

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.

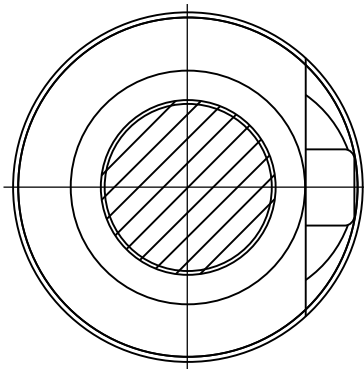


Fig.13.2 Immersion type

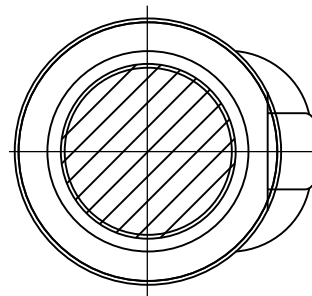
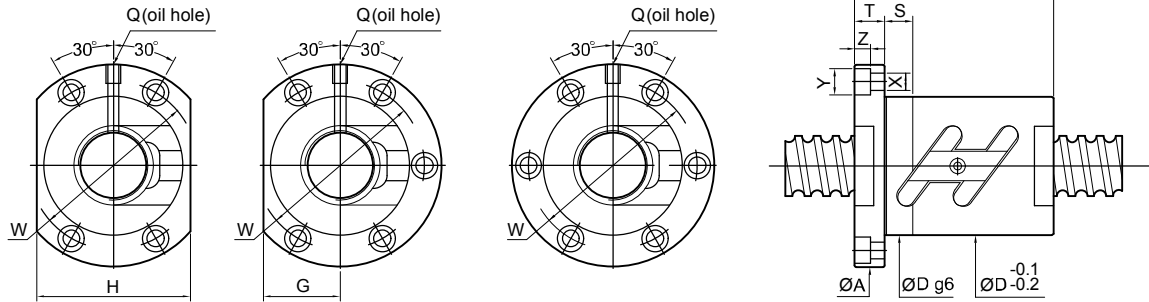


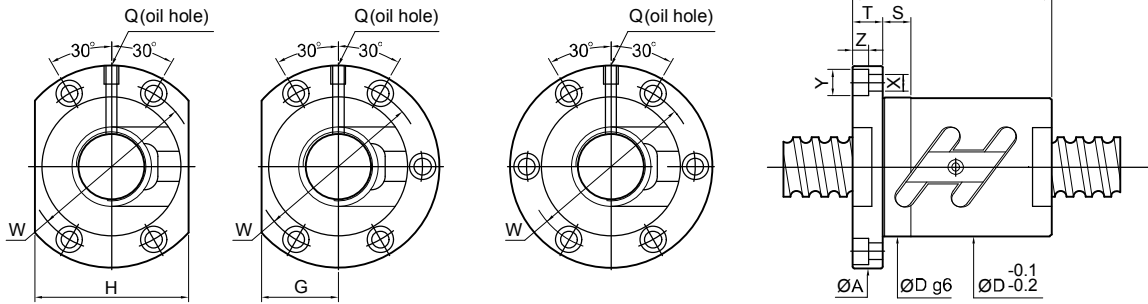
Fig.13.3 Extrusive type



Unit: mm

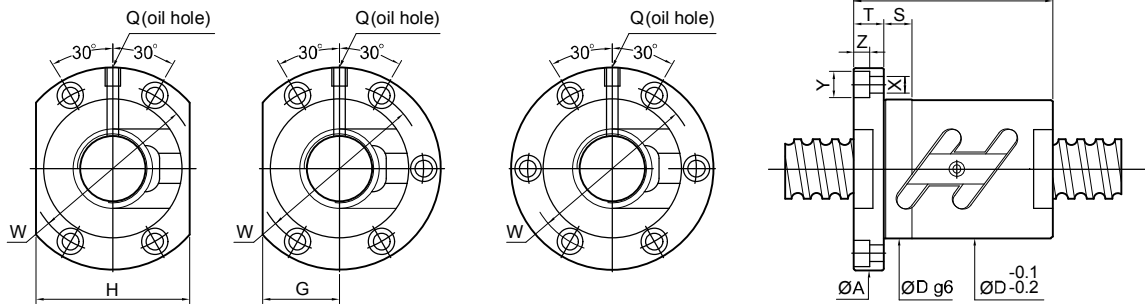
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
10	3	2.000	2.5 \times 1	250	430		37											9	
	4	2.000	2.5 \times 1	250	430	26	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

