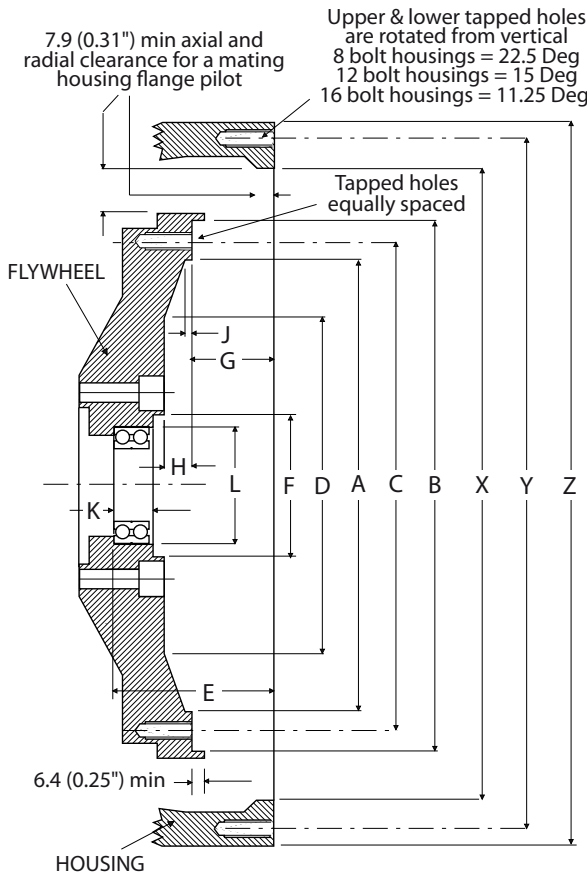


ENGINE & FLYWHEEL STANDARDS

EXTRACTS FROM SAE J620D FOR ENGINE FLYWHEELS AND SAE J617C FOR ENGINE FLYWHEEL HOUSINGS

Flywheels to J620D are in common use on diesel engines supplied for industrial and marine applications. Engines supplied for the truck market are usually fitted with automotive type flywheels which do not conform to standard J620D. Also some engines from Europe and Japan have variations away from standard such as metric threads in flywheel or housing or non standard machining.



The appropriate standards list tolerances for machined surfaces, threads, bore eccentricity and face deviation. Should any of this detail be required please consult our sales staff for a copy of the complete SAE standard. Flywheel shown with pilot bearing installed for reference only. Pilot bearing is required only when using over centre clutches or torque converters. If fitting a flywheel drive plate for hydraulic pump drives, the bearing should be removed.

Flywheel No.	A		B		C		D	
	mm	inch	mm	inch	mm	inch	mm	inch
6 1/2	184.2	7.25	215.90	8.500	200.02	7.875	127.0	5.00
7 1/2	206.2	8.12	241.30	9.500	222.25	8.750	—	—
8	225.6	8.88	263.52	10.375	244.48	9.625	—	—
10	276.4	10.88	314.32	12.375	295.28	11.625	196.8	7.75
11 1/2	314.5	12.38	352.42	13.875	333.38	13.125	203.2	8.00
14	409.4	16.12	466.72	18.375	438.15	17.250	222.2	8.75
16	460.2	18.12	517.52	20.375	488.95	19.250	254.0	10.00
18	498.3	19.62	571.5	22.500	542.92	21.375	—	—

Flywheel No.	E		F		G		H	
	mm	inch	mm	inch	mm	inch	mm	inch
6 1/2	71.4	2.81	63.5	2.50	30.2	1.19	12.7	0.50
7 1/2	71.4	2.81	63.5	2.50	30.2	1.19	12.7	0.50
8	100.1	3.94	76.2	3.00	62.0	2.44	12.7	0.50
10	100.1	3.94	76.2	3.00	53.8	2.12	15.7	0.62
11 1/2	100.1	3.94	—	—	39.6	1.56	28.4	1.12
14	100.1	3.94	101.6	4.00	25.4	1.00	28.4	1.12
16	100.1	3.94	104.6	4.12	15.7	0.62	28.4	1.12
18	100.1	3.94	104.6	4.12	15.7	0.62	31.8	1.25

