

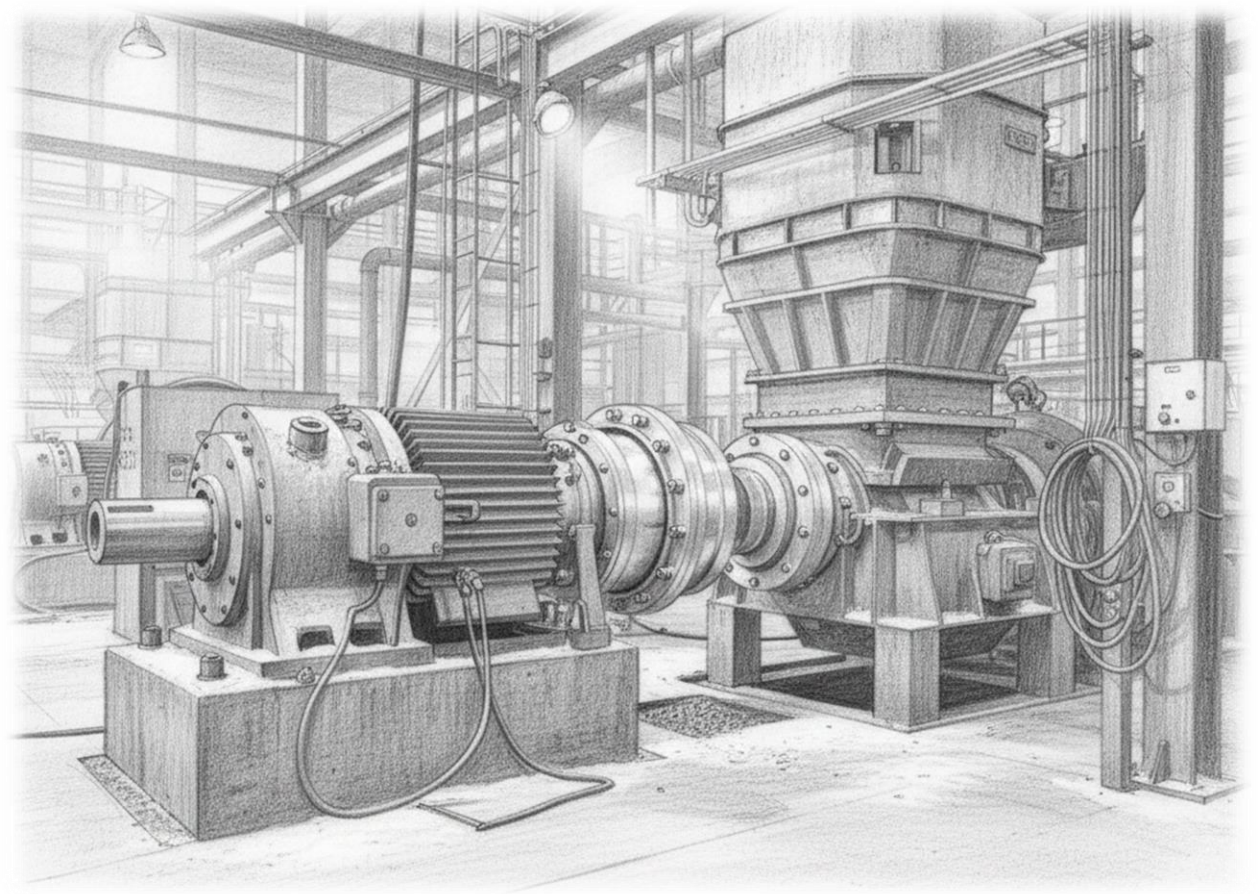
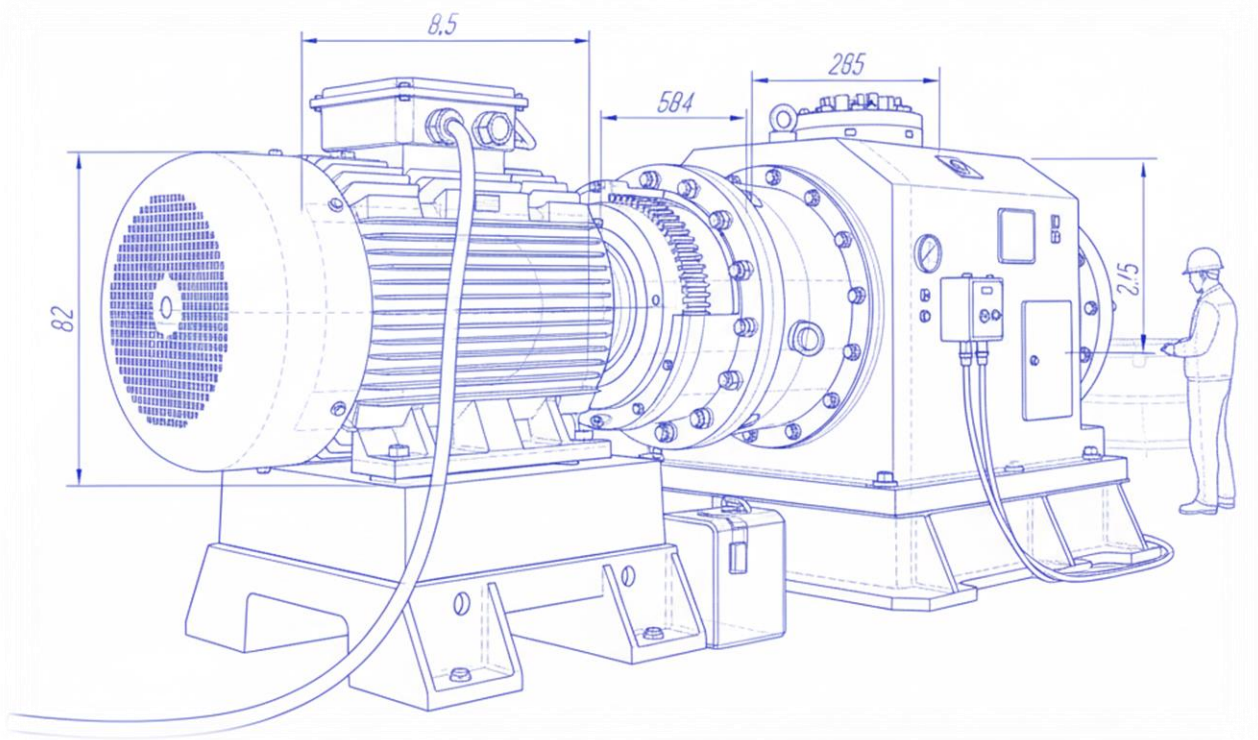


