

HIGH PERFORMANCE FLEXIBLE DISC COUPLINGS FOR HIGH SPEED APPLICATION



- ◆ The coupling series listed in this catalogue are applicable preferably to the equipment driven by steam turbines, gas turbines and all kinds of energy recovery turbines, to all kinds of turbine-compressors and other high speed power transmission.
- ◆ For some high speed applications or applications where the requirements for coupling weight are rigorous, TRUMY high performance flexible diaphragm coupling series may be selected.









Brief introduction

Wuxi TRUMY Transmission Engineering Co., Ltd., former AVIC Num. 614 Research Institute Transmission Engineering Corporation, was founded in May 2001, has since then become a shareholding enterprise after system reforming. The corporation is engaged in research and development, manufacture, marketing and service of flexible couplings. TRUMY main products include: metallic flexible disc coupling, metallic flexible diaphragm coupling, grid coupling, among them metallic flexible laminated membrane coupling and metallic flexible diaphragm coupling were awarded second prize of science and technology progress by Ministry of Aviation Industry in 1990, accredited as one of the high-tech products of Jiangsu province in 1999.

Since the early 1980s the AVIC Num. 614 Research Institute has begun designing and application researching of metallic flexible couplings and formed a complete proprietary technology system. TRUMY carries on the proprietary technology of its predecessor, Num. 614 Research Institute, possesses sophisticated design computation technique and verification facilities, has accumulated a wealth of experience in product research & develop, design and application to processing power equipment and provided various solutions to flexible power transmitting sets for the industries.

TRUMY products passed ISO9001 quality system certification in 2003, GJB9001 quality system certification in 2007. The corporation has been accredited as a Hi-tech Enterprise of Jiangsu Province for consecutive years since 2003. Over 20 years TRUMY and its predecessor have built long term cooperative relationships with numerous well known processing power equipment manufacturers at home as well as abroad, supplied hundreds of thousands high quality coupling sets for industries.

CONTENT

HGD Series	Couplings with a disc pack, spacer and sleeve joint integrated into a subassembly for delivery, dynamic balance precision well kept, easy to operate, first choice for most middle/high speed applications.	
HBD Series	A derivative from HGD series, designed with a double way transmitting mechanism, to protect turbine equipments from load throw-off.	
TDH Series	Couplings having advantages of HGD series, but not so high configuration, able to be partly substituted for HGD series as an option for middle/high speed applications.	
GD Series	Couplings with small external sizes, enabling disc packs to be replaced separately, able to be substituted for TGD series, suitable for middle/high speed applications where coupling external sizes are limited.	
TGD Series	Main choice for high speed turbine-compressor set applications, couplings with small external sizes and small additional bending moment, with disc packs allowed to be replaced separately, hub designed with an inversion form.	
TDS Series	Small dimension couplings with a disc pack, spacer and sleeve joint integrated into a factory-assembled unit, dynamic balance precision well kept, hub designed with an inversion form, the additional bending moment reduced, applicable to high speed turbine-compressor sets.	
TDR Series	Couplings having advantages of TDS series and smaller additional bending moment, suitable for high speed applications where requirements for additional bending moment are ultra rigorous.	
TDX Series	Small dimension couplings with centering rings set on each disc pack, suitable for limited axial size and middle/high speed applications.	



Coupling series designation

TRUMY coupling designation consists of 5 groups as follows:

HGD6 420 – 100 × 120 / 85 × 100 – 460 – 00T1

A B C D E

Group A is composed of letters and figures, indicating coupling type and the number of holes in a disc respectively.

Figure notation: 6 indicating 6 hole disc
8 indicating 8 hole disc
10 indicating 10 hole disc

Group B represents the grade of torque transmission of the coupling. A bigger grade value corresponds to a higher torque transmitted by the coupling. When the torque < 100KNm, the grade value represents the power (Kw) transmitted per 1000 r/min. When the torque is more than or equals to 100KNm, the grade value represents the power (Kw) transmitted per 1 r/min, in figures “XX” of “90XX”, where 90 is a prefix.

Group C represents fitting diameters and lengths of the driving and driven shafts, where the numerator and denominator denote the driving and driven shafts respectively.

Group D represents the distance between the driving and driven shaft ends.

Group E shows design number of the coupling

Type characteristics and guide to coupling selection

TRUMY high performance flexible disc couplings are high quality torque transmitting products developed specially for high speed rotary machinery. The flexible elements are thin metal discs made from high strength steel. Having passed finite element analysis and from optimization, all types of the metal discs offer optimal comprehensive performances. The bolts transmitting torque with strength class above 10.8 are made from high quality alloy steel. Hub, sleeve and other force bearing components made from alloy steel have high strength as well as good comprehensive performances through quenching and tempering. The TRUMY high speed-high performance flexible disc couplings possess outstanding advantages such as:

- High strength, good flexibility, good comprehensive performances;
- Light weight, high power density, small affect to the machines;
- Small additional bending moment, especially suitable for turbine– compressor sets;
- Membranedisc with optimized profile has big capacity to compensate misalignments.

1.The coupling series listed herein are mainly applicable to the equipment driven by steam turbines, gas turbines and various kinds of energy recovery turbo–machines, or to high/middle speed power transmission after the speed–increasing gear driven by electric motors or internal combustion engines. For pumps, fans and compressors directly driven by electric motors or internal combustion engines, also for middle/low speed power transmission after the reductor driven by turbo–machinery, TRUMY middle/low speed flexible disc coupling series or grid coupling series should be the first priority in selection.

2.Coupling selection recommendations for high/middle speed applications:

- Series HGD are preferred. If the safety protection type with back–up gears is needed, series HBD, TGD or GD should be selected.
- If the coupling external dimensions are limited, series TGD or GD should be the first priority. For speed over 13000r/min applications series TDS or flexible diaphragm couplings are recommended.
- The series TDR or DM flexible diaphragm couplings may be applicable to those situations, where the machines are especially sensitive to coupling weight and additional bending moment.