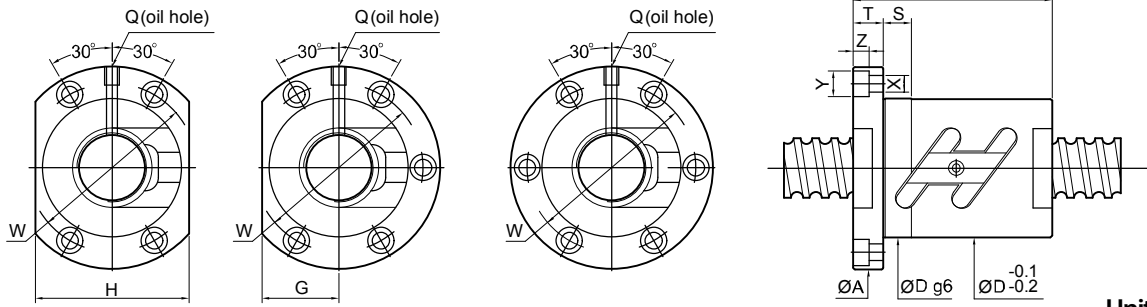
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS kgf/µm		
O.D.	LEAD			Dynamic (1×10 ⁵ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q			
25	4	2.381	1.5×2	600	1630	44													26	
			2.5×1	510	1355	46	40	69	11	57	26	52	15	5.5	9.5	5.5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



Unit: mm

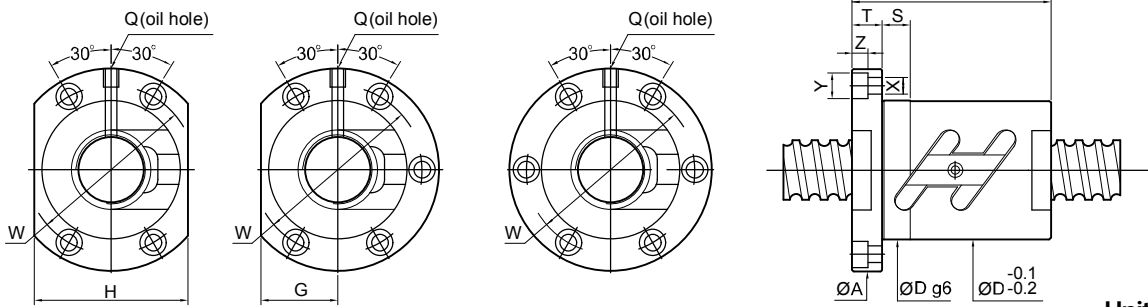
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		S	X	Y			Z
32	4	2.381	2.5 \times 1	565	1750	54	40	81	12	67	32	64	15	6.6	11	6.5	M6 \times 1P	26	
			2.5 \times 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



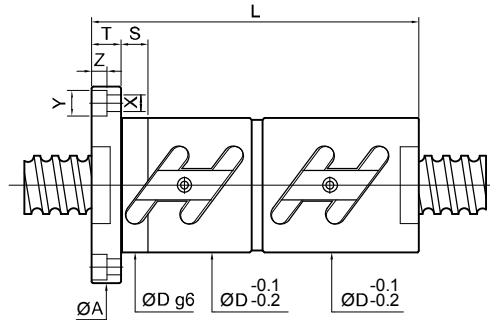
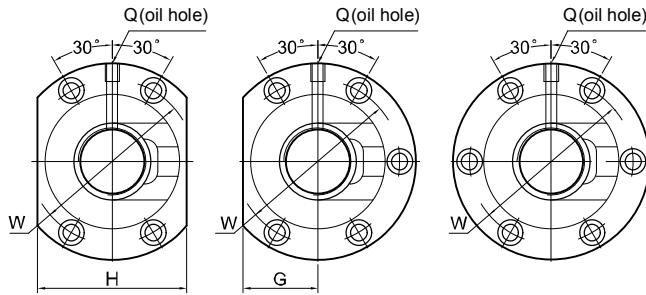
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT 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	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	132	18	110	50	100	20	11	17.5	11	PT1/8x			81	
45	10	6.35	2.5x3	7760	23550	90	131												119			
			2.5x1	3550	8950		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	



