



How to Select

Standard Selection Method

- power(kW) or torque(Nm)
- speed
- Application or type of equipment to be connected (motor to pump, gear drive to conveyor, etc.)
- Shaft diameters
- Shaft gaps
- Physical space limitations
- Special bore or finish information and type of fit

Exceptions are High Peak Loads and Brake Applications. For these conditions use the Formula Selection Method in the next column, or consult your local Esco Representative for assistance.

1. RATING: Determine system torque. If torque is not given, calculate as shown below:

$$\text{System torque(N m)} = \text{KW} \times 9549 / \text{rpm}$$

Where kilowatt (kW) is the actual or transmitted power required by the application (if unknown, use the motor or turbine nameplate rating) and rpm is the actual speed the coupling is rotating. Applications that require rapid changes in direction or torque reversals should be referred to Esco Engineering.

2. SERVICE FACTOR: Determine appropriate service factor from Table 1, Page 1.

3. REQUIRED MINIMUM COUPLING RATING: Determine the required minimum coupling rating as shown below:

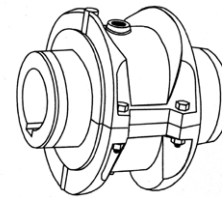
$$\text{Minimum Coupling Rating} = \text{S.F. (Service Factor)} \times \text{Torque (Nm)}$$

4. CHECK: Check speed (rpm), bore, gap, and dimensions.

SERVICE FACTORS are a guide, based on experience, of the ratio between coupling catalog rating and system characteristics. The system characteristics are best measured with a torque meter.

Table 1 - Service Factor

Torque Demands Driven Machine	Typical applications for electric motor or turbine driven equipment	Typical Service Factor
	Constant Torque such as Centrifugal Pumps, Blowers, and Compressors.	1.0
	Continuous duty with some torque variations including Plastic Extruders, Forced Draft Fans.	1.5
	Light shock loads from Metal Extruders, Cooling Towers, Cane Knife, Log Haul.	2.0
	Moderate shock loading as expected from a Car Dumper, Stone Crusher, Vibrating Screen.	2.5
	Heavy shock load with some negative torques from Roughing Mills, Reciprocating Pumps, Compressors, Reversing Runout Tables,	3.0
	Applications like Reciprocating Compressors with frequent torque reversals, which do not necessarily cause reverse rotations.	Consult ESCO Engineering



Features That Give Grid the Lowest Lifetime Operating Cost

Longer Life

Tapered grids, made of high strength alloy steel, are quenched and tempered to spring hardness.

The grid surface is then precision shot peened to compress the surface molecules. The effect is a dramatic increase in rating, providing reserve strength for longer life .

Quick, Easy Installation...

Replace-In-Place Design

The grid is the wearing member of a Escogrid coupling . Tapered grids are accessible through the quickly removable cover. The replace-in-place design of the replacement grids allows them to be dropped in without the need to remove or reposition hubs or realign shafts When coupling-connected equipment must be moved,

Equipment Protection

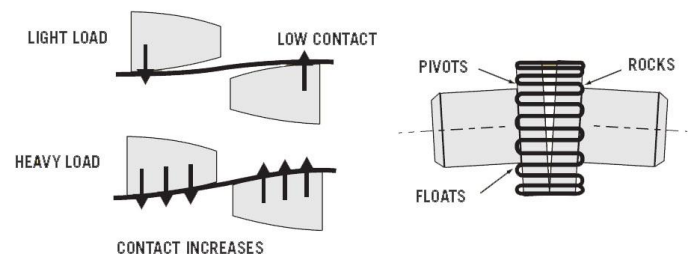
The grid is free to rock, pivot and float within the hub teeth. Generous misalignment capacity is provided without producing detrimental bearing side loads created by other couplings.

Versatile Designs

Two cover designs are available in the popular sizes. Standard spacer, and brakewheel or disc designs are also available.