3.This catalogue is mainly compiled for common industry uses. For such special applications as test beds, super–high speed equipment and the special equipment requiring super high misalignment compensating capability, customers may not always find suitable couplings from the catalogue. In this case please contact TRUMY sales engineer, the company will carry out special design to meet customer particular requirements.

Selection procedure

Whenever you have questions about coupling selection, please contact TRUMY sales engineer. Jointly selecting TRUMY couplings by both supply and demand sides is recommended.

- According to driving and driven machines and operation conditions, select a service factor K from the table below.
- Determine coupling calculation power rating P_c
 $P_c = P \times K$
where: P_c -- calculation power (kw);
 P transmitting power (kw). Taking into account that the driven machine may work under overload conditions, suggest that P is calculated according to the power value of the driving machine;
 K -- service factor.
- Calculate transmitting torque of the coupling
 $T = 9549 \times P_c / n$
where: T – torque (N.m);
 n – rated or normal working speed (r/min) .
- Following the guide to coupling selection ,tentatively select coupling type according to the conditions $T \leq$ continuous torque rating and $n_{max} \leq$ max. speed.
- Check the operating conditions
 - Check up peak torque and max. transient torque with the requirements of the machines. For the machines starting frequently and those with big start–up shock the starting torque should be checked. For the machines equipped with brake apparatus the braking torque should be checked.If specified,for power generation packages or machine driven by synchronous motors the transient torque associated with generator short torque or the cyclic torque associated with synchronous motor start–up should be checked. If necessary, select the types with higher parameter values or select other coupling series.
 - Check up the coupling type selected with the requirement for max. allowable shaft diameter. If necessary, select the types with higher parameter values or select other coupling series.
 - Check up the distance between shaft ends (DBSE) with the requirement for min. DBSE of the coupling type selected. Appropriate DBSE enables not only the coupling to realize better performances but also the machines to be easily maintained. If required,DBSE should be in accordance with API610 or API671.
 - Check up the capacity to accommodate axial displacement and angular misalignment of the coupling selected with requirements of the machines.If necessary, select the types with higher parameter values or select other coupling series. For the machines with larger thermal expansion the coupling may be processed by cold pre–stretching so that the coupling works in a small deformation state when the machines are thermally balanced in operation.

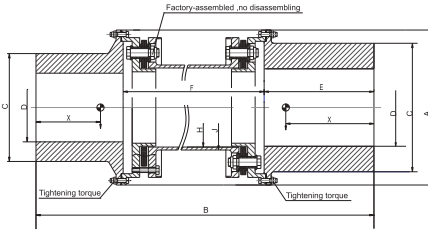
Service factors

Duty	Driven machine	Driving machine		
		electromotor,steam or gas turbines	Steam engine or water turbine	Internal combustion engine
Constant torque	Centrifugal pumps, light conveyors,alternators, light fans	1. 0 *	1. 5	3. 0
Slight torque fluctuations	Machine tools, screw compressor, screw pumps, liquid ring compressors, rotary dryers	1. 5	2. 0	3. 5
Substantial torque fluctuations	Reciprocating pumps, low viscosity mixers, cranes, winches	2. 0	2. 5	4. 0
Exceptionally high torque fluctuations	Rotary presses, reciprocating compressors, high viscosity mixers, marine propellers	3. 0	3. 5	5. 0

* For the gear box the value of the factor 1.25 may be adopted, for direct electromotor start–up --- 1.5, according to the requirements in API671 the minimum is 1.5. When needed, the service factor value may be increased or decreased, following the relative rules in API671.

If the customer can not find the corresponding types of driving or driven machines recommended in the table, please select the service factors from AGMA 514.02 or consult TRUMY sales engineer.

HGD Series



- ◆ Main choice for middle/high speed applications.
- ◆ Factory-assembled middle transmitting unit, dynamic balance precision well kept, easy to mount/dismount.
- ◆ Big hub for relatively large allowable shaft diameters.
- ◆ Adjusting shims provided to adjust magnitude of pre-stretching or mounting error.

Direction for use

1. Bore diameter D, hub outside diameter C, hub length E, distance between flange mating faces F may be designed separately according to the matching requirements of the machines.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub (with or without key), flange, spline, etc. For straight bore connection to be applied the hub-shaft fit types list in the table are recommended.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	r6 s6 t6 u6	Hot mounting
	P7	h6	Hot mounting
Interference fit, without key connection	Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.		Hot mounting or oil pressure mounting

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between flange mating faces. For other sizes of bore diameter, hub outside diameter and distance between flange mating faces, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between flange mating faces the torsional stiffness K can be calculated using the formula as follows:

$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T}$$

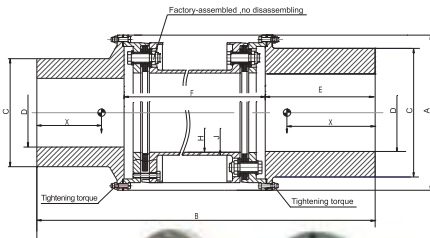
where K- torsional stiffness for a given distance between flange mating faces, K_T - torsional stiffness shown in the catalogue, ΔK_T - torsional stiffness for spacer tube per meter as shown in the catalogue, ΔL - variation of size F relative to TRUMY standard distance between flange mating faces.

