

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

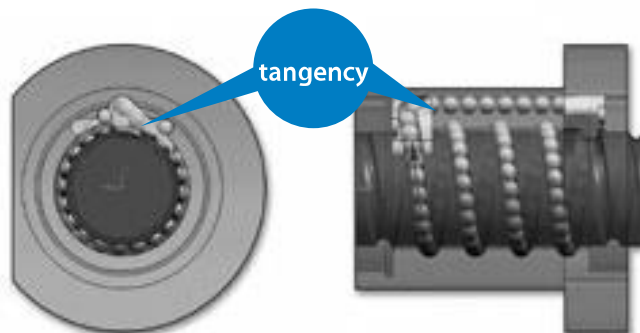
The specially designed pathway of the Recirculation System makes a contact with lead angle and also with BCD in the same tangency, improving its smoothness effectively.

### Applications

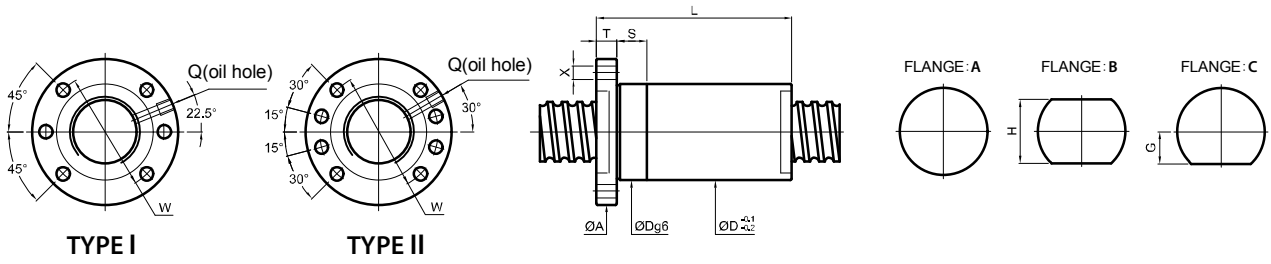
CNC Machinery / Precision Machinery / High Speed Machinery /

Semi-Conductor Equipment / Medical equipment

Diameter  
Reduces  
20%~25%



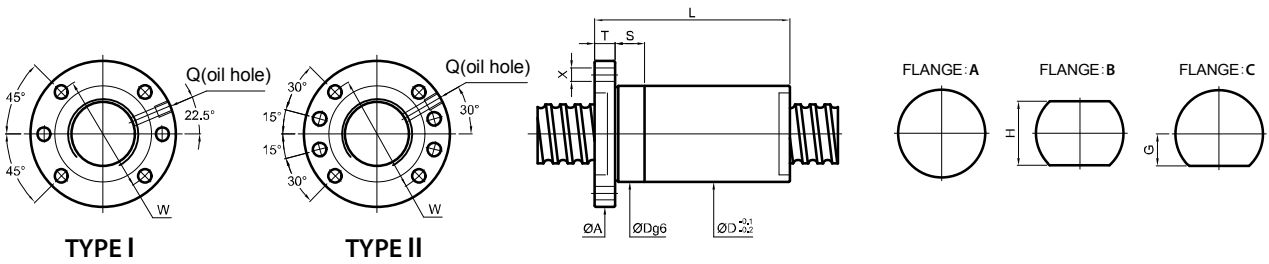
# FSDC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY(kgf)		NUT		FLANGE					FIT	OIL HOLE	BOLT	STIFFNESS	
O.D.	LEAD			Dynamic (10 <sup>6</sup> 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	4.762	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	6.35	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

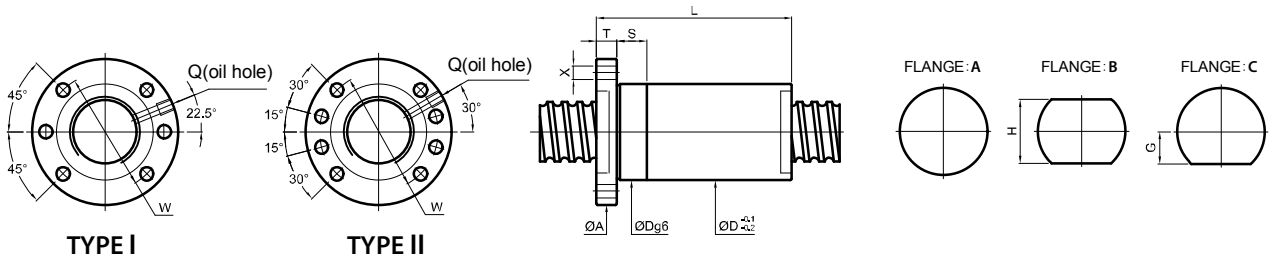


Unit: mm

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 <sup>6</sup> 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