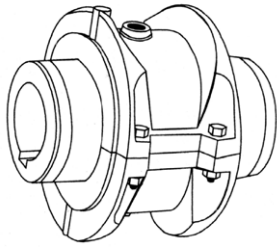
Interchange

With Steelflex coupling of American FALK company completely interchangeable

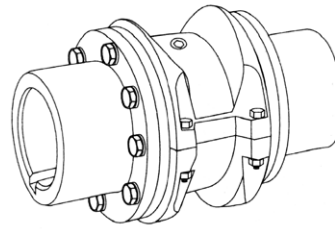


Escogrid couplings

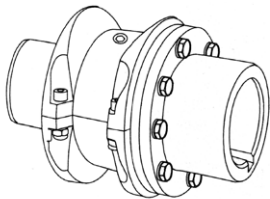
A general purpose, lubricated design that combines the economy and high torque capacity of a gear coupling with the torsional flexibility of an elastomer coupling.



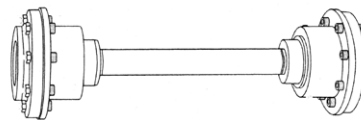
**Type T10
Close Coupled:**
A double flexing, close-coupled design for use in four bearing systems. Features a horizontally split cover which allows for grid replacement without the movement of the connected equipment.



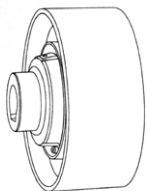
**Type T31
Full Spacer:**
Complete center section drops out for easy service of connected equipment bearings and seals. Ideal for pump applications.



**Type T35
Half Spacer:**
An economical spacer design for easy service of connected equipment bearings and seals. Ideal for pump applications.



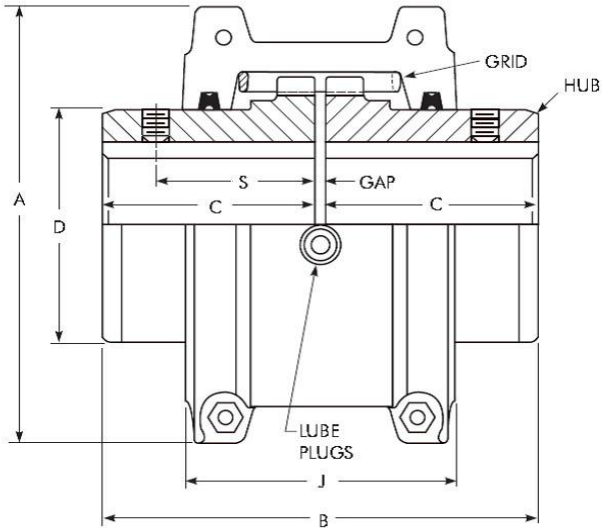
**Type T50
Floating Shaft:**
Double piloted design for connecting equipment where the distance between shafts is too large for a spacer type coupling.



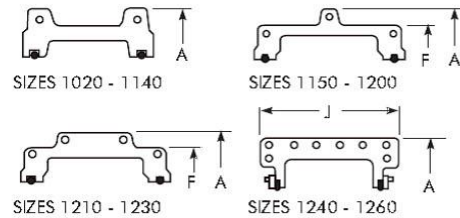
**Type T61/35
Brakewheel:**
Provides a built-in braking surface right at or near the centerline of the coupling . . . saves space and dollars.

Type T10

CloseCoupled/Dimensions — Millimeters



COVER PROFILES – HORIZONTAL SPLIT



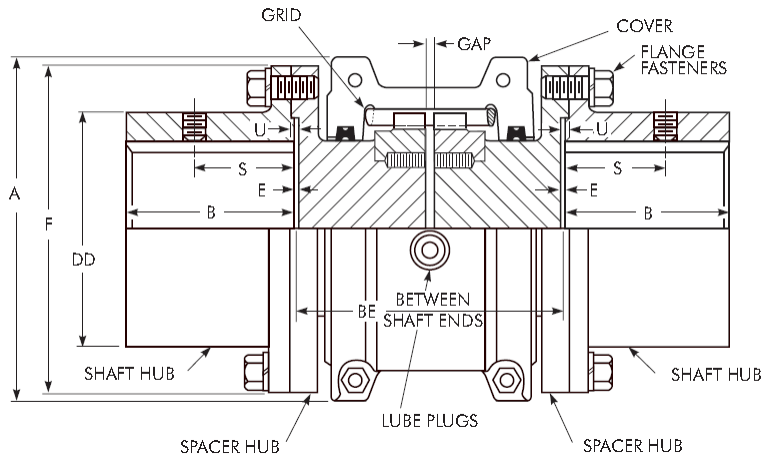
Sizes 1020 thru 1230T10 covers are cast aluminum alloy;
 Sizes 1240 thru 1260T10 are fabricated steel.