4. The standard distance between flange mating faces F is in accordance with the requirements in section 8.3, API671(the 4-th edition).The "minimum" distance between flange mating faces is referred to as the shortest distance between flange mating faces which meets the conditions of part machining technology and installing space for the structure. The "minimum" distance should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Coupling Capacity and Main Dimensions & Technical Data

Type	Continuous Torque Rating (kNm)	Peak Torque Rating (kNm)	Momentary Torque Limit (kNm)	Max Speed (r/min)	A (mm)	B (mm)	C _{max} (mm)	D _{max} (mm)	E (mm)	F (mm)		H (mm)	J (mm)	Tightening Torque (Nm)	Weight of Total Coupling (kg)	Centre of Gravity X _{CG} (mm)	Torsional Stiffness K _T (MNm/Rad)	Moment of Inertia ^① (Kgm ²)	Spacer Tube Per m			Angular Misalignment (Max deg)	Restoring Moment (Nm/deg)	Axial Displacement	
										std	min								Weight (kg)	Torsional Stiffness ΔK _T (MNm/Rad)	Moment of Inertia (Kgm ²)			Max (±mm)	Axial Force (N)
HGD6-170	1.6	4	5.3	33000	146	272	105	70	75	460	122	58	65	15	12.8	69.3	0.077	0.028	5.3	0.0513	0.00504	1/3	200.8	1.8	1160
HGD6-210	2	4.8	6.4	27000	168	290	127	85	90	460	110	75	84	15	19.2	75.6	0.111	0.059	8.8	0.142	0.0140		114.5	2	1040
HGD6-420	4	10.9	14.5	24300	188	340	150	100	105	460	130	85	94	45	27.8	83.6	0.196	0.112	9.9	0.203	0.0199		221.1	2	1640
HGD6-660	6.3	18.5	24.6	21000	212	400	175	115	120	460	160	99	108	100	42.6	94.6	0.398	0.23	11.5	0.314	0.0308		286.2	2.5	2490
HGD6-1100	10	21.1	28	18500	236	430	195	130	135	460	160	117	127	100	56.4	103.5	0.460	0.38	15.0	0.571	0.0561		256.4	2.5	2950
HGD6-1500	14	33.8	45	16000	272	525	225	150	165	460	195	140	151	150	88.6	124.3	0.807	0.82	19.7	1.066	0.105		240.6	3.5	4270
HGD6-2100	20	49.6	66	14600	300	545	250	170	180	460	185	152	164	150	112.2	131.3	1.204	1.26	23.4	1.489	0.146		566.9	3.5	5020
HGD6-2900	28	64.1	85.3	13300	316	590	270	185	195	460	200	168	182	180	137.6	141.7	1.588	1.80	30.2	2.361	0.232		552.9	4	6700
HGD6-3300	31.5	68.7	91.4	12500	348	620	290	195	205	460	210	184	198	180	173.2	147.9	1.694	2.68	33.0	3.069	0.301		485.9	4	6440
HGD6-4700	45	97	129	11100	385	710	328	220	230	460	250	202	219	350	246.8	166.8	2.759	4.74	41.4	4.662	0.457		616.6	4.5	8230
HGD6-7400	71	142	189	10000	425	780	365	245	255	500	270	228	248	500	336.9	188.4	4.521	8.14	58.7	8.485	0.833		1818	5.5	12550
HGD6-9011	100	212	283	9200	455	885	395	270	290	500	305	232	256	700	404.4	203.2	6.649	11.14	72.2	10.979	1.077		1691	6	17750
HGD6-9013	125	237	315	8500	492	925	435	290	310	500	305	270	292	700	515.2	223.2	7.016	16.87	76.2	15.358	1.507		1940	6	17380
HGD6-9017	160	355	472	7600	548	1000	475	315	335	550	330	300	327	1200	689.6	241.9	8.744	27.57	104.4	26.183	2.569		2172	7.5	22460
HGD6-9021	200	396	527	6900	602	1070	525	350	370	550	330	344	374	1200	902.6	258.0	11.377	44.05	132.8	43.682	4.286	2027	8	23260	
HGD8-840	8	15.5	20.6	24300	188	340	146	100	105	460	130	82	94	45	28.0	87.8	0.371	0.11	13.0	0.258	0.0253	1/4	964	1.2	2660
HGD8-1100	10	26.3	35	21000	212	400	175	115	120	460	160	97	108	100	42.8	94.5	0.620	0.22	13.9	0.373	0.0366		1522	1.8	3870
HGD8-1300	12.5	31.4	41.8	18500	236	520	195	130	135	460	250	123	135	100	56.6	103.8	0.917	0.39	19.1	0.811	0.0796		849.6	2.2	3850
HGD8-2900	28	65.8	87.5	15700	282	600	235	155	165	460	270	138	152	150	97.8	123.4	1.755	0.95	25.0	1.344	0.132		1665	2.2	7060
HGD8-3300	31.5	83.5	111	14600	305	675	260	175	185	460	305	149	164	180	125.6	135.7	2.482	1.47	28.9	1.810	0.178		1879	2.8	8710
HGD8-4700	45	97.7	130	12500	348	715	290	195	205	460	305	184	198	180	173.6	148.0	3.047	2.70	33.0	3.069	0.301		1421	2.8	8500
HGD8-6600	63	145	193	10900	404	730	345	230	240	460	250	217	234	350	276.2	168.7	5.086	5.91	47.3	6.133	0.602		2311	3.4	10200
HGD8-9011	100	202	269	10000	425	780	365	245	255	500	270	228	248	500	334.6	183.8	8.454	7.99	58.7	8.485	0.833		4194	4	17150
HGD8-9015	140	302	402	9200	455	885	395	270	290	500	305	232	256	700	436.6	211.3	12.341	12.17	72.2	10.979	1.077		9319	4.2	23550
HGD8-9018	180	336	447	8500	492	925	435	290	310	500	305	270	292	700	554.8	215.1	13.324	18.71	76.2	15.358	1.507		6401	4.4	24510
HGD8-9023	224	505	671	7600	548	1000	475	315	335	550	330	300	327	1200	743.6	236.0	20.258	30.28	104.4	26.183	2.569		7265	5.2	29250
HGD8-9029	280	564	750	6900	602	1070	525	350	370	550	330	344	374	1200	955.0	252.2	24.798	47.68	132.8	43.682	4.286		8441	5.7	30740
HGD8-9047	400	812	1080	6200	662	1205	585	390	410	600	385	386	420	1900	1325.6	282.8	37.326	81.29	169.0	70.033	6.872		10340	6.8	42450
HGD10-2100	20	40.4	53.7	18500	236	520	190	130	135	460	250	119	135	100	57.4	110.2	1.451	0.38	25.1	1.034	0.101		1/5	6682	1.6
HGD10-3700	35.5	85	113	15700	282	600	225	155	165	460	270	132	152	150	94.6	132.2	2.663	0.87	35.0	1.808	0.177	11629		1.7	9350
HGD10-5300	50	108	144	14600	305	675	255	175	185	460	305	140	164	180	128.0	143.3	3.933	1.44	45.0	2.664	0.261	14082		1.9	12710
HGD10-6600	63	126	168	12500	348	715	286	195	205	460	305	176	198	180	175.4	154.3	5.406	2.64	50.7	4.535	0.445	8674		2.3	12910
HGD10-8400	80	186	248	10900	404	730	345	230	240	460	250	217	234	350	278.6	169.7	7.921	5.99	47.3	6.133	0.602	7768		2.8	14000
HGD10-9013	125	260	346	10000	425	780	368	245	255	500	270	228	248	500	336.2	184.3	11.448	8.05	58.7	8.485	0.833	14480		3	21290
HGD10-9017	160	389	518	9200	455	885	398	270	290	500	305	232	256	700	442.4	213.4	15.643	12.39	72.2	10.979	1.077	33810		3.1	26770
HGD10-9019	180	433	576	8500	492	925	435	290	310	500	305	270	292	700	558.6	216.4	19.95	18.88	76.2	15.358	1.507	21870		4	29530
HGD10-9026	250	649	863	7600	548	1000	475	315	335	550	330	300	327	1200	748.0	237.1	29.386	30.52	104.4	26.183	2.569	24370		4.3	35960
HGD10-9037	355	726	965	6900	602	1070	525	350	370	550	330	344	374	1200	959.2	253.2	39.425	47.99	132.8	43.682	4.286	27010		4.6	41260
HGD10-9058	500	1044	1389	6200	662	1205	585	390	410	600	385	386	420	1900	1327.0	282.7	59.46	81.56	169.0	70.033	6.872	33000		5.6	57480