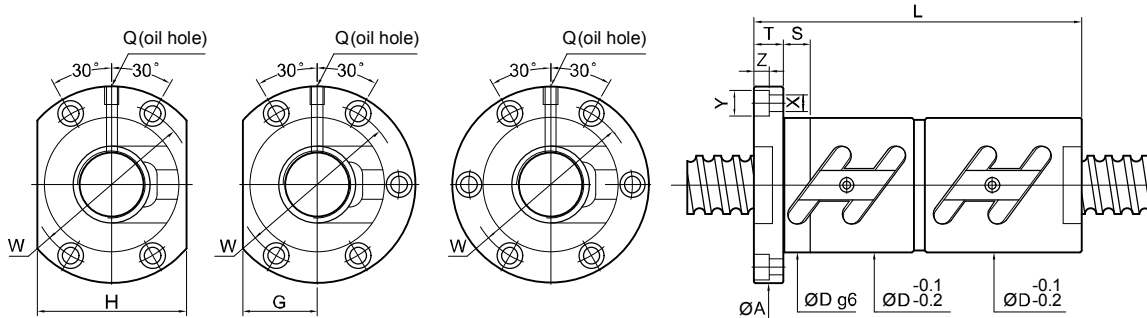
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit 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	5	3.175	1.5x2	1410	5305	50												49		
			1.5x3	2000	7960	80	60	114	15	96	43	86	15	9	14	8.5	PT1/8x	72		
			2.5x2	2190	8840	60	60												80	
			3.5x1	1610	6190	50	50												57	
	6	3.969	3.175	1.5x2	1920	6600	60												50	
				2.5x2	2980	11000	84	67	118	15	100	45	90	15	9	14	8.5	PT1/8x	82	
				2.5x3	4220	16500	85	85												121
				3.5x1	2190	7700	60	60												58
	8	4.762	3.175	1.5x2	2515	7810	68												52	
				2.5x2	3900	13020	87	86	128	18	107	49	98	20	11	17.5	11	PT1/8x	85	
				2.5x3	5520	19530	109	109												125
				3.5x1	2870	9110	71	71												60
	10	6.35	3.175	1.5x2	3725	10450	81												54	
				2.5x1	3190	8710	71	71												45
				2.5x2	5790	17420	93	101	135	18	113	51	102	20	11	17.5	11	PT1/8x	88	
				2.5x3	8200	26130	131	131												130
	12	7.144	3.175	2.5x1	3700	10050	88												46	
				2.5x2	6710	20100	100	116	146	22	122	55	110	20	14	20	13	PT1/8x	89	
55	10	6.35	2.5x2	6005	19540	102	101	144	18	122	54	108	20	11	17.5	11	PT1/8x	95		
			2.5x3	8510	29310	131	131												140	
63	10	6.35	2.5x1	3510	11200	75												55		
			2.5x2	6370	22400	108	105	154	22	130	58	116	20	14	20	13	PT1/8x	106		
	12	7.938	3.175	2.5x3	9020	33600	135	135										156		
				2.5x1	4770	13780	88	88												59
12	7.938	3.175	2.5x2	8650	27560	115	124	161	22	137	61	122	20	14	20	13	PT1/8x	113		
			2.5x3	12250	41340	160	160												167	
80	10	6.35	2.5x2	7130	28500	130	105	176	22	152	66	132	20	14	20	13	PT1/8x	129		
			2.5x3	10100	42750	134	134												190	
	12	7.938	3.175	2.5x2	9710	35560	136	124	182	22	158	68	136	20	14	20	13	PT1/8x	137	
				2.5x3	13760	53340	160	160												202
16	9.525	3.175	2.5x2	16450	59280	143	160	204	28	172	77	154	30	18	26	17.5	PT1/8x	170		
			2.5x3	23300	88920	208	208												250	



Unit: mm

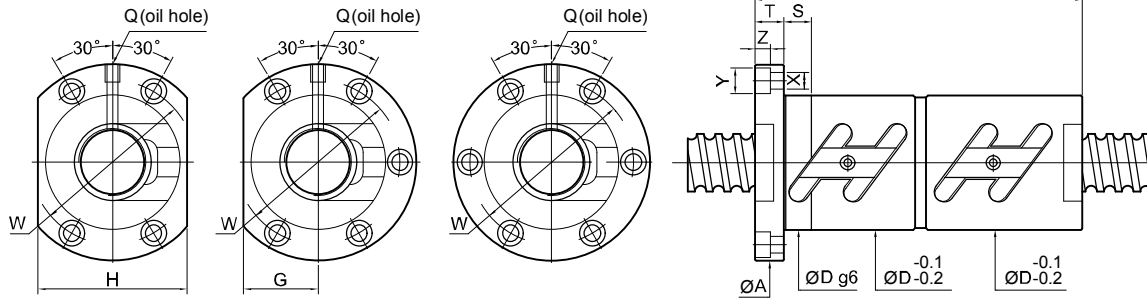
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
16	4	2.381	1.5 \times 2	490	1010	81												36	
			2.5 \times 1	430	850	34	70	57	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
	6	3.175	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	88													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
6		3.969	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
8		3.969	1.5 \times 2	1285	2545	108												49	
			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

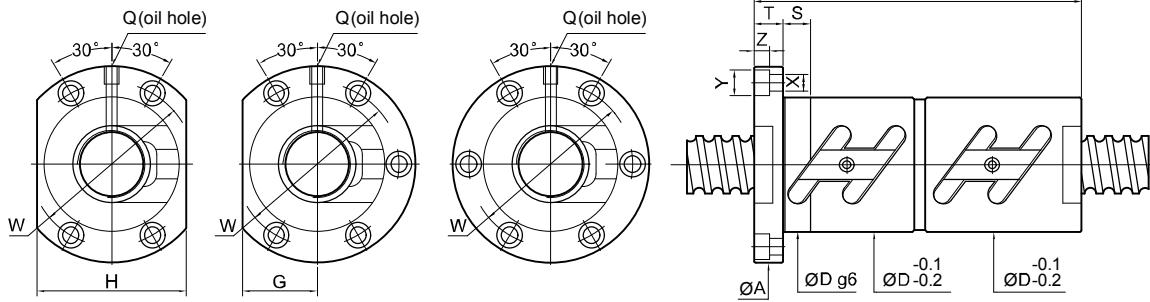
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/μm	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z			
25	4	2.381	1.5x2	600	1630	46	83	69	11	57	26	52	15	5.5	9.5	5.5	M6x1P	51	
			2.5x1	510	1355		67											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		138											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