TrueTorq Private Limited



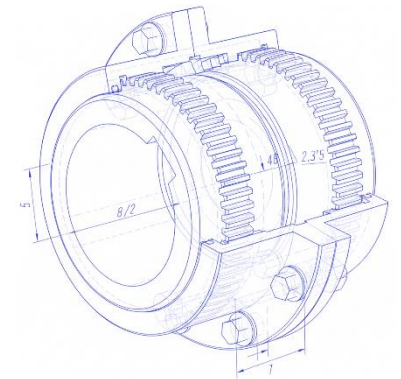
TT Gear Couplings





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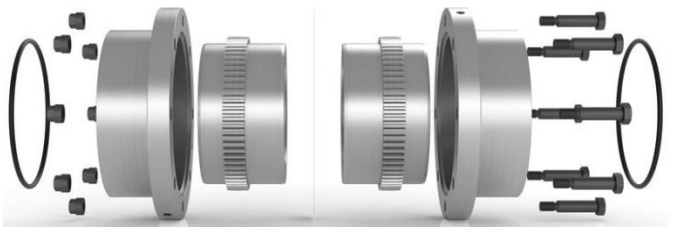


Gear Couplings

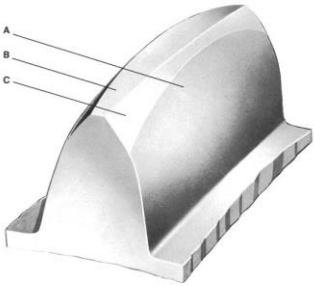
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TT GEAR COUPLINGS

Properties of gear couplings

Parameters	
Product	TT Gear
Performance data	
Rated torque [Nm]	490 to 340781
Max Speed n [rpm]	8000
Standard materials	
Hubs	EN9 FORGED STEEL
SLEEVE	EN9 (SIZE 100 TO 106)
SLEEVE	CAST STEEL (SIZE 107 TO 119)
'O' RING	SYNTHETIC RUBBER
GASKET	BETA FLEX
HEX BOLT	HIGH TENSILE
Surface coating	Phosphating, and Blackening ..etc

Details on Gear couplings

Fully-Crowned Tooth	
In contrast with ordinary gear tooth forms, the TT Gear Fully-Crowned Tooth represents the ultimate achievement in the art of gear tooth design, wherein all three working portions of the tooth are crowned. As a result, the teeth act much like a rocking chair, capable of sliding freely in the axial direction without digging or gouging the internal mating teeth. Because of this design advantage, TT Flexible Couplings with Fully-Crowned Gear Teeth offer operational benefits of maximum load-carrying capacity with minimum size, maximum reliability and long life.	