HBD Series



- ◆ A derivative from HGD series, optional for middle/high speed applications.
- ◆ Double way transmitting mechanism (back-up gears) to protect turbine machines from load throw-off.
- ◆ Factory-assembled middle transmitting unit, dynamic balance precision well kept, easy to mount/dismount.
- ◆ Big hub design for relatively larger allowable shaft diameters.
- ◆ Adjusting shims provided to adjust magnitude of pre-stretching or mounting error.

Direction for use

1. Bore diameter D, hub outside diameter C, hub length E, distance between flange mating faces F may be designed separately according to the matching requirements of the machines.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub (with or without key), flange, spline, etc. For straight bore connection to be applied the hub-shaft fit types list in the table are recommended.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	r6 s6 t6 u6	Hot mounting
	P7	h6	Hot mounting
Interference fit, without key connection	Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.		Hot mounting or oil pressure mounting

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between flange mating faces. For other sizes of bore diameter, hub outside diameter and distance between flange mating faces, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between flange mating faces the torsional stiffness K can be calculated using the formula as follows:

$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T}$$

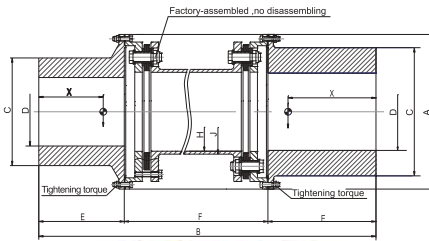
where K- torsional stiffness for a given distance between flange mating faces, K_T- torsional stiffness shown in the catalogue, ΔK_T- torsional stiffness for spacer tube per meter as shown in the catalogue, ΔL- variation of size F relative to TRUMY standard distance between flange mating faces.

4. The standard distance between flange mating faces F is in accordance with the requirements in section 8.3, API671(the 4-th edition).The "minimum" distance between flange mating faces is referred to as the shortest distance between flange mating faces which meets the conditions of part machining technology and installing space for the structure. The "minimum" distance should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Coupling Capacity and Main Dimensions & Technical Data

