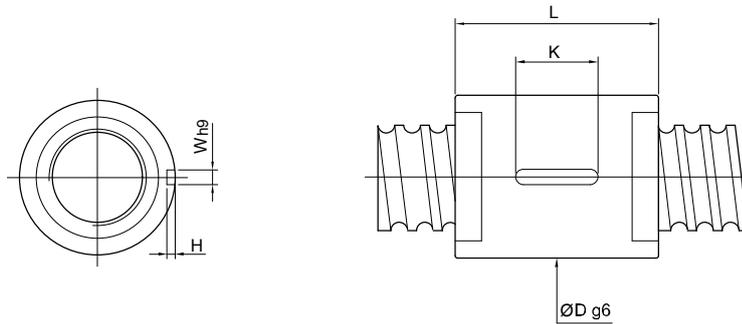
SCREW SIZE		BALL	EFFECTIVE	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS		
O.D.	LEAD	DIA.	TURN	Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/μm		
20	5	3.175	2×(2)	610	1140	34	53	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	29		
			3×(2)	860	1710													67	43	
	6	3.969	2×(2)	760	1370	34	61	57	12	45	20	40	12	5.5	9.5	5.5	M6×1P	29		
			3×(2)	1080	2050													77	50	
25	4	2.381	2×(2)	350	960	40	44	63	12	51	22	44	15	5.5	9.5	5.5	M8×1P	30		
			3×(2)	500	1440													56	46	
			4×(2)	640	1920													64	59	
	5	3.175	2.381	2×(2)	690	1530	40	53	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	35	
				3×(2)	980	2300													67	51
				4×(2)	1250	3070													76	67
				6	3.969	3×(2)													1275	2740
8	3.969	3×(2)	1275	2740	40	85	63.5	12	51	22	44	15	5.5	9.5	5.5	M8×1P	52			
10	4.762	2.381	2×(2)	1140	2140	42	88	69	15	55	26	52	15	6.6	11	6.5	M8×1P	36		
			3×(2)	1610	3210													102	53	
28	6	3.175	3×(2)	1030	2630	43	69	68	12	55	26	52	15	6.6	11	6.5	M8×1P	56		
	10	3.175	2×(2)	730	1750	45	77	73	12	60	30	60	15	6.6	11	6.5	M8×1P	38		
32	4	2.381	3×(2)	560	1840	43	56	68	12	55	26	52	15	6.6	11	6.5	M8×1P	55		
			5×(2)	870	3070													73	89	
	5	3.175	2.381	3×(2)	1095	3060	48	67	73.5	12	60	30	60	15	6.6	11	6.5	M8×1P	63	
				4×(2)	1400	4080													77	82
	6	3.969	2.381	3×(2)	1500	3750	48	77	73.5	12	60	30	60	15	6.6	11	6.5	M8×1P	65	
				4×(2)	1920	5000													90	86
8	4.762	2.381	3×(2)	1820	4230	50	95	83	16	66	32	64	15	6.6	11	6.5	M8×1P	66		
			4×(2)	2330	5640													112	86	
10	6.35	3×(2)	2605	5310	50	120	88	16	70	34	68	15	9	14	8.5	M8×1P	67			
12	6.35	3×(2)	2605	5310	50	124	88	16	70	34	68	15	9	14	8.5	M8×1P	67			

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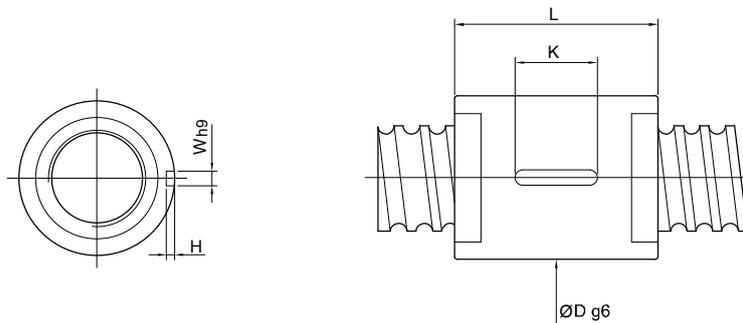
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/µm	
40	5	3.175	3 (2)	1230	3970	65													75
			4 (2)	1575	5290	55	80	88.5	16	72	29	58	15	9	14	8.5	M8	1P	100
			6 (2)	2230	7940	101													
	6	3.969	4 (2)	2130	6410	55	93												103
			6 (2)	3020	9620	118	88.5	16	72	34	68	15	9	14	8.5	M8	1P	149	
8	4.762	4 (2)	2720	7620	60	116	93	16	76	36	72	20	9	14	8.5	M8	1P	105	
10	6.35	3 (2)	3010	7100	64	123	106	18	84	43	86	20	11	17.5	11	PT1/8		82	
		4 (2)	3850	9470	143														107
12	6.35	4 (2)	3850	9470	63	160	106	18	84	43	86	20	11	17.5	11	PT1/8		107	
50	5	3.175	3 (2)	1350	5070	65												89	
			4 (2)	1730	6760	66	80	98	16	82	36	72	20	9	14	8.5	PT1/8	119	
			6 (2)	2450	10140	101													174
	6	3.969	4 (2)	2380	8250	66	93	98	16	82	36	72	20	9	14	8.5	PT1/8	123	
			6 (2)	3370	12380	118													181
8	4.762	4 (2)	3010	9610	70	119	113	18	90	42	84	20	11	17.5	11	PT1/8	125		
10	6.35	3 (2)	3430	9300	74	123	116	18	92	42	84	20	11	17.5	11	M8	1P	99	
		4 (2)	4390	12400	143														129
12	7.144	4 (2)	5530	16330	75	164	121	22	97	47	97	20	14	20	13	PT1/8	135		
		3 (2)	4510	11150	147														101
		4 (2)	5770	14870	164														132
63	6	3.969	4 (2)	2610	10550	80	96	122	18	100	45	90	20	11	17.5	11	PT1/8	146	
			6 (2)	3700	15830	121													217
	8	4.762	4 (2)	3375	12200	82	119	124	18	102	46	92	20	11	17.5	11	PT1/8	151	
	10	6.35	4 (2)	5020	16450	85	147	132	22	107	48	96	20	14	20	13	PT1/8	158	
12	7.938	3 (2)	5140	14570	90	147	136	22	112	52	104	20	14	20	13	PT1/8	122		
		4 (2)	6580	19430	171														161
20	9.525	2 (2)	5990	15740	95	156	153	28	123	59	118	20	18	26	17.5	PT1/8	107		
80	10	6.35	2 (2)	3360	13390	105	95	171	22	147	67	134	25	14	20	13	PT1/8	118	
			3 (2)	4760	20090	115													
	16	9.525	2 (2)	11280	41220	115	175	205	28	169	73	146	30	18	26	17.5	PT1/8	201	
			3 (2)	7960	27480	115	159	205	28	169	73	146	30	18	26	17.5	PT1/8	137	



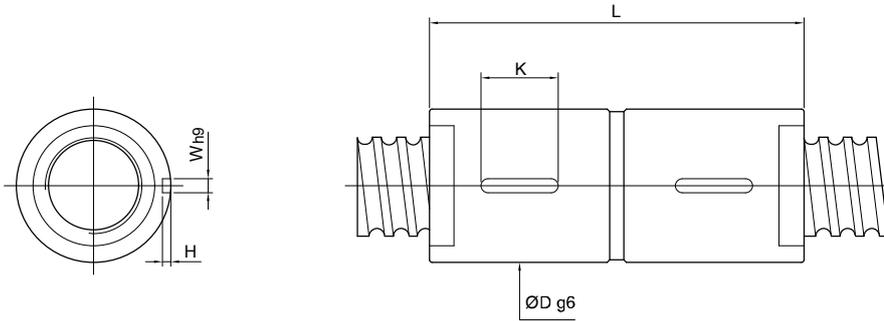
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		KEYWAY			STIFFNESS
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	K	W	H	kgf/μm
16	5	3.175	3	765	1240	30	40	20	3	1.8	18
			4	860	1710	34	41	20	3	1.8	21
20	5	3.175	3	1100	2280	34	48	20	3	1.8	28
			4	1080	2050	34	46	20	4	2.5	22
25	6	3.969	3	1380	2730	40	56	25	4	2.5	28
			4	980	2300	40	41	20	4	2.5	26
32	5	3.175	3	1250	3070	40	48	20	4	2.5	33
			4	1275	2740	40	46	20	4	2.5	26
40	6	3.969	3	1630	3650	40	56	25	4	2.5	34
			4	1095	3060	48	41	20	4	2.5	31
50	5	3.175	3	1400	4080	48	48	20	4	2.5	41
			4	1980	6120	50	61	25	5	3.0	60
60	6	3.969	3	1500	3750	50	46	20	5	3.0	32
			4	1920	5000	50	56	25	5	3.0	43
70	8	4.762	3	2720	7500	50	70	32	6	3.5	63
			4	1820	4230	50	59	25	5	3.0	32
80	10	6.35	3	2330	5640	50	70	25	5	3.0	43
			4	2605	5310	50	68	25	6	3.5	33
90	5	3.175	3	3340	7080	55	79	32	6	3.5	45
			4	1575	5290	55	48	20	4	2.5	49
100	6	3.969	3	2230	7940	55	61	25	4	2.5	73
			4	2130	6410	55	56	25	5	3.0	51
120	8	4.762	3	3020	9620	60	70	32	5	3.0	75
			4	2720	7620	60	70	25	5	3.0	52
140	10	6.35	3	3850	11430	65	91	40	5	3.0	77
			4	3010	7100	65	68	25	6	3.5	41
160	10	6.35	3	3850	9470	65	79	32	6	3.5	53
			4								



Unit: mm

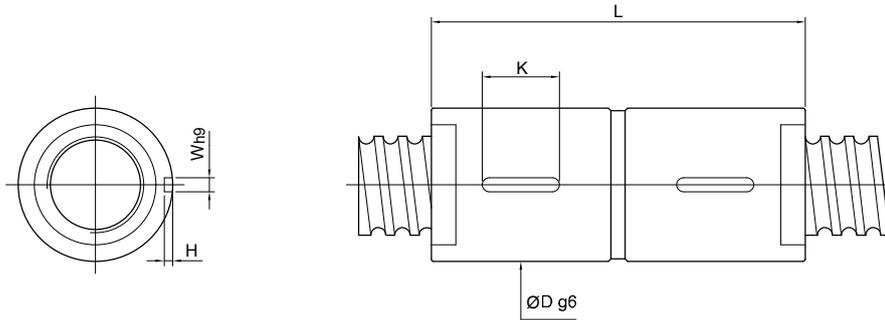
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		KEYWAY			STIFFNESS
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	K	W	H	kgf/μm
50	5	3.175	4	1730	6750	66	48	20	4	2.5	60
			6	2450	10130		61	25			86
	6	3.969	4	2380	8250	66	56	25	5	3.0	61
			6	3370	12380		70	32			90
	8	4.762	4	3010	9610	70	70	32	5	3.0	63
			6	4260	14420		91	32			92
10	6.35	3	3430	9300	74	68		6	3.5	49	
		4	4390	12400		79	32			65	
12	7.938	3	4510	11150	75	82	40	6	3.5	50	
		4	5770	14870		92	40			66	
63	6	3.969	4	2610	10550	80	56	25	6	3.5	73
			6	3700	15830		70	32			107
	8	4.762	4	3375	12200	82	70	32	6	3.5	76
			6	4780	18300		91	40			111
10	6.35	4	5020	16450	85	79	32	8	4.0	79	
		6	7110	24680		85	40			116	
12	7.938	4	6580	19430	90	95	40	8	4.0	80	
		6	9320	29150		123	50			118	
80	10	6.35	4	5510	21200	105	79	32	8	4.0	95
			6	7810	31800		102	40			140
	12	7.938	4	7500	25700	110	95	40	8	4.0	98
6	10620	38550	123	50	143						
20	9.525	3	9770	31700	115	126	50	10	5.0	97	
		4	12510	42270		149	63			127	
100	10	6.35	3	4760	20090	125	72		10	5	91
			4	6090	26790		82	50			120
			5	7380	33490		94	50			148
			6	8630	40190		104	50			176
	16	9.525	4	14440	54960	135	128		10	5	140
			5	17490	68700		77	63			173
			6	20460	82440		162	63			205
			4	14440	54960		144	63			140
20	9.525	5	17490	68700	135	164	63	10	5	173	
		6	20460	82440		187	63			205	



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD(kgf)		NUT		KEYWAY			STIFFNESS	
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	K	W	H	kgf/µm	
16	5	3.175	3	765	1240	28	75	20	3	1.8	35	
			4	980	1650		85				47	
20	5	3.175	3	860	1710	34	75	20	3	1.8	43	
			4	1100	2280		85				56	
	6	3.969	3	1080	2050	34	87	20	4	2.5	43	
			4	1380	2730		103				56	
25	5	3.175	3	980	2300	40	75	20	4	2.5	51	
			4	1250	3070		85				67	
	6	3.969	3	1275	2740	40	87	20	4	2.5	52	
			4	1630	3650		103				68	
32	5	3.175	3	1095	3060	48	75	20	4	2.5	63	
			4	1400	4080		85				82	
			6	1980	6120		105				122	
	6	3.969	4.762	3	1500	3750	50	87	25	5	3.0	65
				4	1920	5000		103				86
				6	2720	7500		127				125
	8	4.762	6.35	3	1820	4230	50	109	25	5	3.0	66
				4	2330	5640		127				86
40	5	3.175	3	2605	5310	50	135	25	6	3.5	67	
			4	3340	7080		155				89	
	6	3.969	4.762	4	1575	5290	55	85	20	4	2.5	100
				6	2230	7940		105				147
8	4.762	6.35	4	2130	6410	55	103	25	5	3.0	103	
			6	3020	9620		127				149	
10	6.35	8.125	4	2720	7620	60	127	25	5	3.0	105	
			6	3850	11430		161				154	
10	6.35	8.125	3	3010	7100	65	135	25	6	3.5	82	
			4	3850	9470		155				107	

RDIC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	BASIC RATE LOAD (kgf)		NUT		KEYWAY			STIFFNESS
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	K	W	H	kgf/μm
50	5	3.175	4	1730	6750	66	85	20	4	2.5	119
			6	2450	10130		105	25			174
	6	3.969	4	2380	8250	66	103	25	5	3.0	123
			6	3370	12380		127	32			181
	8	4.762	4	3010	9610	70	127	32	5	3.0	125
			6	4260	14420		161	40			185
10	6.35	3	3430	9300	74	135	32	6	3.5	99	
		4	4390	12400		155	32			129	
12	7.938	6	6220	18600	75	197	40	6	3.5	191	
		3	4510	11150		161	40			101	
63	6	3.969	4	2610	10550	80	106	25	6	3.5	146
			6	3700	15830		130	32			217
	8	4.762	4	3375	12200	82	131	32	6	3.5	151
			6	4780	18300		165	40			222
	10	6.35	4	5020	16450	85	160	32	8	4.0	158
			6	7110	24680		202	40			232
	12	7.938	4	6580	19430	90	185	40	8	4.0	161
			6	9320	29150		238	50			236
80	10	6.35	4	5510	21200	105	160	32	8	4.0	190
			6	7810	31800		202	40			280
	12	7.938	4	7500	25700	110	185	40	8	4.0	196
			6	10620	38550		238	50			288
	20	9.525	3	9770	31700	115	245	50	10	5.0	193
			4	12510	42270		289	63			254
100	10	6.35	3	4760	20090	125	132	50	10	5	173
			4	6090	26790		164				228
			5	7380	33490		174				281
			6	8630	40190		204				334
	16	9.525	4	14440	54960	135	240	63	10	5	266
			5	17490	68700		274				329
	6	20460	82440	306	391	135	284	63	10	5	266
	20	9.525	5	17490	68700	135	324	63	10	5	329
			6	20460	82440		366	391			

PMI Precision Ground BallScrew

13.2 End Deflector Series

Features

It is important for a high-lead ballscrew to be with characteristics of high rigidity, low noise and thermal control.

PMI takes its patented design and treatments to achieve the following characteristics:

High DN Value

Max. DN Value: 220,000

Low Noise

The average and accurate ball circle diameter (BCD) through whole threads make the ballscrews to obtain the stable and consistent drag torque as well as to reduce the noise.

The audio frequency is low and downy due to the designed of plastic circulation system.

Space Saving

The ballnut diameter reduces 20% ~25% substantially and the length of nut is shorter.

The total space shall be reduced to approximately 50% consequently.

Circulation

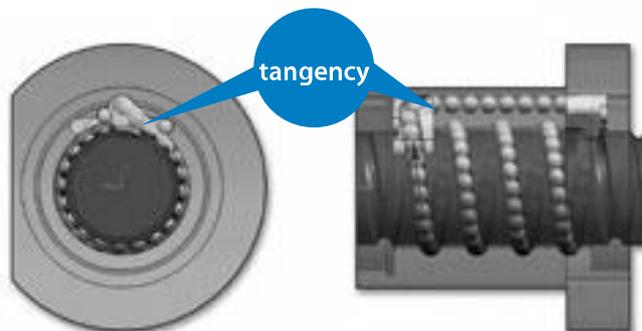
The specially designed pathway of the Recirculation System makes a contact with lead angle and also with BCD in the same tangency, improving its smoothness effectively.

Applications

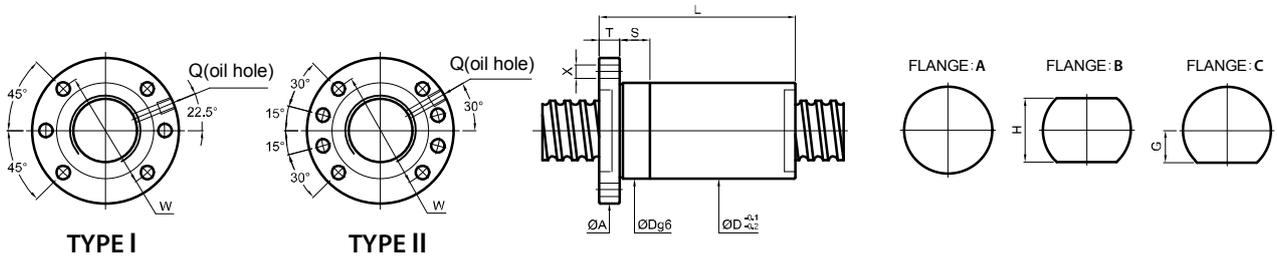
CNC Machinery / Precision Machinery / High Speed Machinery /

Semi-Conductor Equipment / Medical equipment

Diameter
Reduces
20%~25%



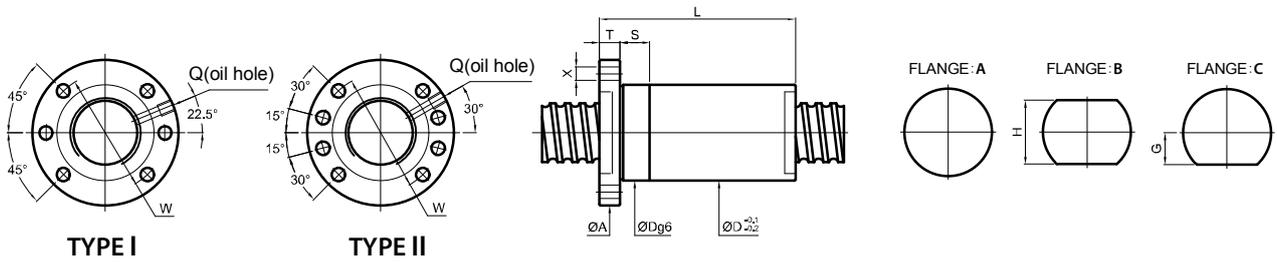
FSDC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY(kgf)		NUT		FLANGE					FIT	OIL HOLE	BOLT	STIFFNESS	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H	TYPE	S	Q	X	kgf/µm
12	4	2.381	3	610	1190	24	28	44	10	34	16	32	I	10	M6×1P	4.5	20
	5		3	610	1190		32										20
	10		3	590	1160		45										20
	20	2	390	770	54		14										
14	4	2.381	3	680	1430	26	28	46	10	36	16	32	I	10	M6×1P	4.5	23
	5	3.175	3	820	1520	28	32	49	10	36	16	32	I	10	M6×1P	4.5	25
15	5	3.175	3	850	1640	29	35	51	10	39	19	38	I	10	M6×1P	5.5	26
	10		3	840	1610		47										26
	20		2	560	1050		58										18
16	5	3.175	3	890	1760	29	41	51	10	39	19	38	I	10	M6×1P	5.5	27
	10		3	870	1740	50	27										
	16		2	600	1150	51	19										
20	4	2.381	3	780	2000	32	28	54	12	42	19	38	I	12	M6×1P	5.5	29
	5	3.175	4	1300	3030	36	40	62	12	49	19	38	I	12	M6×1P	6.6	43
	10		3	990	2220		47										33
	20		2	670	1450		56										23
	6	3.969	3	1540	3310	37	38	62	12	49	19	38	I	12	M6×1P	6.6	34
	8		3	1540	3300		45										34
10	4.762	4	2560	5530	40	62	62	12	51	24	48	I	15	M6×1P	6.6	47	
25	4	2.381	3	870	2560	36	28	62	12	49	19	38	I	12	M6×1P	6.6	34
	5	3.175	4	1440	3840	40	41	62	12	51	24	48	I	15	M6×1P	6.6	50
	10		3	1100	2810		50										38
	15		4	1410	3780		81										50
	20	2	750	1840	60	26											
	25	2	730	1810	71	26											
	6	3.969	4	2250	5710	43	45	64	12	51	22	44	I	15	M6×1P	6.6	53
	12		4	2240	5660		70										53
	25		2	1160	2720		70										28
	8	4.762	4	2880	6890	45	55	65	15	54	25.5	51	I	15	M6×1P	6.6	55
	10		4	2880	6870		63										55
	16		4	2830	6790		85										55
20	2	1470	3180	61	29												
10	6.35	5	5050	11500	51	78	84	16	67	32	64	I	15	M6×1P	9	72	

Coam and Cam are the modified static and dynamic load capacities, calculated according to ISO-3408-5

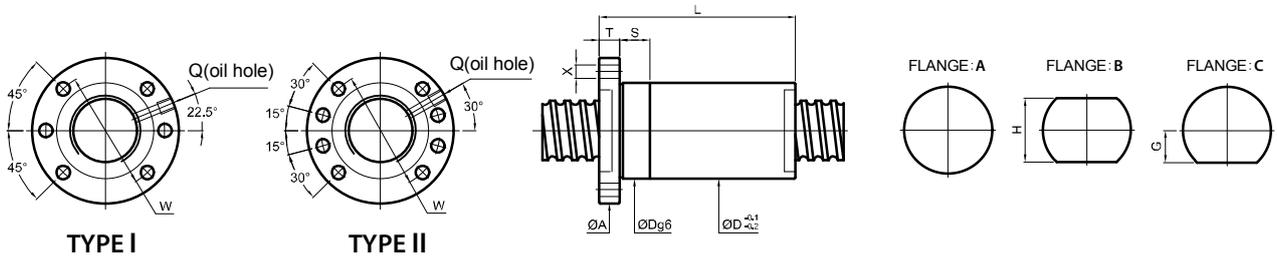


Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY (kgf)		NUT		FLANGE					FIT S	OIL HOLE Q	BOLT X	STIFFNESS kgf/μm	
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H					TYPE
28	5	3.175	5	1850	5460	43	48	65	12	51	24	48	I	15	M8×1P	6.6	67
	6	3.969	5	2880	7980	46	52	66	12	50	26	52	I	15	M8×1P	6.6	70
	8		3	2350	5720		46										46
	10	4.762	3	2340	5710	48	52	74	12	60	30	60	I	15	M8×1P	6.6	46
	16		5	3680	9690		102										73
	10	6.35	5	5280	12530	54	78	87	16	72	34.5	69	I	15	M8×1P	9	77
	12		5	5270	12500		88										77
32	5	3.175	4	1610	4970	50	41	87	16	72	34.5	69	I	15	M8×1P	9	61
	6		5	3050	9140		52										77
	10	3.969	4	2550	7500	53	62	87	16	72	34.5	69	I	15	M8×1P	9	63
	32		2	1300	3540		90										40
	8		5	3900	10930		67										80
	10		5	3890	10910		77										80
	12	4.762	5	3890	10890	53	87	87	16	72	34.5	69	I	15	M8×1P	9	80
	15		5	3860	10850		116										80
	20		2	1700	4230		70										34
	32		2	1640	4120		90										34
	10		5	4900	13360		78										84
	12	5.556	5	4890	13340	55	88	87	16	72	34.5	69	I	15	M8×1P	9	84
	16		5	4860	13280		107										79
	20		3	3140	8110		87										53
	10		5	5720	14490		78										85
	12	6.35	5	5710	14470	57	88	87	16	72	34.5	69	I	15	M8×1P	9	85
	16		4	4520	11100		92										69
20	3		3530	8340	88		54										

Coam and Cam are the modified static and dynamic load capacities, calculated according to ISO-3408-5

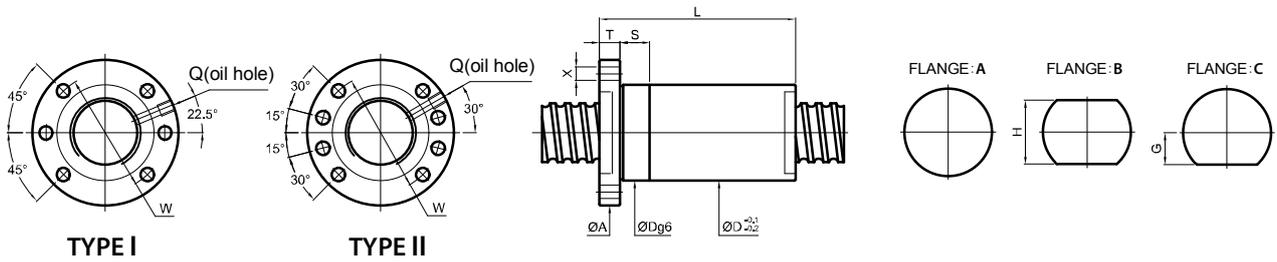
FSDC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY (kgf)		NUT		FLANGE						FIT S	OIL HOLE Q	BOLT X	STIFFNESS kgf/μm
O.D.	LEAD			Dynamic (1×10 ⁵ REV. Cam)	Static Coam	Dg6	L	A	T	W	G	H	TYPE				
36	8	4.762	5	4170	12580	56	63	80	11	68	34	68	I	15	M8×1P	9	86
	10		5	6050	16460		78										93
	12		5	6080	16430		88										93
	16	6.35	5	6050	16360	61	109	91	18	76	34	68	II	15	M8×1P	9	93
	20		4	4910	12890		109										76
	36		2	2570	6250		95										41
38	10	6.35	5	6260	17740	63	80	93	18	78	35	70	II	20	M8×1P	9	97
	12		5	6260	17410		88										97
	16		5	6220	17350		109										97
	40	3	3830	10220	142	71											
40	5	3.175	4	1760	6260	58	42	91	18	76	34	68	II	15	M8×1P	9	71
	6	3.969	5	3420	11810		52										92
	8	4.762	4	3610	11260		60										56
	10	6.35	5	6430	18440	65	78	95	18	80	36	72	II	20	M8×1P	9	101
	12		5	6420	18410		88										101
	15		5	6380	18350		103										101
	16		5	6390	18330		108										101
	20		4	5190	14450		110										82
	40	2	2700	6950	70	90	98	18	83	37	74	II	20	M8×1P	11	43	
	12	7.144	5	7530	20800	70	90	98	18	83	37	74	II	20	M8×1P	11	103
16	5		7500	20730	103												

Coam and Cam are the modified static and dynamic load capacities, calculated according to ISO-3408-5

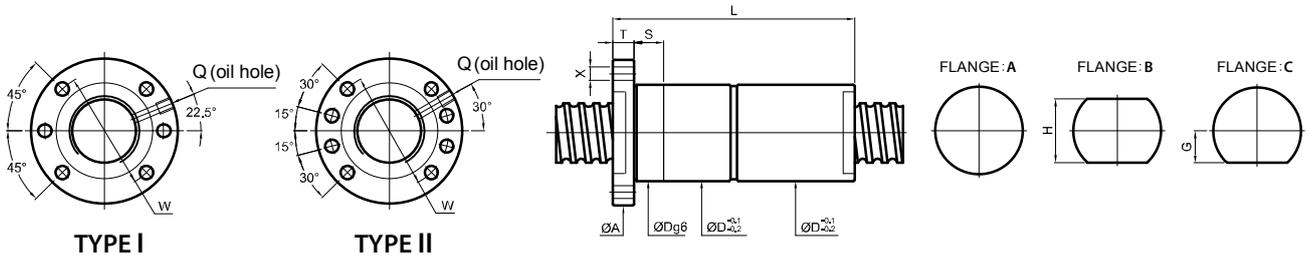


Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY (kgf)		NUT		FLANGE						FIT S	OIL HOLE Q	BOLT X	STIFFNESS kgf/µm
O.D.	LEAD			Dynamic (10 ⁶ REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H	TYPE				
45	8	4.762	4	3770	12580	66	55	98	18	83	37	74	II	20	M8×1P	11	84
	10		5	6910	21330		78										110
	12	6.35	5	6910	21310	70	89	105	18	88	40	80	II	20	M8×1P	11	110
	16		5	6880	21250		111										110
	12	7.144	5	7930	23300		88	105	18	88	40	80	II	20	M8×1P	11	113
	20		4	6440	18340	73	110										91
50	5	3.175	5	2360	9950	70	48	105	18	88	40	80	II	20	M8×1P	11	105
	8	4.762	5	4780	17550	70	64	105	18	88	40	80	II	20	M8×1P	11	109
	10		5	7160	23320		78										119
	12	6.35	5	7150	23300		90	118	18	100	46	92	II	20	M8×1P	11	119
	16		5	7120	23250	75	109										119
	20		3	4460	13520		95										74
	20	7.938	4	7810	22680	80	114	121	18	104	50	100	II	25	M8×1P	11	101
55	12	6.35	5	7340	25280	80	96	118	18	100	46	92	II	20	M8×1P	11	128
63	10	6.35	5	7800	29210	88	84	135	22	115	50	110	II	20	M8×1P	11	141
	16	9.525	5	13640	43620	102	116	147	20	127	56	112	II	25	M8×1P	14	167
80	20		5	15350	56760		143										196
	25	9.525	4	12530	44860	118	146	165	25	145	65	130	II	25	M8×1P	14	159
	30		3	9610	32980		134										121

Coam and Cam are the modified static and dynamic load capacities, calculated according to ISO-3408-5

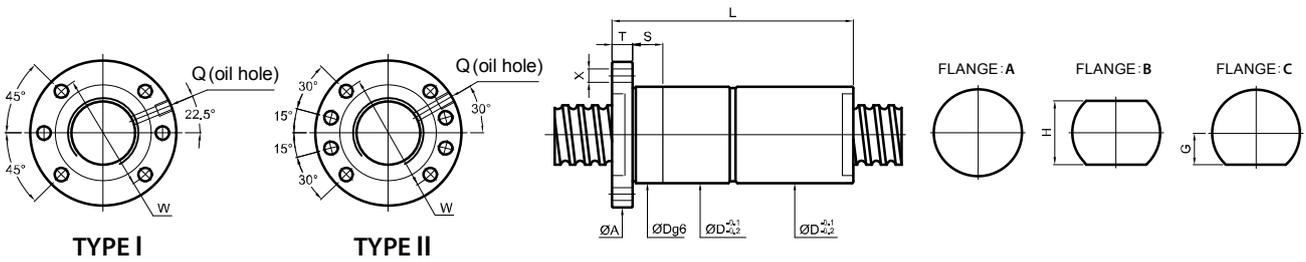
FDDC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY (kgf)		NUT		FLANGE						FIT	OIL HOLE	BOLT	STIFFNESS	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H	TYPE	S	Q	X	kgf/μm	
20	4	2.381	3	780	2000	32	61	54	12	42	19	38	I	12	M6×1P	5.5	44	
	5		4	1300	3030		80										65	
	10	3.175	3	990	2220	36	97	62	12	49	19	38	I	12	M6×1P	6.6	50	
	20		2	670	1450		116										33	
	6	3.969	3	1540	3310	37	81	62	12	49	19	38	I	12	M6×1P	6.6	51	
	8		93	51														
	10	4.762	4	2560	5530	40	107	62	12	51	24	48	I	15	M6×1P	6.6	70	
25	4	2.381	3	870	2560	36	60	62	12	49	19	38	I	12	M6×1P	6.6	53	
	5		4	1440	3840		81										77	
	10		3	1100	2810		100										58	
	15	3.175	4	1410	3780	40	166	62	12	51	24	48	I	15	M6×1P	6.6	77	
	20		2	750	1840		120										39	
	25		2	730	1810		146										39	
	6	3.969	4	2250	5710		87											80
	12		4	2240	5660	43	142	64	12	51	22	44	I	15	M6×1P	6.6	80	
	25		2	1160	2720		145											41
	8	4.762	4	2880	6890		111											83
	10		4	2880	6870	45	128	65	15	54	25.5	51	I	15	M6×1P	6.6	83	
	16		4	2830	6790		173										83	
	20		2	1470	3180		122											42
		10	6.35	5	5050	11500	51	153	84	16	67	32	64	I	15	M6×1P	9	108

Coam and Cam are the modified static and dynamic load capacities, calculated according to ISO-3408-5

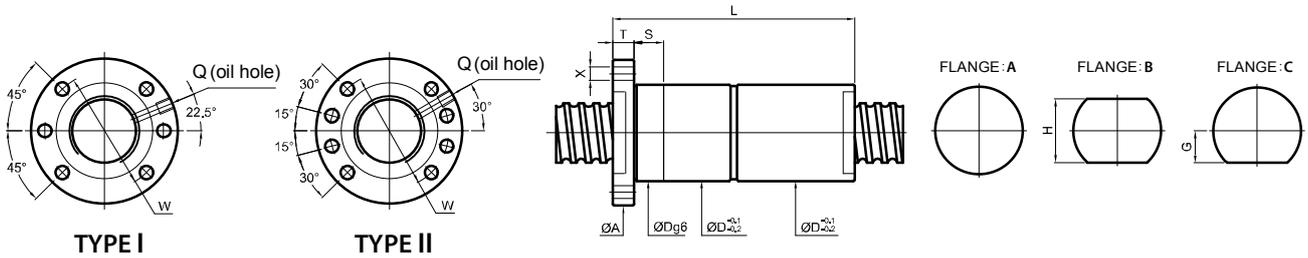


Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY(kgf)		NUT		FLANGE						FIT S	OIL HOLE Q	BOLT X	STIFFNESS kgf/µm		
O.D.	LEAD			Dynamic (10 ⁶ REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H	TYPE						
28	5	3.175	5	1850	5460	44	93	65	12	51	24	48	I	15	M8×1P	6.6	104		
	6	3.969	5	2880	7980	46	106	66	12	50	26	52	I		M8×1P	6.6	108		
	8		3	2350	5720		94											69	
		10	4.762	3	2340	5710	48	102	74	12	60	30	60	I		M8×1P	6.6	69	
		16		5	3680	9690		206										112	
		10	6.35	5	5280	12530		158										118	
		12		5	5270	12500	54	172	87	16	72	34.5	69	I		M8×1P	9	118	
32	5	3.175	4	1610	4970	50	81	87	16	72	34.5	69	I	15	M8×1P	9	93		
	6		5	3050	9140		106										120		
	10	3.969	4	2550	7500	53	126	87	16	72	34.5	69	I	15	M8×1P	9	96		
	32		2	1300	3540		172										60		
	8		5	3900	10930		132											124	
	10		5	3890	10910		147											124	
	12	4.762	5	3890	10890	53	171	87	16	72	34.5	69	I	15	M8×1P	9		124	
	15		5	3860	10850													221	124
	20		2	1700	4230		140											51	
	32		2	1640	4120		186											51	
	10		5	4900	13360		153											129	
	12	5.556	5	4890	13340	55	172	87	16	72	34.5	69	I	15	M8×1P	9		129	
	16		5	4860	13280													211	121
	20		3	3140	8110													177	79
	10		5	5720	14490		153											131	
	12	6.35	5	5710	14470	57	172	87	16	72	34.5	69	I	15	M8×1P	9		131	
	16		4	4520	11100													180	105
20	3		3530	8340	178													80	

Coam and Cam are the modified static and dynamic load capacities,calculated according to ISO-3408-5

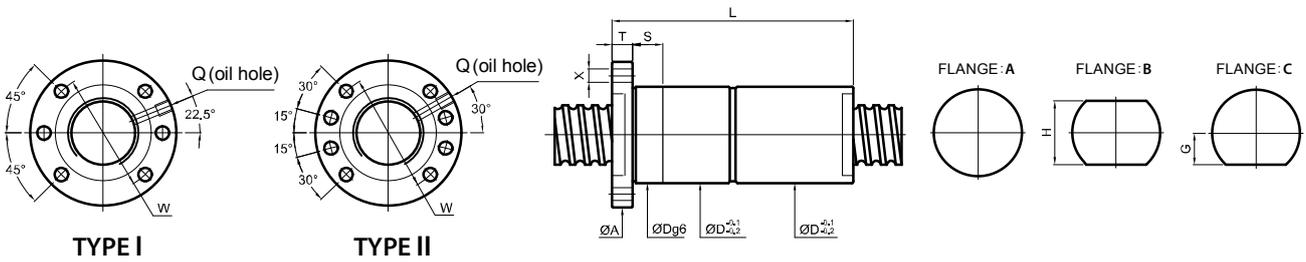
FDDC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY (kgf)		NUT		FLANGE					FIT	OIL HOLE	BOLT	STIFFNESS	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H	TYPE	S	Q	X	kgf/μm
36	8	4.762	5	4170	12580	56	127	80	11	68	34	68	II	15	M8×1P	9	133
	10		5	6050	16460		153										142
	12		5	6080	16430		172										142
	16	6.35	5	6050	16360	61	213	91	18	76	34	68	II	15	M8×1P	9	142
	20		4	4910	12890		217										115
	36		2	2570	6250		194										59
38	10		5	6260	17740		155										149
	12	6.35	5	6260	17410		172										149
	16		5	6220	17350	63	213	93	18	78	35	70	II	20	M8×1P	9	149
	40		3	3830	10220		282										106
40	5	3.175	4	1760	6260	60	87	91	18	76	34	68	II	15	M8×1P	9	111
	6	3.969	5	3420	11810	60	108	91	18	76	34	68	II	15	M8×1P	9	142
	8	4.762	4	3610	11260	62	118	91	18	76	34	68	II	15	M8×1P	9	118
	10		5	6430	18440		158										155
	12		5	6420	18410		172										155
	15	6.35	5	6380	18350		226	95	18	80	36	72	II	20	M8×1P	9	155
	16		5	6390	18330	68	212										155
	20		4	5190	14450		220										125
	40		2	2700	6950		210	98	18	83	37	74	II	20	M8×1P	11	64
	12	7.144	5	7530	20800		174										158
16		5	7500	20730	70	212	98	18	83	37	74	II	20	M8×1P	11	158	

Coam and Cam are the modified static and dynamic load capacities, calculated according to ISO-3408-5



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY(kgf)		NUT		FLANGE					FIT S	OIL HOLE Q	BOLT X	STIFFNESS kgf/µm	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H					TYPE
45	8	4.762	4	3770	12580	66	114	98	18	83	37	74	II	20	M8×1P	11	130
	10		5	6910	21330		158										170
	12	6.35	5	6910	21310	70	171	105	18	88	40	80	II	20	M8×1P	11	170
	16		5	6880	21250		215										170
	12	7.144	5	7930	23300	73	178	105	18	88	40	80	II	20	M8×1P	11	173
	20		4	6440	18340		220										139
50	5	3.175	5	2360	9950	70	98	105	18	88	40	80	II	20	M8×1P	11	164
	8	4.762	5	4780	17550	70	128	105	18	88	40	80	II	20	M8×1P	11	169
	10		5	7160	23320		158										185
	12	6.35	5	7150	23300	75	174	118	18	100	46	92	II	20	M8×1P	11	185
	16		5	7120	23250		215										185
	20		3	4460	13520	75	185	118	18	100	46	92	II	20	M8×1P	11	112
	20	7.938	4	7810	22680	80	220	121	18	104	46	92	II	20	M8×1P	11	154
55	12	6.35	5	7340	25280	80	174	118	18	100	46	92	II	20	M8×1P	11	198
63	10	6.35	5	7800	29210	88	164	135	22	115	50	100	II	20	M8×1P	14	220
	16	9.525	5	13640	43620	102	228	147	20	127	56	112		25			257
80	20		5	15350	56760		283										305
	25	9.525	4	12530	44860	118	296	165	25	145	65	130	II	25	M8×1P	14	245
	30		3	9610	32980		254										185

Coam and Cam are the modified static and dynamic load capacities,calculated according to ISO-3408-5

13.3 External Ball Circulation Nuts

Features:

- Lower noise due to longer ball circulation paths.
- Offers smoother ball circulation.
- Offers better solution and quality for high lead or large diameter ballscrews.

Type:

There are two types of Ballnut of the external circulation Ballscrews. They are **immersion type** of Fig.13.2 and **extrusive type** of Fig.13.3. The **immersion type** means the ball circulation tubes are inside the circular surface of Ballnut as shown on specifications of this catalogue are of **immersion type**

In some cases, as per designs on customer's drawings, there are smaller outer diameters ballnuts required. Then the ball circulation tubes shall extrude out of Ballnut circular surface.