SIZE	Torque Rating Nm	Allow Speed rpm	Max Bore mm	Cplg Wt With No Bore-Kg	Lube Wt Kg	DIMENSION - MILLIMETERS							
						A	B	C	D	F	J	S	Gap
1020T	52	4500	28	1,91	0,0272	97,0	98,2	47,6	39,7	...	66,7	39,1	3
1030T	149	4500	35	2,59	0,0408	105,7	98,2	47,6	49,2	...	68,3	39,1	3
1040T	249	4500	43	3,36	0,0544	114,3	104,6	50,8	57,2	...	69,9	40,1	3
1050T	435	4500	50	5,44	0,0680	135,1	123,6	60,3	66,7	...	80,9	44,7	3
1060T	684	4350	56	7,26	0,0862	147,8	130,0	63,5	76,2	...	93,5	52,3	3
1070T	994	4125	67	10,4	0,113	158,8	155,4	76,2	87,3	...	96,8	53,8	3
1080T	2050	3600	80	17,7	0,172	190,5	180,8	88,9	104,8	...	115,6	64,5	3
1090T	3730	3600	95	25,4	0,254	211,1	199,8	98,4	123,8	...	122,2	71,6	3
1100T	6280	2440	110	42,2	0,426	251,0	246,2	120,6	142,1	...	155,4	...	5
1110T	9320	2250	120	54,4	0,508	269,7	259,0	127,0	160,3	...	161,5	...	5
1120T	13700	2025	140	81,2	0,735	307,8	304,4	149,2	179,4	...	191,5	...	6
1130T	19900	1800	170	121	0,907	345,9	329,8	161,9	217,5	...	195,1	...	6
1140T	28600	1650	200	178	1,13	384,0	374,4	184,2	254,0	...	201,2	...	6
1150T	39800	1500	215	227	1,95	453,1	371,8	182,9	269,2	391,2	271,5	...	6
1160T	55900	1350	240	309	2,81	501,9	402,2	198,1	304,8	436,9	278,4	...	6
1170T	74600	1225	280	448	3,49	566,9	437,8	215,9	355,6	487,2	307,3	...	6
1180T	103000	1100	300	619	3,76	629,9	483,6	238,8	393,7	554,7	321,1	...	6
1190T	137000	1050	335	776	4,40	675,6	524,2	259,1	436,9	607,8	325,1	...	6
1200T	186000	900	360	1057	5,62	756,9	564,8	279,4	497,8	660,4	355,6	...	6
1210T	249000	820	390	1424	10,5	844,6	622,6	304,8	533,4	750,8	431,8	...	13
1220T	336000	730	420	1785	16,1	920,8	663,2	325,1	571,5	822,2	490,2	...	13
1230T	435000	680	450	2267	24,0	1003,3	703,8	345,4	609,6	904,7	546,1	...	13
1240T	559000	630	480	2950	33,8	1087,1	749,6	368,3	647,7	...	647,7	...	13
1250T	746000	580	◆	3833	50,1	1181,1	815,6	401,3	711,2	...	698,5	...	13
1260T	932000	540	◆	4682	67,2	1260,9	876,6	431,8	762,0	...	762,0	...	13

◆ Refer to Factory.