Type	Continuous Torque Rating (kNm)	Peak Torque Rating (kNm)	Momentary Torque Limit (kNm)	Max Speed (r/min)	A (mm)	B (mm)	C _{max} (mm)	D _{max} (mm)	E ₁ (mm)	F ⁽¹⁾⁽²⁾ (mm)		H (mm)	J (mm)	Tightening Torque (Nm)	Weight of Total Coupling (Kg)	Centre of Gravity X ⁽³⁾ (mm)	Torsional Stiffness K _T ⁽⁴⁾ (MNm/Rad)	Moment of Inertia ⁽⁵⁾ (Kgm ²)	Spacer Tube Per m			Angular Misalignment (Max deg)	Restoring Moment (Nm/deg)	Axial Displacement	
										std	min								Weight (Kg)	Torsional Stiffness ΔK _T (MNm/Rad)	Moment of Inertia (Kgm ²)			Max (±mm)	Axial Force (N)
HBD6-170	1.6	4	5.3	33000	146	272	105	70	75	460	122	58	65	15	12.8	69.3	0.077	0.028	5.3	0.0513	0.00504	1/3	200.8	1.8	1160
HBD6-210	2	4.8	6.4	27000	168	290	127	85	90	460	110	75	84	15	19.2	75.6	0.111	0.059	8.8	0.142	0.0140		114.5	2	1040
HBD6-420	4	10.9	14.5	24300	188	340	150	100	105	460	130	85	94	45	27.8	83.6	0.196	0.112	9.9	0.203	0.0199		221.1	2	1640
HBD6-660	6.3	18.5	24.6	21000	212	400	175	115	120	460	160	99	108	100	42.6	94.6	0.398	0.23	11.5	0.314	0.0308		286.2	2.5	2490
HBD6-1100	10	21.1	28	18500	236	430	195	130	135	460	160	117	127	100	56.4	103.5	0.460	0.38	15.0	0.571	0.0561		256.4	2.5	2950
HBD6-1500	14	33.8	45	16000	272	525	225	150	165	460	195	140	151	150	88.6	124.3	0.807	0.82	19.7	1.066	0.105		240.6	3.5	4270
HBD6-2100	20	49.6	66	14600	300	545	250	170	180	460	185	152	164	150	112.2	131.3	1.204	1.26	23.4	1.489	0.146		566.9	3.5	5020
HBD6-2900	28	64.1	85.3	13300	316	590	270	185	195	460	200	168	182	180	137.6	141.7	1.588	1.80	30.2	2.361	0.232		552.9	4	6700
HBD6-3300	31.5	68.7	91.4	12500	348	620	290	195	205	460	210	184	198	180	173.2	147.9	1.694	2.68	33.0	3.069	0.301		485.9	4	6440
HBD6-4700	45	97	129	11100	385	710	328	220	230	460	250	202	219	350	246.8	166.8	2.759	4.74	41.4	4.662	0.457		616.6	4.5	8230
HBD6-7400	71	142	189	10000	425	780	365	245	255	500	270	228	248	500	336.9	188.4	4.521	8.14	58.7	8.485	0.833		1818	5.5	12550
HBD6-9011	100	212	283	9200	455	885	395	270	290	500	305	232	256	700	404.4	203.2	6.649	11.14	72.2	10.979	1.077		1691	6	17750
HBD6-9013	125	237	315	8500	492	925	435	290	310	500	305	270	292	700	515.2	223.2	7.016	16.87	76.2	15.358	1.507		1940	6	17380
HBD6-9017	160	355	472	7600	548	1000	475	315	335	550	330	300	327	1200	689.6	241.9	8.744	27.57	104.4	26.183	2.569		2172	7.5	22460
HBD6-9021	200	396	527	6900	602	1070	525	350	370	550	330	344	374	1200	902.6	258.0	11.377	44.05	132.8	43.682	4.286	2027	8	23260	
HBD8-840	8	15.5	20.6	24300	188	340	146	100	105	460	130	82	94	45	28.0	87.8	0.371	0.11	13.0	0.258	0.0253	1/4	964	1.2	2660
HBD8-1100	10	26.3	35	21000	212	400	175	115	120	460	160	97	108	100	42.8	94.5	0.620	0.22	13.9	0.373	0.0366		1522	1.8	3870
HBD8-1300	12.5	31.4	41.8	18500	236	520	195	130	135	460	250	123	135	100	56.6	103.8	0.917	0.39	19.1	0.811	0.0796		849.6	2.2	3850
HBD8-2900	28	65.8	87.5	15700	282	600	235	155	165	460	270	138	152	150	97.8	123.4	1.755	0.95	25.0	1.344	0.132		1665	2.2	7060
HBD8-3300	31.5	83.5	111	14600	305	675	260	175	185	460	305	149	164	180	125.6	135.7	2.482	1.47	28.9	1.810	0.178		1879	2.8	8710
HBD8-4700	45	97.7	130	12500	348	715	290	195	205	460	305	184	198	180	173.6	148.0	3.047	2.70	33.0	3.069	0.301		1421	2.8	8500
HBD8-6600	63	145	193	10900	404	730	345	230	240	460	250	217	234	350	276.2	168.7	5.086	5.91	47.3	6.133	0.602		2311	3.4	10200
HBD8-9011	100	202	269	10000	425	780	365	245	255	500	270	228	248	500	334.6	183.8	8.454	7.99	58.7	8.485	0.833		4194	4	17150
HBD8-9015	140	302	402	9200	455	885	395	270	290	500	305	232	256	700	436.6	211.3	12.341	12.17	72.2	10.979	1.077		9319	4.2	23550
HBD8-9018	180	336	447	8500	492	925	435	290	310	500	305	270	292	700	554.8	215.1	13.324	18.71	76.2	15.358	1.507		6401	4.4	24510
HBD8-9023	224	505	671	7600	548	1000	475	315	335	550	330	300	327	1200	743.6	236.0	20.258	30.28	104.4	26.183	2.569		7265	5.2	29250
HBD8-9029	280	564	750	6900	602	1070	525	350	370	550	330	344	374	1200	955.0	252.2	24.798	47.68	132.8	43.682	4.286		8441	5.7	30740
HBD8-9047	400	812	1080	6200	662	1205	585	390	410	600	385	386	420	1900	1325.6	282.8	37.326	81.29	169.0	70.033	6.872		10340	6.8	42450
HBD10-2100	20	40.4	53.7	18500	236	520	190	130	135	460	250	119	135	100	57.4	110.2	1.451	0.38	25.1	1.034	0.101		1/5	6682	1.6
HBD10-3700	35.5	85	113	15700	282	600	225	155	165	460	270	132	152	150	94.6	132.2	2.663	0.87	35.0	1.808	0.177	11629		1.7	9350
HBD10-5300	50	108	144	14600	305	675	255	175	185	460	305	140	164	180	128.0	143.3	3.933	1.44	45.0	2.664	0.261	14082		1.9	12710
HBD10-6600	63	126	168	12500	348	715	286	195	205	460	305	176	198	180	175.4	154.3	5.406	2.64	50.7	4.535	0.445	8674		2.3	12910
HBD10-8400	80	186	248	10900	404	730	345	230	240	460	250	217	234	350	278.6	169.7	7.921	5.99	47.3	6.133	0.602	7768		2.8	14000
HBD10-9013	125	260	346	10000	425	780	368	245	255	500	270	228	248	500	336.2	184.3	11.448	8.05	58.7	8.485	0.833	14480		3	21290
HBD10-9017	160	389	518	9200	455	885	398	270	290	500	305	232	256	700	442.4	213.4	15.643	12.39	72.2	10.979	1.077	33810		3.1	26770
HBD10-9019	180	433	576	8500	492	925	435	290	310	500	305	270	292	700	558.6	216.4	19.95	18.88	76.2	15.358	1.507	21870		4	29530
HBD10-9026	250	649	863	7600	548	1000	475	315	335	550	330	300	327	1200	748.0	237.1	29.386	30.52	104.4	26.183	2.569	24370		4.3	35960
HBD10-9037	355	726	965	6900	602	1070	525	350	370	550	330	344	374	1200	959.2	253.2	39.425	47.99	132.8	43.682	4.286	27010		4.6	41260
HBD10-9058	500	1044	1389	6200	662	1205	585	390	410	600	385	386	420	1900	1327.0	282.7	59.46	81.56	169.0	70.033	6.872	33000		5.6	57480