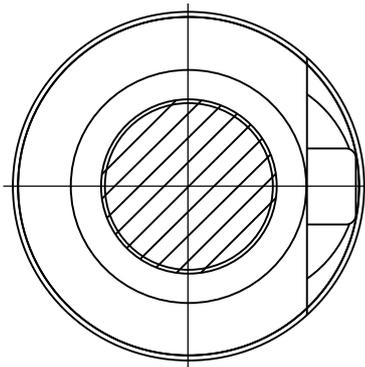


Fig.13.2 Immersion type

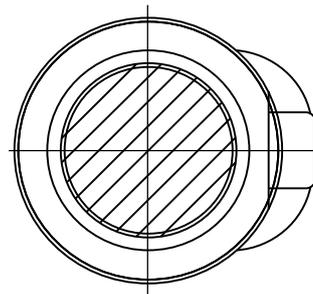
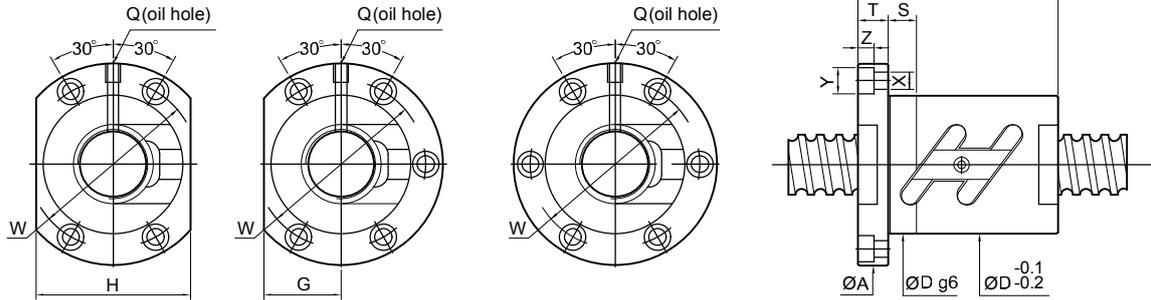


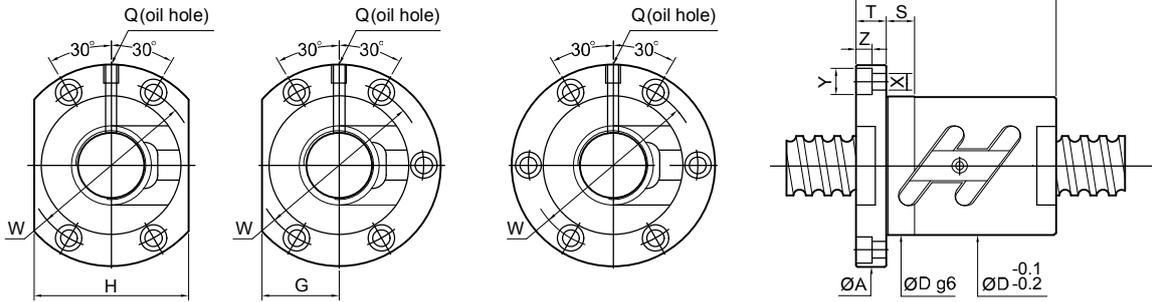
Fig.13.3 Extrusive type



Unit: mm

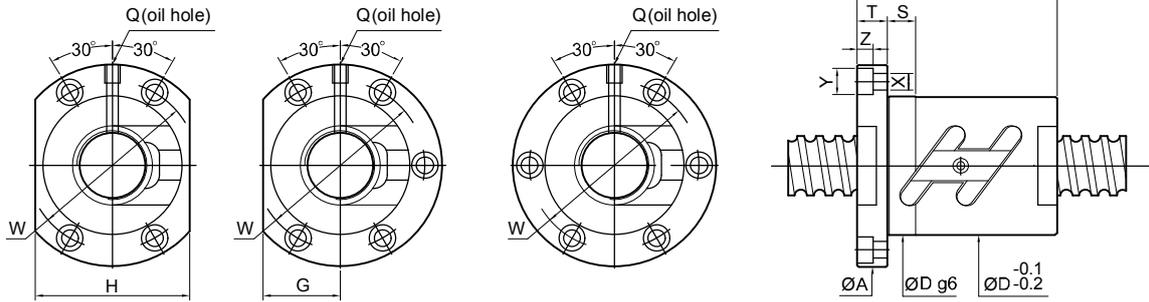
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
10	3	2.000	2.5 \times 1	250	430		37											9	
	4	2.000	2.5 \times 1	250	430	26	40	46	10	36	14	28	10	4.5	8	4.5	M6 \times 1P	9	
	5	2.000	2.5 \times 1	250	430		42											9	
12	4	2.381	2.5 \times 1	380	640		40											12	
	5	2.381	2.5 \times 1	380	640	30	42	50	10	40	16	32	10	4.5	8	4.5	M6 \times 1P	12	
14	4	2.381	2.5 \times 1	410	750		40											14	
	5	3.175	2.5 \times 1	675	1145	34	42	57	11	45	17	34	10	4.5	9.5	5.5	M6 \times 1P	15	
15	4	2.381	2.5 \times 1	420	800		40											14	
	5	3.175	2.5 \times 1	680	1210	34	42	57	10	45	17	34	10	5.5	9.5	5.5	M6x1P	15	
	10	3.175	2.5 \times 1	680	1210		55											16	
16	4	2.381	1.5 \times 2	490	1010		44											18	
			2.5 \times 1	430	850	34	41	57	11	45	17	34	10	5.5	9.5	5.5	M6 \times 1P	15	
			3.5 \times 1	560	1180		42												21
	5	3.175	1.5 \times 2	805	1525		45												19
			2.5 \times 1	690	1270	40	41	63	11	51	21	42	15	5.5	9.5	5.5	M6 \times 1P	16	
			2.5 \times 2	1250	2540		56												31
			3.5 \times 1	920	1780		46												22
	6	3.175	1.5 \times 2	805	1525		52												19
			2.5 \times 1	690	1270	40	44	63	11	51	21	42	15	5.5	9.5	5.5	M6 \times 1P	16	
			3.5 \times 1	920	1780		52											22	
10	3.175	2.5 \times 1	690	1270	40	56	63	11	51	21	42	15	5.5	9.5	5.5	M6 \times 1P	16		
20	4	2.381	1.5 \times 2	530	1270		44											21	
			2.5 \times 1	480	1060	40	40	63.5	11	51	21	42	10	5.5	9.5	5.5	M6 \times 1P	18	
			2.5 \times 2	820	2120		50						15						35
			3.5 \times 1	600	1480		43						10						25
	5	3.175	1.5 \times 2	965	2070		45												24
			2.5 \times 1	830	1730	44	42	67	11	55	26	52	10	5.5	9.5	5.5	M6 \times 1P	20	
			2.5 \times 2	1510	3460		56						15						39
			3.5 \times 1	1110	2420		46						15						26
	6	3.969	1.5 \times 2	1285	2545		56												24
			2.5 \times 1	1100	2120	48	49	71	11	59	27	54	10	5.5	9.5	5.5	M6 \times 1P	20	
			2.5 \times 2	1470	2970		56						15						28
			3.5 \times 1	1470	2970		56						15						28
8	3.969	1.5 \times 2	1285	2545		61												24	
		2.5 \times 1	1100	2120	48	54	75	13	61	27	54	15	6.6	11	6.5	M6 \times 1P	20		
		2.5 \times 2	1470	2970		62						15						28	
		3.5 \times 1	1470	2970		62						15						28	

FSWC



Unit: mm

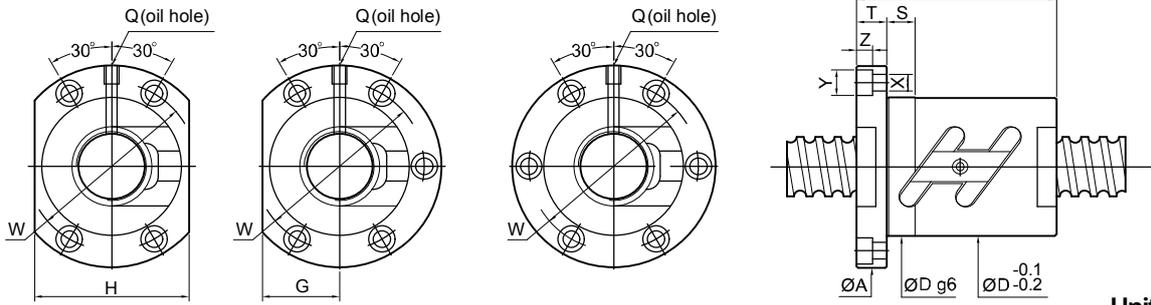
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/µm		
O.D.	LEAD			Dynamic (1×10 ⁵ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z				
													Q							
25	4	2.381	1.5×2	600	1630	44												26		
			2.5×1	510	1355	46	40	69	11	57	26	52	15	5.5	9.5	5.5	M6×1P	22		
			2.5×2	930	2710	49	49												42	
			3.5×1	680	1900	42	42												30	
	5	3.175	3.175	1.5×2	1065	2575	45												28	
				2.5×1	910	2150	50	41	73	11	61	28	56	15	5.5	9.5	5.5	M6×1P	24	
				2.5×2	1650	4300	56	56												46
				3.5×1	1210	3010	46	46												33
	6	3.969	3.969	1.5×2	1420	3215	56												29	
				2.5×1	1210	2680	53	49	76	11	64	29	58	15	5.5	9.5	5.5	M6×1P	24	
				2.5×2	2190	5360	62	62												47
				3.5×1	1610	3750	56	56												34
	8	4.762	4.762	1.5×2	1820	3840	61												30	
				2.5×1	1560	3200	58	61	85	13	71	32	64	15	6.6	11	6.5	M6×1P	25	
				3.5×1	2080	4480	66	66												35
				1.5×2	1820	3840	71	71												30
	10	4.762	4.762	2.5×1	1560	3200	58	65	85	15	71	32	64	15	6.6	11	6.5	M6×1P	25	
				3.5×1	2080	4480	75	75												35
				2.5×1	1210	2680	53	60	76	11	64	32	64	15	5.5	9.5	5.5	M6×1P	24	
				1.5×2	1110	2960	46	46												31
	28	5	3.175	2.5×1	950	2470	55	42	83	12	69	31	62	15	6.6	11	6.5	M8×1P	26	
				2.5×2	1720	4940	56	56												50
				3.5×1	1270	3460	47	47												36
				1.5×2	1480	3605	57	57												32
6		3.969	3.969	2.5×1	1270	3000	55	50	83	12	69	31	62	15	6.6	11	6.5	M8×1P	26	
				2.5×2	2300	6000	63	63												51
				3.5×1	1690	4200	57	57												37
				1.5×2	1935	4325	65	65												33
8		4.762	4.762	2.5×1	1650	3600	60	63	93	15	76	36	72	15	9	14	8.5	M8×1P	28	
				3.5×1	2200	5040	68	68												38
				1.5×2	1935	4325	74	74												33
				2.5×1	1650	3600	60	67	93	15	76	36	72	15	9	14	8.5	M8×1P	28	
10	4.762	4.762	3.5×1	2200	5040	77	77											38		



Unit: mm

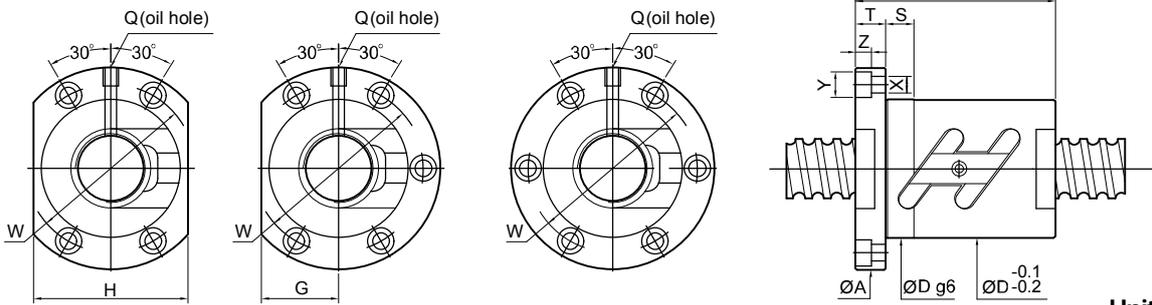
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		S	X	Y			Z
32	4	2.381	2.5 \times 1	565	1750	54	40	81	12	67	32	64	15	6.6	11	6.5	M6 \times 1P	26	
			2.5 \times 2	1020	3500		50											50	50
	5	3.175	1.5 \times 2	1180	3410	58	47	85	12	71	32	64	15	6.6	11	6.5	M8 \times 1P	34	
			2.5 \times 1	1010	2840		43											43	
			2.5 \times 2	1830	5680		57											57	57
			2.5 \times 3	2590	8520		72											72	72
			3.5 \times 1	1350	3980		47											47	47
	6	3.969	1.5 \times 2	1560	4135	62	57	88	12	75	34	68	15	6.6	11	6.5	M8 \times 1P	29	
			2.5 \times 1	1330	3450		45											45	
			2.5 \times 2	2410	6900		63											63	63
	8	4.762	1.5 \times 2	2010	5010	66	64	98	15	82	38	76	15	9	14	8.5	M8 \times 1P	35	
			2.5 \times 1	1720	4180		63											63	
			2.5 \times 2	3120	8360		80											80	80
			3.5 \times 1	2300	5850		68											68	68
	10	6.35	1.5 \times 2	3000	6530	74	78	108	15	90	41	82	15	9	14	8.5	M8 \times 1P	30	
			2.5 \times 1	2570	5440		68											68	
			2.5 \times 2	4660	10880		97											97	97
	12	6.35	1.5 \times 2	3000	6530	74	88	108	18	90	41	82	15	9	14	8.5	M8 \times 1P	36	
2.5 \times 1			2570	5440	77		77												
2.5 \times 2			4660	10880	110		110											110	
36	5	3.175	1.5 \times 2	1240	3850	65	50	98	15	82	38	76	15	9	14	8.5	M8 \times 1P	38	
			2.5 \times 2	1920	6420		60											60	
			2.5 \times 3	2720	9630		75											75	75
			3.5 \times 1	1410	4490		50											50	50
	6	3.969	2.5 \times 2	2600	7900	65	66	98	15	82	38	76	15	9	14	8.5	M8 \times 1P	62	
			2.5 \times 3	3680	11850		84											84	84
	10	6.35	1.5 \times 2	3180	7410	75	81	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	38	
			2.5 \times 1	2720	6180		71											71	
			2.5 \times 2	4930	12360		103											103	103
	12	6.35	1.5 \times 2	3630	8650	75	81	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	41	
			2.5 \times 1	2720	6180		77											77	
			2.5 \times 2	4930	12360		110											110	110
12	6.35	2.5 \times 1	2720	6180	75	77	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	35		
		2.5 \times 2	4930	12360		110											110	110	
12	6.35	3.5 \times 1	3630	8650	75	91	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	48		
		3.5 \times 1	3630	8650		91											91	91	

FSWC



Unit: mm

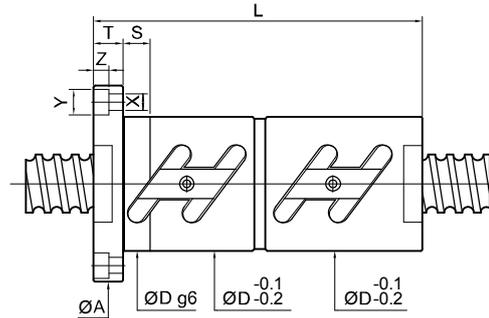
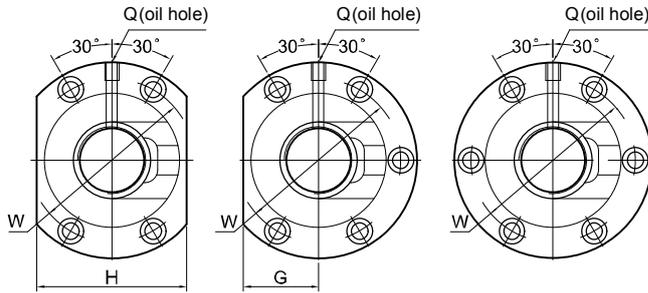
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS			
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		S	X	Y			Z	Q	kgf/μm
40	5	3.175	1.5x2	1280	4275	67	50												41		
			2.5x1	1090	3560		48													34	
			2.5x2	1980	7120		60	101	15	83	39	78	15	9	14	8.5	M8x1P			66	
			2.5x3	2800	10680		75														98
			3.5x1	1450	4980		50														47
	6	3.969	1.5x2	1750	5300	70	60												42		
			2.5x1	1500	4420		53													35	
			2.5x2	2720	8840		66	104	15	86	40	80	15	9	14	8.5	PT1/8x			69	
			2.5x3	3850	13260		84														101
			3.5x1	2000	6190		60														49
	8	4.762	1.5x2	2220	6320	74	64												43		
			2.5x1	1900	5270		63													36	
			2.5x2	3450	10540		83	108	15	90	41	82	15	9	14	8.5	PT1/8x			70	
			3.5x1	2540	7380		68														50
			2.5x2	3370	8335		81														45
	10	6.35	2.5x1	2880	6950	82	71												35		
			2.5x2	5220	13900		103	124	18	102	47	94	20	11	17.5	11	PT1/8x			74	
			3.5x1	3840	9730		81														52
			2.5x1	2880	6950		77														38
			2.5x2	5220	13900		86	112	128	18	106	48	96	20	11	17.5	11	PT1/8x			74
	12	6.35	3.5x1	3840	9730	86	91												52		
			2.5x1	2880	6950		77													38	
			2.5x2	5220	13900		86	112	128	18	106	48	96	20	11	17.5	11	PT1/8x			74
			3.5x1	3840	9730		91														52
2.5x2			5480	15700	88		101													81	
2.5x3	7760	23550	131	132		18	110	50	100	20	11	17.5	11	PT1/8x			119				
45	12	7.144	2.5x1	3550	8950	90	84											43			
			2.5x2	6440	17900		112	132	18	110	50	100	20	11	17.5	11	PT1/8x			82	
			2.5x3	9120	26850		148													121	



Unit: mm

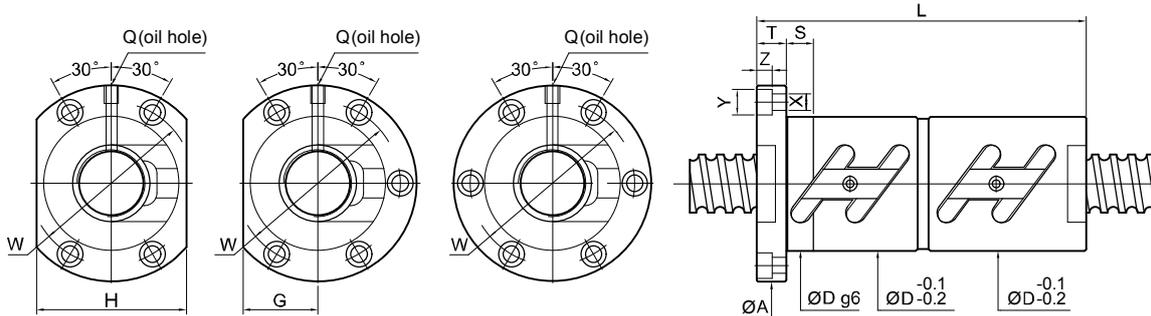
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
50	5	3.175	1.5 \times 2	1410	5305	50												49	
			1.5 \times 3	2000	7960	80	60	114	15	96	43	86	15	9	14	8.5	PT1/8 \times	72	
			2.5 \times 2	2190	8840	60	60												80
			3.5 \times 1	1610	6190	50	50												57
	6	3.969	1.5 \times 2	1920	6600	60												50	
			2.5 \times 2	2980	11000	84	67	118	15	100	45	90	15	9	14	8.5	PT1/8 \times	82	
			2.5 \times 3	4220	16500	85	85												121
			3.5 \times 1	2190	7700	60	60												58
	8	4.762	1.5 \times 2	2515	7810	68												52	
			2.5 \times 2	3900	13020	87	86	128	18	107	49	98	20	11	17.5	11	PT1/8 \times	85	
			2.5 \times 3	5520	19530	109	109												125
			3.5 \times 1	2870	9110	71	71												60
	10	6.35	1.5 \times 2	3725	10450	81												54	
			2.5 \times 1	3190	8710	71	71												45
			2.5 \times 2	5790	17420	93	101	135	18	113	51	102	20	11	17.5	11	PT1/8 \times	88	
			2.5 \times 3	8200	26130	131	131												130
	12	7.144	2.5 \times 1	3700	10050	88												46	
			2.5 \times 2	6710	20100	100	116	146	22	122	55	110	20	14	20	13	PT1/8 \times	89	
55	10	6.35	2.5 \times 2	6005	19540	102	101	144	18	122	54	108	20	11	17.5	11	PT1/8 \times	95	
			2.5 \times 3	8510	29310	131	131												140
63	10	6.35	2.5 \times 1	3510	11200	75											55		
			2.5 \times 2	6370	22400	108	105	154	22	130	58	116	20	14	20	13	PT1/8 \times	106	
	2.5 \times 3	9020	33600	135	135												156		
	12	7.938	2.5 \times 1	4770	13780	88												59	
2.5 \times 2			8650	27560	115	124	161	22	137	61	122	20	14	20	13	PT1/8 \times	113		
2.5 \times 3	12250	41340	160	160												167			
80	10	6.35	2.5 \times 2	7130	28500	130	105	176	22	152	66	132	20	14	20	13	PT1/8 \times	129	
			2.5 \times 3	10100	42750	134	134												190
	12	7.938	2.5 \times 2	9710	35560	136	124	182	22	158	68	136	20	14	20	13	PT1/8 \times	137	
			2.5 \times 3	13760	53340	160	160												202
16	9.525	2.5 \times 2	16450	59280	143	160	204	28	172	77	154	30	18	26	17.5	PT1/8 \times	170		
		2.5 \times 3	23300	88920	208	208												250	

FDWC



Unit: mm

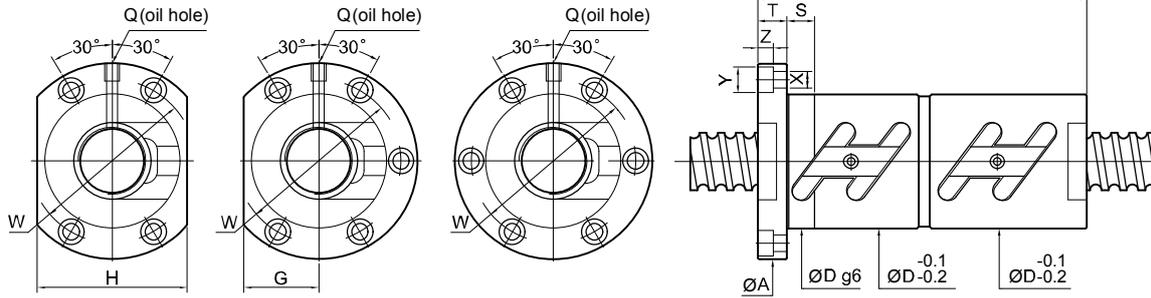
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m		
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z				
16	4	2.381	1.5 \times 2	490	1010	81												36		
			2.5 \times 1	430	850	34	70	57	11	45	17	34	15	5.5	9.5	5.5	M6 \times 1P	30		
			3.5 \times 1	560	1180	78													42	
	5	3.175	1.5 \times 2	805	1525	90													39	
			2.5 \times 1	690	1270	40	77	63	11	51	20	40	15	5.5	9.5	5.5	M6 \times 1P	33		
			2.5 \times 2	1250	2540	105													63	
			3.5 \times 1	920	1780	88													45	
	6	3.175	1.5 \times 2	805	1525	90													39	
			2.5 \times 1	690	1270	40	80	63	11	51	20	40	15	5.5	9.5	5.5	M6 \times 1P	33		
				3.5 \times 1	920	1780	90												45	
	20	4	2.381	1.5 \times 2	530	1270	83													42
				2.5 \times 1	480	1060	40	67	63	11	51	24	48	15	5.5	9.5	5.5	M6 \times 1P	36	
2.5 \times 2				820	2120	89													69	
3.5 \times 1				600	1480	75													49	
5		3.175	1.5 \times 2	965	2070	99														47
			2.5 \times 1	830	1730	44	76	67	11	55	26	52	15	5.5	9.5	5.5	M6 \times 1P	40		
			2.5 \times 2	1510	3460	105													77	
			3.5 \times 1	1110	2420	80													55	
6		3.969	1.5 \times 2	1285	2545	98														49
			2.5 \times 1	1100	2120	48	82	71	11	59	27	54	15	5.5	9.5	5.5	M6 \times 1P	41		
			3.5 \times 1	1470	2970	93													45	
			1.5 \times 2	1285	2545	108														49
8	3.969	2.5 \times 2	1100	2120	48	102	75	13	61	28	56	15	6.6	11	6.5	M6 \times 1P	41			
		3.5 \times 1	1470	2970	110													56		



Unit: mm

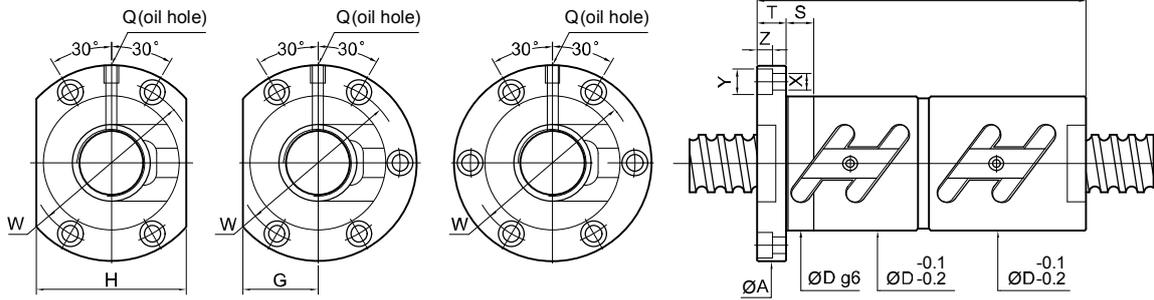
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/μm	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
25	4	2.381	1.5x2	600	1630	46	83	69	11	57	26	52	15	5.5	9.5	5.5	M6x1P	51	
			2.5x1	510	1355		67											43	
			2.5x2	930	2710		91											84	
			3.5x1	680	1900		75											59	
	5	3.175	2.5x2	1.5x2	1065	2575	50	80	73	11	61	28	56	15	5.5	9.5	5.5	M6x1P	57
				2.5x1	910	2150		77											48
				2.5x2	1650	4300		105											92
				3.5x1	1210	3010		86											65
	6	3.969	2.5x2	1.5x2	1420	3215	53	91	76	11	64	29	58	15	5.5	9.5	5.5	M6x1P	58
				2.5x1	1210	2680		82											49
				2.5x2	2190	5360		116											94
				3.5x1	1610	3750		93											67
8	4.762	2.5x2	1.5x2	1820	3840	58	111	85	13	71	32	64	15	6.6	11	6.5	M6x1P	60	
			2.5x1	1560	3200		95											50	
			3.5x1	2080	4480		111											69	
			3.5x1	2080	4480		138											69	
10	4.762	2.5x2	1.5x2	1820	3840	58	134	85	15	71	32	64	15	6.6	11	6.5	M6x1P	60	
			2.5x1	1560	3200		117											50	
			3.5x1	2080	4480		138											69	
			3.5x1	2080	4480		138											69	
28	5	3.175	1.5x2	1110	2960	55	86	83	12	69	31	62	15	6.6	11	6.5	M8x1P	62	
			2.5x1	950	2470		78											52	
			2.5x2	1720	4940		106											101	
			3.5x1	1270	3460		86											72	
	6	3.969	2.5x2	1.5x2	1480	3605	55	98	83	12	69	31	62	15	6.6	11	6.5	M8x1P	63
				2.5x1	1270	3000		89											53
				2.5x2	2300	6000		117											103
				3.5x1	1690	4200		94											73
	8	4.762	2.5x2	1.5x2	1935	4325	60	113	93	15	76	36	72	15	9	14	8.5	M8x1P	66
				2.5x1	1650	3600		97											55
				3.5x1	2200	5040		113											76
				3.5x1	2200	5040		134											76
10	4.762	2.5x2	1.5x2	1935	4325	60	134	93	15	76	36	72	15	9	14	8.5	M8x1P	66	
			2.5x1	1635	3600		117											55	
			3.5x1	2200	5040		138											76	
			3.5x1	2200	5040		138											76	

FDWC



Unit: mm

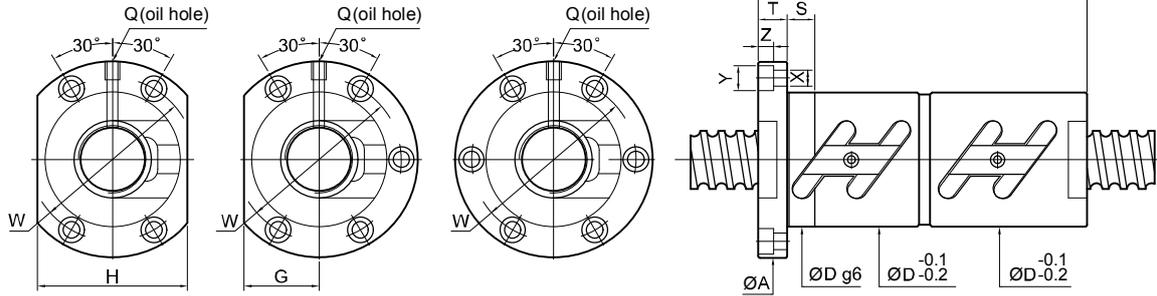
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/µm
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
													Dynamic (1×10 ⁶ REV.) Ca				Static Co	
32	4	2.381	2.5×1	565	1750	54	68	81	12	67	32	64	15	6.6	11	6.5	M6×1P	52
			2.5×2	1020	3500		90											101
	5	3.175	1.5×2	1180	3410	58	82	85	12	71	32	64	15	6.6	11	6.5	M8×1P	69
			2.5×1	1010	2840		78											58
			2.5×2	1830	5680		136											112
			2.5×3	2590	8520		136											164
	6	3.969	3.5×1	1350	3980	62	82	88	12	75	34	68	15	6.6	11	6.5	M8×1P	80
			1.5×2	1560	4135		100											70
			2.5×1	1330	3450		87											59
	8	4.762	2.5×2	2410	6900	66	123	98	15	82	38	76	15	9	14	8.5	M8×1P	114
			3.5×1	1770	4830		100											81
			1.5×2	2010	5010		113											76
2.5×1			1720	4180	106		64											
10	6.35	2.5×2	3120	8360	74	152	108	15	90	41	82	15	9	14	8.5	M8×1P	123	
		3.5×1	2300	5850		113											88	
		1.5×2	3000	6530		138											76	
		2.5×1	2570	5440		118											64	
12	6.35	2.5×2	4660	10880	74	177	108	18	90	41	82	15	9	14	8.5	M8×1P	123	
		3.5×1	3430	7620		148											88	
		1.5×2	3000	6530		160											76	
		2.5×1	2570	5440		137											64	
36	5	3.175	2.5×2	4660	10880	65	208	98	15	82	38	76	15	9	14	8.5	M8×1P	124
			3.5×1	3430	7620		160											88
			1.5×2	1240	3850		91											75
			2.5×1	1920	6420		110											123
	6	3.969	2.5×2	2720	9630	65	139	98	15	82	38	76	15	9	14	8.5	M8×1P	181
			3.5×1	1410	4490		90											87
			1.5×2	2600	7900		123											126
			2.5×1	3680	11850		159											187
	8	4.762	2.5×2	3265	9450	70	153	114	18	92	46	92	20	11	17.5	11	M8×1P	129
			3.5×1	3630	8650		151											96
			1.5×2	3180	7410		141											83
			2.5×1	2720	6180		131											70
10	6.35	2.5×2	4930	12360	75	180	118	18	98	45	90	15	11	17.5	11	M8×1P	136	
		3.5×1	3630	8650		151											96	
		1.5×2	3180	7410		141											83	
		2.5×1	2720	6180		131											70	
12	6.35	2.5×2	4930	12360	75	208	118	18	98	45	90	15	11	17.5	11	M8×1P	136	
		3.5×1	3630	8650		161											97	
		1.5×2	3180	7410		141											83	
		2.5×1	2720	6180		131											70	



Unit: mm

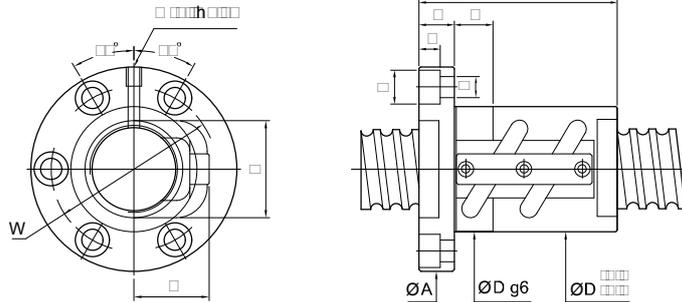
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/µm	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
40	5	3.175	1.5x2	1280	4275	88												82	
			2.5x1	1090	3560	84													69
			2.5x2	1980	7120	67	108	101	15	83	39	78	15	9	14	8.5	M8x1P		133
			2.5x3	2800	10680	139													196
			3.5x1	1450	4980	88													95
	6	3.969	1.5x2	1750	5300	103													85
			2.5x1	1500	4420	90													71
			2.5x2	2720	8840	70	123	104	15	86	40	80	15	9	14	8.5	PT1/8x		138
			2.5x3	3850	13260	159													202
			3.5x1	2000	6190	103													98
	8	4.762	1.5x2	2220	6320	124													86
			2.5x1	1900	5270	108													73
			2.5x2	3450	10540	74	108	15	90	41	82	15	9	14	8.5	PT1/8x		141	
			2.5x3	2540	7380	125													100
			3.5x1	2540	7380	125													100
	10	6.35	1.5x2	3370	8335	141													91
2.5x1			2880	6950	131													71	
2.5x2			5220	13900	82	124	18	102	47	94	20	11	17.5	11	PT1/8x		148		
2.5x3			3840	9730	151													105	
3.5x1			3840	9730	151													105	
12	6.35	2.5x1	2880	6950	137													76	
		2.5x2	5220	13900	86	208	128	18	106	48	96	20	11	17.5	11	PT1/8x		148	
		2.5x3	3840	9730	161													105	
		3.5x1	3840	9730	161													105	
		3.5x1	3840	9730	161													105	
45	6	3.969	2.5x2	2850	9870	80	123	114	15	96	48	96	15	9	14	8.5	PT1/8x	151	
			2.5x3	4035	14800	159													222
	8	4.762	2.5x2	3650	11780	85	158	127	18	105	52	104	20	11	17.5	11	PT1/8x	155	
			2.5x3	5175	17670	206													228
	10	6.35	2.5x2	5480	15700	88	180	132	18	110	50	100	20	11	17.5	11	PT1/8x	163	
			2.5x3	7760	23550	243													239
	12	7.144	2.5x1	3550	8950	90	140	132	18	110	50	100	20	11	17.5	11	PT1/8x	85	
			2.5x2	6440	17900	210													165

FDWC



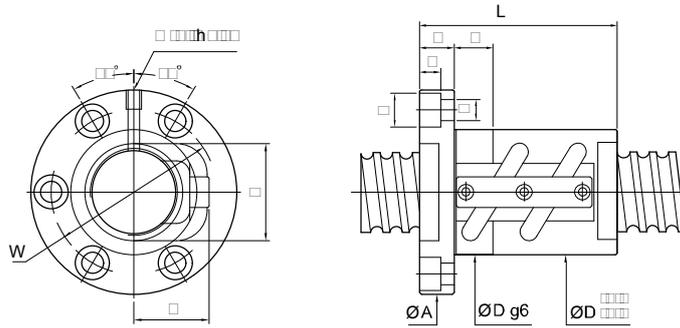
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS kgf/µm											
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q												
50	5	3.175	1.5x2	1410	5305	80	108	114	15	96	43	86	15	9	14	8.5	PT1/8x	98											
			1.5x3	2000	7960		128											144											
			2.5x2	2190	8840		113											159											
			3.5x1	1610	6190		108											114											
	6	3.969	1.5x2	1920	6600	84	111	118	15	100	45	90	15	9	14	8.5	PT1/8x	101											
			2.5x2	2980	11000		123											164											
			2.5x3	4220	16500		159											242											
			3.5x1	2190	7700		107											117											
	8	4.762	1.5x2	2515	7810	87	127	128	18	107	49	98	20	11	17.5	11	PT1/8x	104											
			2.5x2	3900	13020		156											170											
			2.5x3	5520	19530		208											250											
			3.5x1	2870	9110		127											121											
	10	6.35	1.5x2	3725	10450	93	151	180	135	18	113	51	102	20	11	17.5	11	PT1/8x	108										
			2.5x1	3190	8710		132												91										
			2.5x2	5790	17420		243												177										
			2.5x3	8200	26130		151												261										
	12	7.144	2.5x1	3700	10050	100	140	146	18	122	55	110	20	14	20	13	PT1/8x	92											
			2.5x2	6710	20100		210											179											
	55	10	6.35	2.5x2	6005	19540	102	181	144	18	122	54	108	20	11	17.5	11	PT1/8x	191										
				2.5x3	8510	29310		243											281										
	63	10	6.35	2.5x1	3510	11200	108	136	189	154	22	130	58	116	20	14	20	13	PT1/8x	110									
				2.5x2	6370	22400		249												213									
				2.5x3	9020	33600		115												313									
		12	7.938	2.5x1	4760	13820	115	144	161	22	137	61	122	20	14	20	13	PT1/8x	112										
2.5x2				8650	27560	214		218																					
2.5x3				14600	46200	122		280																					
16	9.525	2.5x1	8050	23100	122	200	178	28	150	69	138	20	18	26	17.5	PT1/8x	144												
		2.5x2	14600	46200		296											280												
80	10	6.35	2.5x2	7130	28500	130	189	176	22	152	66	132	20	14	20	13	PT1/8x	258											
			2.5x3	10100	42750		249											380											
	12	7.938	2.5x2	9710	35560	136	220	182	22	158	68	136	20	14	20	13	PT1/8x	265											
			2.5x3	13760	53340		292											391											
			2.5x2	16450	59280		143											290	204	28	172	77	154	30	18	26	17.5	PT1/8x	339
			2.5x3	23300	88920													386											500



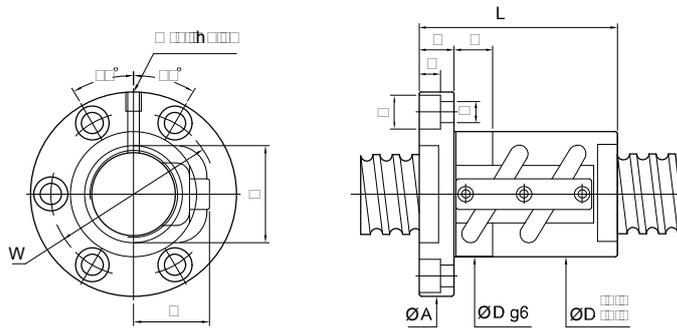
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/µm	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
14	4	2.381	2.5x1	410	750	25	40	45	10	35	10	5.5	9.5	5.5	19	21	M6x1P	14	
	5	3.175	2.5x1	675	1145	25	42	45	10	35	10	5.5	9.5	5.5	19	21	M6x1P	15	
15	4	2.381	2.5x1	420	800	28.5	40	48	10	38	10	5.5	9.5	5.5	17	22	M6x1P	14	
	5	3.175	2.5x1	680	1210	28.5	42	48	10	38	10	5.5	9.5	5.5	17	22	M6x1P	15	
16	5	3.175	1.5x2	805	1525	31	50	54	12	41	15	5.5	9.5	5.5	20	23	M6x1P	19	
			2.5x1	690	1270		45											16	20
			2.5x2	1250	2540		60											17	31
			3.5x1	920	1780		50											18	22
20	5	3.175	1.5x2	965	2070	35	50	58	12	46	15	5.5	9.5	5.5	22	27	M6x1P	24	
			2.5x1	830	1730		45											20	
			2.5x2	1510	3460		60											26	
			3.5x1	1110	2420		50											26	
25	6	3.969	1.5x2	1285	2545	42	66	68	12	55	15	5.5	9.5	5.5	28	33	M6x1P	24	
			2.5x1	1100	2120		36											20	
			2.5x2	2190	5360		68											27	
			3.5x1	1610	3750		65											27	
28	5	3.175	1.5x2	1420	3215	44	65	70	12	56	15	6.6	11	6.5	28	34	M6x1P	29	
			2.5x1	1210	2680		50											24	
			2.5x2	2190	5360		68											27	
			3.5x1	1610	3750		65											27	
28	6	3.969	1.5x2	1820	3840	44	75	70	12	56	15	6.6	11	6.5	28	34	M6x1P	30	
			2.5x1	1560	3200		45											25	
			2.5x2	2080	4480		75											25	
			3.5x1	1690	4200		55											25	
28	5	3.175	1.5x2	1110	2960	44	50	70	12	56	15	6.6	11	6.5	28	34	M6x1P	31	
			2.5x1	950	2470		45											26	
			2.5x2	1720	4940		60											26	
			3.5x1	1270	3460		50											26	
28	6	3.969	1.5x2	1480	3605	44	55	70	12	56	15	6.6	11	6.5	28	36	M6x1P	32	
			2.5x1	1270	3000		50											26	
			2.5x2	2300	6000		68											26	
			3.5x1	1690	4200		55											26	