Service Factor

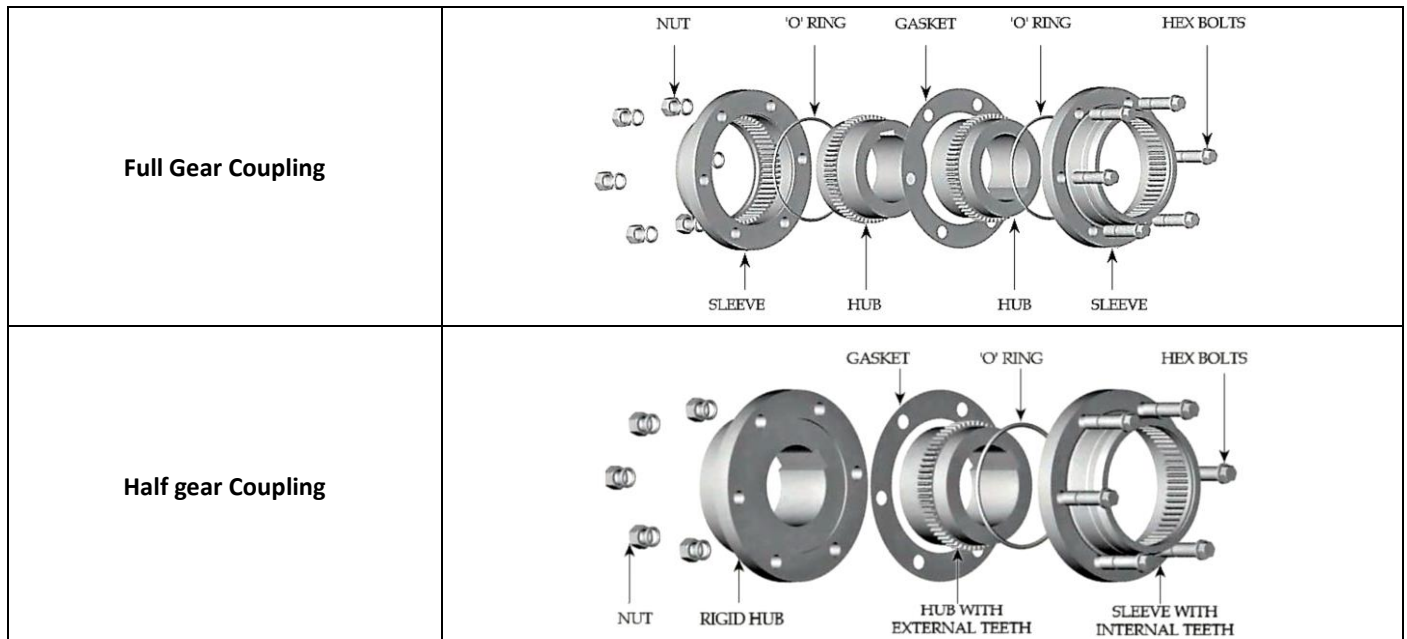
LOAD	DRIVEN EQUIPMENT	Type Driver		
		Motor / Turbine	Hydraulic Drive	Reciprocating Engine
UNIFORM	Centrifugal Pumps • Conveyors - Even Loaded • Exciters • Fans and Blowers - Light Duty • Generators - Even Loaded • Mixers - Liquid	1.0	1.25	1.5
LIGHT SHOCK	Centrifugal Pumps • Generators - Pulsating Load • Grinders • Hydraulic Pumps • Kilns • Line Shafting • Machine Tools • Oscillating Pumps • Textile Machinery • Woodworking Machinery	1.5	1.75	2.0
MEDIUM SHOCK	Air Compressors - Multi-Cylinder • Ball and Rod Mills • Cranes • Elevators • Hoists • Punch Presses • Reciprocating Pumps • Shears • Ship Drives • Welding Generators	2.0	2.25	2.5
HEAVY SHOCK	Air Compressors - Single Cylinder • Dredges • Drilling Rigs • Mine Machinery • Rolling Mill Drives • Rubber Mixers	2.5	2.75	3.0
EXTREME SHOCK	Ore Crushers • Bar stock Shears • Vibrating Conveyors	3.0	3.5	4.0

For operating speeds less than 100 RPM, service factors may be reduced depending upon application.