Flywheel No.	J		K		L		Q - Tapped holes	
	mm	inch	mm	inch	mm	inch	No	Size
6 1/2	9.7	0.38	17.5	0.69	52.0	2.047	6	5/16"-18
7 1/2	12.7	0.50	17.5	0.69	52.0	2.047	8	5/16"-18
8	12.7	0.50	19.0	0.75	62.0	2.441	6	3/8"-16
10	12.7	0.50	28.4	1.12	72.0	2.834	8	3/8"-16
11 1/2	22.4	0.88	31.8	1.25	72.0	2.834	8	3/8"-16
14	22.4	0.88	38.1	1.50	80.0	3.149	8	1/2"-13
16	22.4	0.88	44.4	1.75	100.0	3.937	8	1/2"-13
18	31.8	1.25	44.4	1.75	100.0	3.937	6	5/8"-11

Housing SAE-No.	X		Y		Z		R - Tapped holes	
	mm	inch	mm	inch	mm	inch	No	Size
6	266.70	10.500	285.75	11.250	307.8	12.12	8	3/8"-16
5	314.32	12.375	333.38	13.125	355.6	14.00	8	3/8"-16
4	361.95	14.250	381.00	15.000	403.4	15.88	12	3/8"-16
3	409.58	16.125	428.62	16.875	450.8	17.75	12	3/8"-16
2	447.68	17.625	466.72	18.375	489.0	19.25	12	3/8"-16
1	511.18	20.125	530.22	20.875	552.4	21.75	12	7/16"-14
1/2	584.20	23.000	619.12	24.375	647.7	25.50	12	1/2"-13
0	647.70	25.500	679.45	26.750	711.2	28.00	16	1/2"-13

STANDARDS

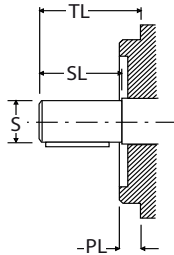
PUMP STANDARDS

EXTRACTS FROM SAE J744C ANSI STANDARD FOR FLUID POWER PUMPS AND MOTORS

The SAE standard J744C was originally developed for off road vehicle use in USA. Not all pumps and motors are built to this standard.

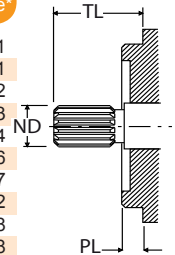
STRAIGHT SHAFT TYPES

S	Torque in-lbs	HP at 1000	SL#	TL#	Key Width	OEM Code
0.500"	260	4.25	0.750"	1.062"	0.125"	78
0.625"	517	8.25	0.937"	1.250"	0.156"	12
0.750"	1,129	17.9	0.937"	1.250"	0.187"	13
0.875"	1,852	29.3	1.312"	1.625"	0.250"	14
1.000"	2,987	47.5	1.500"	1.812"	0.250"	15
1.250"	5,677	90	1.875"	2.187"	0.312"	24
1.500"	10,777	171	2.125"	2.437"	0.375"	60
1.750"	15,057	239	2.625"	2.937"	0.437"	61



30 Deg INVOLUTE SPLINE TYPES

Spline Details	Torque in-lbs	HP at 1000	ND	TL	SAE Code	OEM Code*
9T 20/40 DP	260	4.25	1/2"	1.062"	AA	91
9T 16/32 DP	517	8.25	5/8"	1.250"	A	01
11T 16/32 DP	1,129	17.9	3/4"	1.500"	AH	02
13T 16/32 DP	1,852	29.3	7/8"	1.625"	B	03
15T 16/32 DP	2,987	47.5	1"	1.812"	BB	04
14T 12/24 DP	5,677	90	1 1/4"	2.187"	C	06
21T 16/32 DP	6,839	108	1 3/8"	2.187"	CS	07
17T 12/24 DP	10,777	171	1 1/2"	2.437"	CC	32
13T 8/16 DP	15,057	239	1 3/4"	2.937"	D	08
13T 8/16 DP	15,057	239	1 3/4"	2.937"	E	08
15T 8/16 DP	24,245	285	2"	3.437"	F	37



#Lengths shown are for the common short shaft types for long shaft series see Standard SAE J744C.