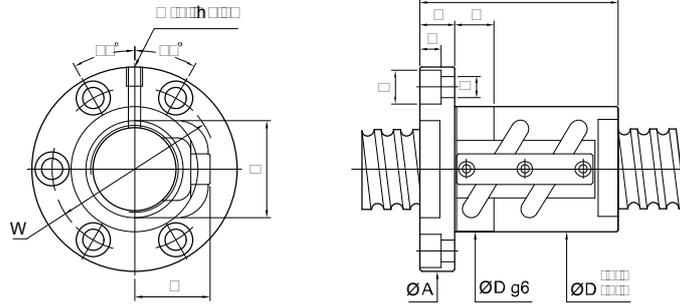
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE			FIT	BOLT			RETURN TUBE		OIL HOLE	STIFFNESS			
O.D.	LEAD			Dynamic (10 ⁶ REV) Ca	Static Co	Dg6	L	A	T	W		S	X	Y	Z	U			V	Q	
											kgf/µm										
32	5	3.175	1.5x2	1180	3410	50													34		
			2.5x1	1010	2840	45														29	
			2.5x2	1830	5680	50	60	76	12	63	15	6.6	11	6.5	30	38	M6x1P			56	
			2.5x3	2590	8520	75															82
			3.5x1	1350	3980	50															40
	6	3.969	1.5x2	1560	4135	55														35	
			2.5x1	1330	3450	50														29	
			2.5x2	2410	6900	52	68	78	12	65	15	6.6	11	6.5	32	39	M6x1P			57	
			3.5x1	1770	4830	55															40
	8	4.762	1.5x2	2010	5010	70														36	
			2.5x1	1720	4180	62														30	
			2.5x2	3120	8360	54	86	88	16	70	15	9	14	8.5	33	40	M6x1P			59	
3.5x1			2300	5850	70															42	
10	6.35	1.5x2	3000	6530	78														38		
		2.5x1	2570	5440	68														32		
		2.5x2	4660	10880	57	98	91	16	73	15	9	14	8.5	37	44	M8x1P			61		
		3.5x1	3430	7620	78															44	
36	6	3.969	2.5x1	1430	3950	50													33		
			2.5x2	2600	7900	55	68	82	12	68	15	6.6	11	6.5	32	42	M6x1P			63	
	10	6.35	1.5x2	3180	7410	82														41	
			2.5x1	2720	6180	72														35	
			2.5x2	4930	12360	62	102	104	18	82	20	11	17.5	11	40	49	M6x1P			68	
			3.5x1	3630	8650	82															48



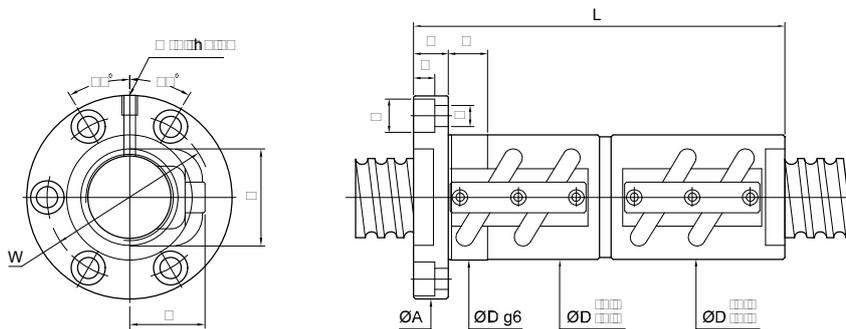
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT	BOLT			RETURN TUBE		OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		S	X	Y	Z	U			V
40	5			3.175	1.5 \times 2	1280	4270		55										
		2.5 \times 1	1090		3560		50												34
		2.5 \times 2	1980		7120	58	65	92	16	72	15	9	14	8.5	34	46	M8 \times 1P		66
		2.5 \times 3	2800		10680		80												98
		3.5 \times 1	1450		4980		55												47
	6	3.969	1.5 \times 2	1750	5300		60												42
			2.5 \times 1	1500	4420		54												35
			2.5 \times 2	2720	8840	60	72	94	16	76	15	9	14	8.5	36	47	PT1/8 \times		69
			2.5 \times 3	3850	13260		90												101
			3.5 \times 1	2000	6190		60												49
	8	4.762	1.5 \times 2	2220	6320		70												43
			2.5 \times 1	1900	5270		62												36
			2.5 \times 2	3450	10540	62	86	96	16	78	15	9	14	8.5	38	48	PT1/8 \times		70
			2.5 \times 3	4800	14400		96												120
			3.5 \times 1	2540	7380		70												50
	10	6.35	1.5 \times 2	3370	8335		82												45
2.5 \times 1			2880	6950		72												35	
2.5 \times 2			5220	13900	65	102	106	18	85	20	11	17.5	11	42	52	PT1/8 \times		74	
2.5 \times 3			7350	20250		120												180	
3.5 \times 1			3840	9730		82												52	
45	10	6.35	2.5 \times 1	3020	7850	70	74	112	18	90	20	11	17.5	11	48	58	PT1/8 \times	42	
			2.5 \times 2	5480	15700		104												81
	12	7.144	2.5 \times 1	3550	8950	74	87	122	18	97	20	14	20	13	49	60	PT1/8 \times	43	
			2.5 \times 2	6440	17900		123												82



Unit: mm

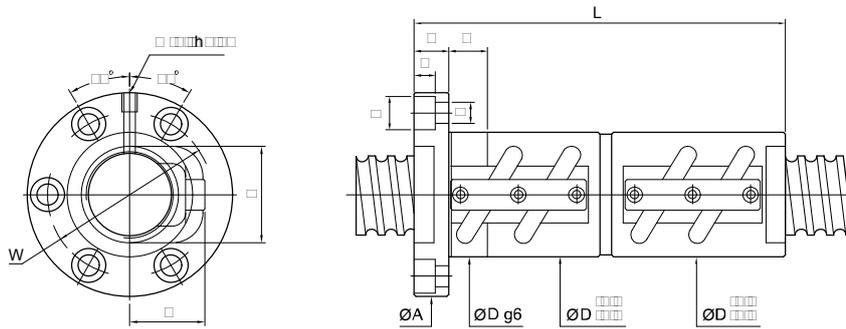
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/μm	
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
																			U
50	5	3.175	1.5×2	1410	5305	63												49	
			1.5×3	2000	7960	70	73	104	16	86	15	9	14	8.5	40	56	PT1/8	72	
			3.5×1	1610	6190	63													57
	6	3.969	2.5×2	2980	11000	72	75	106	16	88	15	9	14	8.5	43	57	PT1/8	82	
			2.5×3	4220	16500	93													121
	8	4.762	2.5×2	3900	13020	75	88	116	18	95	20	11	17.5	11	45	59	PT1/8	85	
			2.5×3	5520	19530	112													125
	10	6.35	1.5×2	3725	10450	84													54
			2.5×1	3190	8710	74													45
			2.5×2	5790	17420	78	104	119	18	98	20	11	17.5	11	48	62	PT1/8	88	
			2.5×3	8200	26130	134													130
	12	7.144	2.5×1	3700	10050	82	87	128	22	105	20	14	20	13	52	64	PT1/8	46	
2.5×2			6710	20100	123													89	
55	10	6.35	2.5×2	6005	19540	84	100	125	18	103	20	11	17.5	11	54	68	PT1/8	95	
			2.5×3	8150	29310	130													140
63	10	6.35	2.5×1	3510	11200	77												55	
			2.5×2	6370	22400	90	107	132	20	110	20	11	17.5	11	53	74	PT1/8	106	
			2.5×3	9020	33600	137													156
	12	7.938	2.5×1	4770	13780	88													59
			2.5×2	8650	27560	94	124	142	22	117	20	14	20	13	57	76	PT1/8	113	
	2.5×3	12250	41340	160														167	
16	9.525	2.5×1	8050	23100	100	105	150	22	123	20	14	20	13	62	78	PT1/8	72		
		2.5×2	14600	46200	153													140	
80	10	6.35	2.5×2	7130	28500	115	109	163	22	137	20	14	20	13	64	91	PT1/8	129	
			2.5×3	10100	42750	139													190
	12	7.938	2.5×2	9710	35560	120	125	169	22	143	25	14	20	13	67	93	PT1/8	137	
			2.5×3	13760	53340	159													202
	16	9.525	2.5×2	16450	59280	125	156	190	28	154	25	18	26	17.5	70	94	PT1/8	170	
			2.5×3	23300	88920	204													250



Unit: mm

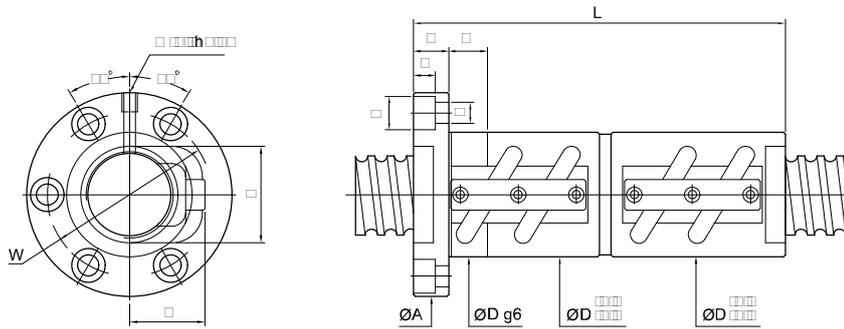
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/µm
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V		
16	5	3.175	1.5x2	805	1525	31	90	54	12	41	15	5.5	9.5	5.5	20	23	M6x1P	39
			2.5x1	690	1270		80											33
			2.5x2	1250	2540		110											63
			3.5x1	920	1780		90											45
20	5	3.175	1.5x2	965	2070	35	90	58	12	46	15	5.5	9.5	5.5	22	27	M6x1P	47
			2.5x1	830	1730		80											40
			2.5x2	1510	3460		110											77
			3.5x1	1110	2420		90											55
20	6	3.969	1.5x2	1285	2545	36	104	60	12	47	15	5.5	9.5	5.5	23	28	M6x1P	49
			2.5x1	1100	2120		92											41
			2.5x2	1470	2970		104											56
			3.5x1	1470	2970		104											56
25	5	3.175	1.5x2	1065	2575	40	90	64	12	52	15	5.5	9.5	5.5	26	31	M6x1P	57
			2.5x1	910	2150		80											48
			2.5x2	1650	4300		110											92
			3.5x1	1210	3010		90											65
25	6	3.969	1.5x2	1420	3215	42	104	68	12	55	15	5.5	9.5	5.5	28	33	M6x1P	58
			2.5x1	1210	2680		92											49
			2.5x2	2190	5360		128											94
			3.5x1	1610	3750		104											67
25	10	4.762	1.5x2	1820	3840	45	136	72	16	58	15	6.6	11	6.5	29	34	M6x1P	60
			2.5x1	1560	3200		122											50
			2.5x2	2080	4480		136											69
			3.5x1	2080	4480		136											69
28	5	3.175	1.5x2	1110	2960	44	90	70	12	56	15	6.6	11	6.5	28	34	M6x1P	62
			2.5x1	950	2470		80											52
			2.5x2	1720	4940		110											101
			3.5x1	1270	3460		90											72
28	6	3.969	1.5x2	1480	3605	44	110	70	12	56	15	6.6	11	6.5	28	36	M6x1P	63
			2.5x1	1270	3000		98											53
			2.5x2	2300	6000		134											103
			3.5x1	1690	4200		110											73

FDVC



Unit: mm

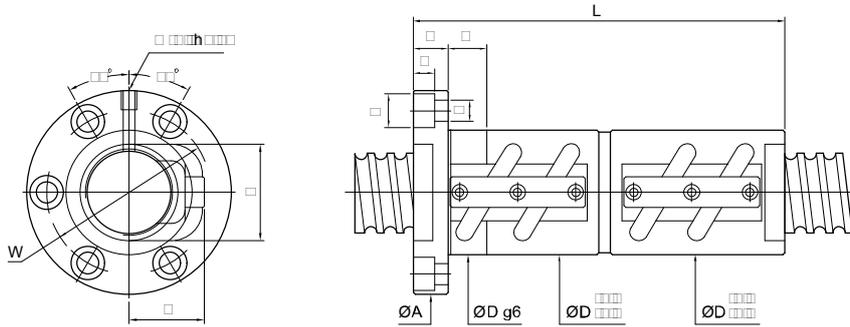
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
32	5	3.175	1.5 \times 2	1180	3410	90												69	
			2.5 \times 1	1010	2840	80													58
			2.5 \times 2	1830	5680	50	110	76	12	63	15	6.6	11	6.5	30	38	M6 \times 1P		112
			2.5 \times 3	2590	8520	140													164
			3.5 \times 1	1350	3980	90													80
	6	3.969	1.5 \times 2	1560	4135	104													70
			2.5 \times 1	1330	3450	92													59
			2.5 \times 2	2410	6900	52	128	78	12	65	15	6.6	11	6.5	32	39	M6 \times 1P		114
			3.5 \times 1	1770	4830	104													81
	8	4.762	1.5 \times 2	2010	5010	126													73
			2.5 \times 1	1720	4180	110													61
			2.5 \times 2	3120	8360	54	158	88	16	70	15	9	14	8.5	33	40	M6 \times 1P		118
3.5 \times 1			2300	5850	126													84	
10	6.35	1.5 \times 2	3000	6530	142													76	
		2.5 \times 1	2570	5440	122													64	
		2.5 \times 2	4660	10880	57	182	91	16	73	15	9	14	8.5	37	44	M8 \times 1P		123	
		3.5 \times 1	3430	7620	142													88	
36	6	3.969	2.5 \times 1	1430	3950	92												65	
			2.5 \times 2	2600	7900	55	128	82	12	68	15	6.6	11	6.5	32	42	M6 \times 1P		126
	10	6.35	1.5 \times 2	3180	7410	144													83
			2.5 \times 1	2720	6180	124													70
			2.5 \times 2	4930	12360	62	184	104	18	82	20	11	17.5	11	40	49	M6 \times 1P		136
			3.5 \times 1	3630	8650	144													90



Unit: mm

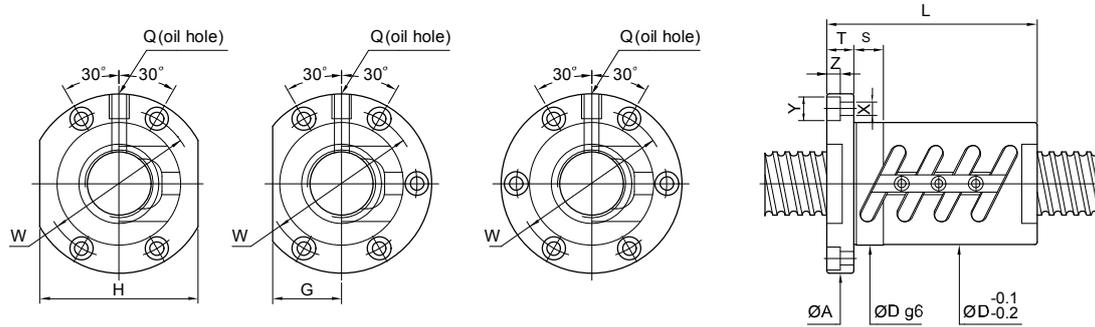
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT		BOLT			RETURN TUBE		OIL HOLE	STIFFNESS kgf/µm	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	S	X	Y	Z	U	V	Q			
40	5	3.175	1.5x2	1280	4275	94												M8x1P	82	
			2.5x1	1090	3560	84														69
			2.5x2	1980	7120	58	114	92	16	72	15	9	14	8.5	34	46				133
			2.5x3	2800	10680	144														196
			3.5x1	1450	4980	94														95
	6	3.969	1.5x2	1750	5300	108														85
			2.5x1	1500	4420	96														71
			2.5x2	2720	8840	60	132	94	16	76	15	9	14	8.5	36	47		PT1/8x	138	
			2.5x3	3850	13260	168														202
			3.5x1	2000	6190	108														98
	8	4.762	1.5x2	2220	6320	126														86
			2.5x1	1900	5270	110														73
			2.5x2	3450	10540	62	158	96	16	78	15	9	14	8.5	38	48		PT1/8x	141	
			3.5x1	2540	7380	126														100
			10	6.35	1.5x2	3370	8335	152												
10	6.35	2.5x1	2880	6950	132														71	
		2.5x2	5220	13900	65	192	106	18	85	20	11	17.5	11	42	52		PT1/8x	148		
		3.5x1	3840	9730	152														105	
		2.5x1	3020	7850	70	134	112	18	90	20	11	17.5	11	48	58		PT1/8x	84		
		2.5x2	5480	15700	70	194													163	
45	12	7.144	2.5x1	3550	8950	74	158	122	18	97	20	14	20	13	49	60		PT1/8x	85	
			2.5x2	6440	17900	74	230													165

FDVC



Unit: mm

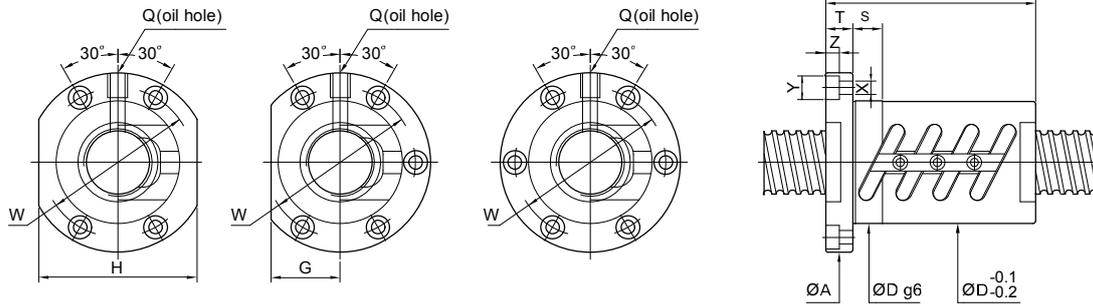
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/µm	
O.D.	LEAD			Dynamic (1×10 ⁶ REV) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
50	5	3.175	1.5×2	1410	5305	107												98	
			1.5×3	2000	7960	70	127	104	16	86	15	9	14	8.5	40	56	PT1/8	144	
			3.5×1	1610	6190	107													114
	6	3.969	2.5×2	2980	11000	72	134												164
			2.5×3	4220	16500	170	106	16	88	15	9	14	8.5	43	57	PT1/8	242		
	8	4.762	2.5×2	3900	13020	75	160												170
			2.5×3	5520	19530		208	116	18	95	20	11	17.5	11	45	59	PT1/8	250	
	10	6.35	1.5×2	3725	10450		154												119
			2.5×1	3190	8710		134												91
			2.5×2	5790	17420	78	194	119	18	98	20	11	17.5	11	48	62	PT1/8	177	
			2.5×3	8200	26130	254													261
	12	7.144	2.5×1	3700	10050	82	160												92
2.5×2			6710	20100	232		128	22	105	20	14	20	13	52	64	PT1/8	179		
55	10	6.35	2.5×2	6005	19540	84	194											191	
			2.5×3	8510	29310		254	125	18	103	20	11	17.5	11	54	68	PT1/8	281	
63	10	6.35	2.5×1	3510	11200		136											110	
			2.5×2	6370	22400	90	196	132	20	110	20	11	17.5	11	53	74	PT1/8	213	
			2.5×3	9020	33600	256													313
	12	7.938	2.5×1	4760	13820		160												112
			2.5×2	8650	27560	94	232	142	22	117	20	14	20	13	57	76	PT1/8	218	
			2.5×3	12250	41340	304													322
16	9.525	2.5×1	8050	23100	100	200												144	
		2.5×2	14600	46200		296	150	22	123	20	14	20	13	62	78	PT1/8	280		
80	10	6.35	2.5×2	7130	28500	115	200											258	
			2.5×3	10100	42750		260	163	22	137	20	14	20	13	64	91	PT1/8	380	
	12	7.938	2.5×2	9710	35560	120	232											265	
			2.5×3	13760	53340		302	169	22	143	25	14	20	13	67	93	PT1/8	391	
	16	9.525	2.5×2	16450	59280	125	302												339
			2.5×3	23300	88920		398	190	28	154	25	18	26	17.5	70	94	PT1/8	500	



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
20	4	2.381	2.5 \times 1 \times (2)	450	1060	40	50	63.5	11	51	21	42	10	5.5	9.5	5.5	M6 \times 1P	32
			3.5 \times 1 \times (2)	600	1480		60											49
	5	3.175	2.5 \times 1 \times (2)	830	1730	44	56	67	11	55	26	52	15	5.5	9.5	5.5	M6 \times 1P	40
			3.5 \times 1 \times (2)	1110	2420		65											55
6	3.969	2.5 \times 1 \times (2)	1100	2120	48	67	71	11	59	27	54	15	5.5	9.5	5.5	M6 \times 1P	41	
			2.5 \times 1 \times (2)	1100		2120											78	41
8	3.969	2.5 \times 1 \times (2)	1100	2120	48	78	75	13	61	27	54	15	6.6	11	6.5	M6 \times 1P	41	
			2.5 \times 1 \times (2)	1100		2120											78	41
25	4	2.381	2.5 \times 1 \times (2)	510	1355	46	50	69	11	57	26	52	15	5.5	9.5	5.5	M6 \times 1P	43
			2.5 \times 2 \times (2)	930	2710		74											84
	5	3.175	2.5 \times 1 \times (2)	910	2150	50	55	73	11	61	28	56	15	5.5	9.5	5.5	M6 \times 1P	48
			2.5 \times 2 \times (2)	1650	4300		85											92
	6	3.969	2.5 \times 1 \times (2)	1210	2680	53	62	76	11	64	29	58	15	5.5	9.5	5.5	M6 \times 1P	49
2.5 \times 2 \times (2)			2190	5360	98		94											
8	4.762	2.5 \times 1 \times (2)	1560	3200	58	77	85	13	71	32	64	15	6.6	11	6.5	M6 \times 1P	50	
		2.5 \times 1 \times (2)	1560	3200		100											50	
28	5	3.175	2.5 \times 1 \times (2)	950	2470	55	56	83	12	69	31	62	15	6.6	11	6.5	M8 \times 1P	52
			2.5 \times 2 \times (2)	1720	4940		86											101
	6	3.969	2.5 \times 1 \times (2)	1270	3000	55	63	83	12	69	31	62	15	6.6	11	6.5	M8 \times 1P	53
2.5 \times 2 \times (2)			2300	6000	100		103											
10	4.762	1.5 \times 1 \times (2)	1045	2120	60	74	93	15	76	36	72	15	9	14	8.5	M8 \times 1P	34	
		2.5 \times 1 \times (2)	1045	2120		74											34	
32	4	2.381	2.5 \times 1 \times (2)	565	1750	54	50	81	12	67	32	64	15	6.6	11	6.5	M6 \times 1P	52
			2.5 \times 2 \times (2)	1020	3500		76											101
	5	3.175	2.5 \times 1 \times (2)	1010	2840	58	57	85	12	71	32	64	15	6.6	11	6.5	M8 \times 1P	58
			2.5 \times 2 \times (2)	1830	5680		87											112
	6	3.969	2.5 \times 1 \times (2)	1330	3450	62	63	88	12	75	34	68	15	6.6	11	6.5	M8 \times 1P	59
			2.5 \times 2 \times (2)	2410	6900		99											114
8	4.762	1.5 \times 1 \times (2)	1110	2510	66	64	100	15	82	38	76	15	9	14	8.5	M8 \times 1P	37	
		2.5 \times 1 \times (2)	1720	4180		80											61	
10	6.35	1.5 \times 1 \times (2)	1660	3260	74	78	108	15	90	41	82	15	9	14	8.5	M6 \times 1P	39	
		2.5 \times 1 \times (2)	2570	5440		97											64	
12	6.35	1.5 \times 1 \times (2)	1660	3260	74	88	108	18	90	41	82	15	9	14	8.5	M8 \times 1P	39	
		2.5 \times 1 \times (2)	2570	5440		110											64	

FOWC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
36	5	3.175	2.5 \times 1 \times (2)	1060	3210	65	60	98	15	82	38	76	15	9	14	8.5	M8 \times 1P	64
			2.5 \times 2 \times (2)	1920	6420		90											123
	6	3.969	2.5 \times 1 \times (2)	1430	3950	65	66	98	15	82	38	76	15	9	14	8.5	M8 \times 1P	65
			2.5 \times 2 \times (2)	2600	7900		102											126
10	6.35	1.5 \times 1 \times (2)	1750	3710	75	81	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	43	
		2.5 \times 1 \times (2)	2720	6180		103											70	
40	5	3.175	2.5 \times 1 \times (2)	1090	3560	67	60	101	15	83	39	78	15	9	14	8.5	M8 \times 1P	69
			2.5 \times 2 \times (2)	1980	7120		90											133
	6	3.969	2.5 \times 1 \times (2)	1500	4420	70	66	104	15	86	40	80	15	9	14	8.5	PT1/8 \times	71
			2.5 \times 2 \times (2)	2720	8840		102											138
	8	4.762	2.5 \times 1 \times (2)	1900	5270	74	83	108	15	90	41	82	15	9	14	8.5	PT1/8 \times	73
			2.5 \times 2 \times (2)	3450	10540		131											141
10	6.35	1.5 \times 1 \times (2)	1860	4710	82	81	103	124	18	102	47	94	20	11	17.5	11	PT1/8 \times	47
		2.5 \times 1 \times (2)	2880	6950		103												76
12	6.35	2.5 \times 1 \times (2)	3850	9730	86	121	112	128	18	106	48	96	20	11	17.5	11	PT1/8 \times	105
		2.5 \times 1 \times (2)	2880	6950		86												76
45	10	6.35	2.5 \times 1 \times (2)	3020	7850	88	101	132	18	110	50	100	20	11	17.5	11	PT1/8 \times	76
			2.5 \times 1 \times (2)	3550	8950		90											84
50	5	3.175	2.5 \times 1 \times (2)	1210	4420	80	60	114	15	96	43	86	15	9	14	8.5	PT1/8 \times	83
			2.5 \times 2 \times (2)	2980	11000		84											164
	6	3.969	2.5 \times 2 \times (2)	3900	13020	87	134	129	18	107	49	98	20	11	17.5	11	PT1/8 \times	170
			2.5 \times 1 \times (2)	3190	8710		101											91
	10	6.35	2.5 \times 2 \times (2)	5790	17420	93	161	135	18	113	51	102	20	11	17.5	11	PT1/8 \times	177
			3.5 \times 1 \times (2)	4260	12190		121											126
12	7.144	2.5 \times 1 \times (2)	3700	10050	100	116	146	22	122	55	110	20	14	20	13	PT1/8 \times	92	
		2.5 \times 1 \times (2)	3310	9770		102											98	
55	10	6.35	2.5 \times 1 \times (2)	3310	9770	102	101	144	18	122	54	108	20	11	17.5	11	PT1/8 \times	191
			2.5 \times 2 \times (2)	6005	19540		161											191
63	10	6.35	2.5 \times 1 \times (2)	3510	11200	108	105	154	22	130	58	116	20	14	20	13	PT1/8 \times	110
			2.5 \times 2 \times (2)	6370	22400		165											213
12	7.938	2.5 \times 1 \times (2)	4770	13780	115	124	161	22	137	61	122	20	14	20	13	PT1/8 \times	113	

13.4 High Lead Ballscrews

High-lead Ballscrews are essential elements and parts for high-speed machine tools of next century.

Features:

It is important for a High-lead Ballscrew to be with characteristics of high rigidity, low noise and thermal control. PMI 's designs and treatments are taken for following:

High DN Value

The DN value can be 130,000 in normal case. For some special cases, for example in a fixed ends case, the DN value can be as high as 140,000. Please contact our engineers for this special application.

High Speed

PMI 's High-speed Ballscrews provide 100 *m/min* and even higher traverse speed for machine tools for high performance cutting.

High Rigidity

Both the screw and ballnut are surface hardened to a specific hardness and case depth to maintain high rigidity and durability.

Multiple thread starts are available to make more steel balls loaded in the ballnut for higher rigidity and durability.

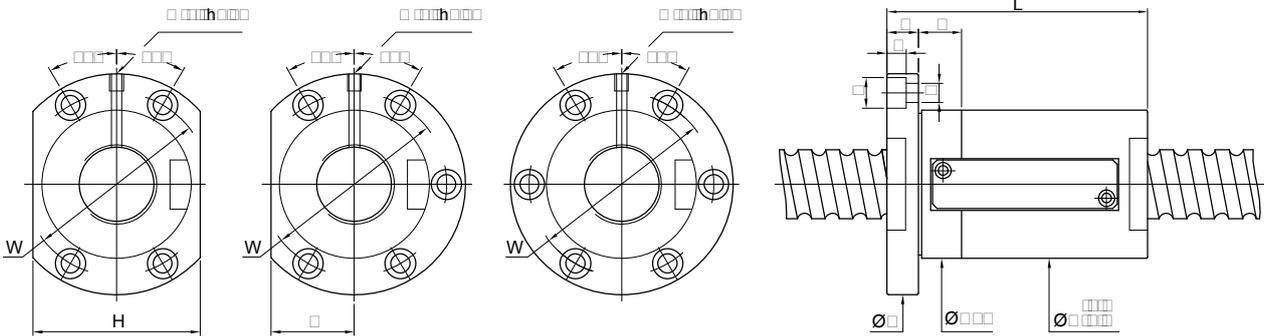
Low Noise

Special design of ball circulation tubes offer smooth ball circulation inside the ballnut. It also makes safe ball fast running into the tubes without damaging the tubes.

Accurate ball circle diameter (BCD) through whole threads for consistent drag torque and low noise.

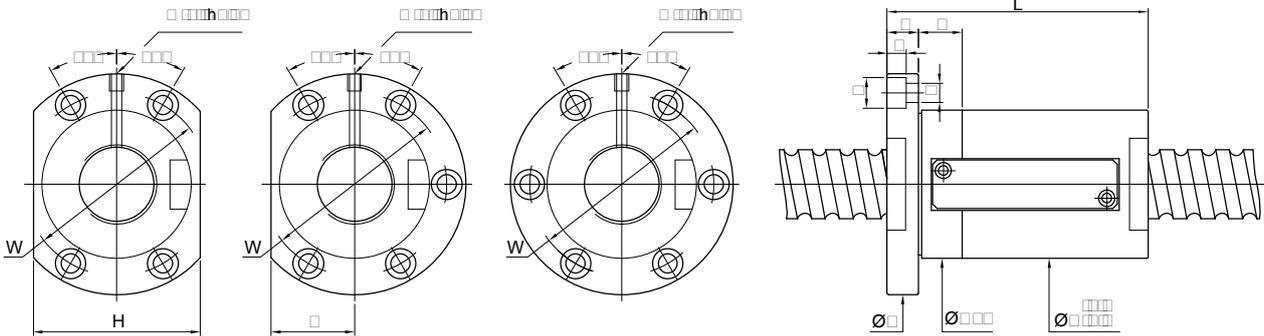


FSWE



Unit: mm

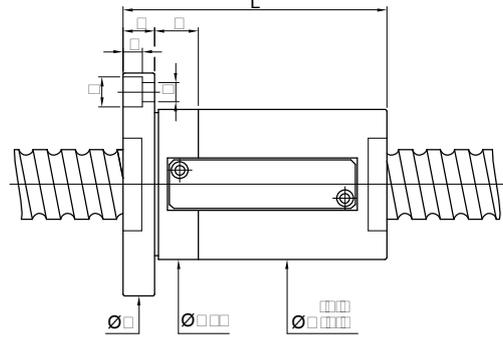
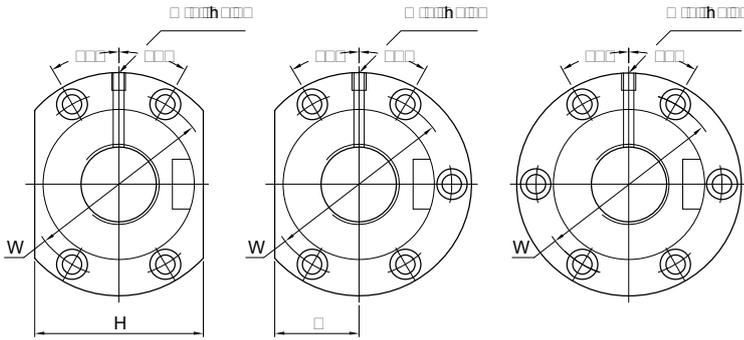
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m			
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z					
12	10	2.381	2.5 \times 1	420	720	30	50	50	10	40	16	32	10	4.5	8	4.4	M6 \times 1P	20			
			2.5 \times 1	1210	2380	46	63	73.5	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	34			
			3.5 \times 1	1580	3230	46	73												45		
20	16	3.969	1.5 \times 1	830	1530	46	63	73.5	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	24			
			2.5 \times 1	1210	2380	46	79												34		
			20	3.969	1.5 \times 1	830	1530	46	70	73	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	24	
25	16	3.969	1.5 \times 1	920	1930	54	62	76	15	64	32	64	15	6.6	11	6.5	M6 \times 1P	28			
			2.5 \times 1	1340	3000	54	78												40		
			20	4.762	1.5 \times 1	1170	2300	58	74											29	
32	16	3.969	2.5 \times 1	1710	3580	58	94	85	15	71	32	64	15	6.6	11	6.5	M6 \times 1P	42			
			3.5 \times 1	2220	4860	58	114												55		
			1.5 \times 1	1010	2480	62	63													33	
			2.5 \times 1	1470	3860	62	79	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	48			
	20	6.35	3.969	3.5 \times 1	1910	5240	62	95											63		
				5 \times 1	2340	6620	62	111												77	
				2.5 \times 1	2830	6090	74	92													54
				3.5 \times 1	3680	8270	74	108	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	69		
				5 \times 1	4490	10450	74	124													85
				1.5 \times 1	1010	2480	62	70													33
20	6.35	3.969	2.5 \times 1	1470	3860	62	90	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	48			
			3.5 \times 1	1910	5240	62	110												63		
			5 \times 1	2350	6610	62	130												77		
			2.5 \times 1	2830	6090	74	104													54	
20	6.35	3.969	3.5 \times 1	3680	8270	74	124	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	69			
			5 \times 1	4490	10450	74	144												85		



Unit: mm

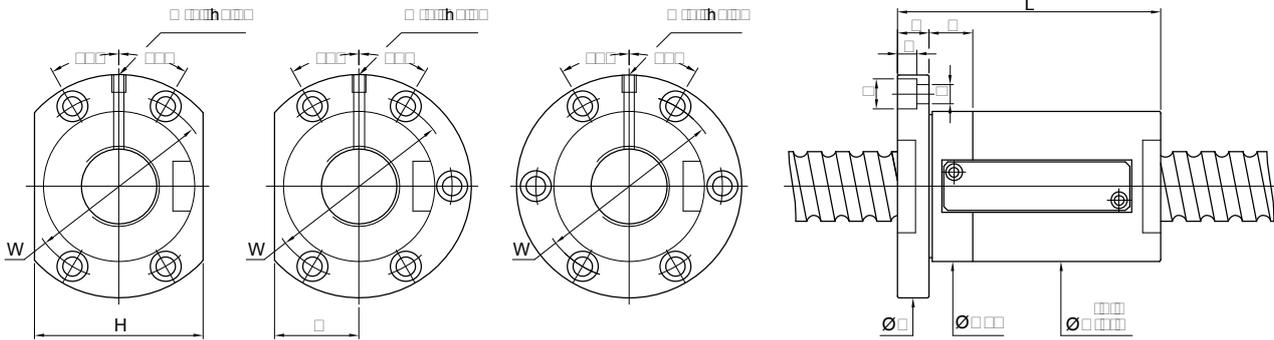
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q		
36	10	6.35	3.5 \times 1	3890	9390	75	84	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	76	
			5 \times 1	4750	11860		94											93	
	12	6.35	2.5 \times 1	2990	6920	75	85	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	58	
			3.5 \times 1	3890	9390		97											76	
	16	6.35	2.5 \times 1	2990	6920	75	91	118	18	98	45	90	15	11	17.5	11	M8 \times 1P	58	
			5 \times 1	4750	11860		109											76	
	20	6.35	1.5 \times 1	2050	4450	75	91	118	18	98	45	90	15	11	17.5	11	PT1/8 \times	41	
			2.5 \times 1	2990	6920		111											58	
			3.5 \times 1	3890	9390		131											76	
			5 \times 1	4750	11860		151											93	
	40	10	6.35	3.5 \times 1	4130	10560	86	86	128	18	106	49	98	15	11	17.5	11	PT1/8 \times	82
				5 \times 1	5050	13340		96											101
12		6.35	2.5 \times 1	3180	7780	86	86	128	18	106	49	98	15	11	17.5	11	PT1/8 \times	63	
			3.5 \times 1	4130	10560		98											82	
16		6.35	2.5 \times 1	3180	7780	86	93	128	18	106	49	98	15	11	17.5	11	PT1/8 \times	63	
			5 \times 1	5050	13340		125											82	
16		7.144	2.5 \times 1	3740	8790	86	92	128	18	106	49	98	15	11	17.5	11	PT1/8 \times	65	
			3.5 \times 1	4870	11930		108											84	
			5 \times 1	5950	15070		124											103	
20		6.35	1.5 \times 1	2180	5000	86	84	128	18	106	49	98	15	11	17.5	11	PT1/8 \times	43	
			2.5 \times 1	3180	7780		104											63	
			3.5 \times 1	4130	10560		124											82	
	5 \times 1		5050	13340	144		101												
40	6.35	1.5 \times 1	2180	5000	86	130	128	18	106	49	98	15	11	17.5	11	PT1/8 \times	43		

FSWE



Unit: mm

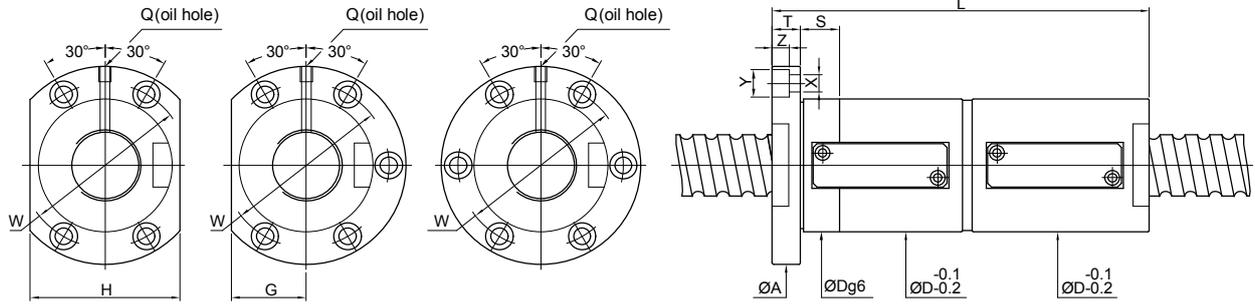
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/μm
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
50	10	6.35	3.5×1	4560	13230	93	85	135	18	113	51	102	20	11	17.5	11	PT1/8	97
			5×1	5580	16710		95											119
	12	6.35	2.5×1	3510	9750	93	80	135	18	113	51	102	20	11	17.5	11	PT1/8	74
			3.5×1	4560	13230		92											119
	12	7.144	2.5×1	4080	11260	100	93	146	25	122	55	110	20	14	20	13	PT1/8	75
			3.5×1	5300	15280		105											99
	16	6.35	2.5×1	3510	9750	93	94	135	18	113	51	102	20	11	17.5	11	PT1/8	74
			3.5×1	4560	13230		110											97
	16	7.144	2.5×1	4080	11260	100	100	146	25	122	55	110	20	14	20	13	PT1/8	75
			3.5×1	5300	15280		116											99
	20	7.144	1.5×1	2790	7240	100	98	146	25	122	55	110	20	14	20	13	PT1/8	52
			2.5×1	4080	11260		118											75
3.5×1			5300	15280	138		99											
5×1			6480	19300	158		121											
20	7.938	2.5×1	4750	12090	105	119	152	25	128	58	116	20	14	20	13	PT1/8	78	
		3.5×1	6180	16400		139											101	
50	7.938	5×1	7550	20720	105	159	152	25	128	58	116	20	14	20	13	PT1/8	124	
		1.5×1	3250	7770		157											53	