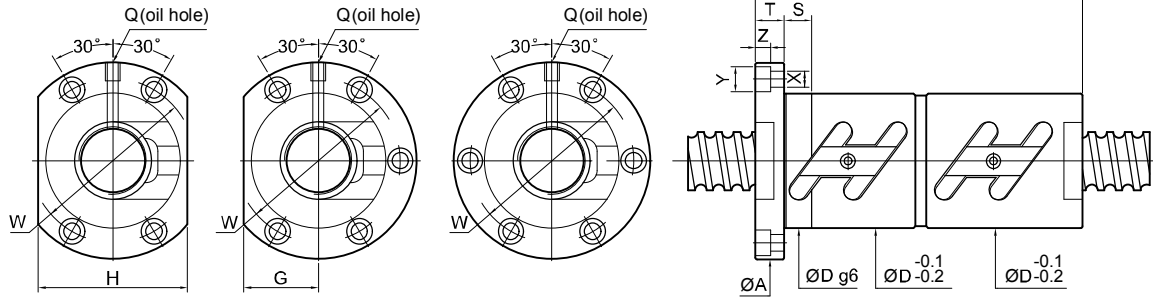
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD(kgf)		NUT		FLANGE					FIT S	BOLT			OIL HOLE Q	STIFFNESS kgf/µm		
O.D.	LEAD			Dynamic (1×10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H		X	Y	Z				
32	4	2.381	2.5×1	565	1750	54	68	81	12	67	32	64	15	6.6	11	6.5	M6×1P	52		
			2.5×2	1020	3500		90											101		
	5	3.175	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		105											136	112
				2.5×3	2590	8520		136											164	
	6	3.969	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	4.762	2.5×2	2410	6900	74	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	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	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	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	
				2.5×3	3680	11850		159											187	
	8	4.762	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	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	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

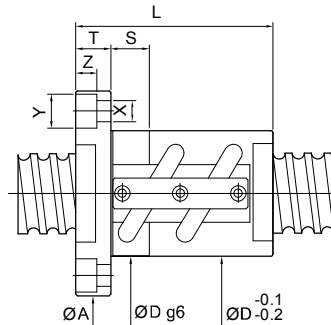
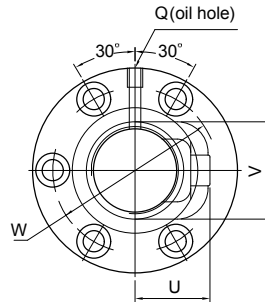
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE					FIT	BOLT			OIL HOLE	STIFFNESS
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	G	H	S	X	Y	Z	Q	kgf/ μ m
40	5	3.175	1.5 \times 2	1280	4275	88											82	
			2.5 \times 1	1090	3560	84											69	
			2.5 \times 2	1980	7120	67	108	101	15	83	39	78	15	9	14	8.5	M8 \times 1P	133
			2.5 \times 3	2800	10680	139												196
			3.5 \times 1	1450	4980	88												95
	6	3.969	1.5 \times 2	1750	5300	103											85	
			2.5 \times 1	1500	4420	90											71	
			2.5 \times 2	2720	8840	70	123	104	15	86	40	80	15	9	14	8.5	PT1/8 \times	138
			2.5 \times 3	3850	13260	159												202
			3.5 \times 1	2000	6190	103												98
	8	4.762	1.5 \times 2	2220	6320	124											86	
			2.5 \times 1	1900	5270	108											73	
			2.5 \times 2	3450	10540	74	108	15	90	41	82	15	9	14	8.5	PT1/8 \times	141	
			2.5 \times 3	4800	14400	152												202
			3.5 \times 1	2540	7380	125												100
	10	6.35	1.5 \times 2	3370	8335	141											91	
2.5 \times 1			2880	6950	131											71		
2.5 \times 2			5220	13900	82	124	18	102	47	94	20	11	17.5	11	PT1/8 \times	148		
2.5 \times 3			7360	22080	151												202	
3.5 \times 1			3840	9730	151												105	
12	6.35	2.5 \times 1	2880	6950	137											76		
		2.5 \times 2	5220	13900	86	208	128	18	106	48	96	20	11	17.5	11	PT1/8 \times	148	
		2.5 \times 3	7360	22080	151												202	
		3.5 \times 1	3840	9730	161												105	
		3.5 \times 2	4800	14400	152												202	
45	6	3.969	2.5 \times 2	2850	9870	80	123	114	15	96	48	96	15	9	14	8.5	PT1/8 \times	151
			2.5 \times 3	4035	14800	159												222
	8	4.762	2.5 \times 2	3650	11780	85	158	127	18	105	52	104	20	11	17.5	11	PT1/8 \times	155
			2.5 \times 3	5175	17670	206												228
	10	6.35	2.5 \times 2	5480	15700	88	180	132	18	110	50	100	20	11	17.5	11	PT1/8 \times	163
			2.5 \times 3	7760	23550	243												239
	12	7.144	2.5 \times 1	3550	8950	90	140	132	18	110	50	100	20	11	17.5	11	PT1/8 \times	85
			2.5 \times 2	6440	17900	210												165