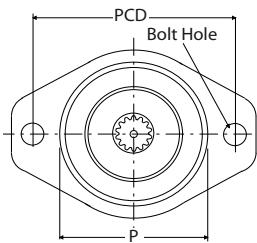
HP at 1000 RPM. Torque and HP requirements noted are typical (based on shaft St of 25000 PSI) and should be considered as a guide only.

HP at 1000 RPM. Torque and HP requirements noted are typical (based on shaft St of 25000 PSI) and should be considered as a guide only. Torsional stress is calculated at spline undercut.

* OEM Code. Unique code for ID of shaft or bore sizes. Appears as last two numbers in all Part Numbers for Splined Hubs, Splined Couplings, Splined Shafts, Flexlock Hubs, Clamplock Components, Over Hung Load Adaptors or Gearboxes shown in this catalogue.

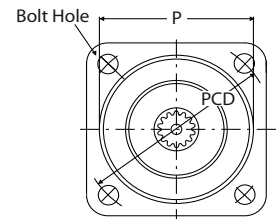
TWO BOLT MOUNTING FLANGE

SAE Code	Bolt PCD	Bolt Hole	P	PL
AA	3.250"	0.406"	2.00"	0.250"
A	4.187"	0.437"	3.25"	0.250"
B	5.750"	0.562"	4.00"	0.375"
C	7.125"	0.687"	5.00"	0.500"
D	9.000"	0.812"	6.00"	0.500"
E	12.500"	1.062"	6.50"	0.625"
F	13.781"	1.062"	7.00"	0.625"



FOUR BOLT MOUNTING FLANGE

SAE Code	PCD	Bolt Hole	P	PL
B	5.000"	0.562"	4.00"	0.375"
C	6.375"	0.562"	5.00"	0.500"
D	9.000"	0.812"	6.00"	0.500"
E	12.500"	0.812"	6.50"	0.625"
F	13.781"	1.062"	7.00"	0.625"

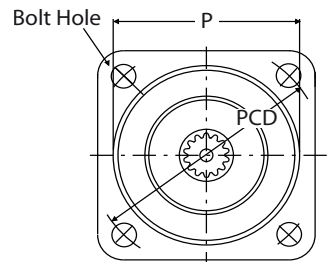


METRIC ISO FLANGES

FOUR BOLT MOUNTING FLANGE

ISO Code	P	PCD	Bolt Hole
M80	80	100	9
M100	100	125	11
M125	125	160	14
M140	140	180	16
M160	160	200	18
M180	180	224	22
M200	200	250	22
M224	224	280	24

Dim's in mm

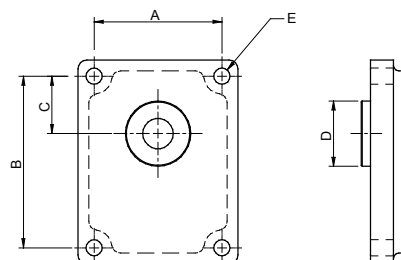


DIN FLANGES

DIN MOUNTING FLANGE

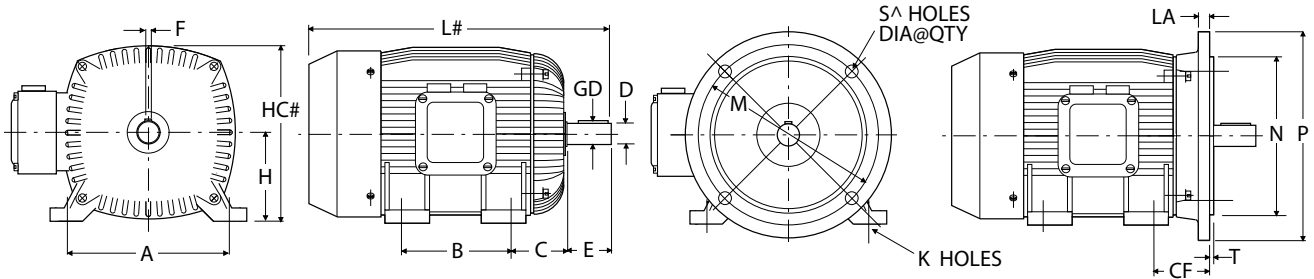
Group	A	B	C	D	E Bolt Hole
2	71.5	96.2	32.5	36.5	9
3	98	128	42	50.8	11