TDH Series



- ◆ An option with lower configuration for middle/high speed applications.
- ◆ Able to be partly substituted for HGD series, high performance-price ratio.
- ◆ Factory-assembled middle transmitting unit, dynamic balance precision well kept, easy to mount/dismount.
- ◆ Big hub design for relatively large allowable shaft diameters.
- ◆ Adjusting shims provided to adjust magnitude of pre-stretching or mounting error.

Direction for use

1. Bore diameter D, hub outside diameter C, hub length E, distance between flange mating faces F may be designed separately according to the matching requirements of the machines.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub(with or without key), flange, spline, etc. For straight bore connection to be applied the hub-shaft fit types list in the table are recommended.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	k6 m6 n6	Hot mounting
		r6 s6 t6 u6	Hot mounting
Interference fit, without key connection	P7	h6	Hot mounting
		Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.	

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between flange mating faces. For other sizes of bore diameter, hub outside diameter and distance between flange mating faces, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between flange mating faces the torsional stiffness K can be calculated using the formula as follows:

$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T}$$

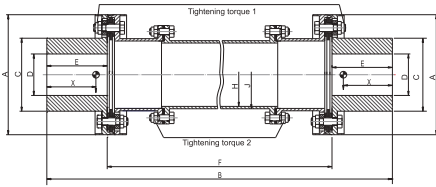
where K- torsional stiffness for a given distance between flange mating faces, K_T- torsional stiffness shown in the catalogue, ΔK_T- torsional stiffness for spacer tube per meter as shown in the catalogue, ΔL- variation of size F relative to TRUMY standard distance between flange mating faces.

4. The standard distance between flange mating faces F is in accordance with the requirements in section 8.3, API671(the 4-th edition).The "minimum" distance between flange mating faces is referred to as the shortest distance between flange mating faces which meets the conditions of part machining technology and installing space for the structure. The "minimum" distance should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Coupling Capacity and Main Dimensions & Technical Data