FDWC



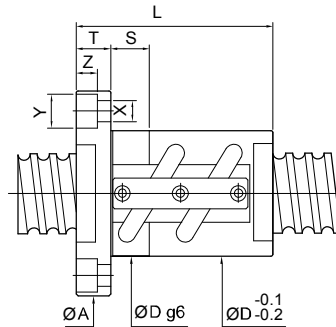
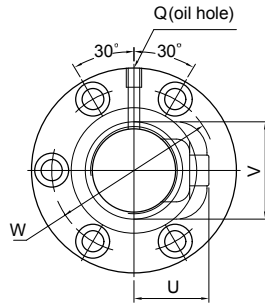
Unit: mm

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



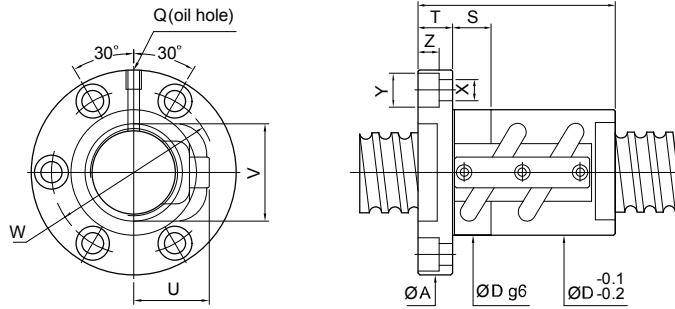
Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
14	4	2.381	2.5 \times 1	410	750	25	40	45	10	35	10	5.5	9.5	5.5	19	21	M6 \times 1P	14	
	5	3.175	2.5 \times 1	675	1145	25	42	45	10	35	10	5.5	9.5	5.5	19	21	M6 \times 1P	15	
15	4	2.381	2.5 \times 1	420	800	28.5	40	48	10	38	10	5.5	9.5	5.5	17	22	M6 \times 1P	14	
	5	3.175	2.5 \times 1	680	1210	28.5	42	48	10	38	10	5.5	9.5	5.5	17	22	M6 \times 1P	15	
16	5	3.175	1.5 \times 2	805	1525	31	50	54	12	41	15	5.5	9.5	5.5	20	23	M6 \times 1P	19	
			2.5 \times 1	690	1270		45											16	20
			2.5 \times 2	1250	2540		60											31	31
			3.5 \times 1	920	1780		50											22	22
20	5	3.175	1.5 \times 2	965	2070	35	50	58	12	46	15	5.5	9.5	5.5	22	27	M6 \times 1P	24	
			2.5 \times 1	830	1730		45											20	
			2.5 \times 2	1510	3460		60											39	
			3.5 \times 1	1110	2420		50											26	
25	6	3.969	1.5 \times 2	1285	2545	42	66	68	12	55	15	5.5	9.5	5.5	28	33	M6 \times 1P	24	
			2.5 \times 1	1100	2120		36											20	
			2.5 \times 2	2190	5360		68											47	
			3.5 \times 1	1610	3750		65											34	
28	5	3.175	1.5 \times 2	1420	3215	44	65	70	12	56	15	6.6	11	6.5	28	34	M6 \times 1P	29	
			2.5 \times 1	1210	2680		50											24	
			2.5 \times 2	2190	5360		68											47	
			3.5 \times 1	1610	3750		65											34	
28	6	3.969	1.5 \times 2	1820	3840	44	75	70	12	56	15	6.6	11	6.5	28	34	M6 \times 1P	30	
			2.5 \times 1	1560	3200		45											25	
			2.5 \times 2	2080	4480		75											35	
			3.5 \times 1	1610	3750		65											34	
28	5	3.175	1.5 \times 2	1110	2960	44	50	70	12	56	15	6.6	11	6.5	28	34	M6 \times 1P	31	
			2.5 \times 1	950	2470		45											26	
			2.5 \times 2	1720	4940		60											50	
			3.5 \times 1	1270	3460		50											36	
28	6	3.969	1.5 \times 2	1480	3605	44	55	70	12	56	15	6.6	11	6.5	28	36	M6 \times 1P	32	
			2.5 \times 1	1270	3000		50											26	
			2.5 \times 2	2300	6000		68											51	
			3.5 \times 1	1690	4200		55											37	