Unit: mm

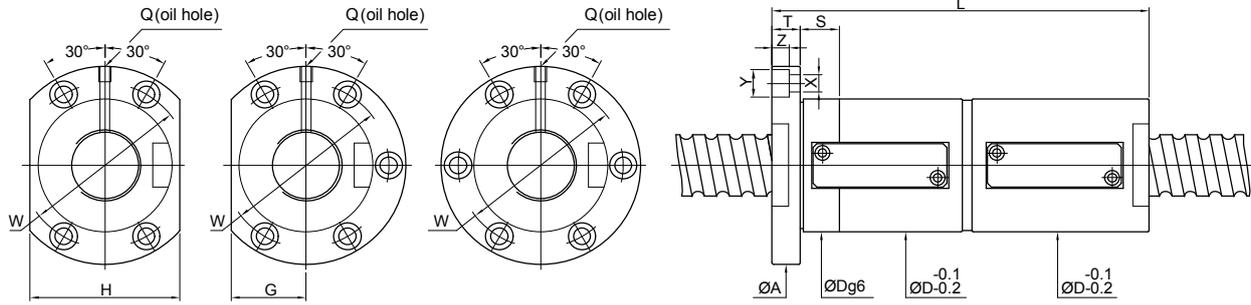
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/μm
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
63	10	6.35	3.5x1	5030	17020	86	154	22	130	58	116	20	14	20	13	PT1/8x	115	
			5x1	6150	21500	96											141	
	12	6.35	2.5x1	3870	12540	84	154	22	130	58	116	20	14	20	13	PT1/8x	87	
			3.5x1	5030	17020	96											115	
	12	7.144	2.5x1	4540	14460	90	161	22	137	61	122	20	14	20	13	PT1/8x	89	
			3.5x1	5900	19620	102											117	
	16	7.144	2.5x1	4540	14460	97	161	22	137	61	122	20	14	20	13	PT1/8x	89	
			3.5x1	5900	19620	113											117	
	16	7.938	2.5x1	5260	15430	112	180	28	150	72	144	25	18	26	17.5	PT1/8x	91	
			3.5x1	6840	20940	128											120	
20	6.35	2.5x1	3870	12540	104	154	22	130	58	116	20	14	20	13	PT1/8x	87		
		3.5x1	5030	17020	124											115		
20	9.525	2.5x1	8870	25870	120	182	28	150	72	144	25	18	26	17.5	PT1/8x	105		
		3.5x1	11530	35110	140											136		
10	6.35	3.5x1	5630	21660	90	176	22	152	66	132	20	14	20	13	PT1/8x	133		
		5x1	6880	27360	100											164		
12	7.938	3.5x1	7670	27030	101	182	22	158	68	136	20	14	20	13	PT1/8x	143		
		5x1	9380	34140	113											177		
16	9.525	2.5x1	9900	33200	108	204	28	172	77	154	30	18	26	17.5	PT1/8x	124		
		3.5x1	12990	45050	124											162		
20	9.525	2.5x1	9900	33200	120	204	28	172	77	154	30	18	26	17.5	PT1/8x	201		
		3.5x1	12990	45050	140											201		
16	9.525	2.5x1	11320	41820	115	243	32	205	91	182	30	22	32	21.5	PT1/8x	139		
		3.5x1	14720	56750	131											182		
20	9.525	2.5x1	11320	41820	128	243	32	205	91	182	30	22	32	21.5	PT1/8x	139		
		3.5x1	14720	56750	148											182		
100	9.525	2.5x1	17990	71690	147	243	32	205	91	182	30	22	32	21.5	PT1/8x	226		
		3.5x1	17990	71690	168											226		

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Unit: mm

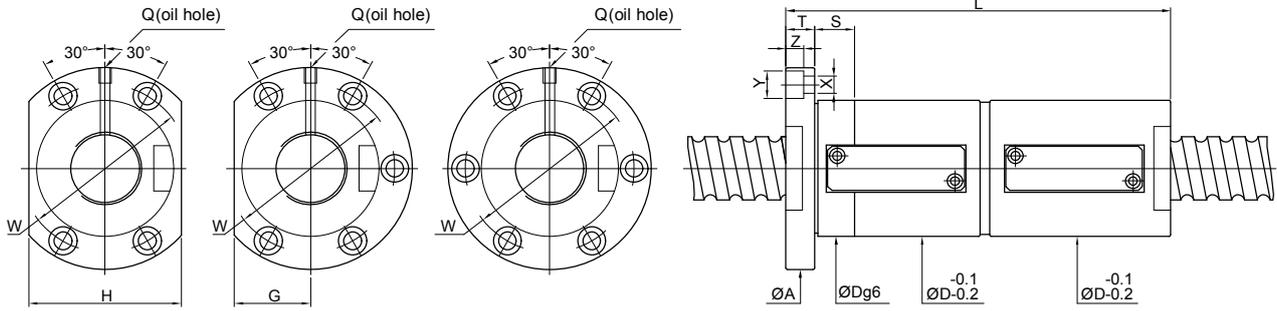
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
12	10	2.381	2.5 \times 1	420	720	30	102	50	10	40	16	32	10	4.5	8	4.4	M6 \times 1P	30
			3.5 \times 1	1210	2380	46	113	73.5	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	51
20	16	3.969	1.5 \times 1	830	1530	46	128	73.5	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	35
			2.5 \times 1	1210	2380	46	160	73.5	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	51
20	20	3.969	1.5 \times 1	830	1530	46	130	73	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	35
			2.5 \times 1	1210	2380	46	160	73	13	59	25	50	10	5.5	9.5	5.5	M6 \times 1P	51
25	16	3.969	1.5 \times 1	920	1930	54	126	76	15	64	32	64	15	6.6	11	6.5	M6 \times 1P	41
			2.5 \times 1	1340	3000	54	158	76	15	64	32	64	15	6.6	11	6.5	M6 \times 1P	61
25	20	4.762	1.5 \times 1	1170	2300	58	154	85	15	71	32	64	15	6.6	11	6.5	M6 \times 1P	43
			2.5 \times 1	1710	3580	58	194	85	15	71	32	64	15	6.6	11	6.5	M6 \times 1P	63
32	16	3.969	3.5 \times 1	2220	4860	62	234	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	83
			5 \times 1	2340	6620	62	226	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	120
32	16	6.35	2.5 \times 1	1010	2480	74	173	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	49
			3.5 \times 1	2830	6090	74	205	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	80
32	20	3.969	5 \times 1	4490	10450	62	237	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	131
			1.5 \times 1	1010	2480	62	93	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	49
32	20	6.35	2.5 \times 1	1470	3860	62	133	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	73
			3.5 \times 1	1910	5240	62	173	88	15	75	34	68	15	6.6	11	6.5	M8 \times 1P	96
32	20	6.35	5 \times 1	2350	6610	74	213	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	120
			2.5 \times 1	2830	6090	74	204	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	80
32	20	6.35	3.5 \times 1	3680	8270	74	244	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	105
			5 \times 1	4490	10450	74	284	108	18	90	41	82	15	11	17.5	11	M8 \times 1P	131



Unit: mm

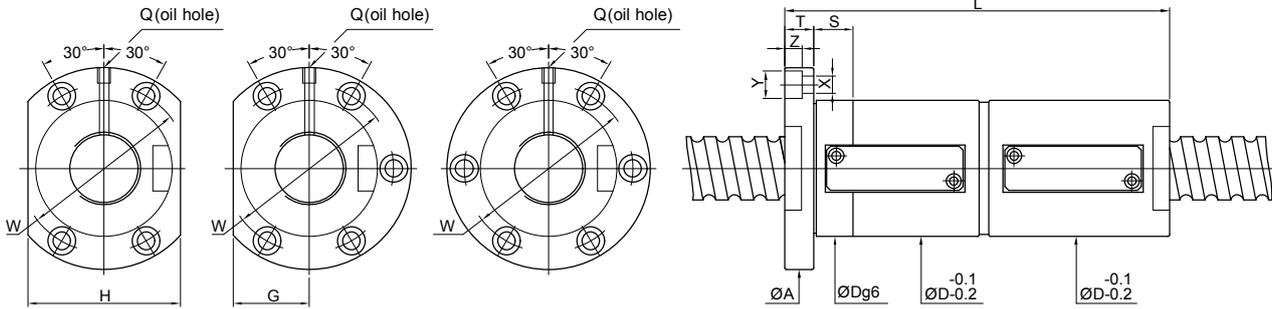
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS kgf/µm	
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q		
36	10	6.35	3.5×1	3890	9390	75	155	118	18	98	45	90	15	11	17.5	11	M8×1P	115	
			5×1	4750	11860		175											143	
	12	6.35	2.5×1	2990	6920	75	140	118	18	98	45	90	15	11	17.5	11	M8×1P	88	
			3.5×1	3890	9390		164											115	
	16	6.35	2.5×1	2990	6920	75	171	118	18	98	45	90	15	11	17.5	11	M8×1P	88	
			3.5×1	3890	9390		203											115	
	20	6.35	1.5×1	2050	4450	75	164	118	18	98	45	90	15	11	17.5	11	PT1/8×	59	
			2.5×1	2990	6920		204											88	
			3.5×1	3890	9390		244											115	
			5×1	4750	11860		284											143	
	40	10	6.35	3.5×1	4130	10560	86	155	128	18	106	49	98	15	11	17.5	11	PT1/8×	125
				5×1	5050	13340		175											155
12		6.35	2.5×1	3180	7780	86	141	128	18	106	49	98	15	11	17.5	11	PT1/8×	95	
			3.5×1	4130	10560		165											125	
16		6.35	2.5×1	3180	7780	86	173	128	18	106	49	98	15	11	17.5	11	PT1/8×	95	
			3.5×1	4130	10560		205											125	
16		7.144	2.5×1	3740	8790	86	173	128	18	106	49	98	15	11	17.5	11	PT1/8×	98	
			3.5×1	4870	11930		205											128	
20		6.35	1.5×1	2180	5000	86	164	128	18	106	49	98	15	11	17.5	11	PT1/8×	64	
			2.5×1	3180	7780		204											95	
			3.5×1	4130	10560		244											125	
			5×1	5050	13340		284											155	
40	6.35	1.5×1	2180	5000	86	242	128	18	106	49	98	15	11	17.5	11	PT1/8×	64		

FDWE



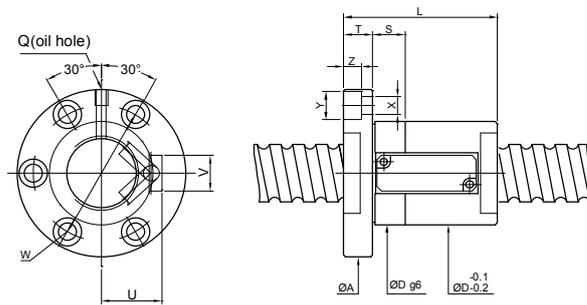
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
50	10	6.35	3.5 \times 1	4560	13230	93	155	135	18	113	51	102	20	11	17.5	11	PT1/8 \times	149	
			5 \times 1	5580	16710		175											185	
	12	6.35	2.5 \times 1	3510	9750	93	141	165	135	18	113	51	102	20	11	17.5	11	PT1/8 \times	112
			3.5 \times 1	4560	13230		141												149
	12	7.144	2.5 \times 1	4080	11260	100	161	185	146	25	122	55	110	20	14	20	13	PT1/8 \times	114
			3.5 \times 1	5300	15280		161												151
	16	6.35	2.5 \times 1	3510	9750	93	174	206	135	18	113	51	102	20	11	17.5	11	PT1/8 \times	112
			3.5 \times 1	4560	13230		174												149
	16	7.144	2.5 \times 1	4080	11260	100	180	212	146	25	122	55	110	20	14	20	13	PT1/8 \times	114
			3.5 \times 1	5300	15280		180												151
	20	7.144	1.5 \times 1	2790	7240	100	179	146	25	122	55	110	20	14	20	13	PT1/8 \times	77	
			2.5 \times 1	4080	11260		179											114	
3.5 \times 1			5300	15280	219		151												
5 \times 1			6480	19300	259		187												
20	7.938	2.5 \times 1	4750	12090	105	219	259	152	25	128	58	116	20	14	20	13	PT1/8 \times	117	
		3.5 \times 1	6180	16400		219												154	
50	7.938	2.5 \times 1	4750	12090	105	219	305	152	25	128	58	116	20	14	20	13	PT1/8 \times	191	
		1.5 \times 1	3250	7770		219												79	



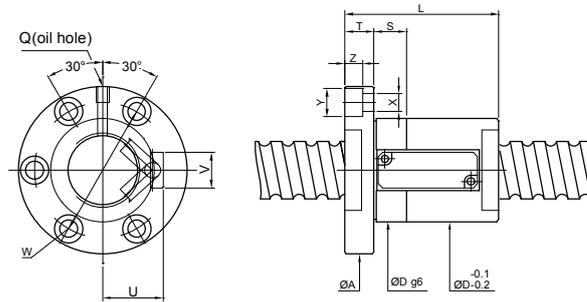
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z		
63	10	6.35	3.5 \times 1	5030	17020	108	155	154	22	130	58	116	20	14	20	13	PT1/8 \times	178
			5 \times 1	6150	21500	108	175	154	22	130	58	116	20	14	20	13	PT1/8 \times	220
	12	6.35	2.5 \times 1	3870	12540	108	153	154	22	130	58	116	20	14	20	13	PT1/8 \times	134
			3.5 \times 1	5030	17020	108	177	154	22	130	58	116	20	14	20	13	PT1/8 \times	178
	12	7.144	5 \times 1	6150	21500	108	201	154	22	130	58	116	20	14	20	13	PT1/8 \times	220
			2.5 \times 1	4540	14460	115	158	161	22	137	61	122	20	14	20	13	PT1/8 \times	136
	12	7.144	3.5 \times 1	5900	19620	115	182	161	22	137	61	122	20	14	20	13	PT1/8 \times	180
			5 \times 1	7210	24780	115	206	161	22	137	61	122	20	14	20	13	PT1/8 \times	224
	16	7.144	2.5 \times 1	4540	14460	115	177	161	22	137	61	122	20	14	20	13	PT1/8 \times	136
			3.5 \times 1	5900	19620	115	209	161	22	137	61	122	20	14	20	13	PT1/8 \times	180
	16	7.938	5 \times 1	7210	24780	115	241	161	22	137	61	122	20	14	20	13	PT1/8 \times	224
			2.5 \times 1	5260	15430	120	207	180	28	150	72	144	25	18	26	17.5	PT1/8 \times	139
16	7.938	3.5 \times 1	6840	20940	120	239	180	28	150	72	144	25	18	26	17.5	PT1/8 \times	184	
		5 \times 1	8360	26450	120	271	180	28	150	72	144	25	18	26	17.5	PT1/8 \times	228	
20	6.35	2.5 \times 1	3870	12540	108	205	154	22	130	58	116	20	14	20	13	PT1/8 \times	134	
		3.5 \times 1	5030	17020	108	245	154	22	130	58	116	20	14	20	13	PT1/8 \times	178	
20	6.35	5 \times 1	6150	21500	108	285	154	22	130	58	116	20	14	20	13	PT1/8 \times	220	
		2.5 \times 1	8870	25870	122	219	182	28	150	72	144	25	18	26	17.5	PT1/8 \times	158	
20	9.525	3.5 \times 1	11530	35110	122	259	182	28	150	72	144	25	18	26	17.5	PT1/8 \times	208	
		5 \times 1	14090	44350	122	299	182	28	150	72	144	25	18	26	17.5	PT1/8 \times	258	
80	10	6.35	3.5 \times 1	5630	21660	130	159	176	22	152	66	132	20	14	20	13	PT1/8 \times	207
			5 \times 1	6880	27360	130	179	176	22	152	66	132	20	14	20	13	PT1/8 \times	256
	12	7.938	3.5 \times 1	7670	27030	136	184	182	22	158	68	136	20	14	20	13	PT1/8 \times	222
			5 \times 1	9380	34140	136	208	182	22	158	68	136	20	14	20	13	PT1/8 \times	275
	16	9.525	2.5 \times 1	9900	33200	143	188	204	28	172	77	154	30	18	26	17.5	PT1/8 \times	189
			3.5 \times 1	12990	45050	143	220	204	28	172	77	154	30	18	26	17.5	PT1/8 \times	251
16	9.525	5 \times 1	15880	56910	143	252	204	28	172	77	154	30	18	26	17.5	PT1/8 \times	311	
		2.5 \times 1	9900	33200	143	220	204	28	172	77	154	30	18	26	17.5	PT1/8 \times	189	
20	9.525	3.5 \times 1	12990	45050	143	260	204	28	172	77	154	30	18	26	17.5	PT1/8 \times	251	
		5 \times 1	15880	56910	143	300	204	28	172	77	154	30	18	26	17.5	PT1/8 \times	311	
100	16	9.525	2.5 \times 1	11320	41820	170	211	243	32	205	91	182	30	22	32	21.5	PT1/8 \times	213
			3.5 \times 1	14720	56750	170	243	243	32	205	91	182	30	22	32	21.5	PT1/8 \times	283
	20	9.525	5 \times 1	17990	71690	170	259	243	32	205	91	182	30	22	32	21.5	PT1/8 \times	351
			2.5 \times 1	11320	41820	170	228	243	32	205	91	182	30	22	32	21.5	PT1/8 \times	213
20	9.525	3.5 \times 1	14720	56750	170	268	243	32	205	91	182	30	22	32	21.5	PT1/8 \times	283	
		5 \times 1	17990	71690	170	308	243	32	205	91	182	30	22	32	21.5	PT1/8 \times	351	



Unit: mm

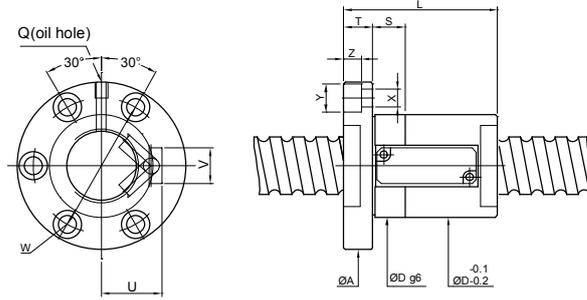
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT	BOLT			RETURN TUBE		OIL HOLE	STIFFNESS
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		S	X	Y	Z	U		
12	10	2.381	2.5×1	420	720	25	50	48	10	36	10	4.5	8	4.4	14	12	M6×1P	20
	10	3.969	2.5×1 3.5×1	1210 1580	2380 3230	38	63 73	62	13	50	10	5.5	9.5	5.5	23	15	M6×1P	34 45
20	16	3.969	1.5×1 2.5×1	830 1210	1530 2380	38	63 79	62	13	50	10	5.5	9.5	5.5	23	15	M6×1P	24 34
	20	3.969	1.5×1	830	1530	38	70	62	13	50	10	5.5	9.5	5.5	23	15	M6×1P	24
25	16	3.969	1.5×1 2.5×1	920 1340	1930 3000	42	62 78	68	15	55	15	6.6	11	6.6	26	14	M6×1P	28 40
	20	4.762	1.5×1 2.5×1 3.5×1	1170 1710 2220	2300 3580 4860	44	74 94 114	72	15	59	15	6.6	11	6.5	27	16	M6×1P	29 42 55
	16	3.969	1.5×1 2.5×1 3.5×1 5×1	1010 1470 1910 2340	2480 3860 5240 6610	49	63 79 95 111	78	15	63	15	6.6	11	6.6	29	15	M8×1P	33 48 63 77
32	16	6.35	2.5×1 3.5×1 5×1	2830 3680 4490	8200 11120 14050	57	92 108 124	98	18	77	20	11	17.5	11	34	22	M8×1P	54 69 85
	20	3.969	1.5×1 2.5×1 3.5×1 5×1	1010 1470 1910 2350	2480 3860 5240 6610	49	70 90 110 130	78	15	63	15	6.6	11	6.6	29	15	M8×1P	33 48 63 77
	20	6.35	2.5×1 3.5×1 5×1	2830 3680 4490	8200 11120 14050	57	104 124 144	98	18	77	20	11	17.5	11	34	22	M8×1P	54 69 85
	20	3.969	1.5×1 2.5×1 3.5×1 5×1	1010 1470 1910 2350	2480 3860 5240 6610	49	70 90 110 130	78	15	63	15	6.6	11	6.6	29	15	M8×1P	33 48 63 77
	20	6.35	2.5×1 3.5×1 5×1	2830 3680 4490	8200 11120 14050	57	104 124 144	98	18	77	20	11	17.5	11	34	22	M8×1P	54 69 85



Unit: mm

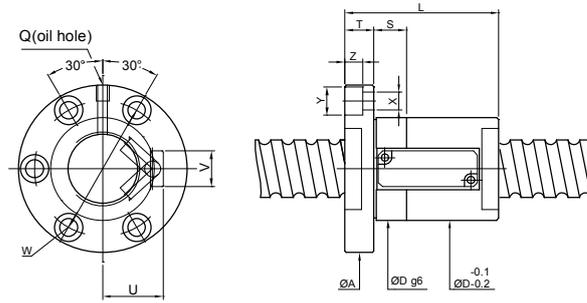
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD(kgf)		NUT		FLANGE			FIT	BOLT			RETURN TUBE		OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		S	X	Y	Z	U			V
36	10	6.35	3.5 \times 1	3890	9390	60	84	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	76	
			5 \times 1	4750	11860		94											93	
	12	6.35	2.5 \times 1	2990	6920	60	85	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	58	
			3.5 \times 1	3890	9390		97											76	
	16	6.35	2.5 \times 1	2990	6920	60	91	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	58	
			3.5 \times 1	3890	9390		107											76	
	20	6.35	1.5 \times 1	2050	4450	60	91	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	41	
			2.5 \times 1	2990	6920		111											58	
			3.5 \times 1	3890	9390		131											76	
			5 \times 1	4750	11860		151											93	
	40	10	6.35	3.5 \times 1	4130	10560	64	84	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	82
				5 \times 1	5050	13340		96											101
12		6.35	2.5 \times 1	3180	7780	64	86	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	63	
			3.5 \times 1	4130	10560		98											82	
16		6.35	2.5 \times 1	3180	7780	64	93	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	63	
			3.5 \times 1	4130	10560		109											82	
16		7.144	2.5 \times 1	3740	8790	64	92	104	18	84	15	11	17.5	11	38	22	PT1/8 \times	65	
			3.5 \times 1	4870	11930		108											84	
20		6.35	1.5 \times 1	2180	5000	64	84	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	43	
			2.5 \times 1	3180	7780		104											63	
			3.5 \times 1	4130	10560		124											82	
			5 \times 1	5050	13340		144											101	
40	6.35	1.5 \times 1	2180	5000	64	130	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	43		

FSVE



Unit: mm

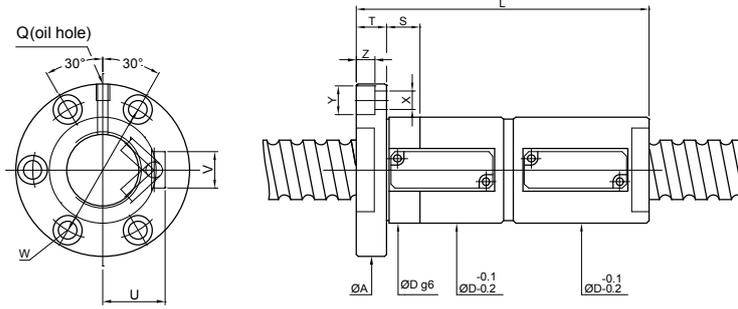
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT		BOLT		RETURN TUBE		OIL HOLE	STIFFNESS kgf/ μ m
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	S	X	Y	Z	U	V	Q	
50	10	6.35	3.5 \times 1	4560	13230	73	85	118	18	96	20	11	17.5	11	43	22	PT1/8 \times	97
			5 \times 1	5580	16710		95											119
	12	6.35	2.5 \times 1	3510	9750	73	82	118	18	96	20	11	17.5	11	43	22	PT1/8 \times	74
			3.5 \times 1	4560	13230		94											97
	12	7.144	2.5 \times 1	4080	11260	75	93	122	20	98	15	14	20	13	44	24	PT1/8 \times	75
			3.5 \times 1	5300	15280		105											99
	16	6.35	2.5 \times 1	3510	9750	73	94	118	18	96	20	11	17.5	11	43	22	PT1/8 \times	74
			3.5 \times 1	4560	13230		110											97
	16	7.144	2.5 \times 1	4080	11260	75	100	122	20	98	15	14	20	13	44	24	PT1/8 \times	75
			3.5 \times 1	5300	15280		116											99
	20	7.144	1.5 \times 1	2790	7240	75	98	122	20	98	15	14	20	13	44	20	PT1/8 \times	52
			2.5 \times 1	4080	11260		118											75
3.5 \times 1			5300	15280	138		99											
5 \times 1			6480	19300	158		121											
20	7.938	2.5 \times 1	4750	12090	76	119	123	25	99	20	14	20	13	46	25	PT1/8 \times	78	
		3.5 \times 1	6180	16400		139											101	
50	7.938	5 \times 1	7550	20720	76	159	123	25	99	20	14	20	13	46	25	PT1/8 \times	124	
		1.5 \times 1	3250	7770		157											53	



Unit: mm

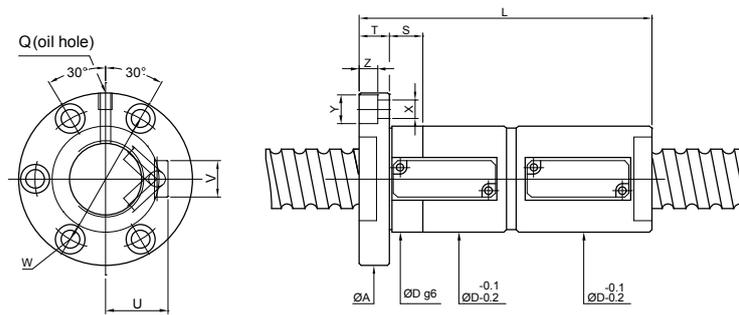
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
											Dynamic (1 \times 10 ⁶ REV.) Ca						Static Co		
63	10	6.35	3.5 \times 1	5030	17020	86	86	133	22	108	20	14	20	13	49	24	PT1/8 \times	115	
			5 \times 1	6150	21500													141	
	12	6.35	2.5 \times 1	3870	12540	86	84	133	22	108	20	14	20	13	49	24	PT1/8 \times	87	
			3.5 \times 1	5030	17020													115	
	12	7.144	2.5 \times 1	4540	14460	87	90	134	22	110	20	14	20	13	50	25	PT1/8 \times	89	
			3.5 \times 1	5900	19620													117	
			5 \times 1	7210	24780													145	
			5 \times 1	7210	24780													145	
	16	7.144	2.5 \times 1	4540	14460	87	97	134	22	110	20	14	20	13	50	25	PT1/8 \times	89	
			3.5 \times 1	5900	19620													117	
16	7.938	2.5 \times 1	5260	15430	89	112	148	28	118	25	18	26	17.5	52	25	PT1/8 \times	91		
		3.5 \times 1	6840	20940													120		
20	6.35	2.5 \times 1	3870	12540	86	104	133	22	108	20	14	20	13	49	24	PT1/8 \times	87		
		3.5 \times 1	5030	17020													115		
20	7.938	2.5 \times 1	5260	15430	89	120	148	28	118	25	18	26	17.5	52	25	PT1/8 \times	91		
		3.5 \times 1	6840	20940													120		
20	9.525	2.5 \times 1	8870	25870	93	120	152	28	122	25	18	26	17.5	54	28	PT1/8 \times	105		
		3.5 \times 1	11530	35110													136		
80	10	6.35	3.5 \times 1	5630	21660	103	90	150	22	126	20	14	20	13	58	25	PT1/8 \times	133	
			5 \times 1	6880	27360													164	
	12	7.938	3.5 \times 1	7670	27030	123	101	170	22	146	20	14	20	13	66	28	PT1/8 \times	143	
			5 \times 1	9380	34140													177	
	16	9.525	2.5 \times 1	9900	33200	126	108	185	28	155	30	18	26	17.5	70	28	PT1/8 \times	124	
			3.5 \times 1	12990	45050													162	
	20	9.525	2.5 \times 1	9900	33200	126	120	185	28	155	30	18	26	17.5	70	28	PT1/8 \times	124	
			3.5 \times 1	12990	45050													162	
	100	16	9.525	2.5 \times 1	11320	41820	146	115	217	32	181	30	22	32	21.5	82	35	PT1/8 \times	139
				3.5 \times 1	14720	56750													182
20		9.525	2.5 \times 1	11320	41820	146	128	217	32	181	30	22	32	21.5	82	35	PT1/8 \times	139	
			3.5 \times 1	14720	56750													182	
20		9.525	5 \times 1	17990	71690	146	147	217	32	181	30	22	32	21.5	82	35	PT1/8 \times	226	
			5 \times 1	17990	71690													226	

FDVE



Unit: mm

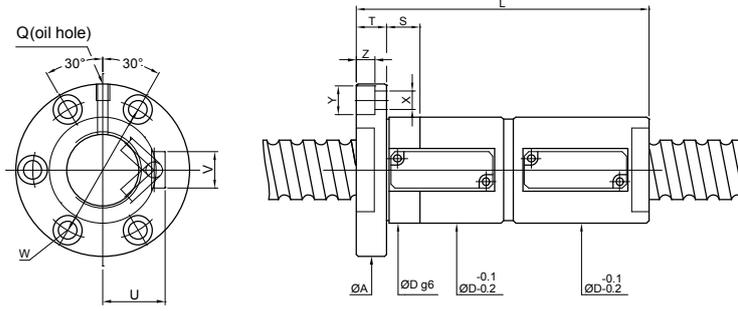
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS $kgf/\mu m$
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V		
											Dynamic (1 \times 10 ⁶ REV) Ca						Static Co	
12	10	2.381	2.5 \times 1	420	720	25	102	48	10	36	10	4.5	8	4.4	14	12	M6 \times 1P	30
			3.5 \times 1	1210	2380	38	113	62	13	50	10	5.5	9.5	5.5	23	15	M6 \times 1P	51
20	16	3.969	1.5 \times 1	830	1530	38	128	62	13	50	10	5.5	9.5	5.5	23	15	M6 \times 1P	35
			2.5 \times 1	1210	2380	38	160	62	13	50	10	5.5	9.5	5.5	23	15	M6 \times 1P	51
25	20	3.969	1.5 \times 1	830	1530	38	130	62	13	50	10	5.5	9.5	5.5	23	15	M6 \times 1P	35
			2.5 \times 1	920	1930	42	126	68	15	55	15	6.6	11	6.6	26	14	M6 \times 1P	41
32	16	3.969	1.5 \times 1	1010	2480	49	162	78	15	63	15	6.6	11	6.6	29	15	M8 \times 1P	49
			2.5 \times 1	1470	3860	57	205	98	18	77	20	11	17.5	11	34	22	M8 \times 1P	73
32	20	3.969	3.5 \times 1	1910	5240	49	213	78	15	63	15	6.6	11	6.6	29	15	M8 \times 1P	96
			5 \times 1	2340	6610	57	244	98	18	77	20	11	17.5	11	34	22	M8 \times 1P	120
32	20	6.35	2.5 \times 1	2830	8200	57	244	98	18	77	20	11	17.5	11	34	22	M8 \times 1P	80
			3.5 \times 1	3680	11120	57	284	113	20	88	22	11	17.5	11	34	22	M8 \times 1P	105
32	20	6.35	5 \times 1	4490	14050	57	284	113	20	88	22	11	17.5	11	34	22	M8 \times 1P	131
			5 \times 1	2350	6610	57	284	113	20	88	22	11	17.5	11	34	22	M8 \times 1P	120



Unit: mm

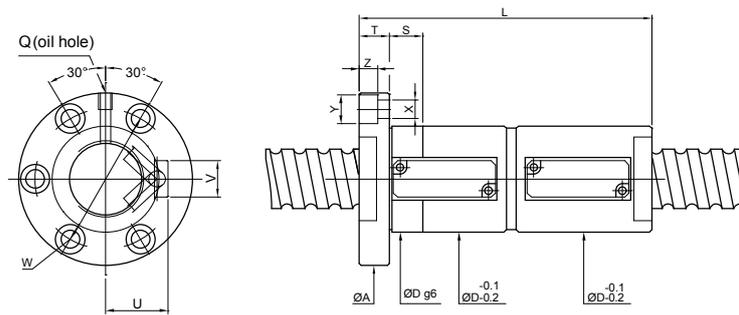
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
																			Dynamic (1 \times 10 ⁶ REV) Ca
36	10	6.35	3.5 \times 1	3890	9390	60	155	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	115	
			5 \times 1	4750	11860		175											143	
	12	6.35	2.5 \times 1	2990	6920	60	152	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	88	
			3.5 \times 1	3890	9390		176											115	
	16	6.35	2.5 \times 1	2990	6920	60	173	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	88	
			3.5 \times 1	3890	9390		205											115	
	20	6.35	1.5 \times 1	2050	4450	60	164	100	18	80	20	11	17.5	11	36	22	M8 \times 1P	59	
			2.5 \times 1	2990	6920		204											88	
			3.5 \times 1	3890	9390		244											115	
			5 \times 1	4750	11860		284											143	
	40	10	6.35	3.5 \times 1	4130	10560	64	155	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	125
				5 \times 1	5050	13340		175											155
12		6.35	2.5 \times 1	3180	7780	64	141	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	95	
			3.5 \times 1	4130	10560		165											125	
16		6.35	2.5 \times 1	3180	7780	64	173	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	95	
			3.5 \times 1	4130	10560		205											125	
16		7.144	2.5 \times 1	3740	8790	64	173	104	18	84	15	11	17.5	11	38	22	PT1/8 \times	98	
			3.5 \times 1	4870	11930		205											128	
20		6.35	1.5 \times 1	2180	5000	64	164	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	64	
			2.5 \times 1	3180	7780		204											95	
			3.5 \times 1	4130	10560		244											125	
			5 \times 1	5050	13340		284											155	
40	6.35	1.5 \times 1	2180	5000	64	242	104	18	84	20	11	17.5	11	38	22	PT1/8 \times	64		

FDVE



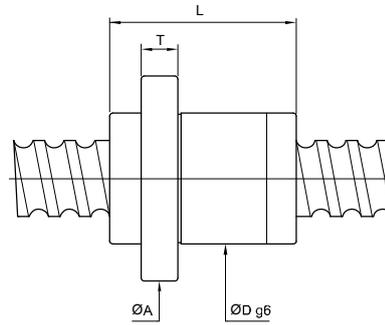
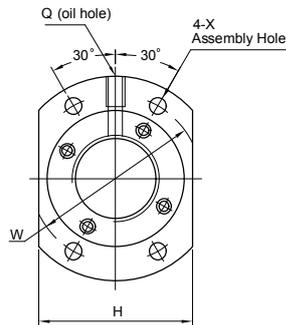
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT	BOLT			RETURN TUBE		OIL HOLE	STIFFNESS
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV) Ca	Static Co	Dg6	L	A	T	W		S	X	Y	Z	U		
50	10	6.35	3.5 \times 1	4560	13230	73	155	118	18	96	20	11	17.5	11	43	22	PT1/8 \times	149
			5 \times 1	5580	16710													175
	12	6.35	2.5 \times 1	3510	9750	73	176	118	18	96	20	11	17.5	11	43	22	PT1/8 \times	112
			3.5 \times 1	4560	13230													200
	12	7.144	2.5 \times 1	4080	11260	75	185	122	20	98	15	14	20	13	44	24	PT1/8 \times	114
			3.5 \times 1	5300	15280													209
	16	6.35	2.5 \times 1	3510	9750	73	206	118	18	96	20	11	17.5	11	43	22	PT1/8 \times	112
			3.5 \times 1	4560	13230													238
	16	7.144	2.5 \times 1	4080	11260	75	212	122	20	98	15	14	20	13	44	24	PT1/8 \times	114
			3.5 \times 1	5300	15280													244
	20	7.144	1.5 \times 1	2790	7240	75	179	122	20	98	15	14	20	13	44	20	PT1/8 \times	77
			2.5 \times 1	4080	11260													219
3.5 \times 1			5300	15280	259													151
5 \times 1			6480	19300	299													187
20	7.938	2.5 \times 1	4750	12090	76	219	123	25	99	20	14	20	13	46	25	PT1/8 \times	117	
		3.5 \times 1	6180	16400													299	154
50	7.938	1.5 \times 1	3250	7770	76	305	123	25	99	20	14	20	13	46	25	PT1/8 \times	79	



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
																			5030
63	10	6.35	3.5 \times 1	5030	17020	86	155	133	22	108	20	14	20	13	49	24	PT1/8 \times	178	
			5 \times 1	6150	21500		175												220
	12	6.35	2.5 \times 1	3870	12540		153												134
			3.5 \times 1	5030	17020	86	177	133	22	108	20	14	20	13	49	24	PT1/8 \times	178	
	12	7.144	5 \times 1	6150	21500		201												220
			2.5 \times 1	4540	14460		158												
	16	7.144	3.5 \times 1	5900	19620	87	182	134	22	110	20	14	20	13	50	25	PT1/8 \times	180	
			5 \times 1	7210	24780		206												224
16	7.938	2.5 \times 1	4540	14460		177												139	
		3.5 \times 1	5900	19620	87	209	134	22	110	20	14	20	13	50	25	PT1/8 \times	184		
20	6.35	5 \times 1	7210	24780		241												228	
		2.5 \times 1	5260	15430		207													134
20	7.938	3.5 \times 1	6840	20940	89	239	148	28	118	25	18	26	17.5	52	25	PT1/8 \times	178		
		5 \times 1	8360	26450		271												220	
20	9.525	2.5 \times 1	3870	12540		205												134	
		3.5 \times 1	5030	17020	86	245	133	22	108	20	14	20	13	49	24	PT1/8 \times	178		
80	10	6.35	5 \times 1	6150	21500		285											220	
			2.5 \times 1	5260	15430		221												139
16	9.525	3.5 \times 1	6840	20940	89	261	148	28	118	25	18	26	17.5	52	25	PT1/8 \times	184		
		5 \times 1	8360	26450		301												228	
20	9.525	2.5 \times 1	8870	25870		219												158	
		3.5 \times 1	11530	35110	93	259	152	28	122	25	18	26	17.5	54	28	PT1/8 \times	208		
100	16	9.525	5 \times 1	14090	44350		299											258	
			2.5 \times 1	11320	41820		211												213
20	9.525	3.5 \times 1	14720	56750	146	243	217	32	181	30	22	32	21.5	82	35	PT1/8 \times	283		
		5 \times 1	17990	71690		259												351	
20	9.525	2.5 \times 1	11320	41820		228												213	
		3.5 \times 1	14720	56750	146	268	217	32	181	30	22	32	21.5	82	35	PT1/8 \times	283		
			5 \times 1	17990	71690		308											351	



Unit: mm

End Cap Series

SCREW SIZE		BALL DIA	EFFECTIVE TURNS circuit × number of thread	BASIC RATE LOAD (kgf)		BALLNUT DIMENSION								
O.D.	LEAD			Dynamic (1 × 10 ⁶ REV.) Ca	Static Co	NUT		FLANGE			BOLT X	OIL HOLE Q	STIFFNESS kgf/μm	
						Dg6	L	A	T	H				W
15	10	3.715	2.8 × 2	1410	2800	34	44	57	10	40	45	5.5	M6 × 1P	34
16	16	3.175	1.8 × 2	700	1400	32	38	53	10	38	42	4.5	M6 × 1P	18
20	20	3.175	1.8 × 2	1100	2500	39	52	62	10	46	50	5.5	M6 × 1P	29
25	25	3.969	1.8 × 2	1650	3900	47	62	74	12	56	60	6.6	M6 × 1P	35
			1.8 × 4	2830	7800									69
32	32	4.762	1.8 × 2	2360	5940	58	78	92	15	68	74	9	M6 × 1P	44
			1.8 × 4	4280	11800									87
36	24	7.144	2.8 × 2	6450	15220	75	94	115	18	86	94	11	M6 × 1P	77
40	40	6.35	1.8 × 2	3860	9900	73	95	114	17	84	93	11	M6 × 1P	55
			1.8 × 4	7000	19880									108
50	50	7.938	1.8 × 2	5800	15800	90	120	135	20	104	112	14	M6 × 1P	68
			1.8 × 4	10520	31600									135

13.6 Ballscrews For Heavy Load

Features

Focused on improvements of contact points of balls and thread grooves, ball diameter and circulation system for new type, FSVH. The rated dynamic load has been increased to as two times as that of conventional type, FSVC.

Long Life

Structure of the newly developed circulation system is designed to distribute the load uniformly to the load balls and it also increases the life of ballscrews.

On conventional circulation system, FSVC, the returning tube is inserted into the holes on ballnut perpendicularly which forms an advancing angle. While ball moves into returning tube, it will hit tube end area and then move into returning tube.

New circulation system, FSVH, ball will move into returning tube smoothly by tangent line as the same direction as lead angle. It can increase the life of circulation system structure.