Type	Continuous Torque Rating (kNm)	Peak Torque Rating ⁽¹⁾ (kNm)	Momentary Torque Limit ⁽²⁾ (kNm)	Max Speed (r/min)	A (mm)	B (mm)	C _{max} ⁽³⁾ (mm)	D _{max} ⁽⁴⁾ (mm)	E ⁽⁵⁾ (mm)	F ⁽¹⁾⁽⁶⁾ (mm)		H (mm)	J (mm)	Tightening Torque (Nm)	Weight of Total Coupling (Kg)	Centre of Gravity X ⁽⁷⁾ (mm)	Torsional Stiffness K _T ⁽⁸⁾ (MNm/Rad)	Moment of Inertia ⁽⁹⁾ (Kg·m ²)	Spacer Tube Per m			Angular Misalignment		Axial Displacement		
										std	min								Weight (Kg)	Torsional Stiffness ΔK _T (MNm/Rad)	Moment of Inertia (Kg·m ²)	Max (deg)	Restoring Moment (Nm/deg)	Max (±mm)	Axial Force (N)	
TDH6-150	1.4	3.2	4.2	19500	146	272	105	70	75	460	122	52	65	15	14.2	72.6	0.098	0.029	9.38	0.0828	0.008	1/3	200.8	1.8	1010	
TDH6-180	1.8	3.8	5.1	16600	168	290	127	85	90	460	110	71	84	15	20.6	79.6	0.122	0.061	12.42	0.191	0.019		114.5	2	930	
TDH6-330	3.15	8.7	11.6	14300	188	340	150	100	105	460	130	83	94	45	28.4	85.9	0.209	0.113	12.00	0.240	0.024		221.1	2	1290	
TDH6-580	5.6	14.8	19.7	12600	212	400	175	115	120	460	160	96	108	100	43.8	97.7	0.447	0.232	15.09	0.401	0.039		286.2	2.5	2220	
TDH6-840	8	16.8	22.4	11000	236	430	195	130	135	460	160	113	127	100	58.8	106.5	0.499	0.39	20.72	0.763	0.075		256.4	2.5	2360	
TDH6-1300	12.5	27.1	36	9500	272	525	225	150	165	460	195	134	151	150	91.8	128.6	0.882	0.83	29.87	1.551	0.152		240.6	3.5	3810	
TDH6-1800	18	39.7	52.8	8800	300	545	250	170	180	460	185	144	164	150	116.6	136.0	1.344	1.28	37.98	2.304	0.226		566.9	3.5	4510	
TDH6-2600	25	51.3	68.3	8000	316	590	270	185	195	460	200	163	182	180	141.6	145.6	1.686	1.82	40.41	3.073	0.302		552.9	4	5990	
TDH6-2900	28	55	73.2	7500	348	620	290	195	205	460	210	179	198	180	176.2	149.9	1.773	2.69	44.16	4.008	0.393		485.9	4	5730	
TDH6-4200	40	77.4	103	6800	385	710	328	220	230	460	250	198	219	350	249.6	169.2	2.852	4.750	53.99	5.995	0.588		616.6	4.5	7320	
TDH6-5800	56	113	151	6100	425	780	365	245	255	500	270	222	248	500	342.0	191.3	4.732	8.20	75.34	10.633	1.043		1818	5.5	9900	
TDH6-8400	80	170	226	5600	455	885	395	270	290	500	305	224	256	700	409.8	206.3	6.964	11.19	94.70	13.959	1.369		1691	6	14200	
TDH6-9011	100	189	252	5100	492	925	435	290	310	500	305	264	292	700	522.2	226.3	7.273	17.04	95.97	18.947	1.859		1940	6	13900	
TDH6-9013	125	283	377	4600	548	1000	475	315	335	550	330	294	327	1200	694.8	244.4	9.457	27.33	126.34	31.121	3.054		2172	7.5	17550	
TDH6-9017	160	317	422	4200	602	1070	525	350	370	550	330	338	374	1200	909.2	260.3	12.189	43.99	158.03	51.156	5.020		2027	8	18610	
TDH8-660	6.3	12.4	16.5	14300	188	340	146	100	105	460	130	83	94	45	27.6	88.7	0.362	0.11	12.00	0.240	0.024		1/4	964	1.2	2090
TDH8-840	8	21	28	12600	212	400	170	115	120	460	160	96	108	100	43.0	96.3	0.656	0.22	15.09	0.401	0.039	1522		1.8	3100	
TDH8-1100	10	25.1	33.4	11000	236	520	195	130	135	460	270	118	135	100	58.6	107.5	1.035	0.39	26.52	1.086	0.107	849.6		2.2	3080	
TDH8-2300	22.4	52.6	70	9500	282	600	235	155	165	460	270	132	152	150	100.2	127.4	2.006	0.97	35.02	1.808	0.177	1665		2.2	5650	
TDH8-2900	28	67.1	89.3	8800	305	675	260	175	185	460	305	144	164	180	129.0	139.2	2.811	1.51	37.98	2.304	0.226	1879		2.8	7740	
TDH8-4200	40	78.2	104	7500	348	715	290	195	205	460	305	179	198	180	177.2	151.2	3.326	2.72	44.16	4.008	0.393	1421		2.8	7560	
TDH8-5900	56	116	155	6500	404	730	345	230	240	460	250	212	234	350	278.8	171.3	5.431	5.97	60.49	7.683	0.754	2311		3.4	9070	
TDH8-8400	80	162	215	6100	425	780	365	245	255	500	270	222	248	500	338.0	186.4	9.141	8.02	75.34	10.632	1.043	4194		4	13720	
TDH8-9013	125	242	322	5600	455	885	395	270	290	500	305	224	256	700	438.8	213.5	13.437	12.18	94.70	13.989	1.370	9319		4.2	21020	
TDH8-9015	140	269	358	5100	492	925	435	290	310	500	305	264	292	700	555.2	216.4	14.116	18.70	95.98	18.947	1.859	6401		4.4	19060	
TDH8-9021	200	404	537	4600	548	1000	475	315	335	550	330	294	327	1200	744.0	237.3	21.416	30.23	126.34	31.121	3.054	7265		5.2	26110	
TDH8-9023	224	451	600	4200	602	1070	525	350	370	550	330	338	374	1200	960.4	254.2	25.701	47.79	158.03	51.156	5.020	8441		5.7	24590	
TDH8-9037	315	650	864	3700	662	1205	585	390	410	600	385	380	420	1900	1309.6	281.0	38.475	80.04	197.29	80.623	7.911	10340		6.8	33430	
TDH10-1700	16	32.3	43	11000	236	520	195	130	135	460	250	118	135	100	57.4	111.9	1.529	0.38	26.52	1.086	0.107	1/5		6682	1.6	4730
TDH10-3300	31.5	67.6	90	9500	282	600	235	155	165	460	270	132	152	150	94.6	133.3	2.752	0.86	35.02	1.808	0.177			11629	1.7	8300
TDH10-4200	40	86	115	8800	305	675	260	175	185	460	305	144	164	180	126.6	143.4	3.728	1.45	37.98	2.304	0.226			14082	1.9	10170
TDH10-5300	50	101	134	7500	348	715	290	195	205	460	305	179	198	180	172.6	153.9	5.236	2.61	44.16	4.008	0.393		8674	2.3	10250	
TDH10-6600	63	150	199	6500	404	730	345	230	240	460	250	212	234	350	281.6	172.0	8.685	6.01	60.49	7.683	0.754		7768	2.8	11020	
TDH10-9011	100	208	277	6100	425	780	365	245	255	500	270	222	248	500	340.8	187.2	12.747	8.10	75.34	10.632	1.043		14480	3	17030	
TDH10-9013	125	311	414	5600	455	885	395	270	290	500	305	224	256	700	448.2	216.6	17.454	12.45	94.70	13.989	1.370		33810	3.1	20910	
TDH10-9017	160	347	461	5100	492	925	435	290	310	500	305	264	292	700	563.8	218.9	21.784	18.95	95.98	18.947	1.859		21870	4	26250	
TDH10-9023	224	519	691	4600	548	1000	475	315	335	550	330	294	327	1200	753.8	239.5	31.888	30.59	126.34	31.121	3.054		24370	4.3	32220	
TDH10-9029	280	580	772	4200	602	1070	525	350	370	550	330	338	374	1200	966.4	255.5	41.632	48.09	158.03	51.156	5.020		27010	4.6	32550	
TDH10-9047	400	836	1112	3700	662	1205	585	390	410	600	385	380	420	1900	1334.2	284.9	62.69	81.73	197.29	80.623	7.911		33000	5.6	45980	

GD Series



- ◆ An option for middle/high speed applications
- ◆ Relatively small external sizes.
- ◆ Equipped with adjusting shims to adjust the amount of pre-stretching or installation error.
- ◆ Double way transmitting mechanism (back-up gears) used for protecting turbine machines from load throw-off.
- ◆ Enable disc packs to be replaced separately.