Type T31

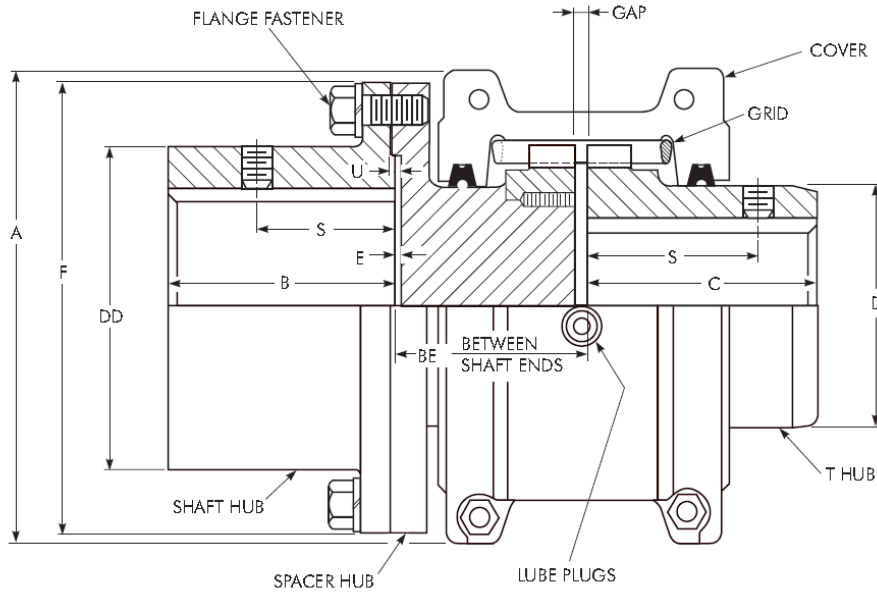
Full Spacer/Dimensions — Millimeters



SIZE	Torque Rating Nm	Allow Speed rpm	Max Bore mm	Cplg Wt With No Bore-Kg	Lube Wt Kg	DIMENSION - MILLIMETERS										Flange Fasteners	
						A	B	BE		DD	E	F	S	U	Gap	No. per Flange & SAE Grade	Dia Inches
								Min	Max								
1020T	52	3600	35	3,86	0,0272	97,0	34,9	89	203	52,4	0,8	85,7	27,4	1,8	5	4 Gr8	0,250
1030T	149	3600	43	5,26	0,0408	105,7	41,3	89	216	59,5	0,8	93,7	31,5	1,8	5	8 Gr8	0,250
1040T	249	3600	56	8,44	0,0544	114,3	54,0	89	216	78,6	0,8	112,7	27,4	1,8	5	8 Gr8	0,250
1050T	435	3600	67	12,5	0,0680	135,1	60,3	111	216	87,3	0,8	125,4	40,6	1,8	5	8 Gr8	0,312
1060T	684	3600	80	19,6	0,0862	147,8	73,0	127	330	103,2	1,8	144,5	43,2	2,8	5	8 Gr8	0,375
1070T	994	3600	85	24,6	0,113	158,8	79,4	127	330	109,5	1,8	152,4	46,7	2,8	5	12 Gr8	0,375
1080T	2050	3600	95	39,4	0,172	190,5	88,9	178	406	122,2	1,8	177,8	49,8	2,8	5	12 Gr5	0,500
1090T	3730	3600	110	60,3	0,254	211,1	101,6	180	406	142,9	1,8	209,6	56,9	2,8	5	12 Gr5	0,625
1100T	6280	2440	130	98,9	0,426	251,0	90,4	203	406	171,4	1,6	250,8	...	3,2	6	12 Gr5	0,750
1110T	9320	2250	150	137	0,508	269,7	104,1	210	406	196,8	1,6	276,2	...	3,2	6	12 Gr5	0,750
1120T	13700	2025	170	196	0,735	307,8	119,4	246	406	225,4	1,6	319,1	...	4,0	10	12 Gr5	0,875
1130T	19900	1800	190	259	0,907	345,9	134,6	257	406	238,1	1,6	346,1	...	4,0	10	12 Gr5	1,000
1140T	28600	1650	210	340	1,130	384,0	152,4	267	406	266,7	1,6	358,8	...	4,0	10	12 Gr5	1,125