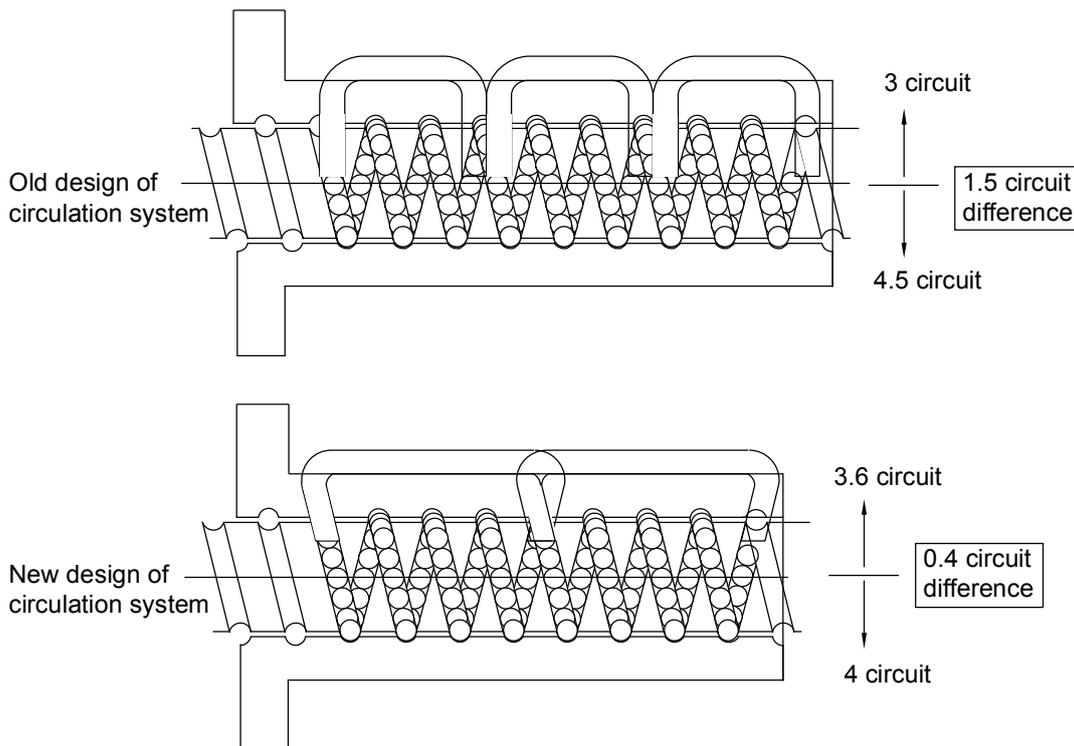


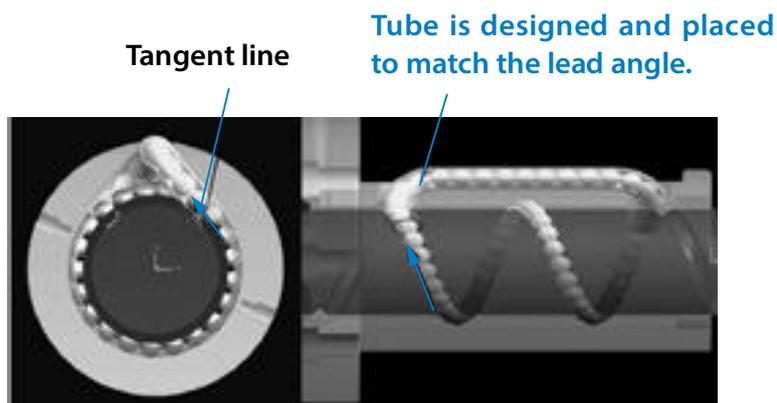
Fig.13.4 Circuit difference for heavy load ballscrew

High DN Value

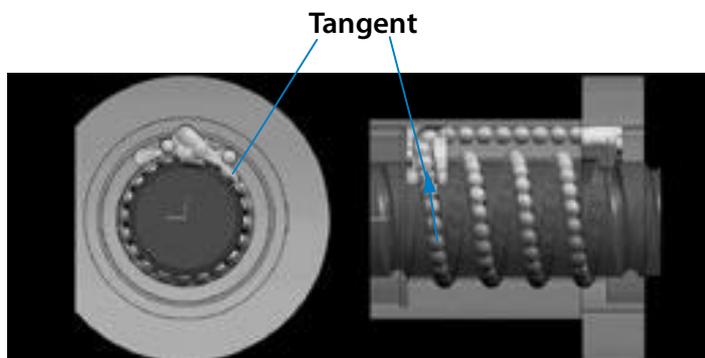
With the newly developed circulation system, ballscrews can meet the demands of high speed running with high DN value.

Low Noise

To use tangential circulation system structure, it can eliminate the noise while balls run into the returning tube.

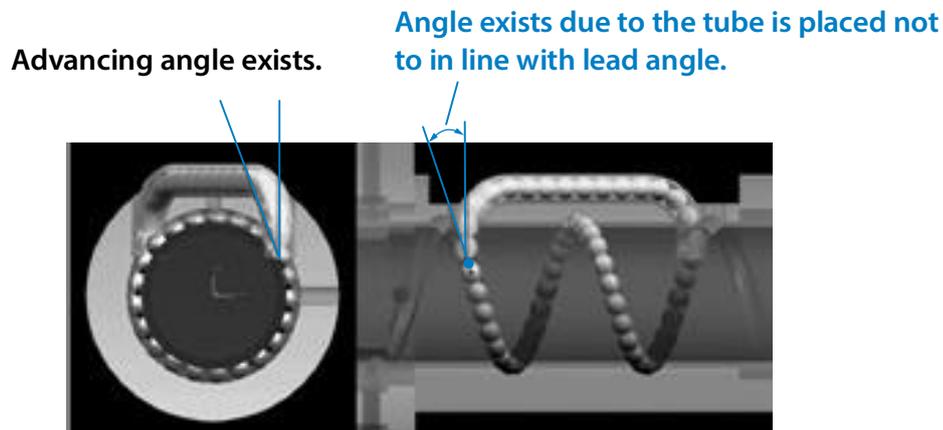


FSVH circulation system structure(NEW)



FSDH circulation system structure (NEW)

Fig.13.5 Circulation system structure for FSVH and FSDH



FSVC circulation system structure

Fig.13.6 Circulation system structure for FSVC

Various Specifications Combination

PMI can supply various ball screws with diameter $40 \times 120mm$ and lead $10mm$ to $60mm$ (Please contact PMI for your specific design requirement)

Recommend mounting direction of heavy load ball screws

In order to support equal load distribution for shaft and nut, recommend mounting direction of ball screws allow fig. 13.7. This mounting direction can avoided vibration as axial load uneven distribution for ball screws, therefore increase service life efficient.

Application

Plastic Injection Machines / Press and Forging Machines
Semi-conductor Equipments / General Machines

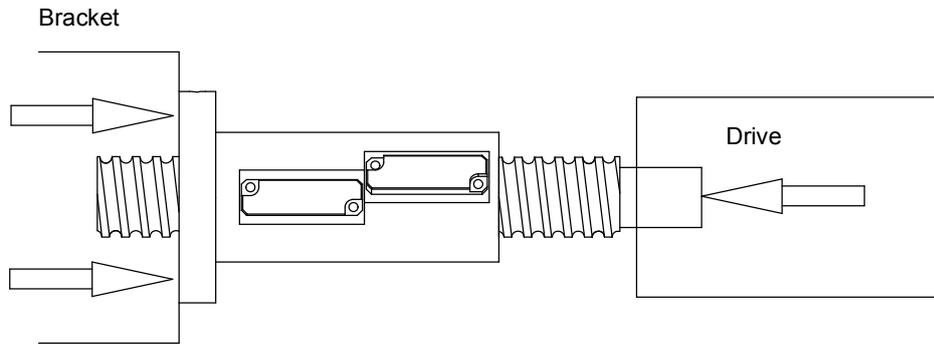


Fig.13.7 Recommend mounting direction of heavy load ballscrew

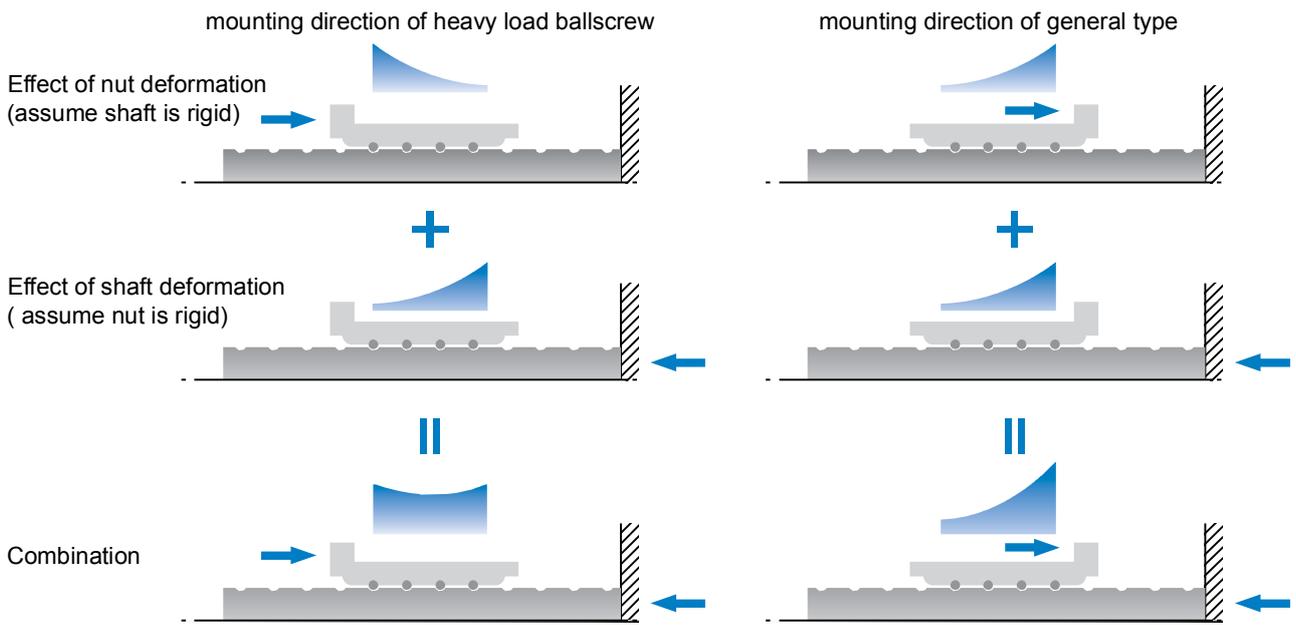
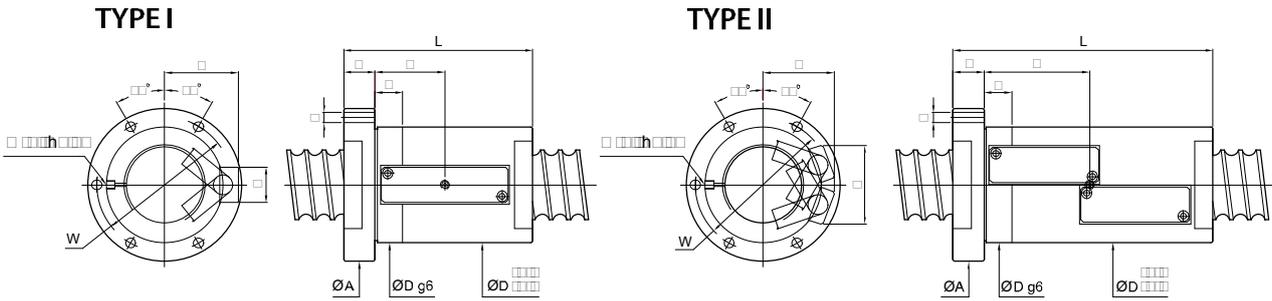


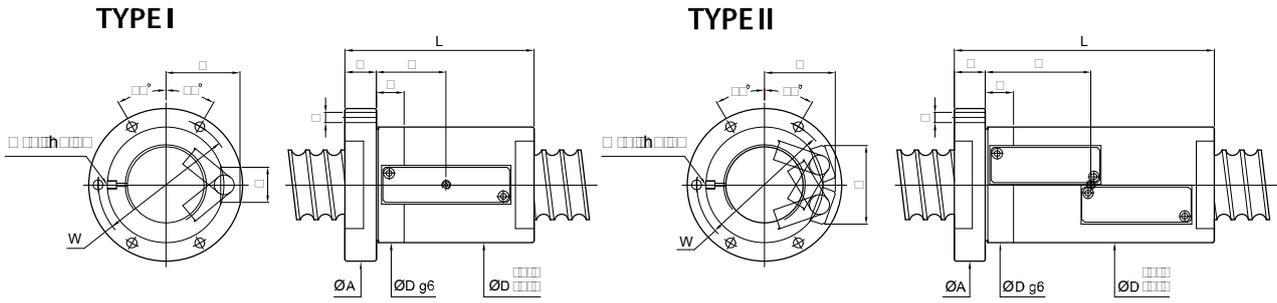
Fig.13.8 Load distribution



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE			FIT S	OIL HOLE		BOLT X	RETURN TUB		Type
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		Q	E		V	U	
40	10	7.938	3.5x2	15000	41800	66	124	98	18	83	20	M6x1P	50.75	9	51	43	II
	12	9.525	3.5x2	18600	48200	70	156	93	18	86	20	M6x1P	58	9	55	45	II
45	10	7.938	3.5x2	15900	47300	70	134	104	18	87	20	M6x1P	54.2	9	54	45	II
50	10	7.938	3.5x2	16700	52900	77	133	109	18	92	20	M6x1P	53.7	9	60	48	II
	16	12.7	6x1	24800	63700	95	168	128	28	112	20	PT1/8x	70.5	9	32	60	I
		12.7	3.5x2	31200	83500		200	128	28	112	20		86	9	72	62	II
20	12.7	3.5x2	31200	84800	95	235	128	28	112	20	PT1/8x	97	9	72	62	II	
55	10	7.938	3.5x2	17500	58500	80	153	114	28	97	20	PT1/8x	62.1	9	61	49	II
	16	12.7	6x1	25800	71800	100	168	133	28	115	20	PT1/8x	69.5	9	32	63	I
3.5x2			32600	94000	100	200	133	28	115	20	84.5		9	77	64	II	
63	16	12.7	6x1	27800	81700	105	168	138	28	122	25	PT1/8x	65.25	9	32	66	I
			3.5x2	35000	107000	105	202	138	28	122	25		82.25	9	80	67	II
			6x2	50300	164000	105	266	138	28	122	25		114.25	9	80	67	II
	20	15.875	2.5x2	35900	99300	117	210	157	32	137	25	PT1/8x	96	11	88	74	II
3.5x2	46600	134700	117	246	157	32	137	25	105.5	11	88		74	II			
25	15.875	2.5x2	35900	99300	117	235	157	32	137	25	PT1/8x	91	11	88	75	II	
80	16	12.7	6x1	30900	104400	120	172	158	32	139	25	PT1/8x	66	9	36	73	I
			3.5x2	39000	136700	120	205	158	32	139	25		84	9	89	74	II
			6x2	56000	208700	120	275	158	32	139	25		122	9	89	74	II
	20	15.875	2.5x2	40100	127000	130	210	168	32	150	25	PT1/8x	87.5	11	90	83	II
			3.5x2	52100	172400	130	250	168	32	150	25		107.5	11	90	83	II
			6x2	75000	263200	130	330	168	32	150	30		147.5	11	90	83	II
25	19.05	3.5x2	67700	206100	145	305	188	40	165	25	PT1/8x	119	11	108	94	II	
		6x2	97200	314600	145	402	188	40	165	30		169	11	108	94	II	

FSVH

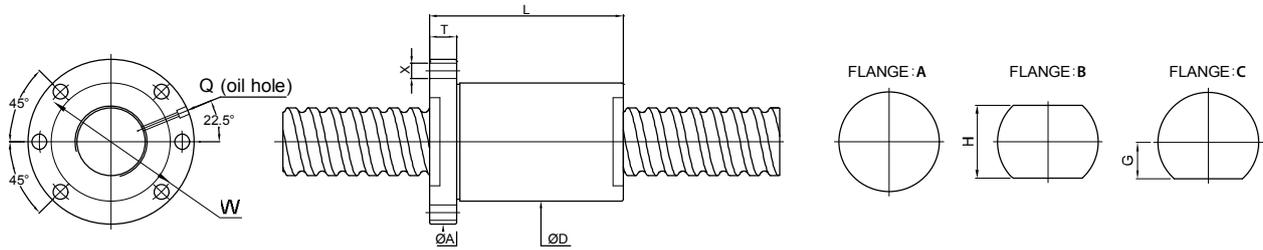


Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	OIL HOLE		BOLT X	RETURN TUB		Type
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		Q	E		V	U	
100	16	12.7	6x1	34200	133200	145	172	185	32	165	25	PT1/8	63.5	11	38	85	I
			3.5x2	43200	174500	145	205	185	32	165	25		79.5	11	98	85	II
			6x2	62000	266300	145	275	185	32	165	25		117.5	11	98	85	II
	20	15.875	2.5x2	44800	160900	150	205	194	32	172	30	PT1/8	82	11	107	92	II
			3.5x2	58300	218400	150	245	194	32	172	30		102	11	107	92	II
			6x2	83800	333300	150	330	194	32	172	30		147	11	107	92	II
25	19.05	3.5x2	74900	260200	165	305	218	40	190	30	PT1/8	122	11	111	102	II	
		6x2	107700	397100	165	410	218	40	190	30		177	11	111	102	II	
120	16	12.7	6x1	34100	130200	173	205	213	40	193	30	PT1/8	84	11	38	93	I
			3.5x2	43000	170700	173	230	213	40	193	30		101	11	108	94	II
	20	15.875	6x1	46000	160800	173	222	213	40	193	30	PT1/8	95	11	54	100	I
			3.5x2	58100	210700	173	260	213	40	193	30		116	11	121	104	II
	25	19.0	6x1	59200	194500	183	261	213	40	193	30	PT1/8	109.5	11	50	106	I
			3.5x2	74700	254800	183	314	213	40	193	30		135.5	11	129	109	II

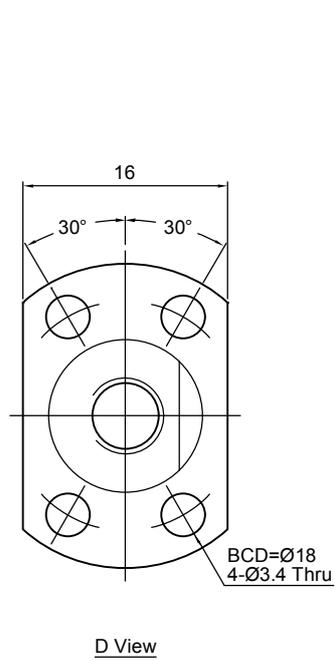
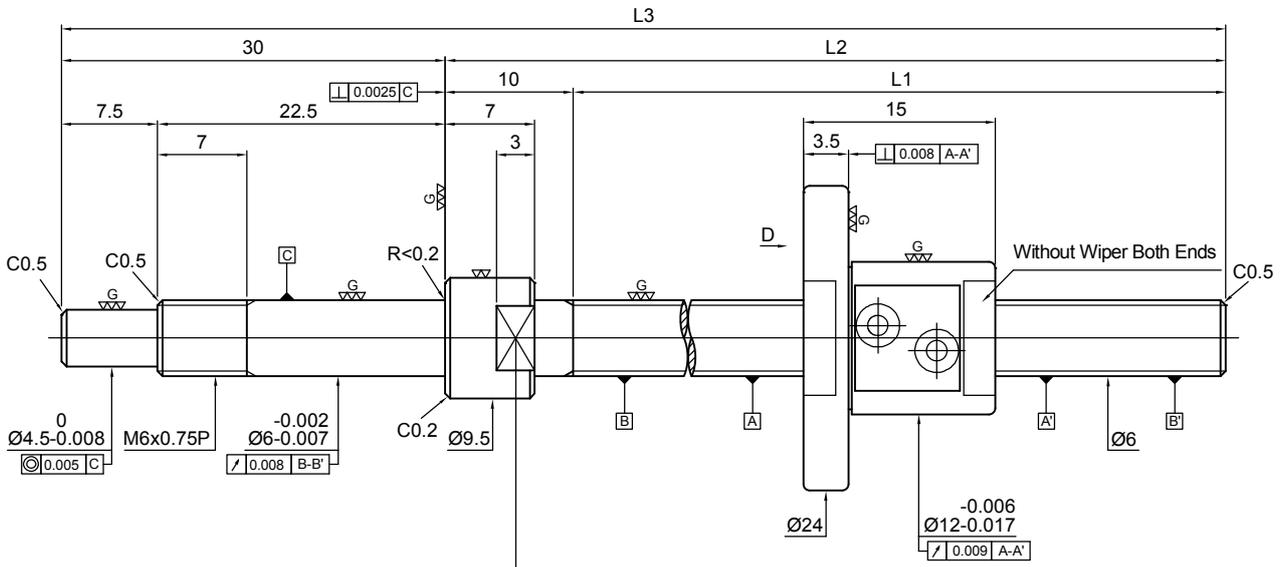
13.7 Heavy Load Series of End Deflector

FSDH



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times number of thread	BASIC RATE LOAD (kgf)		NUT		FLANGE				OIL HOLE	BOLT
O.D.	LEAD			Dynamic (1×10^6 REV.) Ca	Static Co	D6	L	A	T	W	G	Q	X
45	12	9.525	5 \times 1	13600	35400	84	98	128	24	106	57	PT1/8 \times	14
	16	9.525	5 \times 1	13500	35300	84	122	128	24	106	57	PT1/8 \times	14
	20	9.525	4 \times 1	11000	27900	84	122	128	24	106	57	PT1/8 \times	14
50	16	12.7	5 \times 1	21100	53700	102	125	146	28	124	65	PT1/8 \times	14
	20	12.7	4 \times 1	17200	42400	102	124	146	28	124	65	PT1/8 \times	14
	40	12.7	3 \times 2	23400	61200	102	163	146	28	124	65	PT1/8 \times	14
63	32	15.875	4 \times 1	25500	66000	126	176	182	32	154	81	PT1/8 \times	18
	40	15.875	3 \times 2	35300	96600	126	169	182	32	154	81	PT1/8 \times	18
80	50	19.05	4 \times 2	66600	204000	155	255	224	40	190	100	PT1/8 \times	22
100	60	19.05	4 \times 2	73400	251500	175	295	244	40	210	100	PT1/8 \times	22



Specification of ball screw

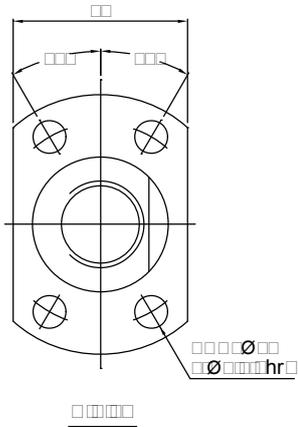
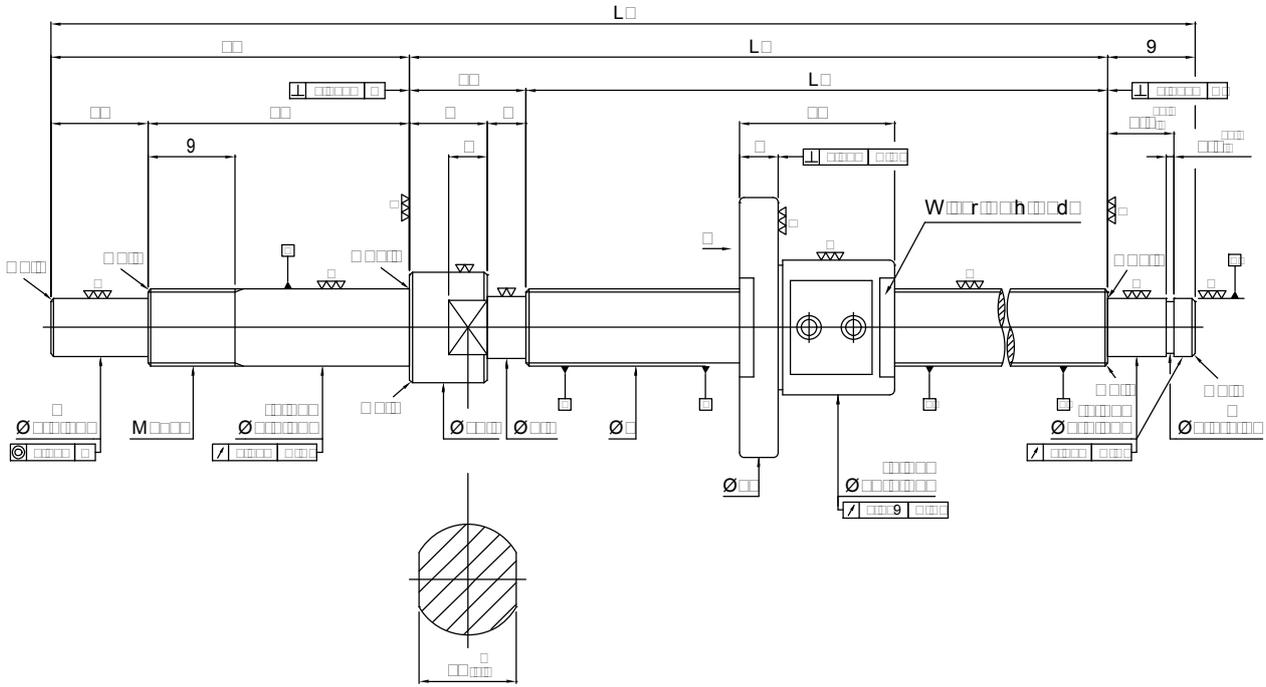
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	6.1	
Lead	1	
Ball Dia.	0.8	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	2.99	
Dynamic Rate Load Ca (kgf)	58	
Static Rate Load Co (kgf)	100	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.01 \times 0.15	0.03 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
FSM0601-C3-1R-0105	65	75	105	3	0	0.012	0.008
FSM0601-C3-1R-0135	95	105	135	3	0	0.012	0.008
FSM0601-C3-1R-0165	125	135	165	3	0	0.012	0.008

FSMC Miniature Ballscrews

Screw Dia. $\varnothing 8$ Lead 01

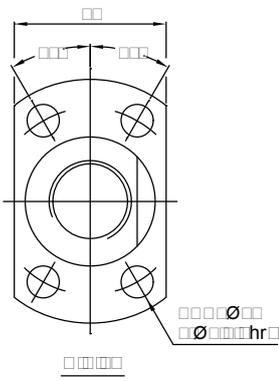
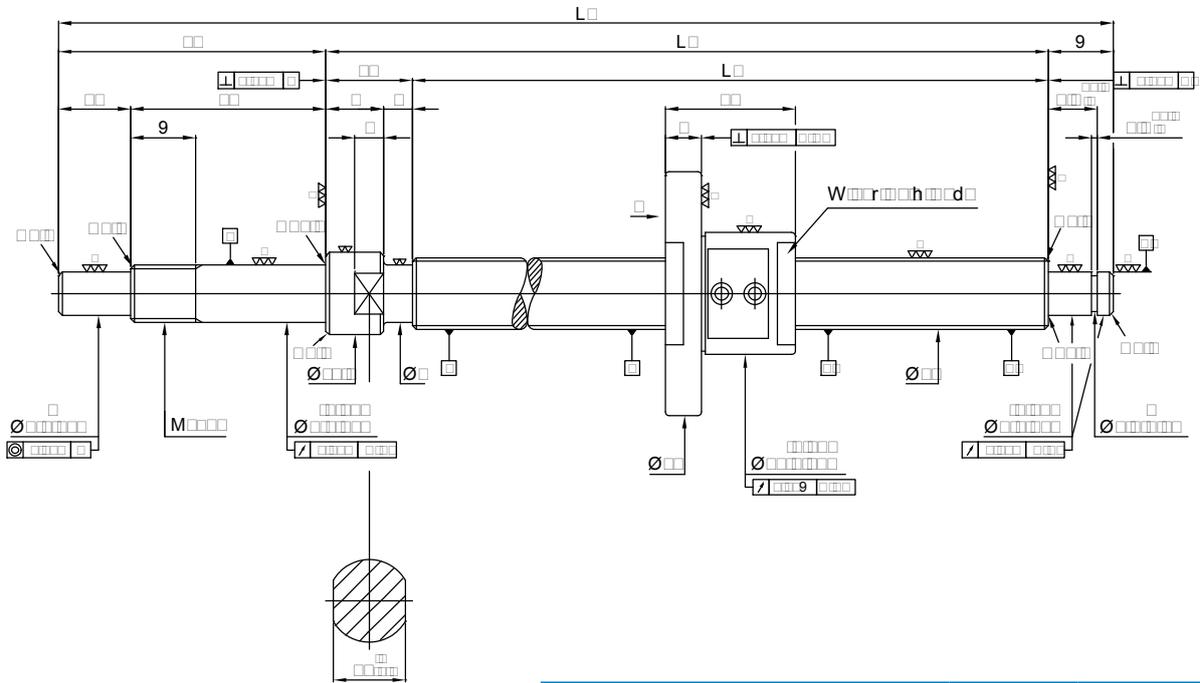


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	8.1	
Lead	1	
Ball Dia.	0.8	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	2.25	
Dynamic Rate Load Ca (kgf)	66	
Static Rate Load Co (kgf)	140	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.01 \times 0.2	0.05 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
FSM0801-C3-1R-0138	80	92	138	3	0	0.012	0.008
FSM0801-C3-1R-0168	110	122	168	3	0	0.012	0.008
FSM0801-C3-1R-0198	140	152	198	3	0	0.012	0.008
FSM0801-C3-1R-0248	190	202	248	3	0	0.012	0.008



Specification of ball screw

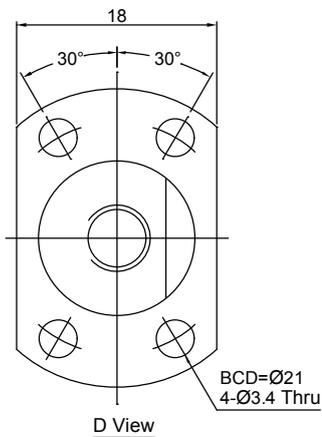
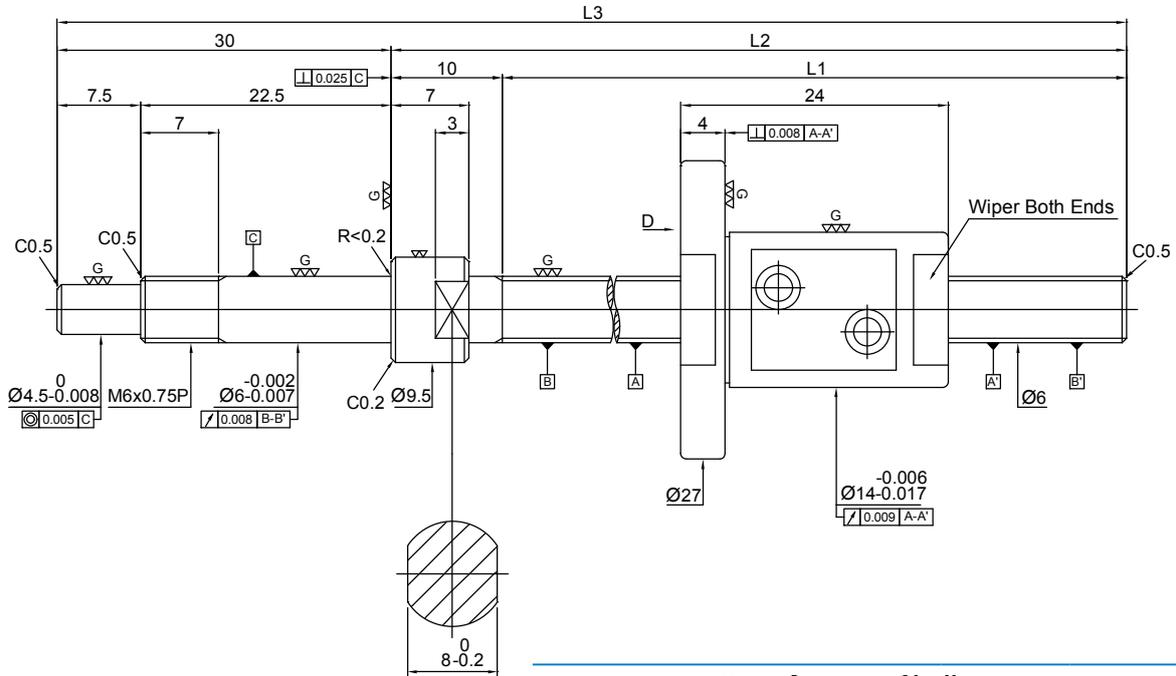
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	10.1	
Lead	1	
Ball Dia.	0.8	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	1.8	
Dynamic Rate Load Ca (kgf)	73	
Static Rate Load Co (kgf)	180	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.01 \times 0.3	0.05 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
FSM1001-C3-1R-0168	110	122	168	3	0	0.012	0.008
FSM1001-C3-1R-0218	160	172	218	3	0	0.012	0.008
FSM1001-C3-1R-0268	210	222	268	3	0	0.012	0.008
FSM1001-C3-1R-0318	260	272	318	3	0	0.012	0.008
FSM1001-C3-1R-0368	310	322	368	3	0	0.013	0.008

FSMC Miniature Ballscrews

Screw Dia. $\varnothing 6$ Lead 02

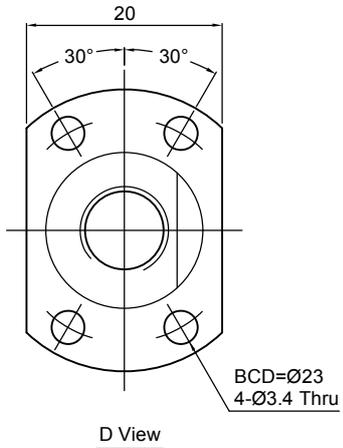
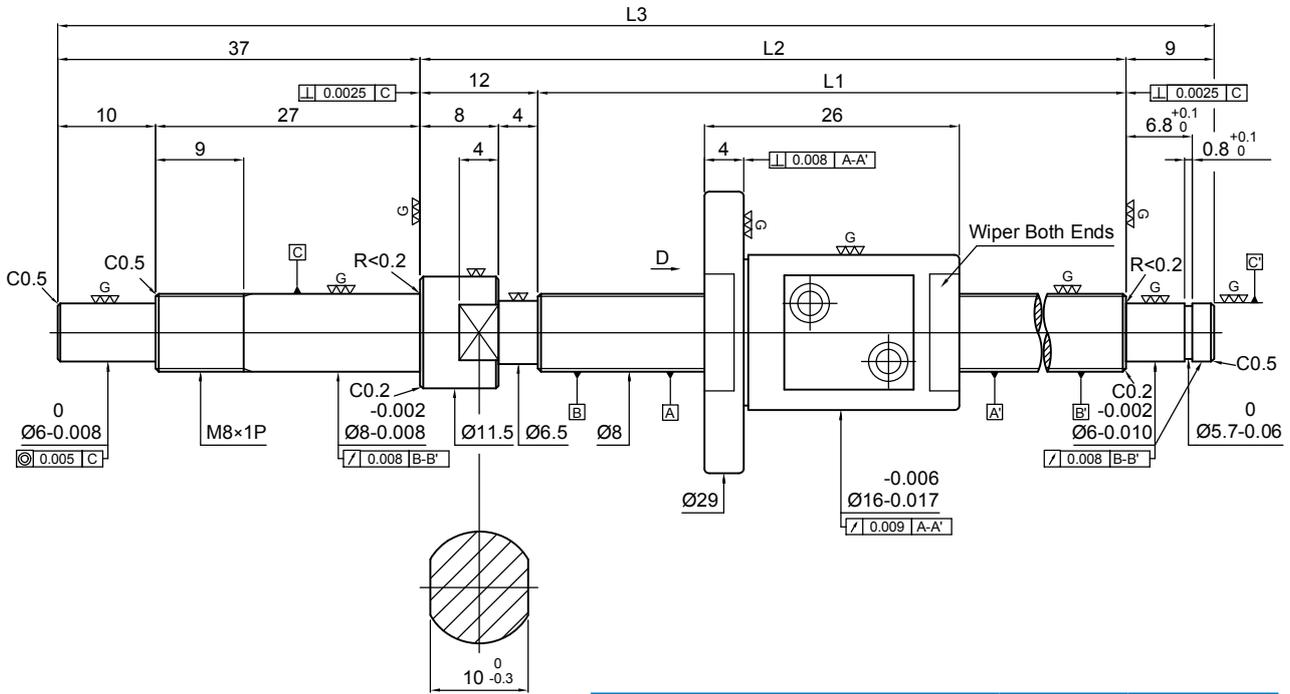


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	6.3	
Lead	2	
Ball Dia.	1.588	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	5.77	
Dynamic Rate Load Ca (kgf)	160	
Static Rate Load Co (kgf)	210	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.01 \times 0.2	0.05 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
FSM0602-C3-1R-0105	65	75	105	3	0	0.012	0.008
FSM0602-C3-1R-0135	95	105	135	3	0	0.012	0.008
FSM0602-C3-1R-0165	125	135	165	3	0	0.012	0.008



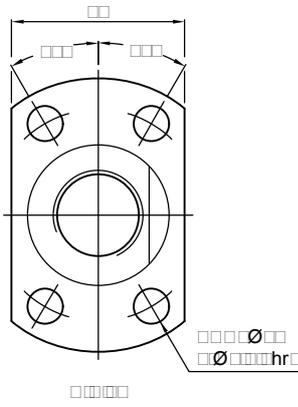
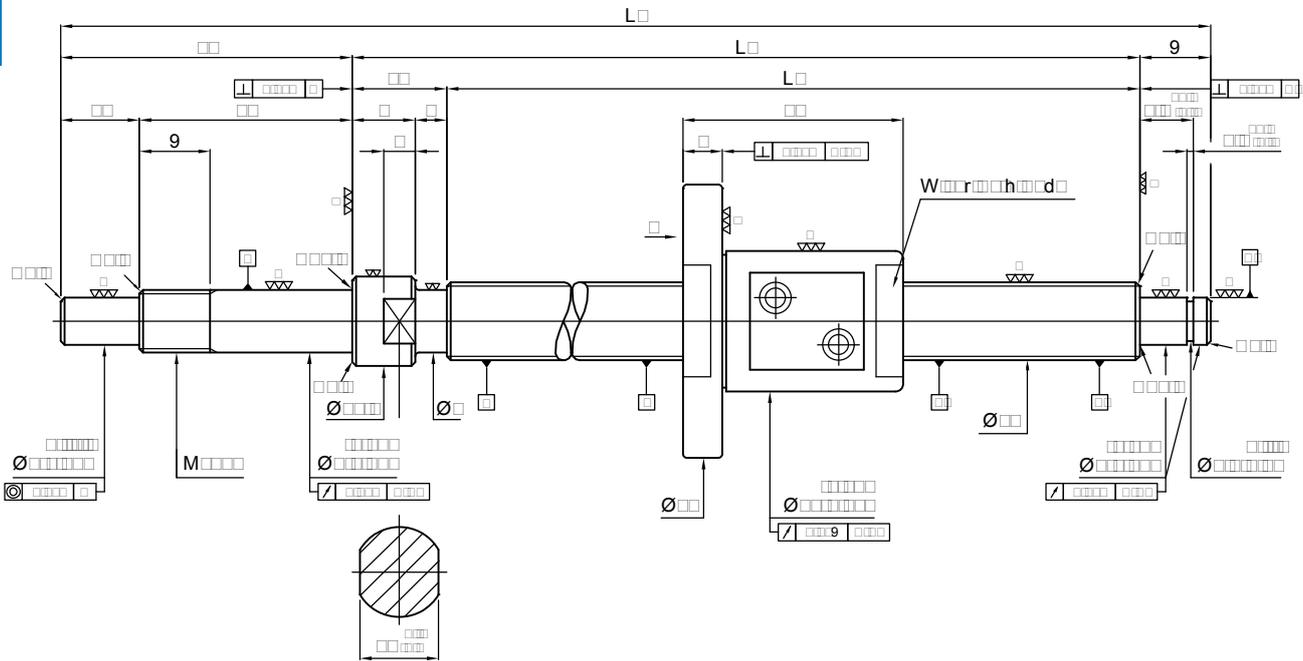
Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	8.3	
Lead	2	
Ball Dia.	1.588	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	4.39	
Dynamic Rate Load Ca (kgf)	190	
Static Rate Load Co (kgf)	290	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.01 \times 0.2	0.05 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
FSM0802-C3-1R-0138	80	92	138	3	0	0.012	0.008
FSM0802-C3-1R-0168	110	122	168	3	0	0.012	0.008
FSM0802-C3-1R-0198	140	152	198	3	0	0.012	0.008
FSM0802-C3-1R-0248	190	202	248	3	0	0.012	0.008

FSMC Miniature Ballscrews
Screw Dia. $\varnothing 10$ Lead 02

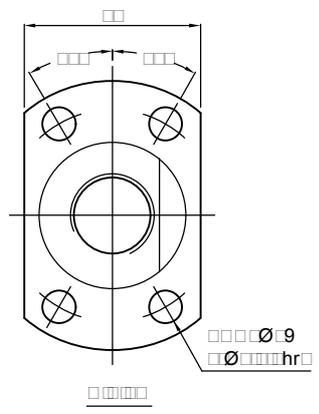
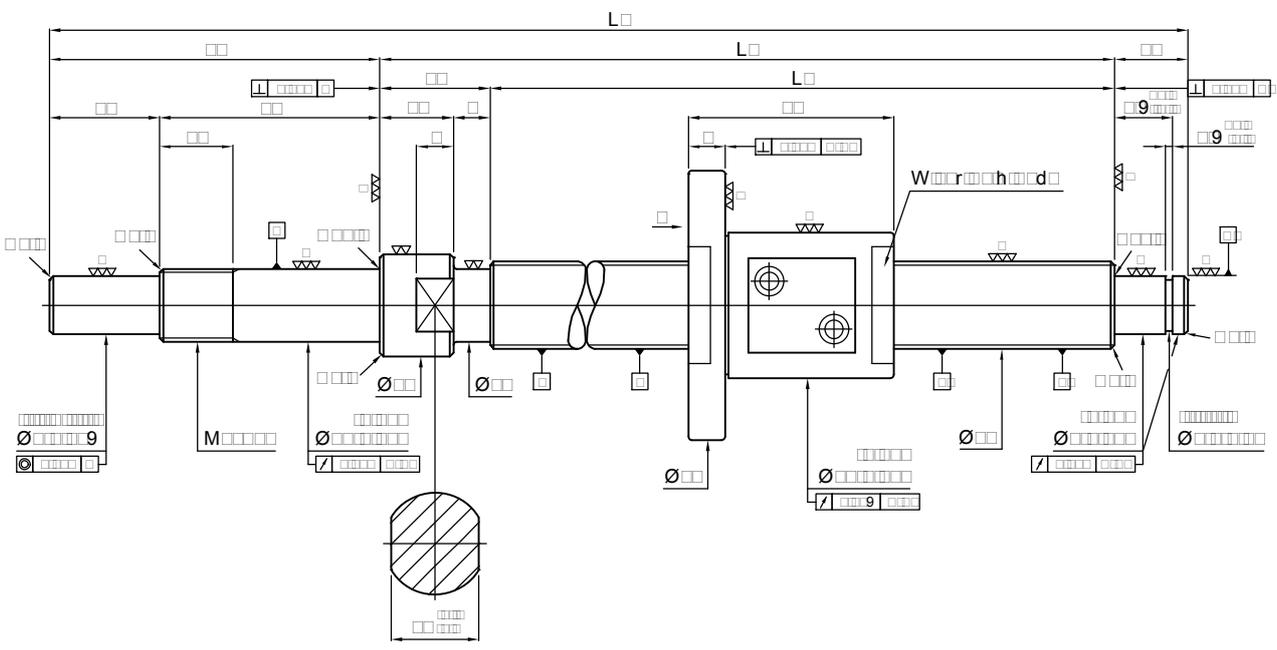