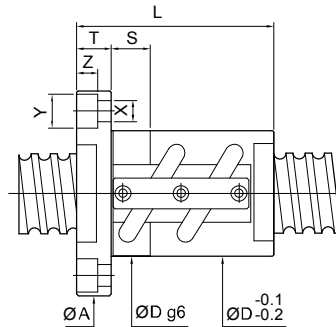
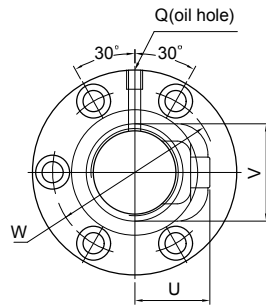
Unit: mm

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
32	5	3.175	1.5 \times 2	1180	3410	50												34	
			2.5 \times 1	1010	2840	45													29
			2.5 \times 2	1830	5680	50	60	76	12	63	15	6.6	11	6.5	30	38	M6 \times 1P		56
			2.5 \times 3	2590	8520	75													82
			3.5 \times 1	1350	3980	50													40
	6	3.969	1.5 \times 2	1560	4135	55													35
			2.5 \times 1	1330	3450	50													29
			2.5 \times 2	2410	6900	52	68	78	12	65	15	6.6	11	6.5	32	39	M6 \times 1P		57
			3.5 \times 1	1770	4830	55													40
	8	4.762	1.5 \times 2	2010	5010	70													36
			2.5 \times 1	1720	4180	62													30
			2.5 \times 2	3120	8360	54	86	88	16	70	15	9	14	8.5	33	40	M6 \times 1P		59
3.5 \times 1			2300	5850	70													42	
10	6.35	1.5 \times 2	3000	6530	78													38	
		2.5 \times 1	2570	5440	68													32	
		2.5 \times 2	4660	10880	57	98	91	16	73	15	9	14	8.5	37	44	M8 \times 1P		61	
		3.5 \times 1	3430	7620	78													44	
36	6	3.969	2.5 \times 1	1430	3950	50												33	
			2.5 \times 2	2600	7900	55	68	82	12	68	15	6.6	11	6.5	32	42	M6 \times 1P		63
	10	6.35	1.5 \times 2	3180	7410	82													41
			2.5 \times 1	2720	6180	72													35
			2.5 \times 2	4930	12360	62	102	104	18	82	20	11	17.5	11	40	49	M6 \times 1P		68
			3.5 \times 1	3630	8650	82													48



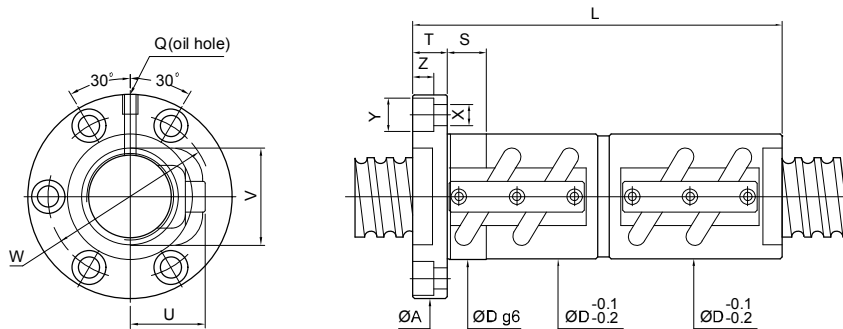
Unit: mm

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			
40	5	3.175	1.5 \times 2	1280	4270		55											41	
			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	17550		108												132	
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