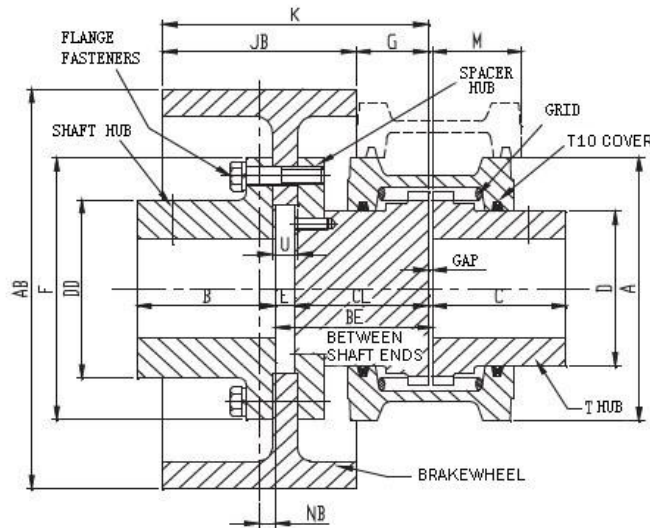
Type T35

Half Spacer/Dimensions — Millimeters



SIZE	Torque Rating Nm	Allow Speed rpm	Max Bore mm		Cplg Wt With No Bore-Kg	Lube Wt Kg	DIMENSION - MILLIMETERS													Flange Fasteners	
			Shaft Hub	T Hub			A	B	BE		C	D	DD	E	F	S		U	Gap	No. per Flange &SAE Grade	Dia Inches
									Min	Max						Shaft Hub	T Hub				
1020T	52	3600	35	28	2,90	0,0272	97,0	34,9	45,0	102	47,6	39,7	52,4	0,8	85,7	27,4	39,1	1,8	3	4 Gr6	0,25
1030T	149	3600	43	35	3,90	0,0408	105,7	41,3	45,0	109	47,6	49,2	59,5	0,8	93,7	31,5	39,1	1,8	3	8 Gr8	0,25
1040T	249	3600	56	43	5,90	0,0544	114,3	54	45,0	109	50,8	57,2	78,6	0,8	112,7	27,4	40,1	1,8	3	8 Gr8	0,25
1050T	435	3600	67	50	8,89	0,068	135,1	60,3	56	109	60,3	66,7	87,3	0,8	125,4	40,6	44,7	1,8	3	8 Gr8	0,312
1060T	684	3600	80	56	13,5	0,0862	147,8	73,0	64	166	63,5	76,2	103,2	1,8	144,5	43,2	52,3	2,8	3	8 Gr8	0,375
1070T	994	3600	85	67	17,5	0,113	158,8	79,4	64	166	76,2	87,3	109,5	1,8	152,4	46,7	53,8	2,8	3	12 Gr8	0,375
1080T	2050	3600	95	80	28,6	0,172	190,5	88,9	78	204	88,9	104,8	122,2	1,8	177,8	49,8	64,5	2,8	3	12 Gr5	0,500
1090T	3730	3600	110	95	42,9	0,254	211,1	101,6	83	204	98,4	123,8	142,9	1,8	209,6	56,9	71,6	2,8	3	12 Gr5	0,625
1100T	6280	2440	130	110	70,8	0,426	251,0	90,4	103	205	120,6	142,1	171,4	1,6	250,8	...	...	3,0	5	12 Gr5	0,750
1110T	9320	2250	150	120	95,7	0,508	269,7	104,1	106	205	127	160,3	196,8	1,6	276,2	...	...	3,0	5	12 Gr5	0,750
1120T	13700	2025	170	140	139	0,735	307,8	119,4	125	205	149,3	179,4	225,4	1,6	319,1	...	...	4,0	6	12 Gr5	0,875
1130T	19900	1800	190	170	190	0,907	345,9	134,6	130	205	161,9	217,5	238,1	1,6	346,1	...	...	4,0	6	12 Gr5	1,000
1140T	28600	1650	210	200	259	1,130	384,0	152,4	135	205	184,2	254	266,7	1,6	358,8	...	...	4,0	6	12 Gr5	1,125

Type T61/T35 Brakewheel/Dimensions — Millimeters



SIZE ★	Torque Rating Nm	Max Bore mm◆		Cplg Wt With No Bore-Kg	Lube Wt Kg	DIMENSION - MILLIMETERS										Flange Fasteners	
		Shaft Hub	T Hub			A	B■	BE	C	D	DD	E	F	U	Gap	No.per Flange	Dia Inches
1020T	16,3	35	28	2,9	0,03	97	48	60,6	47,6	39,7	52,4	10	85,7	14	3	4	6,5
1030T	57	43	35	3,9	0,04	105,7	48	60,6	47,6	49,2	59,5	10	93,7	14	3	8	6,5
1040T	106	56	43	5,9	0,05	114,3	51	63,8	50,8	57,2	78,6	10	112,7	14	3	8	6,5
1050T	203	67	50	9,1	0,07	135,1	60	75,3	60,3	66,7	87,3	12	125,4	16	3	8	9
1060T	332	80	56	13,6	0,09	147,8	64	78,5	63,5	76,2	103,2	12	144,5	16	3	8	10,5
1070T	515	85	67	17,6	0,11	158,8	76	93,2	76,2	87,3	109,5	14	152,4	19	3	12	10,5
1080T	1166	95	80	28,7	0,17	190,5	89	105,9	88,9	104,8	122,2	14	177,8	19	3	12	13
1090T	2034	110	95	42,9	0,25	211,1	98	115,4	98,4	123,8	142,9	14	209,6	19	3	12	17
1100T	3526	130	110	70,8	0,43	251	121	141,6	120,6	142,1	171,4	16	250,8	22	5	12	19
1110T	5288	150	120	95,8	0,51	269,7	127	148	127	160,3	196,8	16	276,2	22	5	12	19
1120T	7729	170	140	138,8	0,73	307,8	149	175,2	149,3	179,4	225,4	20	319,1	28,5	6	12	22
1130T	11255	190	170	190	0,91	345,9	162	187,9	161,9	217,5	238,1	20	346,1	28,5	6	12	26
1140T	16272	210	200	259	1,13	384	184	210,2	184,2	254	266,7	20	358,8	30	6	12	26