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	10.3	
Lead	2	
Ball Dia.	1.588	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	3.54	
Dynamic Rate Load Ca (kgf)	220	
Static Rate Load Co (kgf)	370	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.01 \times 0.3	0.05 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
FSM1002-C3-1R-0168	110	122	168	3	0	0.012	0.008
FSM1002-C3-1R-0218	160	172	218	3	0	0.012	0.008
FSM1002-C3-1R-0268	210	222	268	3	0	0.012	0.008
FSM1002-C3-1R-0318	260	272	318	3	0	0.012	0.008
FSM1002-C3-1R-0368	310	322	368	3	0	0.012	0.008



Specification of ball screw

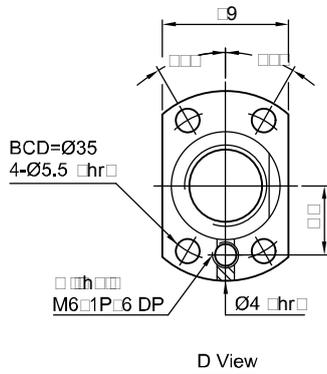
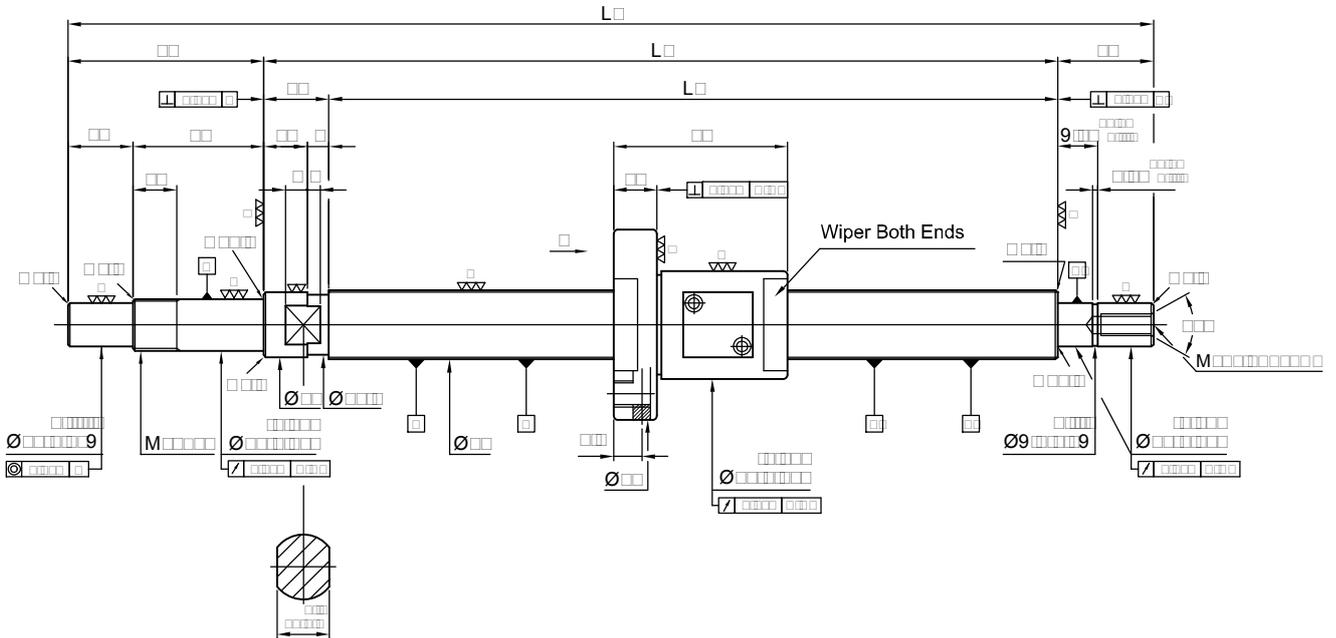
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	12.3	
Lead	2	
Ball Dia.	1.588	
Effective Turns (Circuit × Row)	2.5 × 1	
Lead Angle	2.96	
Dynamic Rate Load Ca (kgf)	240	
Static Rate Load Co (kgf)	450	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.04 × 0.4	0.1 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
FSM1202-C3-1R-0180	110	125	180	3	0	0.012	0.008
FSM1202-C3-1R-0230	160	175	230	3	0	0.012	0.008
FSM1202-C3-1R-0280	210	225	280	3	0	0.012	0.008
FSM1202-C3-1R-0330	260	275	330	3	0	0.012	0.008
FSM1202-C3-1R-0380	310	325	380	3	0	0.012	0.008

FSMC Miniature Ballscrews

Screw Dia.Ø16 Lead02

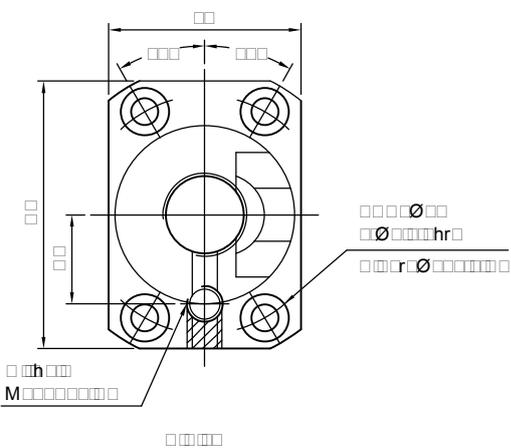
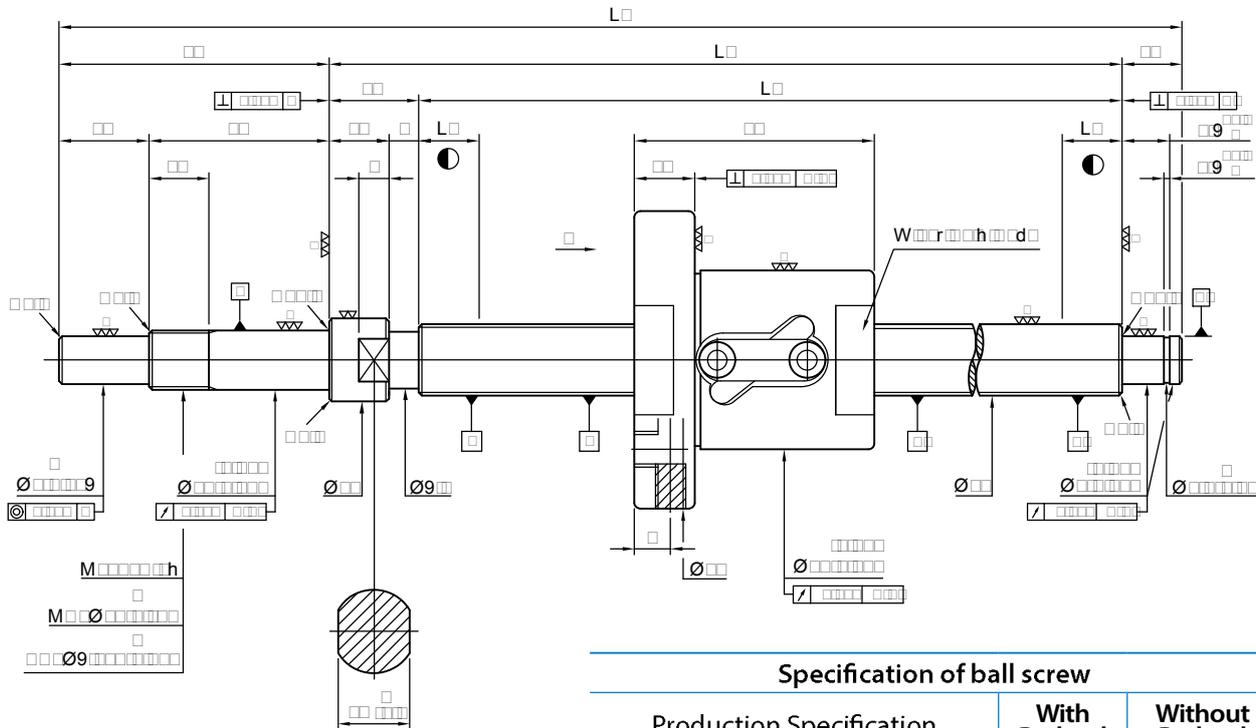


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	16.3	
Lead	2	
Ball Dia.	1.588	
Effective Turns (Circuit × Row)	3.5 × 1	
Lead Angle	2.24	
Dynamic Rate Load Ca (kgf)	360	
Static Rate Load Co (kgf)	850	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.05×0.5	0.15 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length			Accuracy Grade	Lead Accuracy		
	L1	L2	L3		Specified Travel (T)	Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
FSM1602-C3-1R-0221	139	154	221	3	0	0.012	0.008
FSM1602-C3-1R-0271	189	204	271	3	0	0.012	0.008
FSM1602-C3-1R-0321	239	254	321	3	0	0.012	0.008
FSM1602-C3-1R-0371	289	304	371	3	0	0.012	0.008
FSM1602-C3-1R-0471	389	404	471	3	0	0.013	0.008



Specification of ball screw

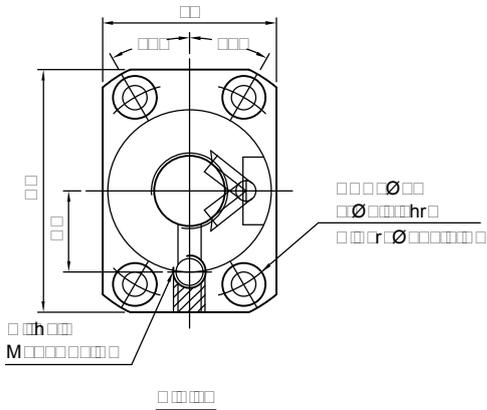
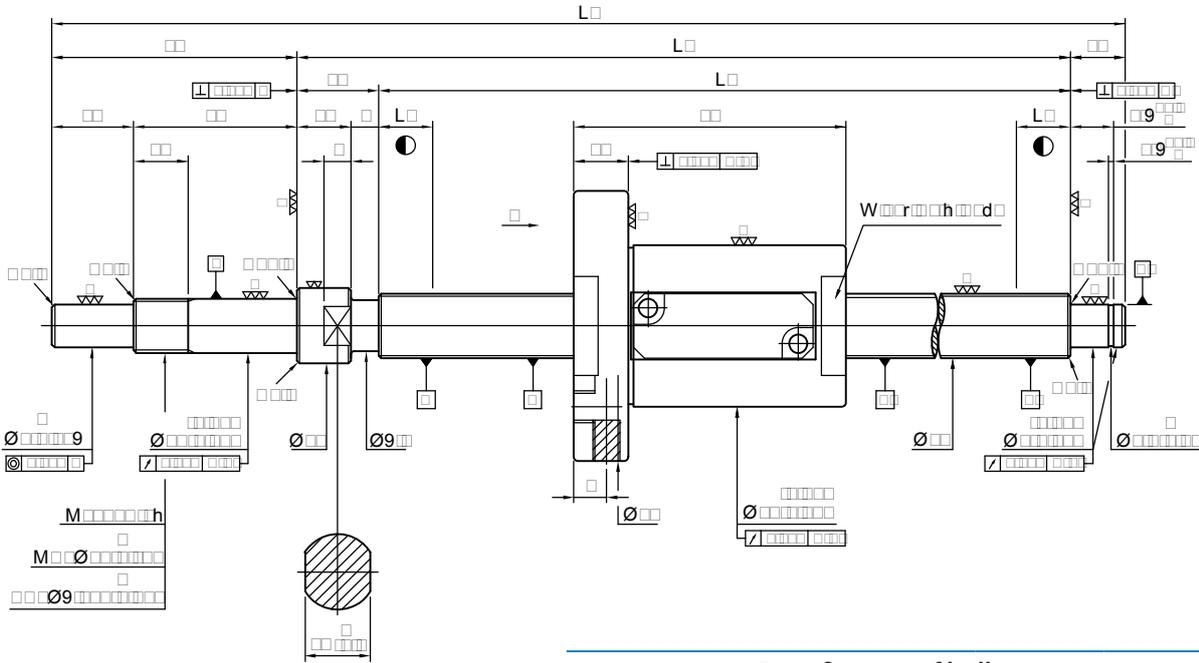
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	12.4	
Lead	5	
Ball Dia.	2.381	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	7.31	
Dynamic Rate Load Ca (kgf)	380	
Static Rate Load Co (kgf)	640	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.01 \times 0.45	0.1 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R12-05B1-FSWC-110-180-0.008	110	125	180	10	3	0.012	0.008
1R12-05B1-FSWC-160-230-0.008	160	175	230	10	3	0.012	0.008
1R12-05B1-FSWC-210-280-0.008	210	225	280	10	3	0.012	0.008
1R12-05B1-FSWC-260-330-0.008	260	275	330	10	3	0.012	0.008
1R12-05B1-FSWC-310-380-0.008	310	325	380	10	3	0.012	0.008
1R12-05B1-FSWC-410-480-0.008	410	425	480	15	3	0.013	0.008
1R12-05B1-FSWC-510-580-0.008	510	525	580	15	3	0.015	0.008

FSWE Standard ballscrews

Screw Dia. \varnothing 12 Lead 10

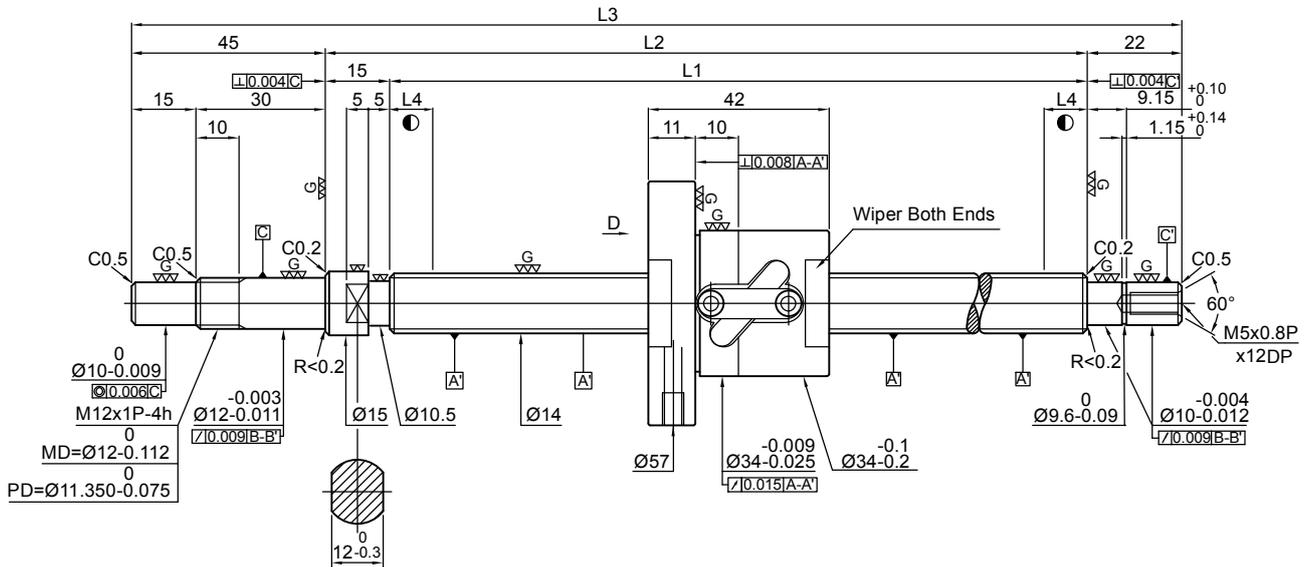


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	12.4	
Lead	10	
Ball Dia.	2.381	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	14.4	
Dynamic Rate Load C_a (kgf)	420	
Static Rate Load C_o (kgf)	720	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.1 \times 0.5	0.1 or less

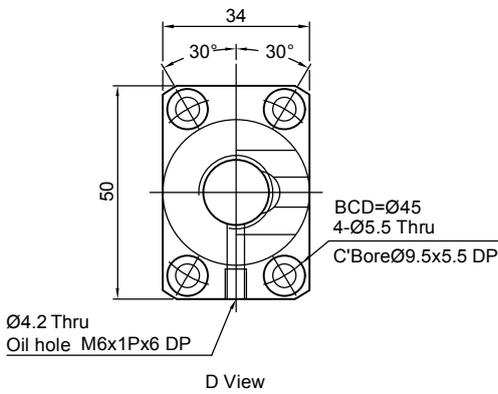
Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R12-10B1-FSWE-160-230-0.008	160	175	230	10	3	0.012	0.008
1R12-10B1-FSWE-210-280-0.008	210	225	280	10	3	0.012	0.008
1R12-10B1-FSWE-310-380-0.008	310	325	380	15	3	0.012	0.008
1R12-10B1-FSWE-410-480-0.008	410	425	480	15	3	0.013	0.008
1R12-10B1-FSWE-510-580-0.008	510	525	580	15	3	0.015	0.008



Specification of ball screw

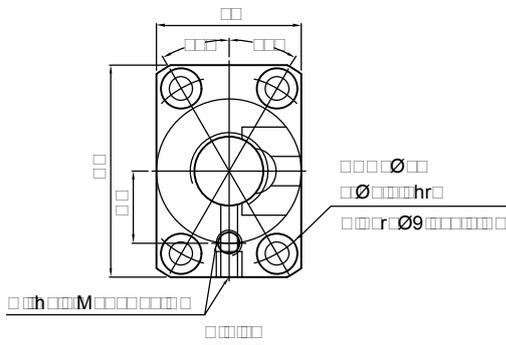
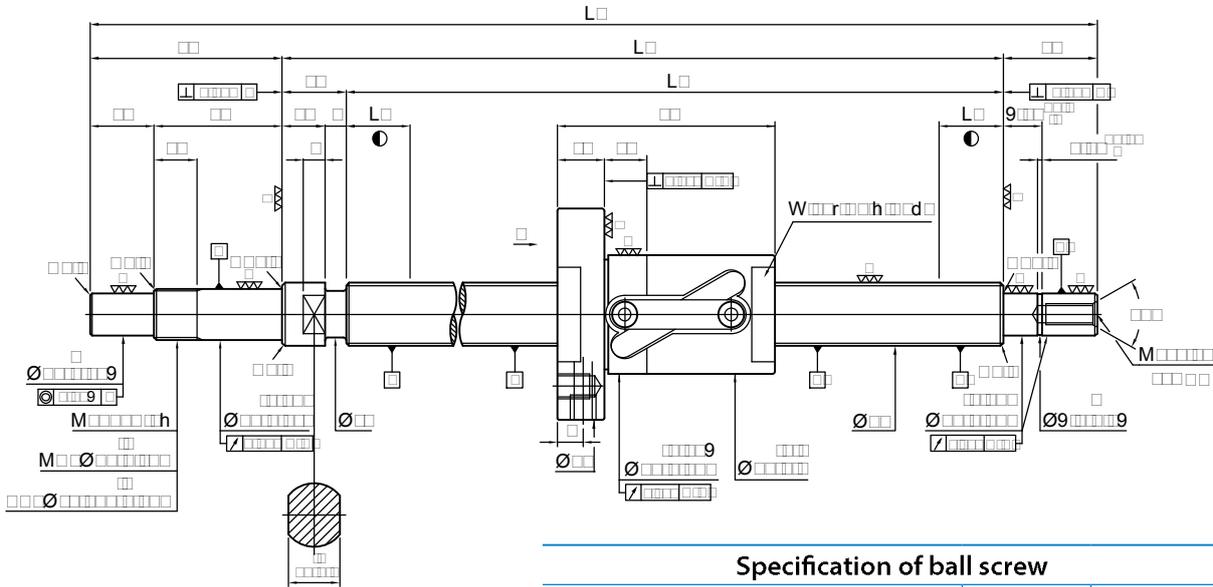
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	14.6	
Lead	5	
Ball Dia.	3.175	
Effective Turns (Circuit × Row)	2.5 × 1	
Lead Angle	6.22	
Dynamic Rate Load Ca (kgf)	675	
Static Rate Load Co (kgf)	1145	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.15×0.7	0.2 or less



Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R14-05B1-FSWC-189-271-0.008	189	204	271	10	3	0.012	0.008
1R14-05B1-FSWC-239-321-0.008	239	254	321	10	3	0.012	0.008
1R14-05B1-FSWC-339-421-0.008	339	954	421	15	3	0.012	0.008
1R14-05B1-FSWC-439-521-0.008	439	454	521	15	3	0.012	0.008
1R14-05B1-FSWC-539-621-0.008	539	554	621	15	3	0.012	0.008
1R14-05B1-FSWC-689-771-0.008	689	704	771	15	3	0.013	0.008

FSWC Standard ballscrews
Screw Dia.Ø15 Lead10

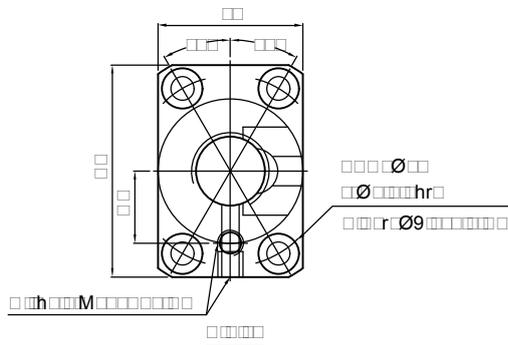
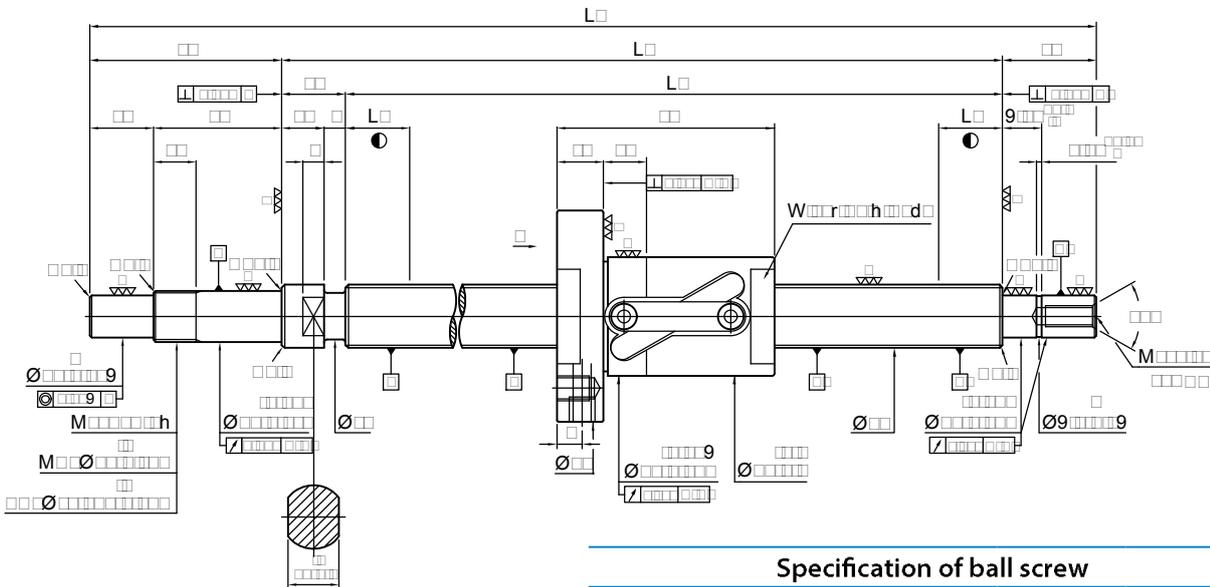


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	15.6	
Lead	10	
Ball Dia.	3.175	
Effective Turns (Circuit × Row)	2.5 × 1	
Lead Angle	11.53	
Dynamic Rate Load Ca (kgf)	680	
Static Rate Load Co (kgf)	1210	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.1×0.79	0.24 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R15-10B1-FSWC-189-271-0.018	189	201	271	10	5	0.023	0.018
1R15-10B1-FSWC-239-321-0.018	239	254	321	10	5	0.023	0.018
1R15-10B1-FSWC-289-371-0.018	289	304	371	15	5	0.023	0.018
1R15-10B1-FSWC-339-421-0.018	339	354	421	15	5	0.023	0.018
1R15-10B1-FSWC-389-471-0.018	289	404	471	15	5	0.025	0.018
1R15-10B1-FSWC-439-521-0.018	439	454	521	15	5	0.025	0.018
1R15-10B1-FSWC-489-571-0.018	489	504	571	15	5	0.027	0.018



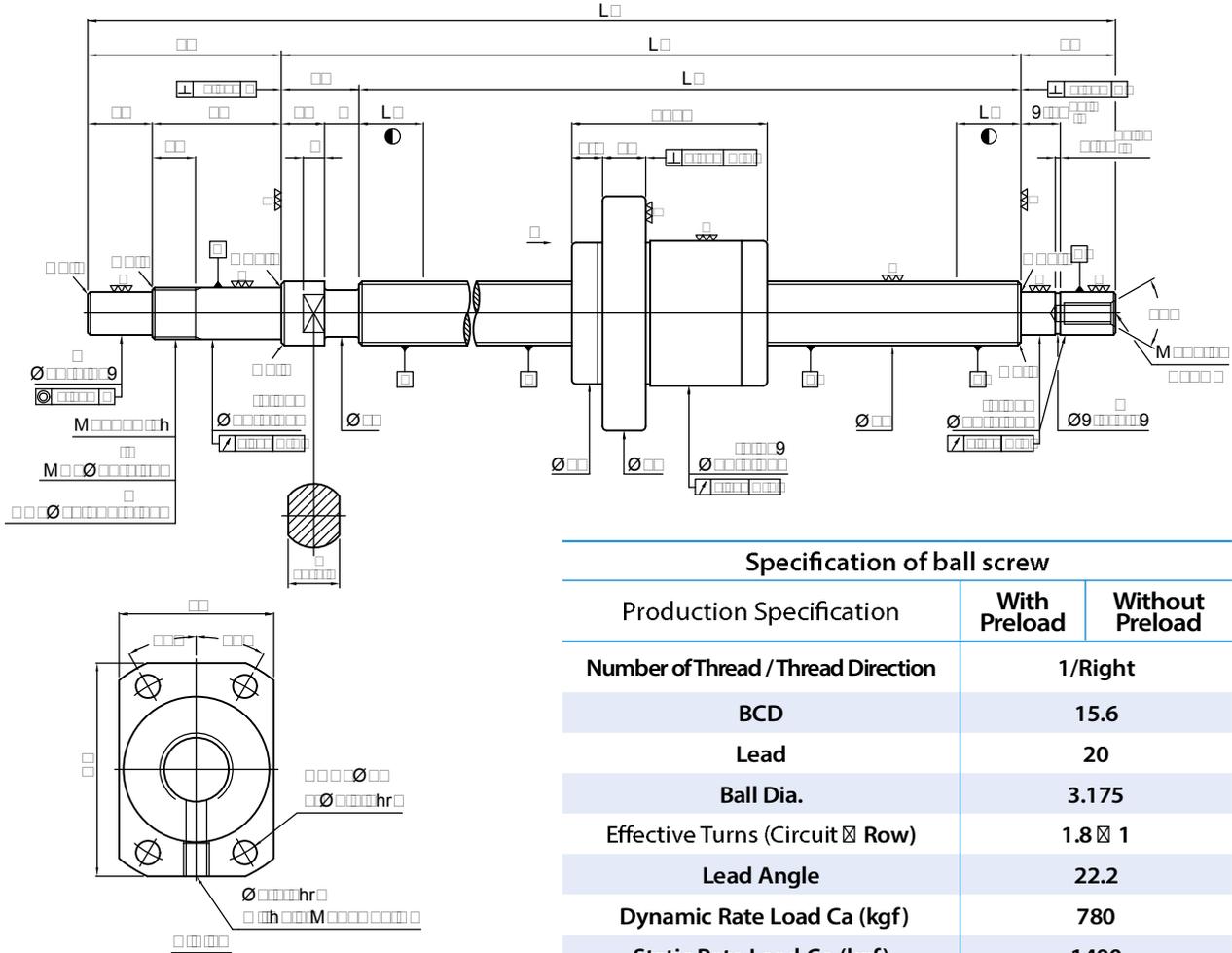
Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	15.6	
Lead	10	
Ball Dia.	3.175	
Effective Turns (Circuit × Row)	2.5 × 1	
Lead Angle	11.53	
Dynamic Rate Load Ca (kgf)	680	
Static Rate Load Co (kgf)	1210	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.1×0.79	0.24 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R15-10B1-FSWC-539-621-0.018	539	554	621	15	5	0.027	0.018
1R15-10B1-FSWC-589-671-0.018	589	604	671	15	5	0.030	0.018
1R15-10B1-FSWC-639-721-0.018	639	654	721	15	5	0.030	0.018
1R15-10B1-FSWC-689-771-0.018	689	704	771	15	5	0.035	0.018
1R15-10B1-FSWC-789-871-0.018	789	804	871	15	5	0.035	0.018
1R15-10B1-FSWC-889-971-0.018	889	904	971	15	5	0.040	0.018
1R15-10B1-FSWC-1089-1171-0.018	1089	1104	1171	15	5	0.046	0.018

FSKC Standard ballscrews
Screw Dia.Ø15 Lead20

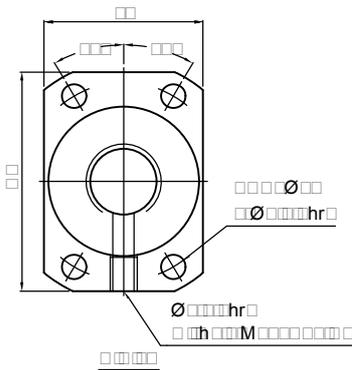
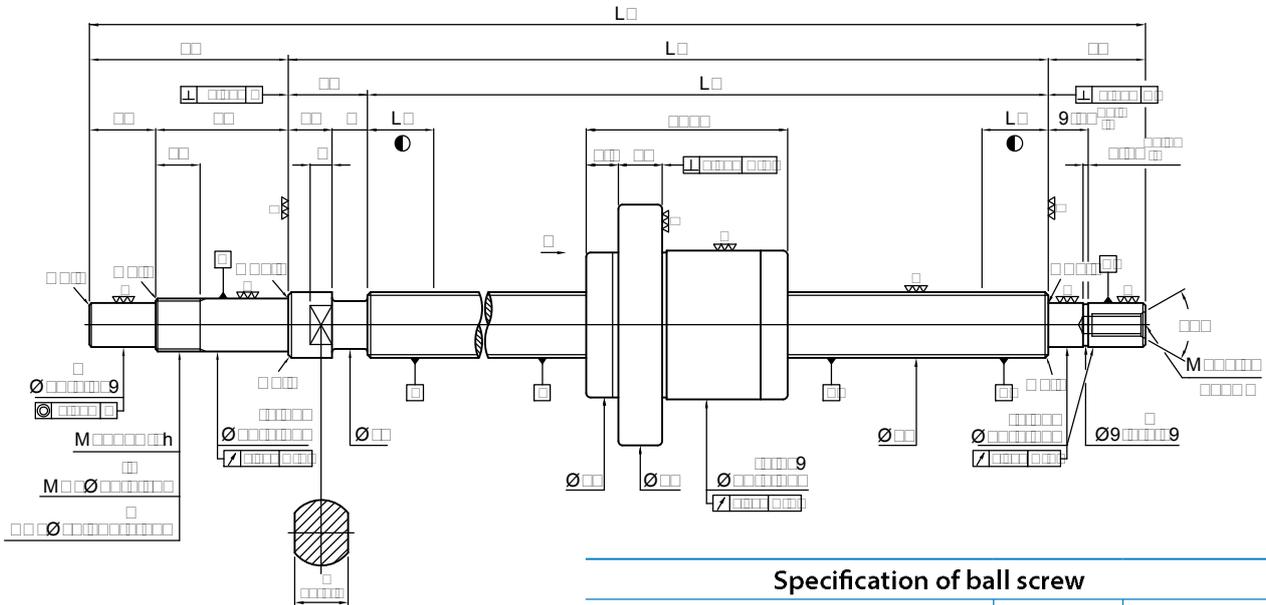


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	15.6	
Lead	20	
Ball Dia.	3.175	
Effective Turns (Circuit × Row)	1.8 × 1	
Lead Angle	22.2	
Dynamic Rate Load Ca (kgf)	780	
Static Rate Load Co (kgf)	1400	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.15×0.8	0.24 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R15-20A1-FSKC-186-271-0.018	186	204	271	10	5	0.023	0.018
1R15-20A1-FSKC-236-321-0.018	236	254	321	10	5	0.023	0.018
1R15-20A1-FSKC-286-371-0.018	286	304	371	15	5	0.023	0.018
1R15-20A1-FSKC-336-421-0.018	336	354	421	15	5	0.023	0.018
1R15-20A1-FSKC-386-471-0.018	386	404	471	15	5	0.025	0.018
1R15-20A1-FSKC-436-521-0.018	436	454	521	15	5	0.025	0.018
1R15-20A1-FSKC-486-571-0.018	486	504	571	15	5	0.027	0.018



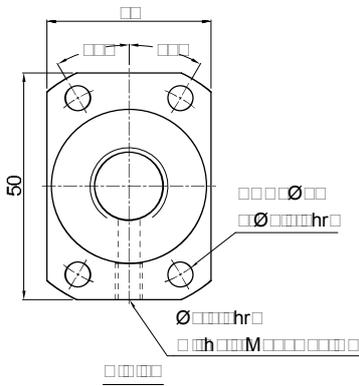
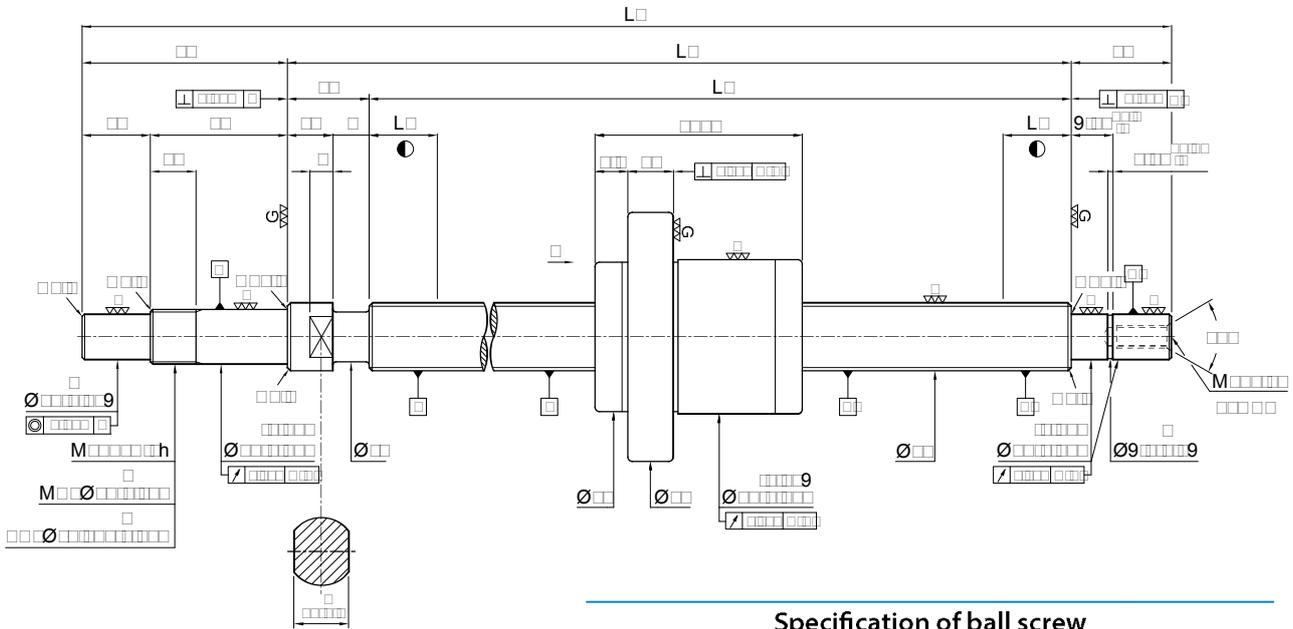
Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	15.6	
Lead	20	
Ball Dia.	3.175	
Effective Turns (Circuit × Row)	1.8 × 1	
Lead Angle	22.2	
Dynamic Rate Load Ca (kgf)	780	
Static Rate Load Co (kgf)	1400	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.15 × 0.8	0.24 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R15-20A1-FSKC-536-621-0.018	536	554	621	15	5	0.027	0.018
1R15-20A1-FSKC-586-671-0.018	586	604	671	15	5	0.030	0.018
1R15-20A1-FSKC-636-721-0.018	636	654	721	15	5	0.030	0.018
1R15-20A1-FSKC-686-771-0.018	686	704	771	15	5	0.030	0.018
1R15-20A1-FSKC-786-871-0.018	786	804	871	15	5	0.035	0.018
1R15-20A1-FSKC-886-971-0.018	889	904	971	15	5	0.040	0.018
1R15-20A1-FSKC-1086-1171-0.018	1089	1104	1171	15	5	0.046	0.018

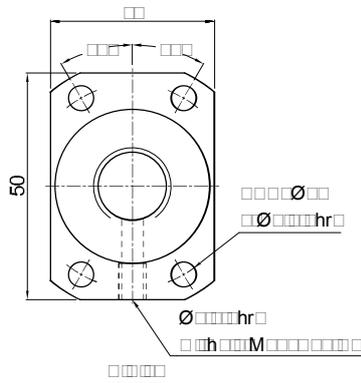
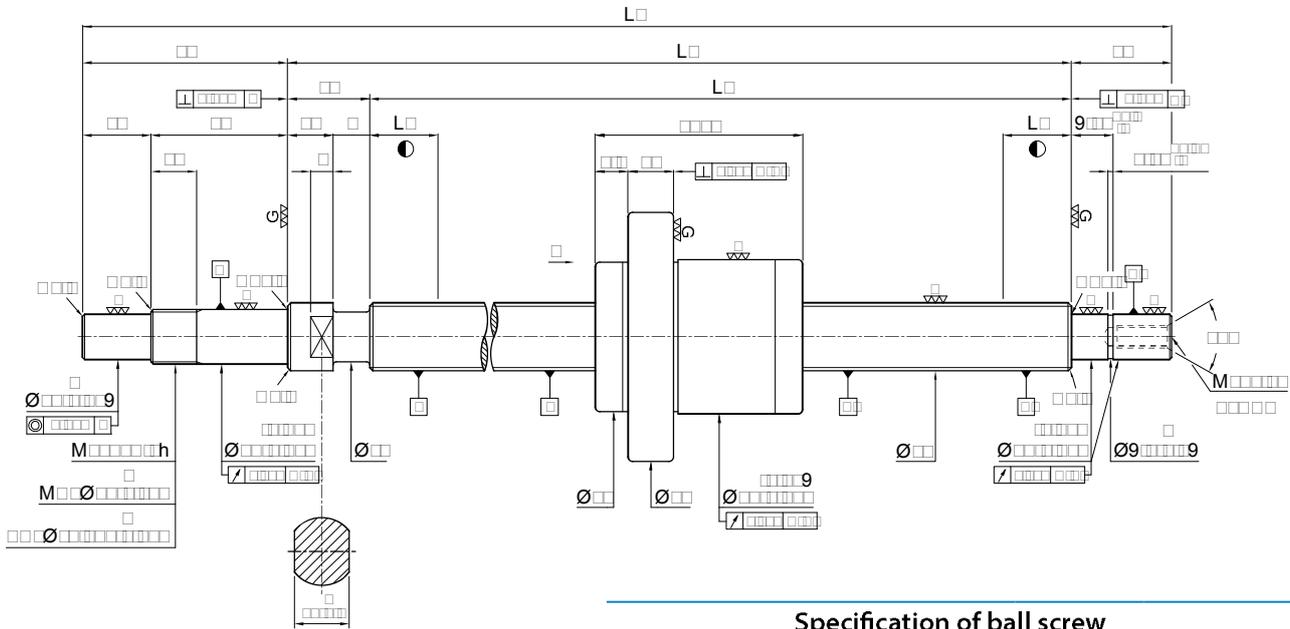
FSKC Standard ballscrews
Screw Dia.Ø15 Lead20



Specification of ball screw		
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	2/Right	
BCD	15.6	
Lead	20	
Ball Dia.	3.175	
Effective Turns (Circuit × Row)	1.8 × 2	
Lead Angle	22.2	
Dynamic Rate Load Ca (kgf)	1400	
Static Rate Load Co (kgf)	2800	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.2 × 0.9	-

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
2R15-20A1-FSKC-236-321-0.018	236	254	321	10	5	0.023	0.018
2R15-20A1-FSKC-286-371-0.018	286	304	371	10	5	0.023	0.018
2R15-20A1-FSKC-336-421-0.018	336	354	421	15	5	0.023	0.018
2R15-20A1-FSKC-386-471-0.018	386	404	471	15	5	0.025	0.018
2R15-20A1-FSKC-436-521-0.018	436	454	521	15	5	0.025	0.018
2R15-20A1-FSKC-486-571-0.018	486	504	571	15	5	0.027	0.018