Dim's in mm



NO RESPONSIBILITY IS ACCEPTED FOR OMISSIONS VARIATIONS OR ERRORS

ELECTRIC MOTOR SIZES



Dimensions so marked are subject to variation depending on the brand of motor being used and may not be shown.
 S^A Frames 63 through 200L have 4 holes on 45 deg. The remainder 8 holes on 22 deg 30 min. Relationship of power output verses frame may vary with manufacturer.

FRAME	DIMENSIONS (mm)														POWER RANGE kW @ MOTOR RPM							
	A	B	C	CF	D	E	F	GD	H	HC#	K	L#	LA	M	N	P	S^A	T	3000	1500	1000	750
63	100	80	40	40	11	23	4	12.5	63	124	7	213	6	115	95	140	10	3	0.12-0.25	0.12-0.18		
71	112	90	45	45	14	30	5	16	71	140	7	235	9	130	110	160	10	3.5	0.37-0.55	0.25-0.37	0.18	0.12
80	125	100	50	50	19	40	6	21.5	80	158	10	272	10	165	130	200	12	3.5	0.75-1.10	0.55-0.75	0.37-0.55	0.18
90S	140	100	56	56	24	50	8	27	90	178	10	300	10	165	130	200	12	3.5	1.50	1.10	0.75	0.37
90L	140	125	56	56	24	50	8	27	90	178	10	320	10	165	130	200	12	3.5	2.20	1.50	1.10	0.55
100L	160	140	63	63	28	60	8	31	100	198	12	362	11	215	180	250	15	4	3.0	2.2-3.0	1.5	0.75-1.1
112M	190	140	70	70	28	60	8	31	112	222	12	391	11	215	180	250	15	4	4.0	4.0	2.2	1.5
132S	216	140	89	89	38	80	10	41	132	260	12	475	12	265	230	300	15	4	5.5-7.5	5.5	3.0	2.2
132M	216	178	89	89	38	80	10	41	132	260	12	515	12	265	230	300	15	4	9.2	7.5	4.0-5.0	3.0
160M	254	210	108	108	42	110	12	45	160	314	15	600	18	300	250	350	19	5	11.0-16.0	9.2-11.0	7.5	4.0-5.5
160L	254	254	108	108	42	110	12	45	160	314	15	645	18	300	250	350	19	5	18.5	15.0	9.2-11.0	7.5
180M	279	241	121	121	48	110	14	51.5	180	354	15	670	18	300	250	350	19	5	22.0	18.5		9.2
180L	318	279	121	121	48	110	14	51.5	180	354	15	710	18	300	250	350	19	5	22.0	22.0	15.0	11.0
200M	318	267	133	133	55	110	16	59	200	392	19	775	18	350	300	400	19	5		22.0	15.0	11.0
200L	356	305	133	133	55	110	16	59	200	392	19	775	18	350	300	400	19	5	30.0-37.0	30.0	18.5-22.0	15.0
225S	356	286	149	149	55/60	110	16/18	#	225	455	19	820	18	400	350	450	19	5	45	37.0-45.0	30	18.5-22.0
225M	356	311	149	149	55/60	110	16/18	#	225	455	19	845	18	400	350	450	19	5	45	37.0-45.0	30	18.5-22.0
250S	406	311	168	168	60/70	140	18/20	#	250	480	24	930	18	500	450	550	19	5	55.0-75.0	55.0-75.0	37.0-45.0	30.0-37.0
250M	406	349	168	168	60/70	140	18/20	#	250	480	24	930	18	500	450	550	19	5	55.0-75.0	55.0-75.0	37.0-45.0	30.0-37.0

STANDARDS