★ The above dimensions are for reference only, which can change after being confirmed
Balance is required when the linear speed of the brakewheel is over 30m/s.

◆ Maximum bore for hub doesn't exceed the Maximum value listed in the table. For hub, shrink fit will be used, and also with the keyway and a setscrew. For the shrink fit of hub, the keyway without setscrew is recommended.
Unless otherwise specified, to comply with the ESCO standard, the Maximum hub is with rectangular keyway.

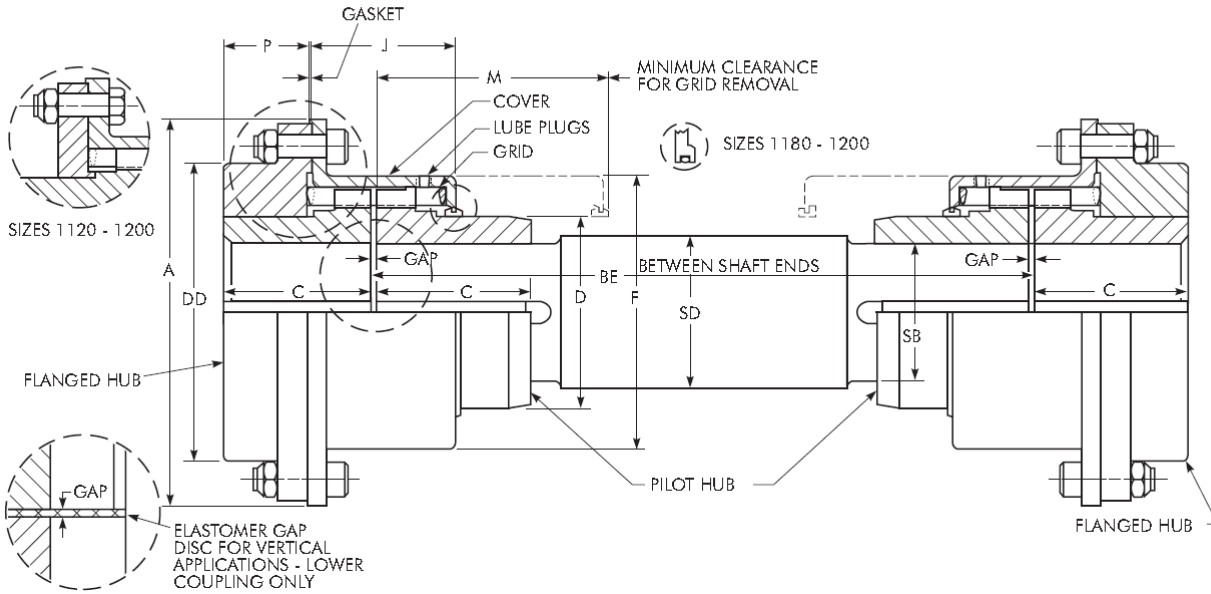
■ B size is available on request.