TT GEAR COUPLINGS

Types and Description

Types



Technical Parameters Full/Half Gear Couplings

Coupling Size	Technical Information					Misalignment (Max.)		
	Torque	Power per 100 RPM	Max Speed	M.I	Weight with solid hubs	Axial	Angular	Parallel
	Nm	kW	RPM	Kg-m ²	Kg (Approx)	mm	Degree (°)	mm
TTFG/HG 100	669	7	8000	0.006	4.2	±0.5	±1.5	0.6
TTFG/HG 101	1337	14	6300	0.029	10			0.8
TTFG/HG 102	3343	35	5000	0.046	15			1.0
TTFG/HG 103	6017	63	4000	0.110	26			1.1
TTFG/HG 104	11365	119	3350	0.213	40			1.3
TTFG/HG 105	17381	182	2800	0.445	62			1.45
TTFG/HG 106	26740	280	2500	0.745	85	±1.0		1.55
TTFG/HG 107	46795	490	2120	1.21	120			1.8
TTFG/HG 108	60165	630	1900	2.04	180			1.9
TTFG/HG 109	74872	784	1700	3.46	210			2.25
TTFG/HG 110	109634	1148	1400	5.55	290			2.6
TTFG 111	109634	1148	1250	15.25	550	±2.0		3.3
TTFG 112	146688	1536	1120	24.30	710			3.5
TTFG 113	196062	2053	1000	43.21	980	±3.0		6.65
TTFG 114	266732	2793	900	64.84	1320			7.4
TTFG 115	381427	3994	800	97.30	1700			8.2

Formula: Power per 100 Rpm

$$\text{Torque (Nm)} = \frac{\text{Power (kW)} \times \text{Constant 9550}}{\text{Speed 100 (rpm)}}$$

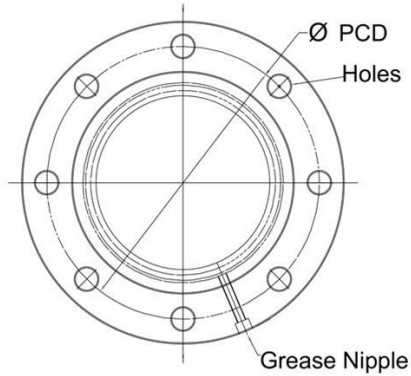
*M.I : Moment of Inertia

TT GEAR COUPLINGS

Constituent

Technical Parameters Full/Half Gear Couplings

Parameters



Coupling Size	Technical Information					
	Bolt Size x length	Nut	PCD	Holes	Grease Nipple	No. of teeth
	Metric	Metric	mm	no's	Metric	no's
TTFG/HG 100	M12x50	M12		6	M6	
TTFG/HG 101	M12x50	M12	140	6	M6	30
TTFG/HG 102	M12x50	M12	155	6	M6	38
TTFG/HG 103	M16x60	M16	185	6	M8	40
TTFG/HG 104	M16x60	M16	215	6	M8	48
TTFG/HG 105	M18x80	M18	245	8	M8	56
TTFG/HG 106	M18x80	M18	275	8	M8	56
TTFG/HG 107	M18x80	M18	305	10	M8	56
TTFG/HG 108	M18x80	M18	335	12	M8	49
TTFG/HG 109	M18x80	M18	380	12	M10	54
TTFG/HG 110	M18x80	M18	440	12	M10	56
TTFG 111	M24x100	M24	495	14	2nos x 1/4" BSP	47
TTFG 112	M24x100	M24	540	14	2nos x 1/4" BSP	54
TTFG 113	M30x120	M30	620	14	2nos x 1/4" BSP	58
TTFG 114	M30x120	M30	670	16	2nos x 1/4" BSP	54
TTFG 115	M30x120	M30	725	16	2nos x 1/4" BSP	57