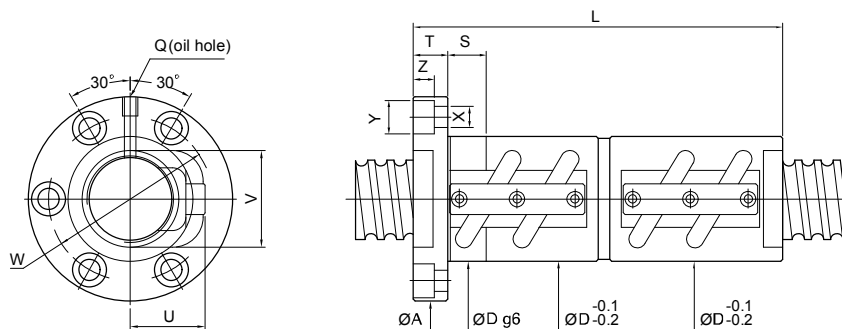
Unit: mm

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



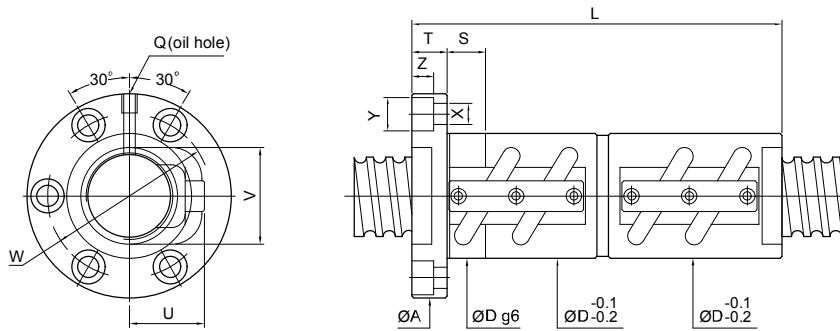
Unit: mm

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			
16	5	3.175	1.5 \times 2	805	1525	31	90	54	12	41	15	5.5	9.5	5.5	20	23	M6 \times 1P	39	
			2.5 \times 1	690	1270		80											33	
			2.5 \times 2	1250	2540		110											63	
			3.5 \times 1	920	1780		90											45	
20	5	3.175	1.5 \times 2	965	2070	35	90	58	12	46	15	5.5	9.5	5.5	22	27	M6 \times 1P	47	
			2.5 \times 1	830	1730		80											40	
			2.5 \times 2	1510	3460		110											77	
			3.5 \times 1	1110	2420		90											55	
20	6	3.969	1.5 \times 2	1285	2545	36	104	60	12	47	15	5.5	9.5	5.5	23	28	M6 \times 1P	49	
			2.5 \times 1	1100	2120		92											41	
			2.5 \times 2	1470	2970		104											56	
			3.5 \times 1	1470	2970		104											56	
25	5	3.175	1.5 \times 2	1065	2575	40	90	64	12	52	15	5.5	9.5	5.5	26	31	M6 \times 1P	57	
			2.5 \times 1	910	2150		80											48	
			2.5 \times 2	1650	4300		110											92	
			3.5 \times 1	1210	3010		90											65	
	6	3.969	3.969	1.5 \times 2	1420	3215	42	104	68	12	55	15	5.5	9.5	5.5	28	33	M6 \times 1P	58
				2.5 \times 1	1210	2680		92											49
				2.5 \times 2	2190	5360		128											94
				3.5 \times 1	1610	3750		104											67
10	4.762	4.762	1.5 \times 2	1820	3840	45	136	72	16	58	15	6.6	11	6.5	29	34	M6 \times 1P	60	
			2.5 \times 1	1560	3200		122											50	
			2.5 \times 2	2080	4480		136											69	
			3.5 \times 1	2080	4480		136											69	
28	5	3.175	1.5 \times 2	1110	2960	44	90	70	12	56	15	6.6	11	6.5	28	34	M6 \times 1P	62	
			2.5 \times 1	950	2470		80											52	
			2.5 \times 2	1720	4940		110											101	
			3.5 \times 1	1270	3460		90											72	
	6	3.969	3.969	1.5 \times 2	1480	3605	44	110	70	12	56	15	6.6	11	6.5	28	36	M6 \times 1P	63
				2.5 \times 1	1270	3000		98											53
				2.5 \times 2	2300	6000		134											103
				3.5 \times 1	1690	4200		110											73



Unit: mm

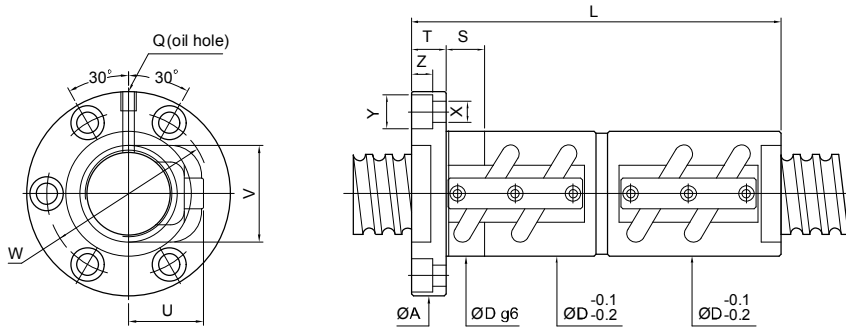
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit \times row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/ μ m	
O.D.	LEAD			Dynamic (1 \times 10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V			
32	5	3.175	1.5 \times 2	1180	3410	90												69	
			2.5 \times 1	1010	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

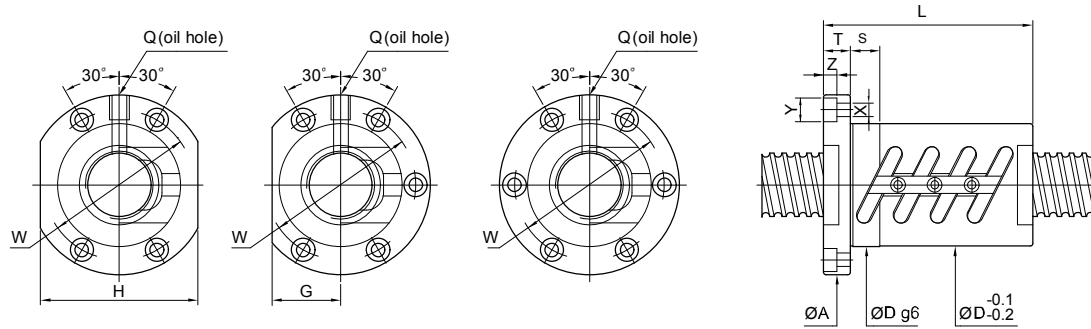
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT	BOLT			RETURN TUBE		OIL HOLE	STIFFNESS	
O.D.	LEAD			Dynamic (10 ⁶ REV.) Ca	Static Co	Dg6	L	A	T	W	S	X	Y	Z	U	V	Q	kgf/µm	
40	5	3.175	1.5x2	1280	4275	94												82	
			2.5x1	1090	3560	84													69
			2.5x2	1980	7120	58	114	92	16	72	15	9	14	8.5	34	46	M8x1P		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
			2.5x3	4800	14400	180													252
			3.5x1	2540	7380	126													100
10	6.35	1.5x2	3370	8335	152													91	
		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	
		2.5x3	7350	22050	210													357	
		3.5x1	3840	9730	152													105	
45	10	6.35	2.5x1	3020	7850	70	134	112	18	90	20	11	17.5	11	48	58	PT1/8x	84	
			2.5x2	5480	15700	194													163
	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	230													165