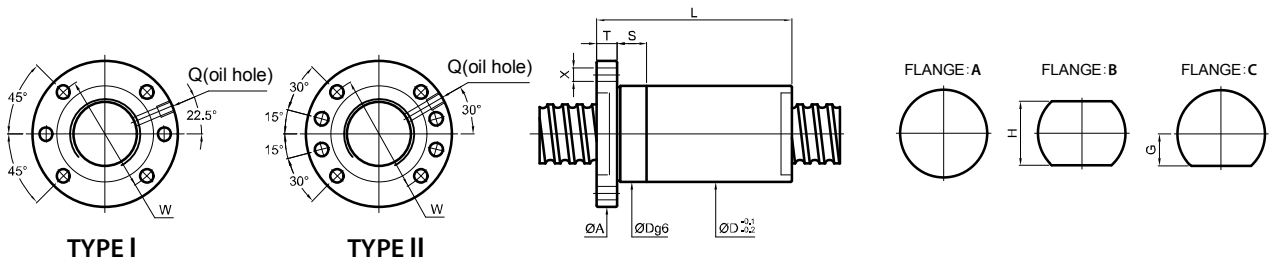
# FSDC



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 <sup>5</sup> 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

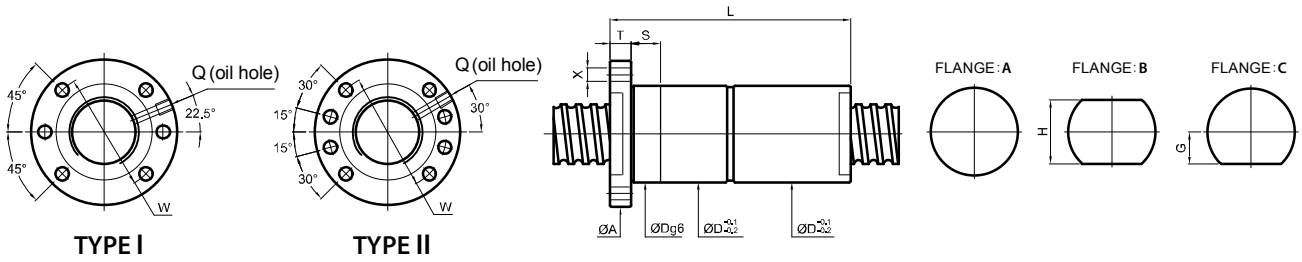


Unit: mm

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 <sup>6</sup> 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

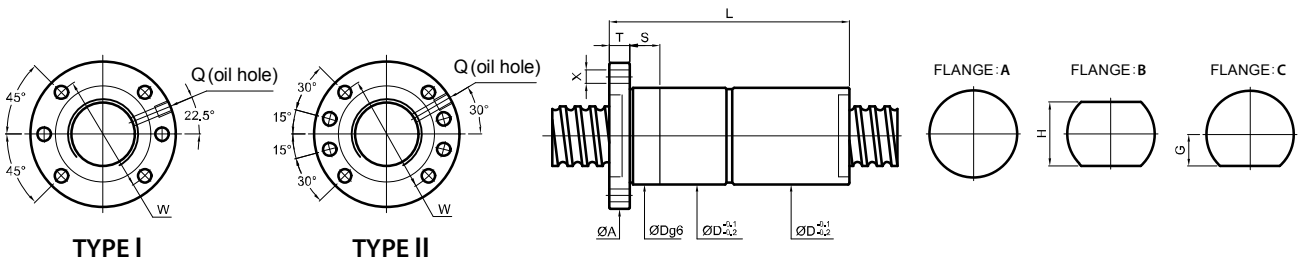
# FDDC



Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY (kgf)		NUT		FLANGE						FIT S	OIL HOLE Q	BOLT X	STIFFNESS kgf/µm
O.D.	LEAD			Dynamic (1×10 <sup>6</sup> REV.) Cam	Static Coam	Dg6	L	A	T	W	G	H	TYPE				
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										
	20		2	1470	3180		122										42
		10	6.35	5	5050	11500	51	153	84	16	67	32	64	I	15	M6×1P	9