Brakewheel Drawing No. :	AB-	JB-	G-	K-	M-	NB-	WT-Kg	
Size:	Shaft Hub			T Hub			Spacer Hub	
	Bore	Key width	fits	Bore	Key width	fits	BE	CL
Drawing No. :							equal to C	

425-620
Jan-07
Metric

Type T50

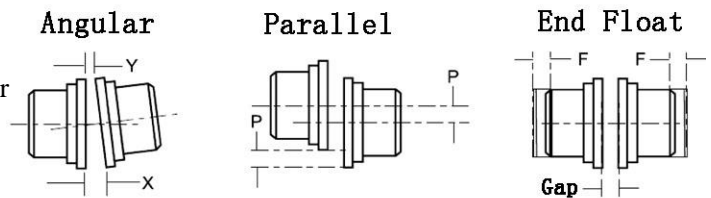
Floating Shaft/Dimensions — Millimeters



SIZE ★	Torque Rating Nm	Max Bore (Flanged Hub) mm	Min Bore mm	Pilot Hub Bore mm	Cplg Wt With No Bore-Kg	Wt Added Per mm of length of "SD" Diamet er Between Hubs	Lube Wt Per Cplg - Kg	DIMENSION - MILLIMETERS											
								A	BE Min	C	D	DD	F	J	M	P	SB	SD	Gap
1030T	149	35	13	27	3,9	0,00498	0,0408	115,9	162	47,6	49,2	83,7	80,8	50,3	77,7	26,8	27	28,6	3
1050T	435	50	13	36,5	8,84	0,00893	0,0680	157,5	195	60,3	66,7	105,2	104,8	59,2	94	36,2	36,5	38,1	3
1070T	994	67	20	49,2	15,6	0,016	0,113	182,9	213	76,2	87,3	126,5	129	65,2	103,1	49,8	49,2	50,8	3
1080T	2050	80	27	61,9	26,4	0,025	0,172	218,4	275	88,9	104,8	154,9	156,2	85,9	134	52,1	61,9	63,5	3
1090T	3730	95	27	74,6	37,2	0,036	0,254	244,9	294	98,4	123,8	180,3	175,8	92,2	143,8	58,5	74,6	76,2	3
1100T	6280	110	42	92,1	62,8	0,056	0,426	286	372	120,6	142,1	211,3	208,3	117,3	181,4	69,3	92,1	95,2	5
1110T	9320	120	42	101,6	83,6	0,067	0,508	324,1	391	127	160,3	245,4	228,6	122,2	190,5	73,9	101,6	104,8	5
1120T	13700	140	61	117,5	97,9	0,090	0,735	327,2	453	149,2	179,4	179,3	257	146,3	220	83,6	117,5	120,6	6
1130T	19900	170	67	133,4	140	0,115	0,907	365,3	463	161,9	217,5	217,4	295,1	149,5	225	94,8	133,4	136,5	6
1140T	28600	200	67	142,9	210	1,131	1,13	419,1	482	184,2	254	254	335,8	155,8	234,7	113,8	142,9	146	6
1150T	39800	215	108	161,9	277	0,168	1,95	477,5	549	182,9	271,4	269,2	391,2	177,4	268,2	101,7	161,9	165,1	6
1160T	55900	240	121	200	381	0,254	2,81	548,6	587	198,1	304,8	304,8	442	189,4	287	111,9	200	203,2	6
1170T	74600	280	134	200	519	0,254	3,49	604,5	622	215,9	355,6	355,6	494,3	201	304,8	124,6	200	203,2	6
1180T	103000	300	153	225,4	718	0,322	3,76	665,5	673	238,8	393,7	393,7	556,3	226,9	330,2	141,4	225,4	228,6	6
1190T	137000	335	153	250,8	898	0,397	4,40	708,7	711	259,1	436,9	436,9	599,4	241,7	349,5	157,6	250,8	254	6
1200T	186000	360	178	276,2	1205	0,480	5,62	782,3	744	279,4	497,8	497,8	622,9	251,8	365,8	172,8	276,2	279,4	6

Escogrid coupling misalignment Capacity and recommended bore tolerances of hubs

- Angular misalignment is expressed in degrees and as the difference between the value of X minus Y, as illustrated.
- Parallel misalignment is the distance P between shaft center lines as shown.
- End Float (Zero Angle and parallel offset) is a measure of how much 'end to end' (from the start of the Zero distance between two hubs) axial movement inside the enclosure.



The value of Table 1 with respect to hub spacer listed in the table, the standard coupling, standard assembly and under the allow speed.

Recommended Bore Tolerances of Escogrid Coupling Hubs are shown in Table 2.