Specification of ball screw

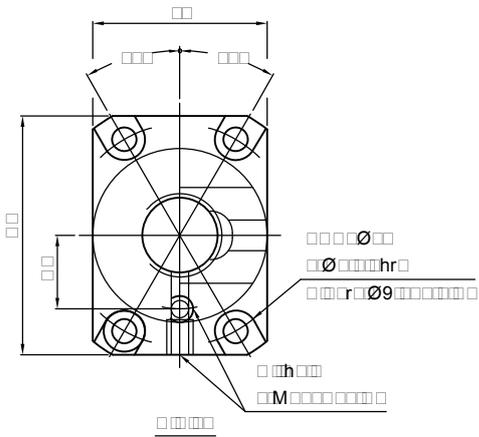
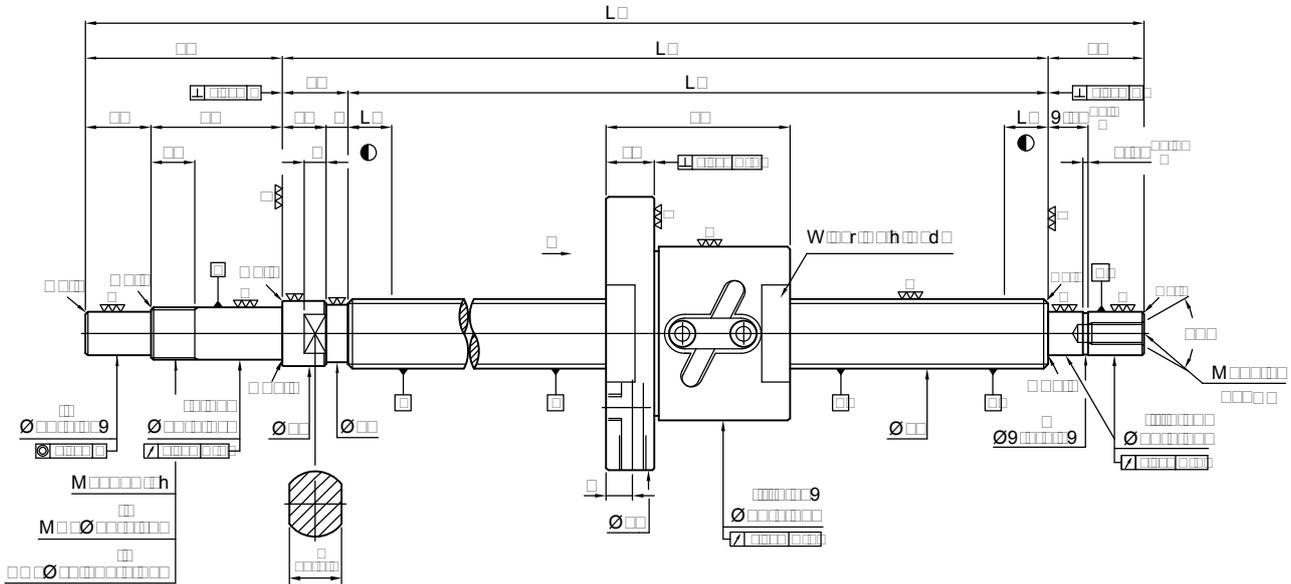
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	2/Right	
BCD	15.6	
Lead	20	
Ball Dia.	3.175	
Effective Turns (Circuit × Row)	1.8 × 2	
Lead Angle	22.2	
Dynamic Rate Load Ca (kgf)	1400	
Static Rate Load Co (kgf)	2800	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.2 × 0.9	-

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
2R15-20A1-FSKC-536-621-0.018	536	554	621	15	5	0.027	0.018
2R15-20A1-FSKC-586-671-0.018	586	604	671	15	5	0.030	0.018
2R15-20A1-FSKC-636-721-0.018	636	654	721	15	5	0.030	0.018
2R15-20A1-FSKC-686-771-0.018	686	704	771	15	5	0.030	0.018
2R15-20A1-FSKC-786-871-0.018	786	804	871	15	5	0.035	0.018
2R15-20A1-FSKC-886-971-0.018	886	904	971	15	5	0.040	0.018

FSWC Standard ballscrews

Screw Dia. \varnothing 16 Lead 05



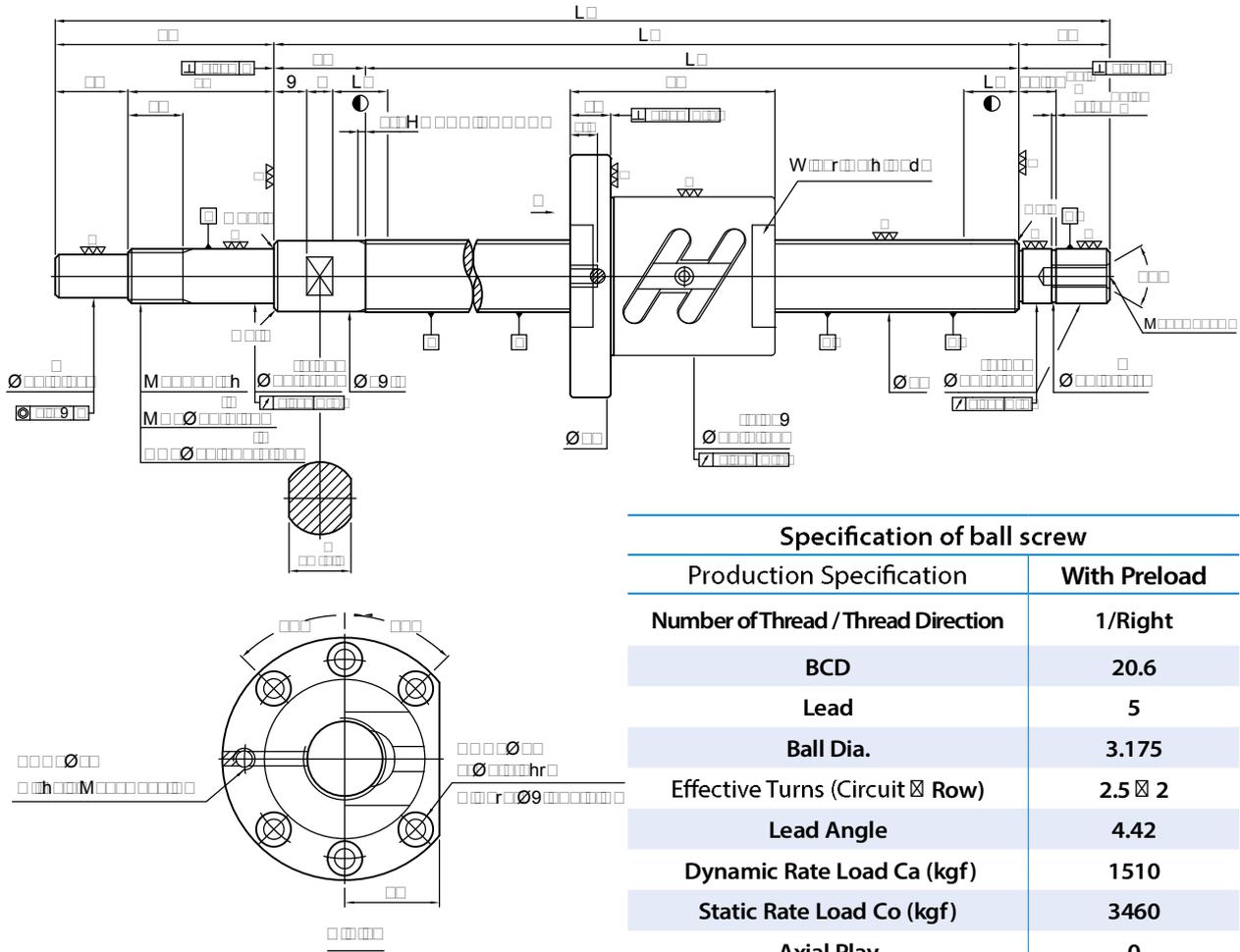
Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	16.6	
Lead	5	
Ball Dia.	3.175	
Effective Turns (Circuit \times Row)	2.5 \times 1	
Lead Angle	5.48	
Dynamic Rate Load Ca (kgf)	690	
Static Rate Load Co (kgf)	1270	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.15 \times 0.8	0.2 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R16-05B1-FSWC-189-271-0.018	189	204	271	10	5	0.023	0.018
1R16-05B1-FSWC-289-371-0.018	289	304	371	10	5	0.023	0.018
1R16-05B1-FSWC-389-471-0.018	389	404	471	15	5	0.025	0.018
1R16-05B1-FSWC-489-571-0.018	489	504	571	15	5	0.027	0.018
1R16-05B1-FSWC-689-771-0.018	689	704	771	15	5	0.035	0.018
1R16-05B1-FSWC-889-971-0.018	889	904	971	15	5	0.040	0.018

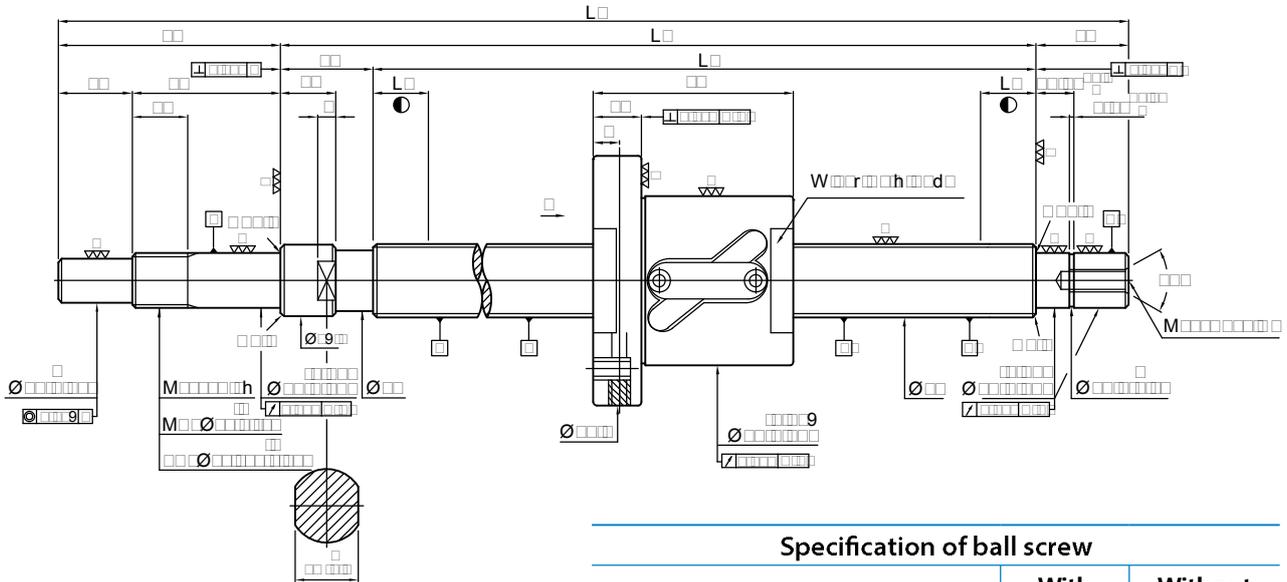
FSWC Standard ballscrews
Screw Dia. $\varnothing 20$ Lead 05



Specification of ball screw	
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	20.6
Lead	5
Ball Dia.	3.175
Effective Turns (Circuit \times Row)	2.5 \times 2
Lead Angle	4.42
Dynamic Rate Load Ca (kgf)	1510
Static Rate Load Co (kgf)	3460
Axial Play	0
Preloading Torque (kgf-cm)	0.28 \times 1.32

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R20-05B2-FSWC-225-335-0.018	225	250	335	10	5	0.023	0.018
1R20-05B2-FSWC-275-385-0.018	275	300	385	10	5	0.023	0.018
1R20-05B2-FSWC-375-485-0.018	375	400	485	15	5	0.025	0.018
1R20-05B2-FSWC-475-585-0.018	475	500	585	15	5	0.027	0.018
1R20-05B2-FSWC-575-685-0.018	575	600	685	15	5	0.030	0.018
1R20-05B2-FSWC-775-885-0.018	775	800	885	10	5	0.035	0.018



Specification of ball screw

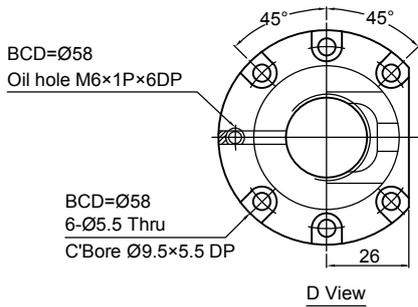
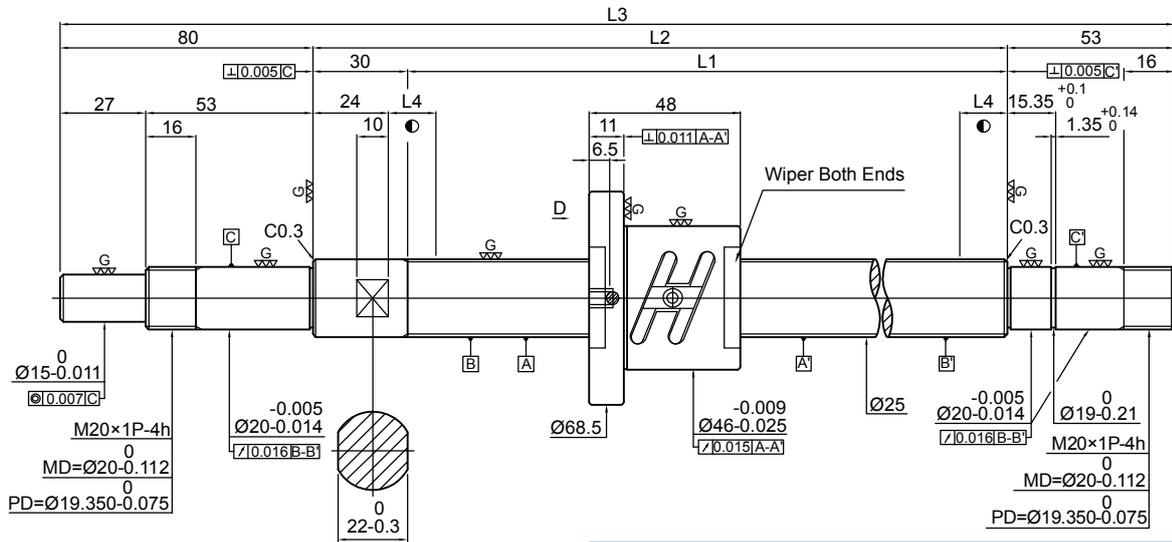
Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	20.7	
Lead	10	
Ball Dia.	3.969	
Effective Turns (Circuit × Row)	2.5 × 1	
Lead Angle	8.74	
Dynamic Rate Load Ca (kgf)	1100	
Static Rate Load Co (kgf)	2120	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.36 × 1.44	0.3 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R20-10B1-FSWC-289-399-0.018	289	314	399	10	5	0.023	0.018
1R20-10B1-FSWC-389-499-0.018	389	414	499	10	5	0.025	0.018
1R20-10B1-FSWC-489-599-0.018	489	514	599	15	5	0.027	0.018
1R20-10B1-FSWC-589-699-0.018	589	614	699	15	5	0.030	0.018
1R20-10B1-FSWC-689-799-0.018	689	714	799	15	5	0.035	0.018
1R20-10B1-FSWC-789-899-0.018	789	814	899	15	5	0.035	0.018
1R20-10B1-FSWC-889-999-0.018	889	914	999	15	5	0.040	0.018
1R20-10B1-FSWC-989-1099-0.018	989	1014	1099	15	5	0.040	0.018
1R20-10B1-FSWC-1089-1199-0.018	1089	1114	1199	15	5	0.046	0.018
1R20-10B1-FSWC-1189-1299-0.018	1189	1214	1299	15	5	0.046	0.018
1R20-10B1-FSWC-1289-1399-0.018	1289	1314	1399	15	5	0.046	0.018

FSWC Standard ballscrews

Screw Dia. $\varnothing 25$ Lead 04

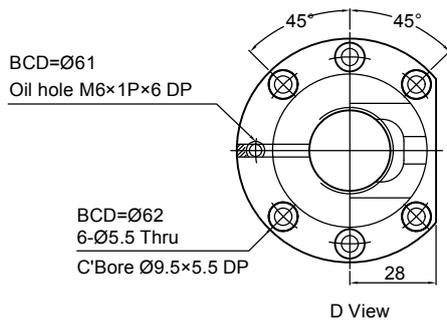
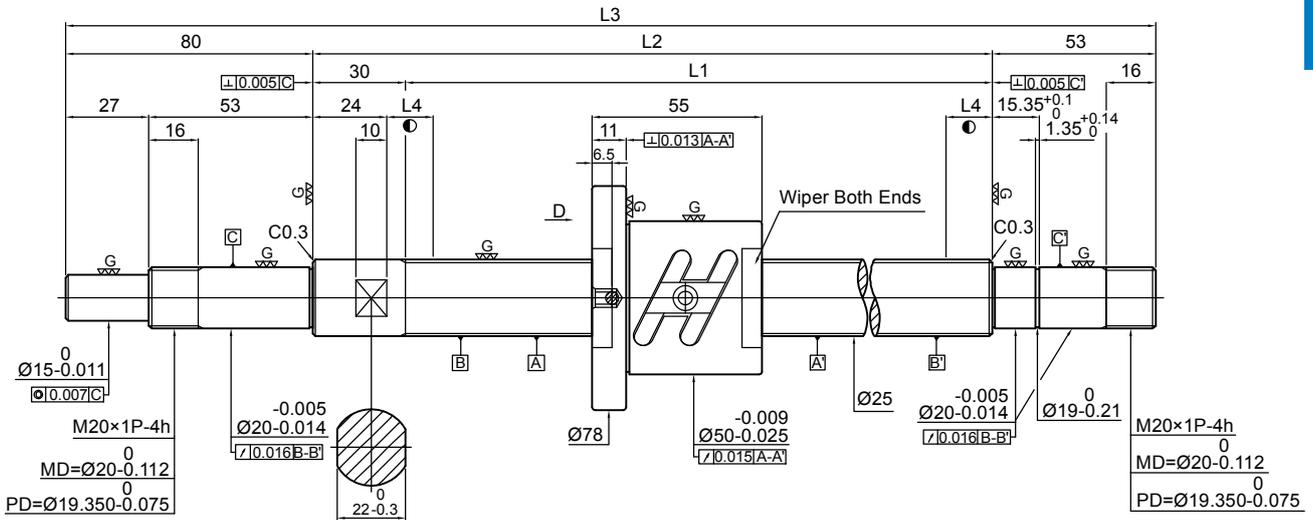


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	25.4
Lead	4
Ball Dia.	2.381
Effective Turns (Circuit \times Row)	2.5 \times 2
Lead Angle	2.87
Dynamic Rate Load Ca (kgf)	930
Static Rate Load Co (kgf)	2710
Axial Play	0
Preloading Torque (kgf-cm)	0.15 \times 0.85

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R25-04B2-FSWC-220-383-0.018	220	250	383	10	5	0.023	0.018
1R25-04B2-FSWC-270-433-0.018	270	300	433	10	5	0.023	0.018
1R25-04B2-FSWC-370-533-0.018	370	400	533	15	5	0.025	0.018
1R25-04B2-FSWC-470-633-0.018	470	500	633	15	5	0.027	0.018
1R25-04B2-FSWC-570-733-0.018	570	600	733	15	5	0.030	0.018
1R25-04B2-FSWC-770-933-0.018	770	800	933	10	5	0.035	0.018

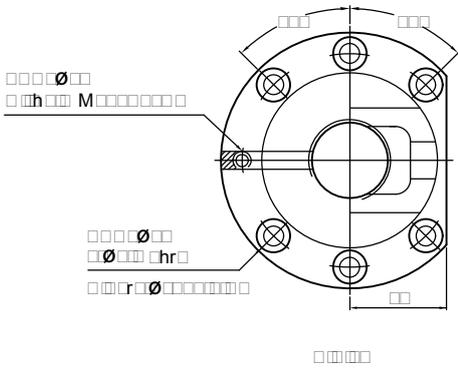
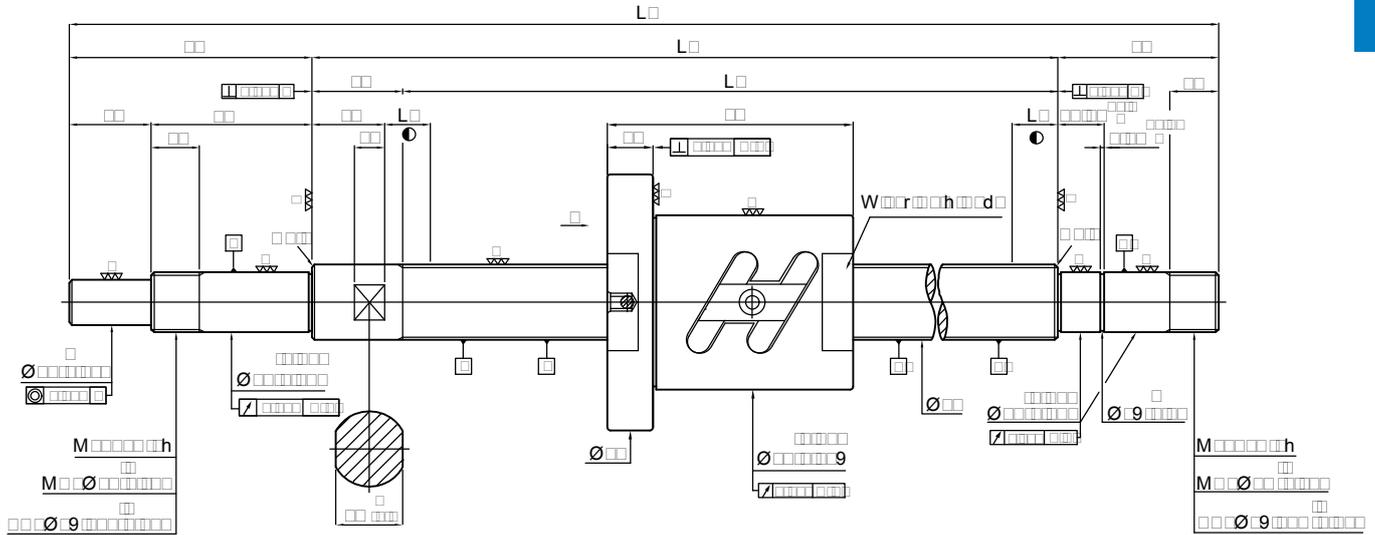


Specification of ball screw

Production Specification	With Preload	Without Preload
Number of Thread / Thread Direction	1/Right	
BCD	25.7	
Lead	5	
Ball Dia.	3.969	
Effective Turns (Circuit \times Row)	2.5 \times 2	
Lead Angle	3.54	
Dynamic Rate Load Ca (kgf)	1100	
Static Rate Load Co (kgf)	2120	
Axial Play	0	0.005 or less
Preloading Torque (kgf-cm)	0.36 \times 1.44	0.3 or less

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R25-05B2-FSWC-220-383-0.018	220	250	383	10	5	0.023	0.018
1R25-05B2-FSWC-270-433-0.018	270	300	433	10	5	0.023	0.018
1R25-05B2-FSWC-370-533-0.018	370	400	533	15	5	0.025	0.018
1R25-05B2-FSWC-470-633-0.018	470	500	633	15	5	0.027	0.018
1R25-05B2-FSWC-570-733-0.018	570	600	733	15	5	0.030	0.018
1R25-05B2-FSWC-670-833-0.018	670	700	833	15	5	0.030	0.018
1R25-05B2-FSWC-770-933-0.018	770	800	933	15	5	0.035	0.018
1R25-05B2-FSWC-970-1133-0.018	970	1000	1133	15	5	0.040	0.018
1R25-05B2-FSWC-1170-1333-0.018	1170	1200	1333	15	5	0.046	0.018



Specification of ball screw

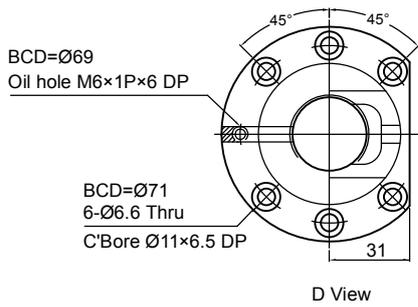
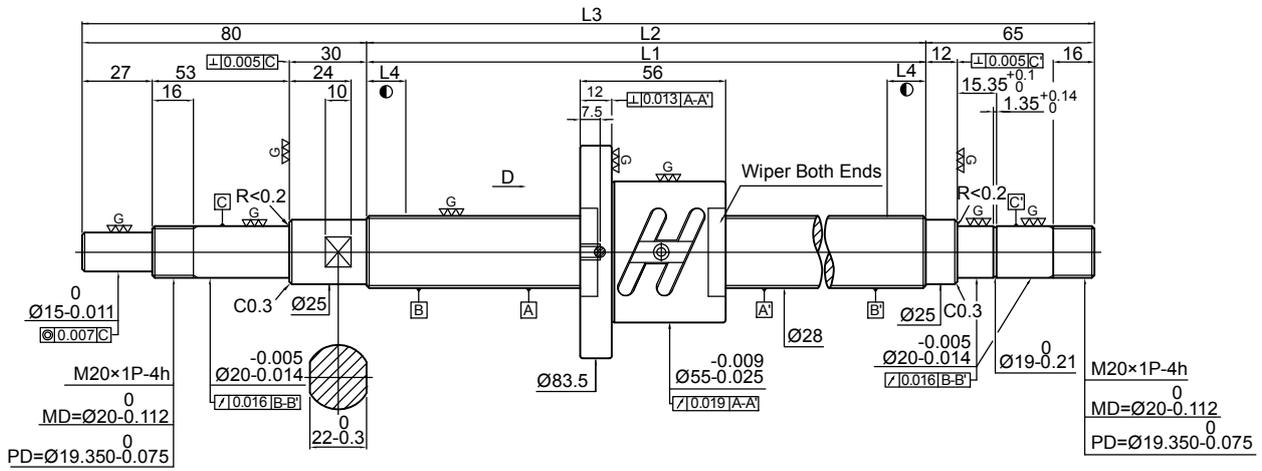
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	26
Lead	10
Ball Dia.	4.762
Effective Turns (Circuit × Row)	1.5 × 2
Lead Angle	6.98
Dynamic Rate Load Ca (kgf)	1820
Static Rate Load Co (kgf)	3840
Axial Play	0
Preloading Torque (kgf-cm)	0.42×2.4

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R25-10A2-FSWC-370-533-0.018	370	400	533	10	5	0.025	0.018
1R25-10A2-FSWC-570-733-0.018	570	600	733	10	5	0.030	0.018
1R25-10A2-FSWC-770-933-0.018	770	800	933	15	5	0.035	0.018
1R25-10A2-FSWC-970-1133-0.018	970	1000	1133	15	5	0.040	0.018
1R25-10A2-FSWC-1170-1333-0.018	1170	1200	1333	15	5	0.046	0.018
1R25-10A2-FSWC-1470-1600-0.018	1470	1500	1633	15	5	0.054	0.018

FSWC Standard ballscrews

Screw Dia. $\varnothing 28$ Lead 05

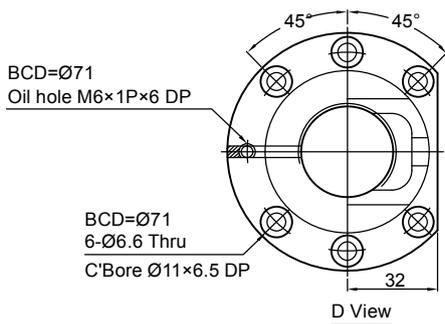
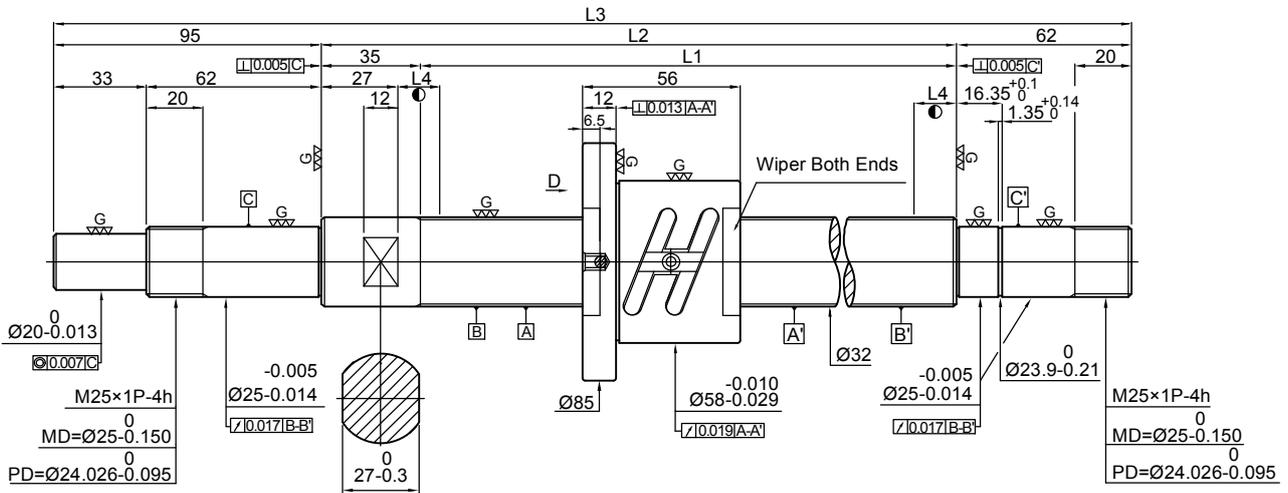


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	28.6
Lead	5
Ball Dia.	3.175
Effective Turns (Circuit \times Row)	2.5 \times 2
Lead Angle	3.19
Dynamic Rate Load C_a (kgf)	1720
Static Rate Load C_o (kgf)	4940
Axial Play	0
Preloading Torque (kgf-cm)	0.3 \times 1.7

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R28-05B2-FSWC-270-445-0.018	270	300	445	10	5	0.023	0.018
1R28-05B2-FSWC-370-545-0.018	370	400	545	15	5	0.023	0.018
1R28-05B2-FSWC-470-645-0.018	470	500	645	15	5	0.023	0.018
1R28-05B2-FSWC-558-733-0.018	558	588	733	15	5	0.023	0.018
1R28-05B2-FSWC-758-933-0.018	758	788	933	15	5	0.025	0.018
1R28-05B2-FSWC-958-1133-0.018	958	988	1133	15	5	0.025	0.018
1R28-05B2-FSWC-1158-1333-0.018	1158	1188	1333	15	5	0.027	0.018



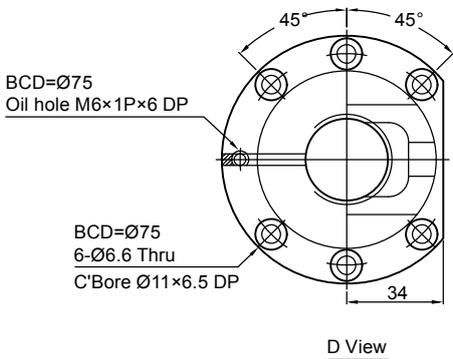
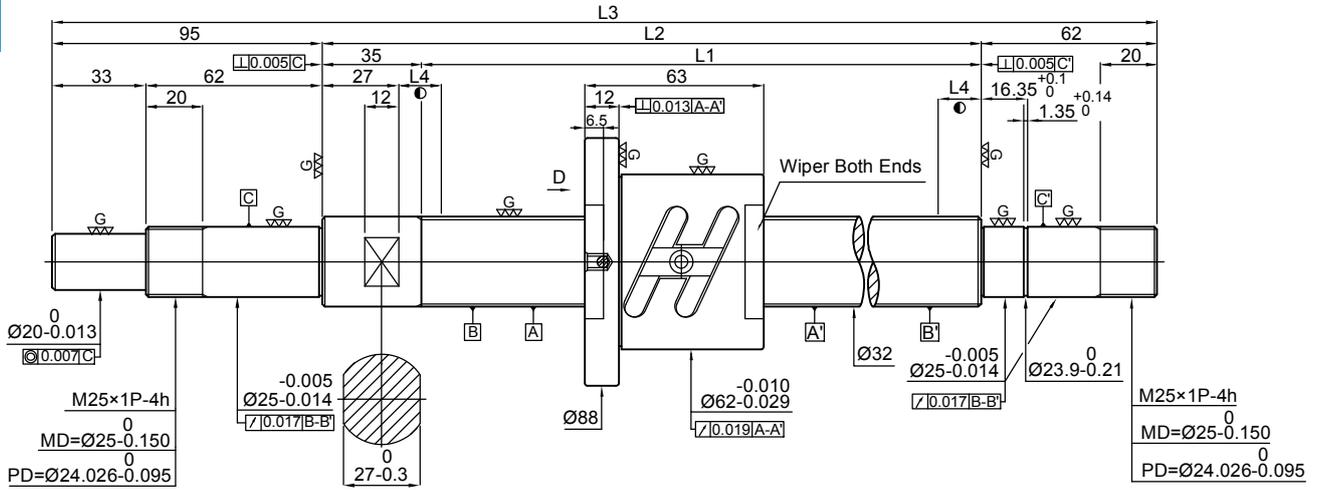
Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	32.6
Lead	5
Ball Dia.	3.175
Effective Turns (Circuit \times Row)	2.5 \times 2
Lead Angle	2.79
Dynamic Rate Load Ca (kgf)	1830
Static Rate Load Co (kgf)	5680
Axial Play	0
Preloading Torque (kgf-cm)	0.48 \times 1.92

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R32-05B2-FSWC-265-457-0.018	265	300	457	10	5	0.023	0.018
1R32-05B2-FSWC-365-557-0.018	365	400	557	15	5	0.025	0.018
1R32-05B2-FSWC-465-657-0.018	465	500	657	15	5	0.027	0.018
1R32-05B2-FSWC-565-757-0.018	565	600	757	15	5	0.030	0.018
1R32-05B2-FSWC-665-857-0.018	665	700	857	15	5	0.030	0.018
1R32-05B2-FSWC-765-957-0.018	765	800	957	15	5	0.035	0.018
1R32-05B2-FSWC-965-1157-0.018	965	1000	1157	15	5	0.040	0.018
1R32-05B2-FSWC-1165-1357-0.018	1165	1200	1357	15	5	0.046	0.018
1R32-05B2-FSWC-1465-1657-0.018	1465	1500	1657	15	5	0.054	0.018

FSWC Standard ballscrews
Screw Dia. $\varnothing 32$ Lead 06



Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	32.7
Lead	6
Ball Dia.	3.969
Effective Turns (Circuit \times Row)	2.5 \times 2
Lead Angle	3.34
Dynamic Rate Load Ca (kgf)	2410
Static Rate Load Co (kgf)	6900
Axial Play	0
Preloading Torque (kgf-cm)	0.48 \times 2.72

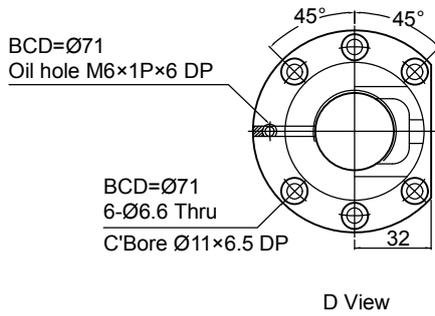
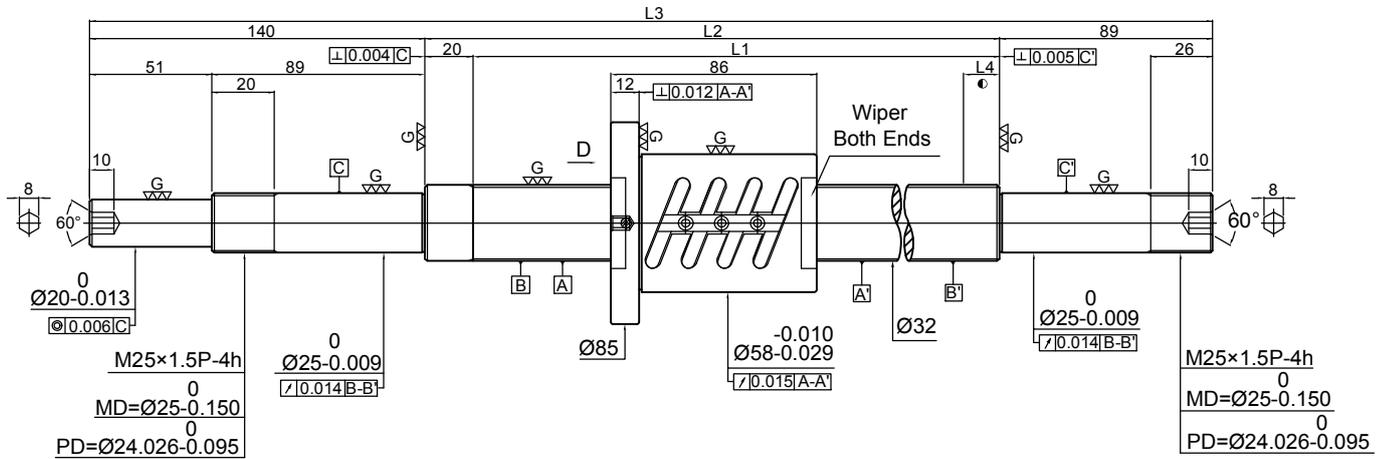
Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R32-06B2-FSWC-365-557-0.018	365	400	557	15	5	0.025	0.018
1R32-06B2-FSWC-565-757-0.018	565	600	757	15	5	0.030	0.018
1R32-06B2-FSWC-765-957-0.018	765	800	957	15	5	0.035	0.018
1R32-06B2-FSWC-965-1157-0.018	965	1000	1157	15	5	0.040	0.018
1R32-06B2-FSWC-1165-1357-0.018	1165	1200	1357	15	5	0.046	0.018
1R32-06B2-FSWC-1465-1657-0.018	1465	1500	1657	15	5	0.054	0.018

FOWC

Standard ballscrews

Screw Dia. Ø32 Lead 05

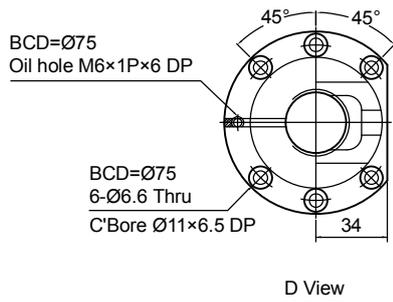
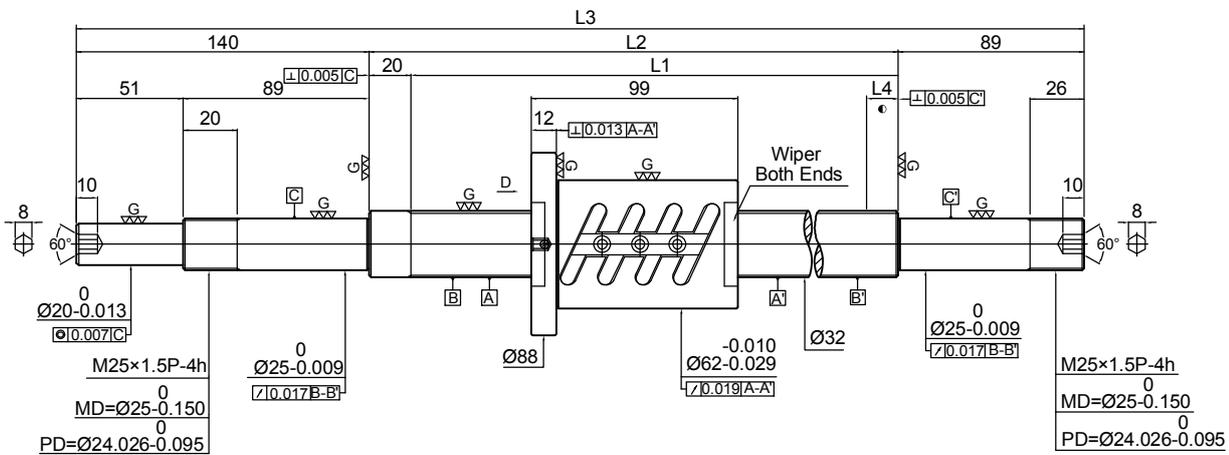


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	32.6
Lead	5
Ball Dia.	3.175
Effective Turns (Circuit × Row)	2.5 × 2(2)
Lead Angle	2.79
Dynamic Rate Load Ca (kgf)	1830
Static Rate Load Co (kgf)	5680
Axial Play	0
Preloading Torque (kgf-cm)	1.2~3.6

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R32-05B1-FOWC-280-529-0.018	280	300	529	10	5	0.023	0.018
1R32-05B1-FOWC-380-629-0.018	380	400	629	15	5	0.025	0.018
1R32-05B1-FOWC-480-729-0.018	480	500	729	15	5	0.027	0.018
1R32-05B1-FOWC-580-829-0.018	580	600	829	15	5	0.030	0.018
1R32-05B1-FOWC-680-929-0.018	680	700	929	15	5	0.035	0.018
1R32-05B1-FOWC-780-1029-0.018	780	800	1029	15	5	0.035	0.018
1R32-05B1-FOWC-980-1229-0.018	980	1000	1229	15	5	0.040	0.018
1R32-05B1-FOWC-1180-1429-0.018	1180	1200	1429	15	5	0.046	0.018
1R32-05B1-FOWC-1480-1729-0.018	1480	1500	1729	15	5	0.054	0.018