FDVC



Unit: mm

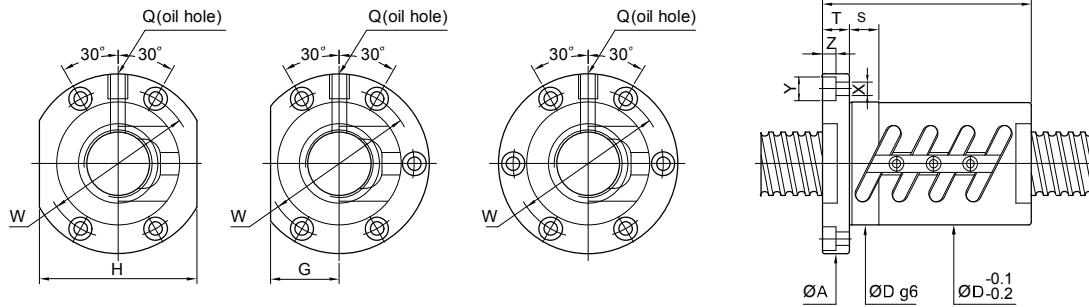
SCREW SIZE		BALL DIA.	EFFECTIVE TURNS circuit row	BASIC RATE LOAD (kgf)		NUT		FLANGE			FIT S	BOLT			RETURN TUBE		OIL HOLE Q	STIFFNESS kgf/µm		
O.D.	LEAD			Dynamic (1×10 ⁶ REV) Ca	Static Co	Dg6	L	A	T	W		X	Y	Z	U	V				
50	5	3.175	1.5×2	1410	5305	107												98		
			1.5×3	2000	7960	70	127	104	16	86	15	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	106	16	88	15	9	14	8.5	43	57	PT1/8	164		
			2.5×3	4220	16500	170													242	
	8	4.762	2.5×2	3900	13020	75	160	116	18	95	20	11	17.5	11	45	59	PT1/8	170		
			2.5×3	5520	19530		208												250	
	10	6.35	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
				3.5×1	4260	12190	154													126
12	7.144	7.144	2.5×1	3700	10050	82	160	128	22	105	20	14	20	13	52	64	PT1/8	92		
			2.5×2	6710	20100		232											179		
55	10	6.35	2.5×2	6005	19540	84	194	125	18	103	20	11	17.5	11	54	68	PT1/8	191		
			2.5×3	8510	29310		254											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	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	9.525	2.5×1	8050	23100	100	200	150	22	123	20	14	20	13	62	78	PT1/8	144		
			2.5×2	14600	46200		296											280		
80	10	6.35	2.5×2	7130	28500	115	200	163	22	137	20	14	20	13	64	91	PT1/8	258		
			2.5×3	10100	42750		260											380		
	12	7.938	7.938	2.5×2	9710	35560	120	232	169	22	143	25	14	20	13	67	93	PT1/8	265	
				2.5×3	13760	53340		302											391	
	16	9.525	9.525	2.5×2	16450	59280	125	302	190	28	154	25	18	26	17.5	70	94	PT1/8	339	
				2.5×3	23300	88920		398											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
	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
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
		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
	10	4.762	2.5 \times 1 \times (2)	1560	3200	58	100	85	15	71	32	64	15	6.6	11	6.5	M6 \times 1P	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
		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
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
	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

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		
			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	
			1.5 \times 1 \times (2)	1860	4710		81											47	
10	6.35	2.5 \times 1 \times (2)	2880	6950	82	103	124	18	102	47	94	20	11	17.5	11	PT1/8 \times	76		
		3.5 \times 1 \times (2)	3850	9730		121											105		
12	6.35	2.5 \times 1 \times (2)	2880	6950	86	112	128	18	106	48	96	20	11	17.5	11	PT1/8 \times	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	84	
			2.5 \times 1 \times (2)	3550	8950		90											85	
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)	2980	11000	84	103	118	15	100	45	90	15	9	14	8.5	PT1/8 \times	164	
			2.5 \times 2 \times (2)	3900	13020		87											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		
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	98	
			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		