Table 1 - Type T Escogrid coupling Misalignment Capacity and End Float

CPLG SIZE	Recommended Installation Maximum			Maximum operating			Cover Bolt Tighten Torque	Allow Speed (rpm)	Lube Wt Per Cplg
	Parallel Offset-P	Angular (x-y)	Hub Spacer ±10%	Parallel Offset-P	Angular (x-y)	End Float (Min.)2×F			
	Max.mm	Max.mm	mm	Max.mm	Max.mm	mm			
1020T	0,15	0,08	3	0,30	0,25	5,33	11,3	4500	0,03
1030T	0,15	0,08	3	0,30	0,30	5,03	11,3	4500	0,04
1040T	0,15	0,08	3	0,30	0,33	5,36	11,3	4500	0,05
1050T	0,20	0,10	3	0,41	0,41	5,38	23,6	4500	0,07
1060T	0,20	0,13	3	0,41	0,46	6,55	23,6	4350	0,09
1070T	0,20	0,13	3	0,41	0,51	6,58	23,6	4125	0,11
1080T	0,20	0,15	3	0,41	0,61	7,32	23,6	3600	0,17
1090T	0,20	0,18	3	0,41	0,71	7,26	23,6	3600	0,25
1100T	0,25	0,20	5	0,51	0,84	10,90	35	2440	0,43
1110T	0,25	0,23	5	0,51	0,91	10,90	35	2250	0,51
1120T	0,28	0,25	6	0,56	1,02	14,12	73	2025	0,74
1130T	0,28	0,30	6	0,56	1,19	14,00	73	1800	0,91
1140T	0,28	0,33	6	0,56	1,35	14,50	73	1650	1,14

Table 2 — Recommended Bore Tolerances Escogrid Coupling Hubs-mm

Shaft Diameter (ISO/R775-1969)		Bore Diameter Tolerance	
Nominal	Tolerance	Clearance	Interference
6 to 30	j6/ k6♦	F7	M6
Over 30 to 50	k6	F7	K6
Over 50 to 80	m6	F7	K7
Over 80 to 100	m6	F7	M7
Over 100 to 200	m6	F7	P7
Over 200 to 355	m6	F7	R7
Over 355 to 500	m6	F7	R8

♦ Per DIN 748 — Differs from ISO/R775

Other coupling types available



Escodisc DLC / DMU / DPU



Escoflex A-R-S-T
Esconyl A-B-C



Esco Couplings N.V.

Kouterveld - Culliganlaan, 3
B - 1831 Diegem (Brussels)
(tel) + 32 02 715 65 60
(fax) + 32 02 720 83 62 - 02 721 28 27
e-mail: info@esco-couplings.be
web site: www.escocoupling.com

Esco Antriebstechnik gmbh

Biberweg 10
D - 53842 Troisdorf
(tel) + 49 (02241) 48070
(fax) + 49 (02241) 480710
e-mail: esco-antriebstechnik@t-online.de
web site: www.esco-antriebstechnik.de

Esco Couplings & Transmissions Pvt. Ltd.

Shed No. B-325, 1st Stage, 3rd Main Road
Peenya Industrial Estate
Bangalore 560 058 INDIA
(tel) + 91 80 4167 4858
(fax) + 91 80 4155 8494
e-mail: info@esco-couplings.co.in

Escogear CST / CST...M



Escogear FST



Escogear NST



Escorail FTRN /FTRNO



Escospeed DHSU - GHS



Esco Aandrijvingen B.V.

Ondernemingsweg, 19 - PB. 349
NL - 2404 HM Alphen A/D Rijn
(tel) + 31 (0) 172 / 42 33 33
(fax) + 31 (0) 172 / 42 33 42
e-mail: info@esco-aandrijvingen.nl
web site: www.esco-aandrijvingen.nl

Esco Transmissions S.A

Z.I. 34, rue Ferme Saint-Ladre
Saint Witz
F - 95471 Fosses Cedex
(tel) + 33 (1) 34 31 95 95
(fax) + 33 (1) 34 31 95 99
e-mail: info@esco-transmissions.fr
web site: www.esco-transmissions.fr

Esco Couplings(Jinan)Ltd

No.2168 Airport road licheng district,
Jinan , Shandong province, China
(tel)+ 86 531- 55711596
(fax) + 86 531-55711599
e-mail: info@esco-couplings.cn
web site: www.esco-couplings.cn