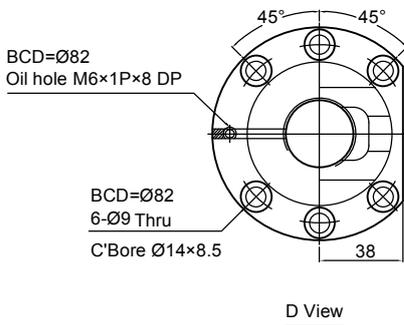
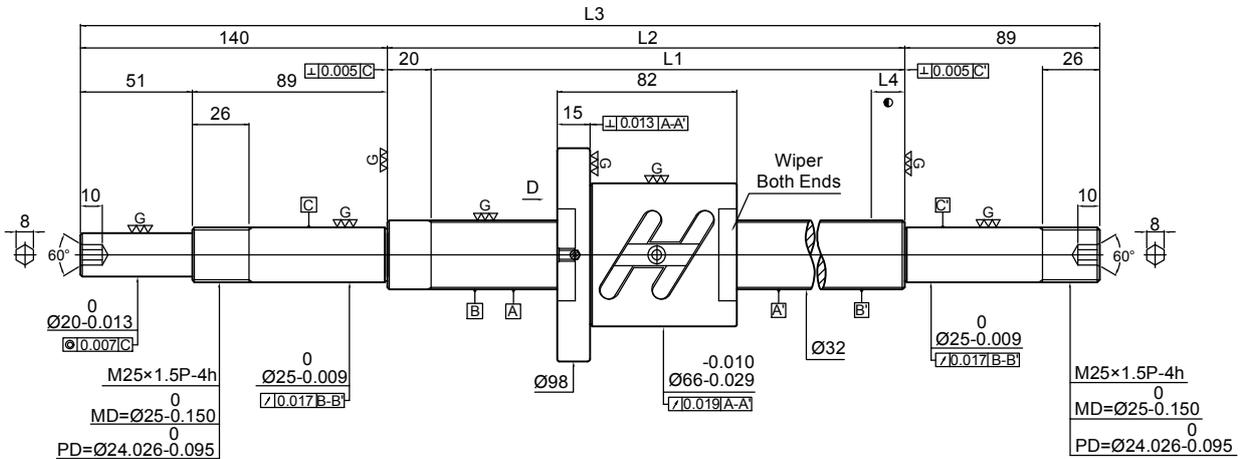
Specification of ball screw	
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	32.7
Lead	6
Ball Dia.	3.969
Effective Turns (Circuit \times Row)	2.5 \times 2(2)
Lead Angle	3.34
Dynamic Rate Load Ca (kgf)	2410
Static Rate Load Co (kgf)	6900
Axial Play	0
Preloading Torque (kgf-cm)	2.32 \times 4.82

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R32-06B1-FOWC-380-629-0.018	380	400	629	15	5	0.025	0.018
1R32-06B1-FOWC-580-829-0.018	580	600	829	15	5	0.030	0.018
1R32-06B1-FOWC-780-1029-0.018	780	800	1029	15	5	0.035	0.018
1R32-06B1-FOWC-980-1229-0.018	980	1000	1229	15	5	0.040	0.018
1R32-06B1-FOWC-1180-1429-0.018	1180	1200	1429	15	5	0.046	0.018
1R32-06B1-FOWC-1480-1729-0.018	1480	1500	1729	15	5	0.054	0.018

FOWC Standard ballscrews

Screw Dia. $\varnothing 32$ Lead 08

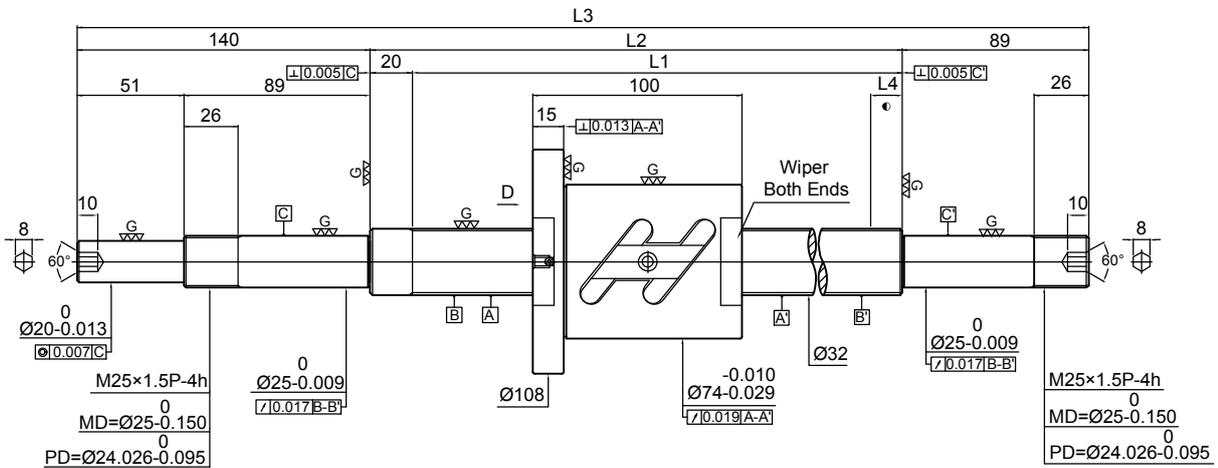


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	33
Lead	8
Ball Dia.	4.762
Effective Turns (Circuit \times Row)	2.5 \times 1(2)
Lead Angle	4.41
Dynamic Rate Load C_a (kgf)	1720
Static Rate Load C_o (kgf)	4180
Axial Play	0
Preloading Torque (kgf-cm)	1.26 \times 5.06

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R32-08B1-FOWC-380-629-0.018	380	400	629	15	5	0.025	0.018
1R32-08B1-FOWC-580-829-0.018	580	600	829	15	5	0.030	0.018
1R32-08B1-FOWC-780-1029-0.018	780	800	1029	15	5	0.035	0.018
1R32-08B1-FOWC-980-1229-0.018	980	1000	1229	15	5	0.040	0.018
1R32-08B1-FOWC-1480-1729-0.018	1480	1500	1729	15	5	0.054	0.018



Specification of ball screw

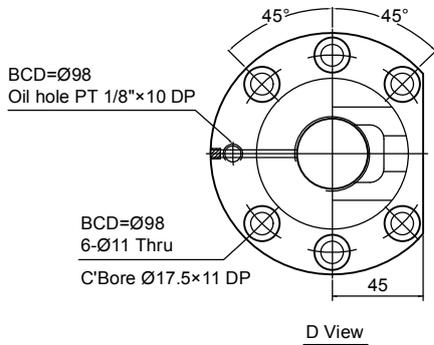
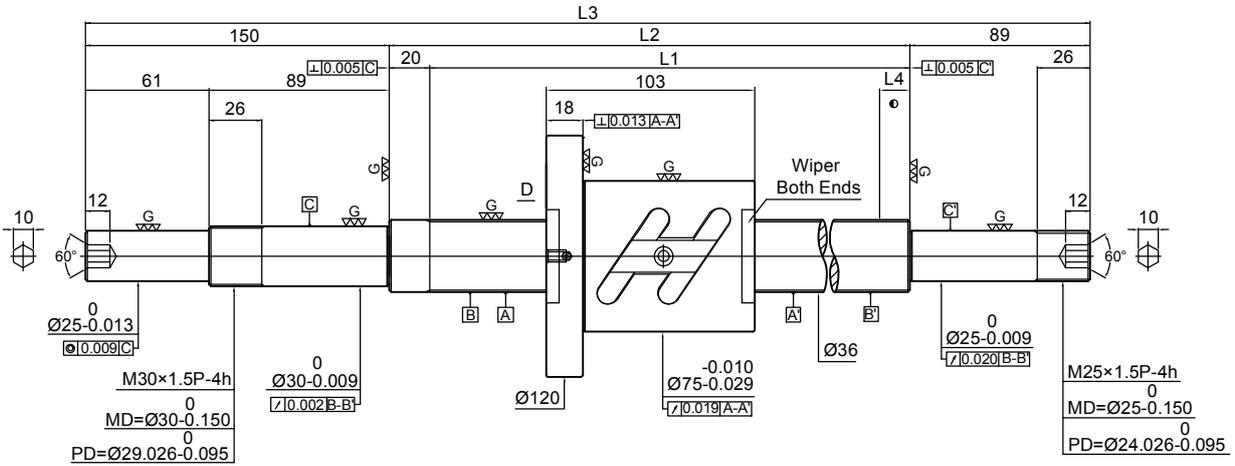
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	33.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit \times Row)	2.5 \times 1(2)
Lead Angle	5.44
Dynamic Rate Load Ca (kgf)	2570
Static Rate Load Co (kgf)	5440
Axial Play	0
Preloading Torque (kgf-cm)	3.58 \times 7.44

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R32-10B1-FOWC-380-629-0.018	380	400	629	15	5	0.025	0.018
1R32-10B1-FOWC-480-729-0.018	480	500	729	15	5	0.027	0.018
1R32-10B1-FOWC-580-829-0.018	580	600	829	15	5	0.030	0.018
1R32-10B1-FOWC-680-929-0.018	680	700	929	15	5	0.030	0.018
1R32-10B1-FOWC-780-1029-0.018	780	800	1029	15	5	0.035	0.018
1R32-10B1-FOWC-980-1229-0.018	980	1000	1229	15	5	0.040	0.018
1R32-10B1-FOWC-1180-1429-0.018	1180	1200	1429	15	5	0.046	0.018
1R32-10B1-FOWC-1480-1729-0.018	1480	1500	1729	15	5	0.054	0.018
1R32-10B1-FOWC-1780-2029-0.018	1780	1800	2029	15	5	0.065	0.018

FOWC Standard ballscrews

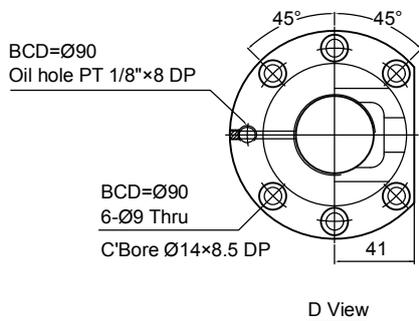
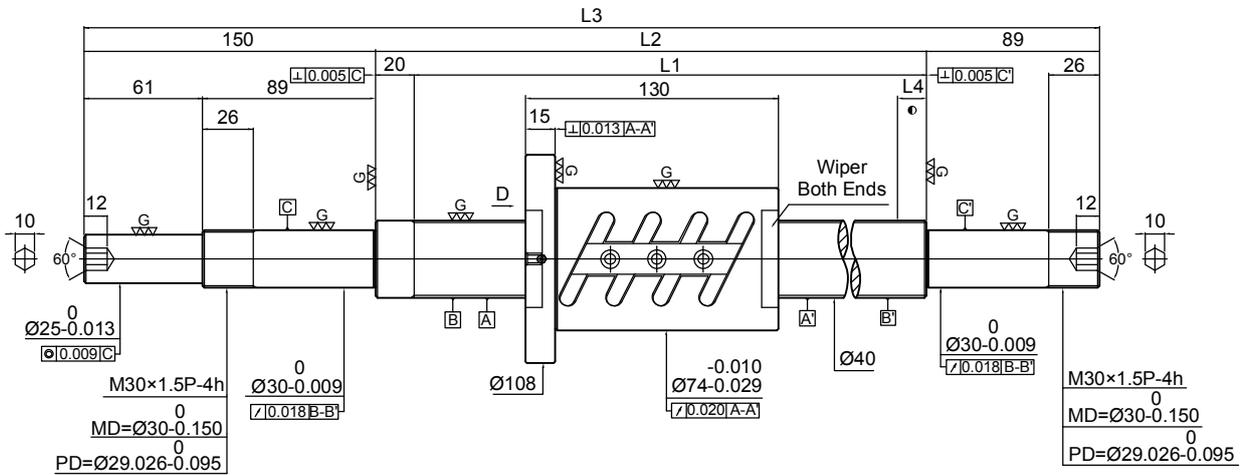
Screw Dia. $\varnothing 36$ Lead 10



Specification of ball screw	
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	37.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit \times Row)	2.5 \times 1(2)
Lead Angle	4.86
Dynamic Rate Load Ca (kgf)	2720
Static Rate Load Co (kgf)	6180
Axial Play	0
Preloading Torque (kgf-cm)	3.91 \times 8.13

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R36-10B1-FOWC-480-739-0.018	480	500	739	15	5	0.027	0.018
1R36-10B1-FOWC-680-939-0.018	680	700	939	15	5	0.030	0.018
1R36-10B1-FOWC-980-1239-0.018	980	1000	1239	15	5	0.040	0.018
1R36-10B1-FOWC-1380-1639-0.018	1380	1400	1639	15	5	0.054	0.018
1R36-10B1-FOWC-1780-2039-0.018	1780	1800	2039	15	5	0.065	0.018



Specification of ball screw

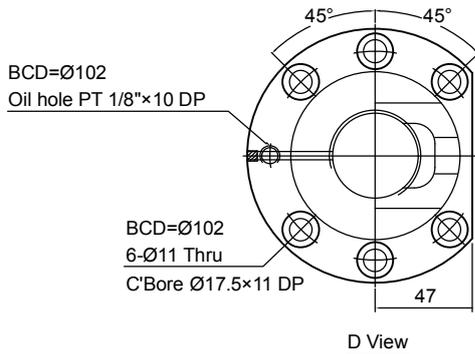
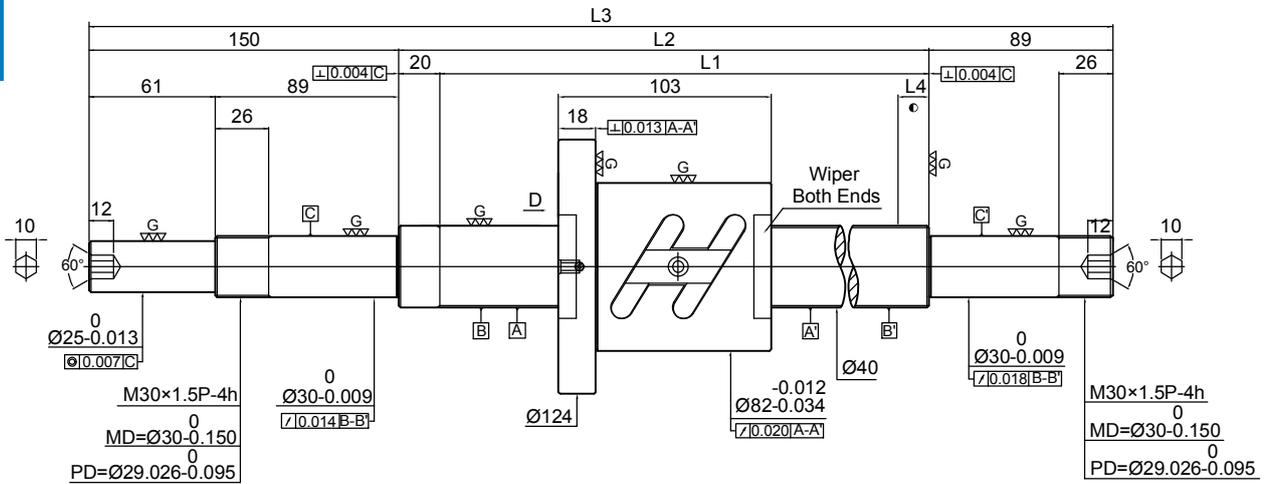
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	41
Lead	8
Ball Dia.	4.762
Effective Turns (Circuit \times Row)	2.5 \times 2(2)
Lead Angle	3.55
Dynamic Rate Load Ca (kgf)	3450
Static Rate Load Co (kgf)	10540
Axial Play	0
Preloading Torque (kgf-cm)	4.24 \times 8.82

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R40-8B2-FOWC-380-639-0.018	380	400	639	15	5	0.025	0.018
1R40-8B2-FOWC-580-839-0.018	580	600	839	15	5	0.030	0.018
1R40-8B2-FOWC-780-1039-0.018	780	800	1039	15	5	0.035	0.018
1R40-8B2-FOWC-980-1239-0.018	980	1000	1239	15	5	0.040	0.018
1R40-8B2-FOWC-1180-1439-0.018	1180	1200	1439	15	5	0.046	0.018
1R40-8B2-FOWC-1580-1839-0.018	1580	1600	1839	15	5	0.054	0.018

FOWC Standard ballscrews

Screw Dia. $\varnothing 40$ Lead 10

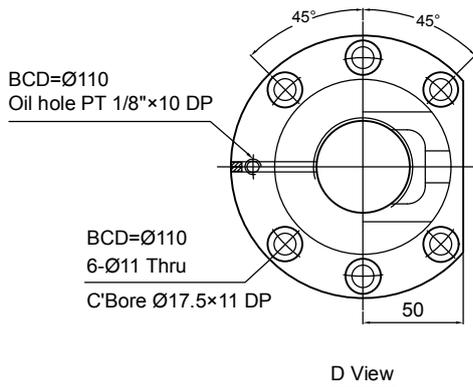
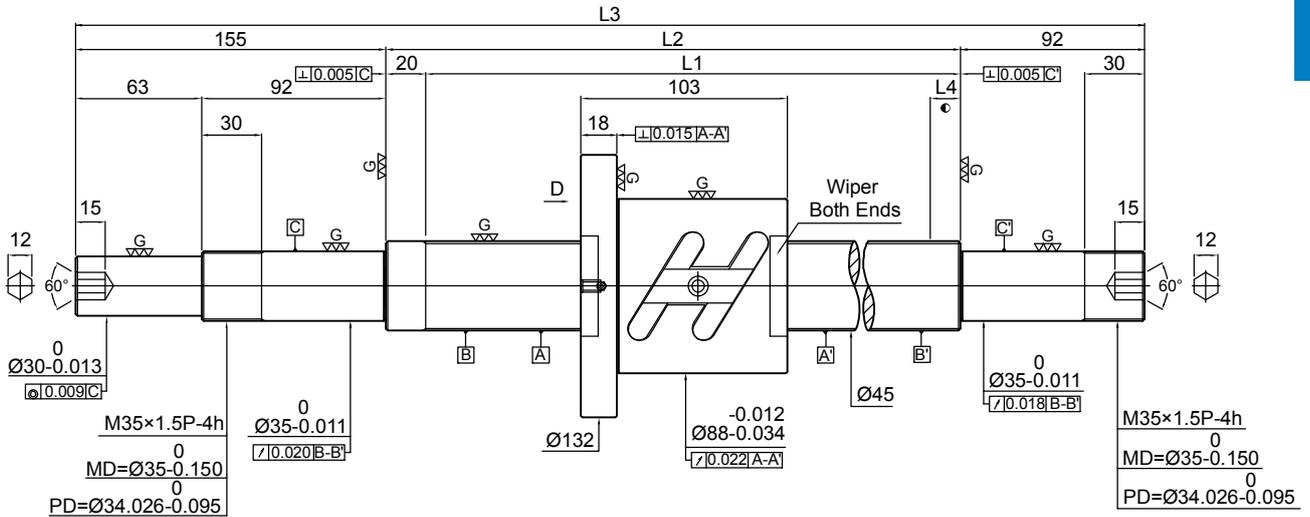


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	41.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit \times Row)	2.5 \times 1(2)
Lead Angle	4.4
Dynamic Rate Load Ca (kgf)	2880
Static Rate Load Co (kgf)	6950
Axial Play	0
Preloading Torque (kgf-cm)	4.57 \times 8.49

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R40-10B1-FOWC-480-739-0.018	480	500	739	15	5	0.027	0.018
1R40-10B1-FOWC-580-839-0.018	580	600	839	15	5	0.030	0.018
1R40-10B1-FOWC-680-939-0.018	680	700	939	15	5	0.030	0.018
1R40-10B1-FOWC-780-1039-0.018	780	800	1039	15	5	0.035	0.018
1R40-10B1-FOWC-980-1239-0.018	980	1000	1239	15	5	0.040	0.018
1R40-10B1-FOWC-1180-1439-0.018	1180	1200	1439	15	5	0.046	0.018
1R40-10B1-FOWC-1380-1639-0.018	1380	1400	1639	15	5	0.054	0.018
1R40-10B1-FOWC-1580-1839-0.018	1580	1600	1839	15	5	0.054	0.018
1R40-10B1-FOWC-1780-2039-0.018	1780	1800	2039	15	5	0.065	0.018
1R40-10B1-FOWC-2380-2639-0.018	2380	2400	2639	15	5	0.077	0.018



Specification of ball screw

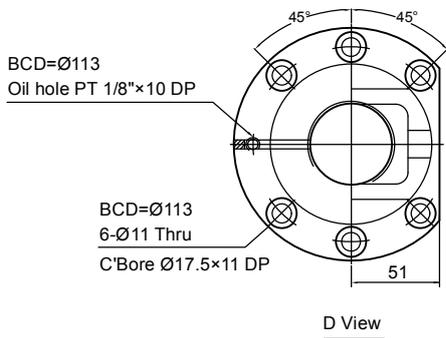
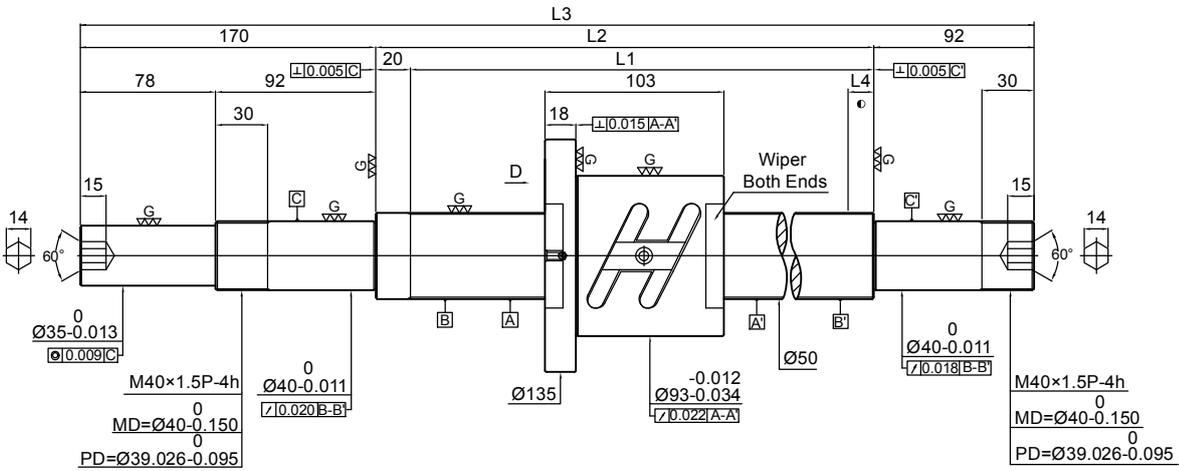
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	46.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit \times Row)	2.5 \times 1(2)
Lead Angle	4.4
Dynamic Rate Load Ca (kgf)	3020
Static Rate Load Co (kgf)	7850
Axial Play	0
Preloading Torque (kgf-cm)	4.58 \times 9.5

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R45-10B1-1FOWC-680-947-0.018	680	700	947	15	5	0.035	0.018
1R45-10B1-1FOWC-980-1247-0.018	980	1000	1247	15	5	0.04	0.018
1R45-10B1-1FOWC-1380-1647-0.018	1380	1400	1647	15	5	0.054	0.018
1R45-10B1-1FOWC-1780-2047-0.018	1780	1800	2047	15	5	0.065	0.018
1R45-10B1-1FOWC-2480-2747-0.018	2480	2500	2747	15	5	0.077	0.018

FOWC Standard ballscrews

Screw Dia. Ø50 Lead 10

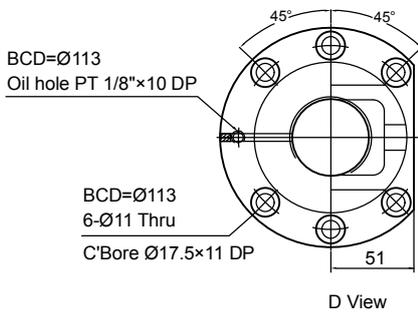
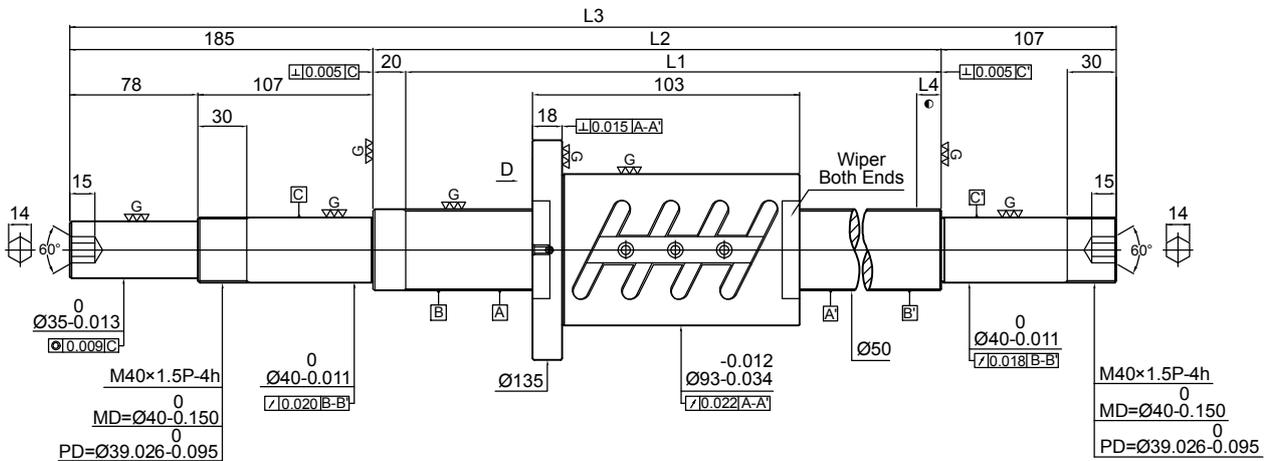


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	51.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit \times Row)	2.5 \times 1(2)
Lead Angle	3.54
Dynamic Rate Load Ca (kgf)	3190
Static Rate Load Co (kgf)	8710
Axial Play	0
Preloading Torque (kgf-cm)	4.84 \times 11.28

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R50-10B1-FOWC-580-892-0.018	580	600	892	15	5	0.030	0.018
1R50-10B1-FOWC-780-1092-0.018	780	800	1092	15	5	0.035	0.018
1R50-10B1-FOWC-980-1292-0.018	980	1000	1292	15	5	0.040	0.018
1R50-10B1-FOWC-1180-1492-0.018	1180	1200	1492	15	5	0.046	0.018
1R50-10B1-FOWC-1480-1792-0.018	1480	1500	1792	15	5	0.054	0.018
1R50-10B1-FOWC-1980-2292-0.018	1980	2000	2292	15	5	0.065	0.018
1R50-10B1-FOWC-2580-2892-0.018	2580	2600	2892	15	5	0.093	0.018



Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	51.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit \times Row)	2.5 \times 2(2)
Lead Angle	3.54
Dynamic Rate Load Ca (kgf)	5790
Static Rate Load Co (kgf)	17420
Axial Play	0
Preloading Torque (kgf-cm)	10.48 \times 17.48

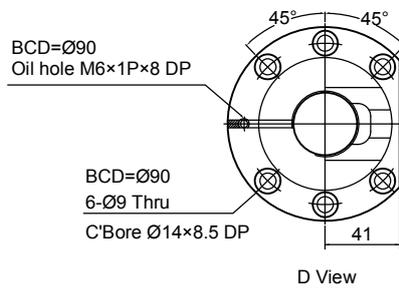
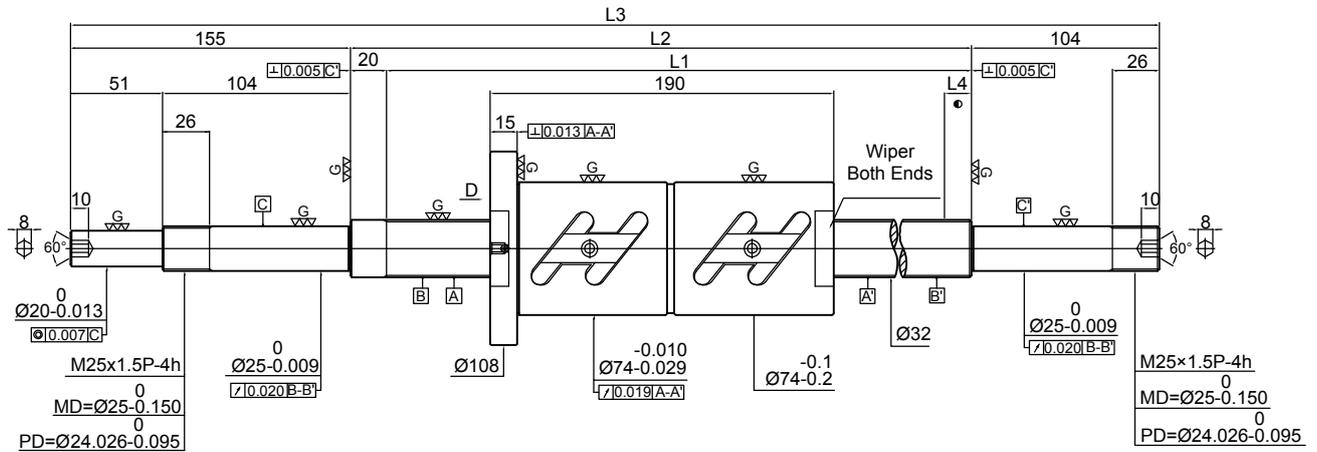
Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e_{300}
1R50-10B2-FOWC-580-892-0.018	580	600	892	15	5	0.030	0.018
1R50-10B2-FOWC-780-1092-0.018	780	800	1092	15	5	0.035	0.018
1R50-10B2-FOWC-980-1292-0.018	980	1000	1292	15	5	0.040	0.018
1R50-10B2-FOWC-1180-1492-0.018	1180	1200	1492	15	5	0.046	0.018
1R50-10B2-FOWC-1480-1792-0.018	1480	1500	1792	15	5	0.054	0.018
1R50-10B2-FOWC-1980-2292-0.018	1980	2000	2292	15	5	0.065	0.018
1R50-10B2-FOWC-2580-2892-0.018	2580	2600	2892	15	5	0.093	0.018

FDWC

Standard ballscrews

Screw Dia. Ø32 Lead10

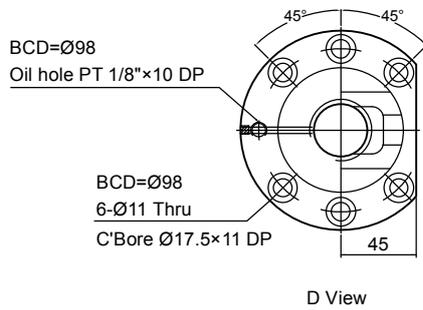
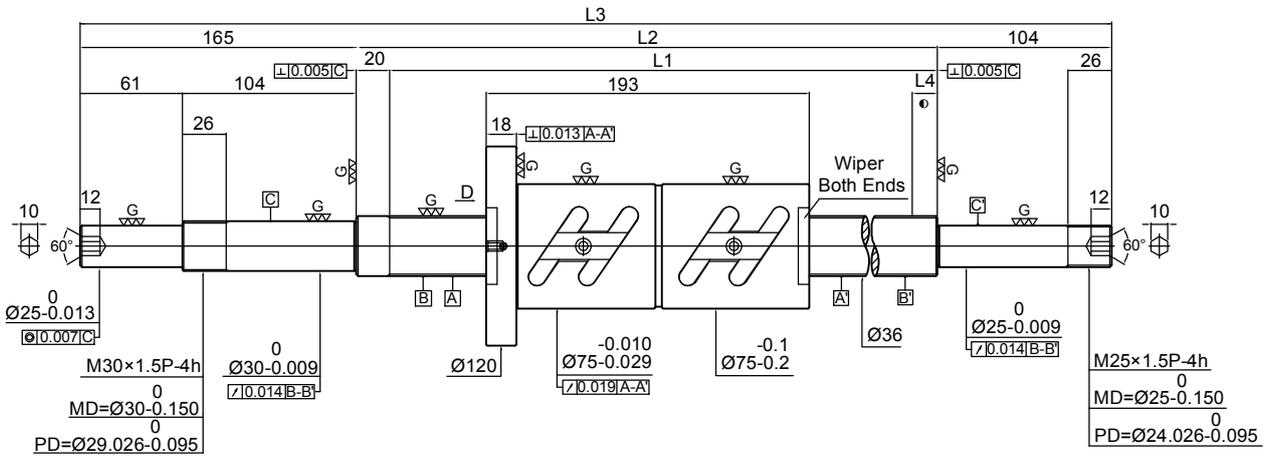


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	33.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit × Row)	2.5 × 2
Lead Angle	5.44
Dynamic Rate Load Ca (kgf)	4660
Static Rate Load Co (kgf)	10880
Axial Play	0
Preloading Torque (kgf-cm)	5.51 × 11.43

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R32-10B2-FDWC-380-659-0.018	380	400	659	15	5	0.025	0.018
1R32-10B2-FDWC-480-759-0.018	480	500	759	15	5	0.027	0.018
1R32-10B2-FDWC-580-859-0.018	580	600	859	15	5	0.030	0.018
1R32-10B2-FDWC-680-959-0.018	680	700	959	15	5	0.030	0.018
1R32-10B2-FDWC-780-1059-0.018	780	800	1059	15	5	0.035	0.018
1R32-10B2-FDWC-980-1259-0.018	980	1000	1259	15	5	0.040	0.018
1R32-10B2-FDWC-1180-1459-0.018	1180	1200	1459	15	5	0.046	0.018
1R32-10B2-FDWC-1480-1759-0.018	1480	1500	1759	15	5	0.054	0.018
1R32-10B2-FDWC-1780-2059-0.018	1780	1800	2059	15	5	0.065	0.018



Specification of ball screw

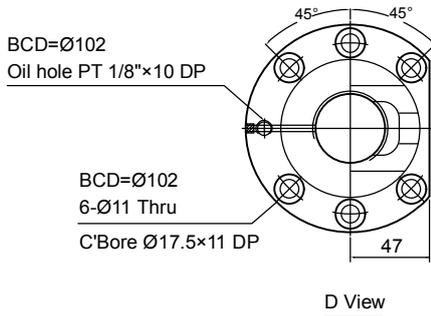
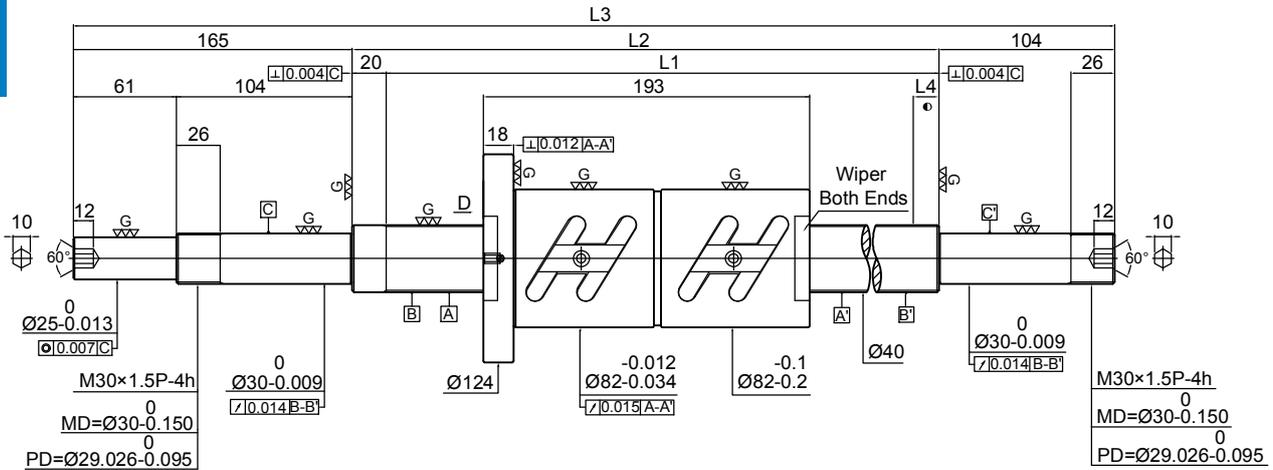
Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	37.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit × Row)	2.5 × 2
Lead Angle	4.86
Dynamic Rate Load Ca (kgf)	4930
Static Rate Load Co (kgf)	12360
Axial Play	0
Preloading Torque (kgf-cm)	6.64 × 12.34

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R36-10B2-1FDWC-480-769-0.018	480	500	769	15	5	0.027	0.018
1R36-10B2-1FDWC-680-969-0.018	680	700	969	15	5	0.035	0.018
1R36-10B2-1FDWC-980-1269-0.018	980	1000	1269	15	5	0.040	0.018
1R36-10B2-1FDWC-1380-1669-0.018	1380	1400	1669	15	5	0.054	0.018
1R36-10B2-1FDWC-1780-2069-0.018	1780	1800	2069	15	5	0.065	0.018

FDWC Standard ballscrews

Screw Dia. Ø40 Lead 10

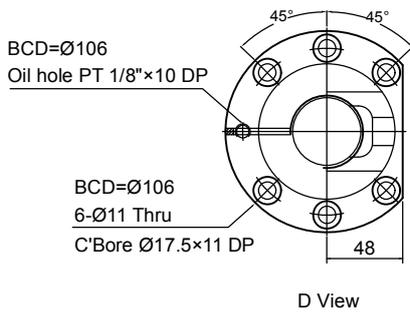
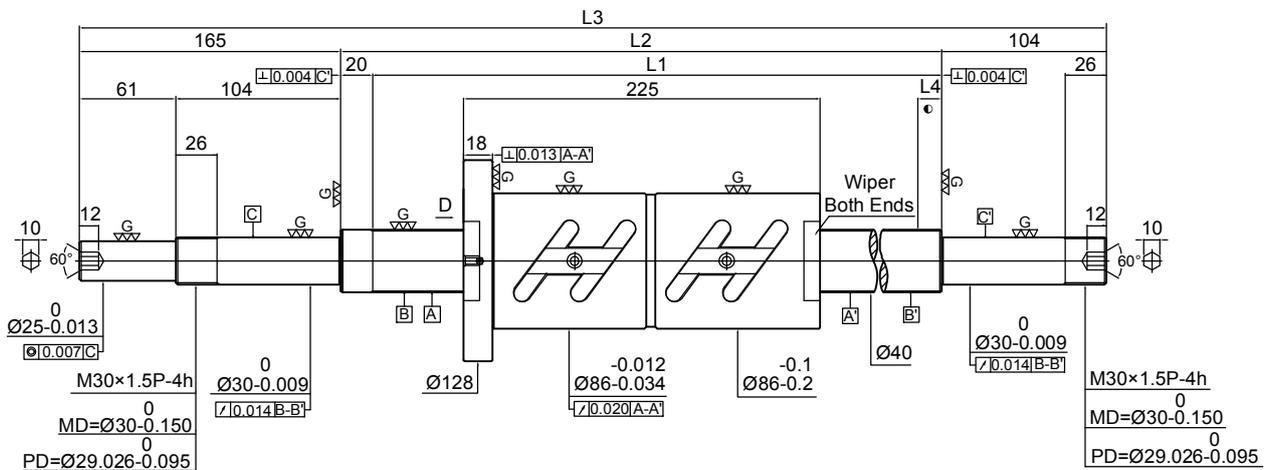


Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	41.4
Lead	10
Ball Dia.	6.35
Effective Turns (Circuit × Row)	2.5 × 2
Lead Angle	4.4
Dynamic Rate Load Ca (kgf)	5220
Static Rate Load Co (kgf)	13900
Axial Play	0
Preloading Torque (kgf-cm)	8.26×13.78

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Deriation in random 300mm e ₃₀₀
1R40-10B2-FDWC-480-769-0.018	480	500	769	15	5	0.027	0.018
1R40-10B2-FDWC-580-869-0.018	580	600	869	15	5	0.030	0.018
1R40-10B2-FDWC-680-969-0.018	680	700	969	15	5	0.030	0.018
1R40-10B2-FDWC-780-1069-0.018	780	800	1069	15	5	0.035	0.018
1R40-10B2-FDWC-980-1269-0.018	980	1000	1269	15	5	0.040	0.018
1R40-10B2-FDWC-1180-1469-0.018	1180	1200	1469	15	5	0.046	0.018
1R40-10B2-FDWC-1380-1669-0.018	1380	1400	1669	15	5	0.054	0.018
1R40-10B2-FDWC-1580-1869-0.018	1580	1600	1869	15	5	0.054	0.018
1R40-10B2-FDWC-1780-2069-0.018	1780	1800	2069	15	5	0.065	0.018
1R40-10B2-FDWC-2380-2269-0.018	2380	2400	2269	15	5	0.077	0.018



Specification of ball screw

Production Specification	With Preload
Number of Thread / Thread Direction	1/Right
BCD	41.5
Lead	12
Ball Dia.	7.144
Effective Turns (Circuit \times Row)	2.5 \times 2
Lead Angle	5.26
Dynamic Rate Load Ca (kgf)	6170
Static Rate Load Co (kgf)	15700
Axial Play	0
Preloading Torque (kgf-cm)	9.79 \times 18.17

Unit: mm

Model No.	Screw Spindle (Shaft) Length				Accuracy Grade	Lead Accuracy	
	L1	L2	L3	L4		Accumulated reference lead deviation E	Lead Derivation in random 300mm e_{300}
1R40-12B2-FDWC-680-969-0.018	680	700	969	15	5	0.030	0.018
1R40-12B2-FDWC-980-1269-0.018	980	1000	1269	15	5	0.040	0.018
1R40-12B2-FDWC-1380-1669-0.018	1380	1400	1669	15	5	0.054	0.018
1R40-12B2-FDWC-1780-2069-0.018	1780	1800	2069	15	5	0.065	0.018
1R40-12B2-FDWC-2480-2769-0.018	2480	2500	2769	15	5	0.077	0.018