



MACHINE SERVICE, INC.

Provider of Technically Advanced Drive Line Solutions

FLANGE BOLTING

Metric Hardware

Use only Grade 10.9 Hex Bolts with self locking Nuts.

Tighten bolts to the following specs based on slightly oiled bolts.

DIN Flange [mm]	Bolt circle [mm]	Pilot [mm]	Qty * Grd 10.9 Bolts	Tightening Torque [NM] +/- 7%
58	47	30	4* M5x.8	9
65	52	35	4* M6x1	15
75	62	42	6* M6x1	15
90	74.5	47	4* M8x1.25	35
100	84	57	6* M8x1.25	35
100XS	84	N/A	4* M8x1.25	35
120	101.5	75	8* M10x1.5	70
120XS	100	N/A	4* M10x1.5	62
150	130	90	8* M12x1.75	120
150XS	130	N/A	4* M12x1.75	105
165	140	95	8* M14x2	190
180XS	150	N/A	4* M14x2	170
180-8	155.5	110	8* M14x2	190
180-10	155.5	110	10* M16x2	295
200XS	165	N/A	4* M14x2	170
225	196	140	8* M16x2	295
250	218	140	8* M18x2.5	405
250FK	218	105	8* M18x2.5	405
285	245	175	8* M20x2.5	580
285FK	245	125	8* M20x2.5	580
315	280	175	8* M22x2.5	780
315FK	280	130	10* M22x2.5	780
350	310	220	10* M22x2.5	780
350 FK	310	155	10* M22x2.5	780
390	345	250	10* M24x3	1000
390 FK	345	170	10* M24x3	1000
435	385	280	10* M27x3	1500
440FK	385	190	16* M27x3	1500
480FK	425	205	16* M30x3.5	2000
550FK	492	250	16* M30x3.5	2000

Small Parts

Bolts, Lockwashers, and Nuts for Companion Flange/ Brake Disc/Flange Yoke Connections

Series	Bolt Data			Application Data		Brake Disc Thick.	Bolt Part Number	Uses L'Washer Number	Uses Nut Number	Bolt Torque (lb. ft.)
	Thread Size	Under Head Length	Shoulder Length	Comp. Flange Thick.	Flange Yoke Thick.					
1000/1100	.312-24	.875	.406	.250	.203	-	5-73-414•	500357-10	231421-2	22-25
1310	.375-24	1.000	.500	.280	.255	-	6-73-316	500357-11	231421-3	40-48
1330/1350/1410	.438-20	1.188	.626	.312	.322	-	7-73-219	500357-12	231421-4	63-75
1330/1350/1410	.438-20	1.625	1.000	.312	.322	.375	7-73-126	500357-12	231421-4	63-75
1480/1550	.500-20	1.375	.687	.375	.375,.410	-	8-73-122	500357-13	231421-5	97-116
1480/1550	.500-20	1.750	1.062	.312	.375,.410	.375	8-73-228•	500357-13	231421-5	97-116
1610	.375-24	1.562	.843	.312	.375	.375	6-73-325	500357-11	231421-3	40-48
1610	.375-24	1.188	.626	.312	.375	-	6-73-1219	500357-11	231421-3	40-48
1710	.375-24	1.688	1.125	.375	.375	.375	6-73-1227•	500357-11	231421-3	40-48
SPL100/1610/ SPL140/1710	.375-24	1.250	.750	.375	.375	-	6-73-220	500357-11	231421-3	40-48
SPL140/SPL170/ SPL250/1760	.438-20	1.375	.750	.375	.375	-	7-73-122	500357-12	231421-4	63-75
1760/1810	.437-20	1.750	1.062	.375	.375,.438	.375	7-73-228	500357-12	231421-4	63-75
1810/1880/1900	.625-18	1.938	1.062	.625	.562	-	10-73-131	232233	231421-7	194-232

Shaft Nuts

Thread Size	Nut Finish	Part Number	Torque to (lb. ft.)
.625-18	CADMIUM	231781	100-120
M30 X 2	CADMIUM	250-74-11	475-525
1.000-20	BLACK	16-74-101	400-450
1.000-20	SILVER	16-74-101	275-325
1.250-18	BLACK	231502	700-750 <i>Flange Diameter is 2.125"</i>
1.250-18	BLACK	20-74-91	475-525 <i>Flange Diameter is 2.500"</i>
1.250-18	SILVER	231502	475-525
1.5000-18	BLACK	24-74-21	1000-1500 <i>Castle Nut</i>



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