*PCD : Pitch Centre Diameter

TT HALF GEAR COUPLINGS

Dimensional Data

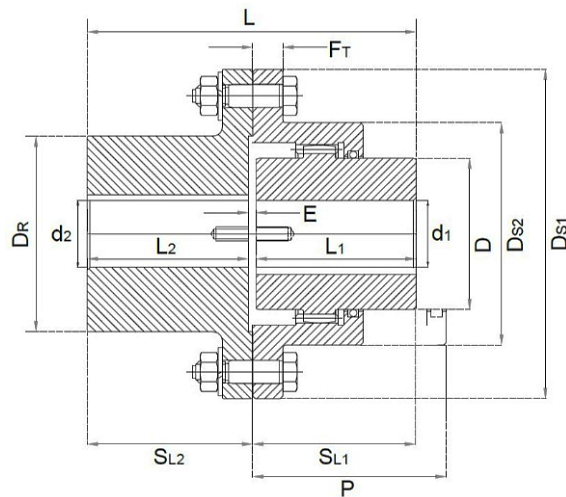
Half Gear Coupling



Features

- Crown gear teeth for longer life.
- Less backlash error
- High torque capacity
- Larger bore capacities

Parameters



TT Half Gear Size	Pilot Bore	Max. bore		Dimensions [mm]										
		d ₂	d ₁	DS ₁	DS ₂	D	SL ₁	L	FT	L ₁ /L ₂	E	SL ₂	DR	P
TTHG 100	10	50	35	120	75	50	39.5	93	15	45	3	46.5	70	55
TTHG 101	20	60	50	170	110	65	49	115	17	55	5	57.5	85	65
TTHG 102	30	75	60	185	125	85	62	145	17	70	5	72.5	110	80
TTHG 103	40	90	75	220	150	105	78	175	20	85	5	87.5	130	105
TTHG 104	50	110	90	250	175	130	96	215	20	105	5	107.5	160	125
TTHG 105	60	130	110	290	200	155	106	230	25	110	10	115	185	140
TTHG 106	75	150	125	320	230	175	117	260	25	125	10	130	215	155
TTHG 107	90	170	140	350	260	205	134	290	25	140	10	145	240	175
TTHG 108	105	200	160	380	290	230	147	320	25	155	10	160	285	190
TTHG 109	125	220	180	430	330	250	156	340	25	165	10	170	315	205
TTHG 110	140	260	220	490	390	310	171	370	25	180	10	185	370	220

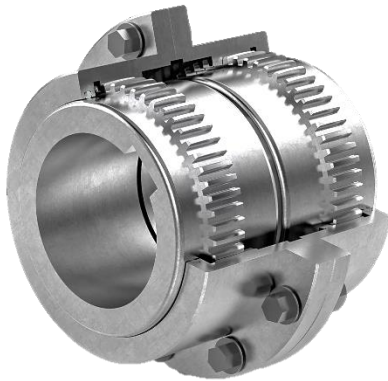
*E stands for DBSE : Distance between side ends

Ordering Example:	Size	Type	Finish bore d1	Finish bore d2
	TTHG 102	HALF GEAR	Ø50	Ø60

TT FULL GEAR COUPLINGS

Dimensional Data

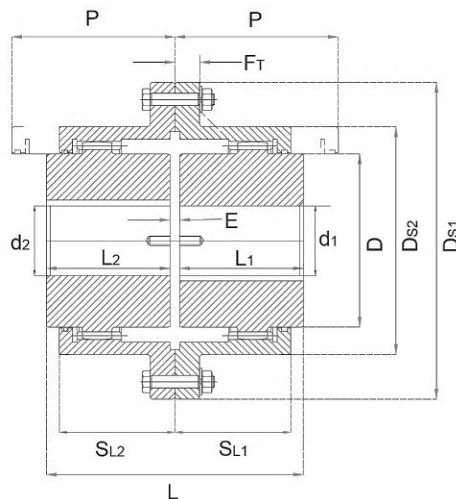
Full Gear Coupling Size 100-110



Features

- Crown gear teeth for longer life.
- Less backlash error
- High torque capacity
- Larger bore capacities