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

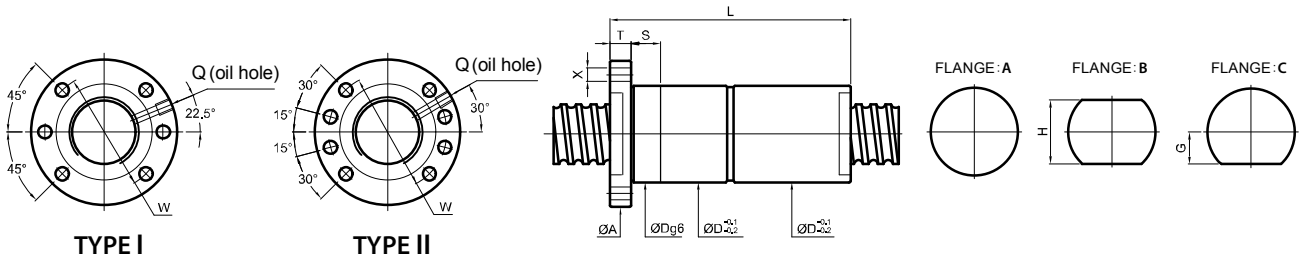


Unit: mm

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 <sup>6</sup> 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	15	M8×1P	6.6	69	
	16		5	3680	9690		206											112
	10	6.35	5	5280	12530	54	158	87	16	72	34.5	69	I	15	M8×1P	9		118
	12		5	5270	12500		172											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

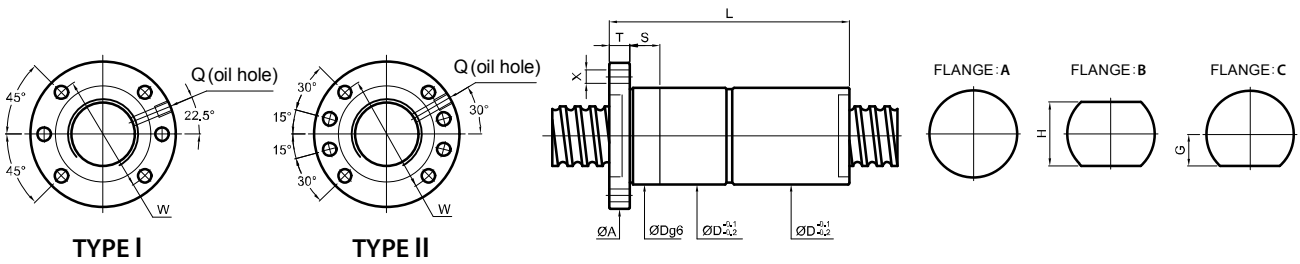


Unit: mm

SCREW SIZE		BALL DIA.	EFFECTIVE TURNS	MODIFIED LOAD CAPACITY (kgf)		NUT		FLANGE						FIT	OIL HOLE	BOLT	STIFFNESS										
O.D.	LEAD			Dynamic (10 <sup>6</sup> 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	6.35	5	6260	17740	63	155	93	18	78	35	70	II	20	M8×1P	9	149										
	12		5	6260	17410		172										149										
	16		5	6220	17350		213										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		108										142										
	8	4.762	4	3610	11260		118										118										
	10	6.35	5	6430	18440		68										158	95	18	80	36	72	II	20	M8×1P	9	155
	12		5	6420	18410												172										155
	15		5	6380	18350												226										155
	16		5	6390	18330												212										155
	20		4	5190	14450												220										125
	40	2	2700	6950	210		64																				
	12	7.144	5	7530	20800		70										174	98	18	83	37	74	II	20	M8×1P	11	158
	16		5	7500	20730												212										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 <sup>6</sup> 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		14	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