Parameters



TT Full Gear Size	Pilot Bore	Max. bore	Dimensions [mm]								
		d ₁ /d ₂	D _{s1}	D _{s2}	D	S _{L1} /S _{L2}	L	F _T	L ₁ /L ₂	E	P
TTFG 100	10	35	120	75	50	39.5	93	15	45	3	45
TTFG 101	20	50	170	110	65	49	115	17	55	5	65
TTFG 102	30	60	185	125	85	62	145	17	70	5	80
TTFG 103	40	75	220	150	105	78	175	20	85	5	105
TTFG 104	50	90	250	175	130	96	215	20	105	5	125
TTFG 105	60	110	290	200	155	106	230	25	110	10	140
TTFG 106	75	125	320	230	175	117	260	25	125	10	155
TTFG 107	90	140	350	260	205	134	290	25	140	10	175
TTFG 108	105	160	380	290	230	147	320	25	155	10	190
TTFG 109	125	180	430	330	250	156	340	25	165	10	205
TTFG 110	140	220	490	390	310	171	370	25	180	10	220

*E stands for DBSE : Distance between side ends

Ordering Example:	Size	Type	Finish bore d1	Finish bore d2
	TTFG 102	FULL GEAR	Ø50	Ø60

TT FULL GEAR COUPLINGS

Dimensional Data

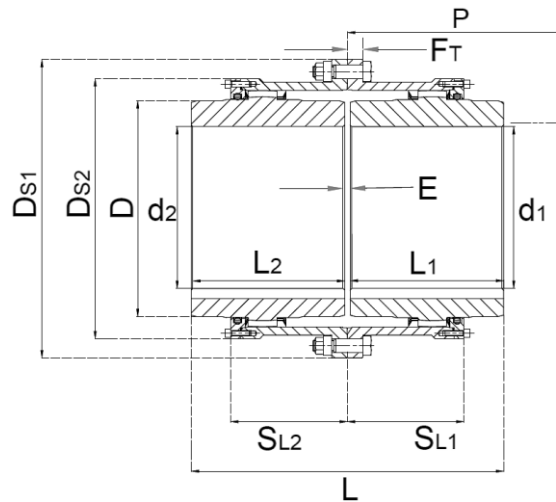
Full Gear Coupling Size 111-115



Features

- Crown gear teeth for longer life.
- Less backlash error
- High torque capacity
- Larger bore capacities

Parameters



Model Size	Pilot Bore	Max. bore	Dimensions [mm]								
		d ₁ /d ₂	D _{S1}	D _{S2}	D	S _{L1} /S _{L2}	L	F _T	L ₁ /L ₂	DBSE E	P
TTFG 111	160	260	545	445	350	190	410	30	200	10	240
TTFG 112	180	300	590	490	400	231	490	30	240	10	280
TTFG 113	200	330	680	555	440	242	535	35	260	15	310
TTFG 114	220	370	730	610	500	266	575	35	280	15	330
TTFG 115	250	410	780	660	540	305	655	35	320	15	370

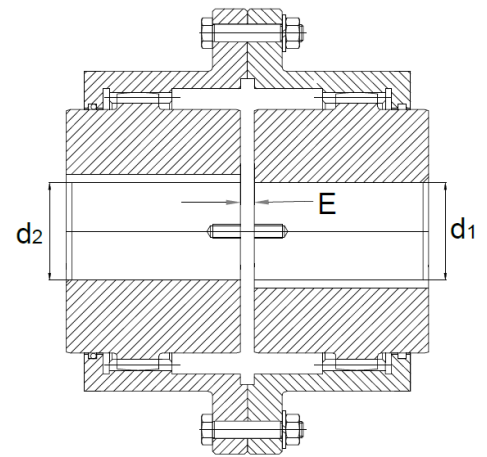
*E stands for DBSE : Distance between side ends

Ordering Example:	Size	Type	Finish bore d1	Finish bore d2
	TTFG 102	FULL GEAR	Ø50	Ø60

SELECTION PROCESS

Questionnaire

1. Application = _____
2. Position (Horizontal/Vertical) = _____
3. Power (P) = _____ kw
4. Speed (n) = _____ rpm
5. Shaft diameter of driver (d1) = _____ mm
6. Shaft diameter of driven (d2) = _____ mm
7. DBSE (distance between side ends) (E) = _____ mm
8. If coupling after gearbox (ratio) = _____
9. Temperature (degree Celsius) = _____ °C
10. Safety Factor (refer page no.4) = _____



Useful Formula's

Parameters	Formula	Unit
Calculated Torque (T)	$T = \frac{P \times 9550}{n}$	_____ Nm
Rated Torque (Nm)	$\text{Rated Torque} = \text{Calculated Torque} \times \text{Service Factor}$	_____ Nm
HP to kW conversion	$\text{kW} = \text{HP} \times 0.746$	_____ kW

Note's

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