Direction for use

1. Coupling length B, Bore diameter D, hub outside diameter C, hub length E, distance between flange mating faces F may be designed separately according to the matching requirements of the machines.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub(with or without key), flange, spline, etc. For straight bore connection to be applied the hub-shaft fit types list in the table are recommended.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	r6 s6 t6 u6	Hot mounting
	P7	h6	Hot mounting
Interference fit, without key connection	Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.		Hot mounting or oil pressure mounting

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between flange mating faces. For other sizes of bore diameter, hub outside diameter, distance between flange mating faces, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between flange mating faces the torsional stiffness K can be calculated using the formula as follows:

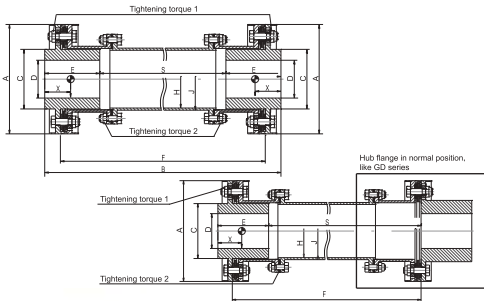
$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T}$$

where K- torsional stiffness for a given distance between flange mating faces, K_T- torsional stiffness shown in the catalogue, ΔK_T- torsional stiffness for spacer tube per meter as shown in the catalogue, ΔL- variation of size F relative to TRUMY standard distance between flange mating faces.

4. The standard distance between flange mating faces F is in accordance with the requirements in section 8.3, API671(the 4-th edition).The "minimum" distance between flange mating faces is referred to as the shortest distance between flange mating faces which meets the conditions of part machining technology and installing space for the structure. The "minimum" distance should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Type	Continuous Torque Rating (kNm)	Peak Torque Rating ¹⁾ (kNm)	Momentary Torque Limit ¹⁾ (kNm)	Max Speed (r/min)	A (mm)	B (mm)	C _{max} ⁽¹⁾ (mm)	D _{max} ⁽¹⁾ (mm)	E ⁽¹⁾ (mm)	F ⁽¹⁾⁽²⁾ (mm)		H (mm)	J (mm)	Tightening Torque 1(Nm)	Tightening Torque 2(Nm)	Weight of Total Coupling ³⁾ (kg)	Centre of Gravity X ⁽⁴⁾ (mm)	Torsional Stiffness K _t ⁽⁵⁾ (MNm/Rad)	Moment of Inertia ⁶⁾ (kgm ²)	Spacer Tube Per m			Angular Misalignment		Axial Displacement	
										std	min									Weight (kg)	Torsional Stiffness ΔK _t (MNm/Rad)	Moment of Inertia (kgm ²)	Max (deg)	Restoring Moment (Nm/deg)	Max (±mm)	Axial Force (N)
GD6-130	1.25	2.6	3.4	33000	114	324	74	50	55	460	214	56	63	15	8	7.6	51.1	0.063	0.011	5.1	0.0465	0.0046	1/3	200.8	1.8	900
GD6-170	1.6	3.1	4.1	27000	138	384	92	65	70	460	244	72	79	15	8	11.0	61.7	0.093	0.025	6.5	0.0948	0.0093		114.5	2	830
GD6-330	3.15	6.7	9	24300	155	416	106	75	80	460	256	80	88	25	8	14.5	68.6	0.137	0.041	8.3	0.149	0.015		157.9	2	1290
GD6-580	5.6	10.8	14.4	21000	179	470	121	85	90	460	290	95	105	45	8	22.8	77.4	0.309	0.086	22.8	0.315	0.031		227	2.5	2220
GD6-660	6.3	12.3	16.3	18300	206	512	140	100	105	460	302	110	120	45	15	31.8	87.9	0.346	0.157	14.2	0.479	0.047		203.3	2.5	1860
GD6-1100	10	24.4	32.5	16000	236	585	161	115	125	460	335	130	142	100	25	48.4	104.0	0.659	0.33	20.1	0.950	0.093		198.1	3.5	3050
GD6-1800	18	33.9	45.1	14600	258	630	179	130	140	460	350	146	158	150	25	61.4	115.0	1.094	0.51	22.5	1.326	0.13		526.4	3.5	4510
GD6-2600	25	45.3	60.2	13300	284	706	195	145	155	460	396	160	176	180	45	79.6	129.2	1.268	0.80	33.2	2.389	0.23		435.6	4	5990
GD6-2900	28	48.5	64.5	12400	305	746	211	155	165	460	416	176	190	180	45	89.8	132.3	1.280	1.04	31.6	2.699	0.26		382.9	4	5730
GD6-4200	40	76.7	102	11100	338	808	235	170	180	460	448	199	215	350	45	129.3	144.8	2.205	1.89	40.8	4.465	0.44		533.3	4.5	7320
GD6-5800	56	109	145	10000	372	900	264	190	200	600	500	225	242	500	45	180.1	160.7	3.324	3.22	49.0	6.808	0.67		1519.2	5.5	9900
GD6-8400	80	150	200	9200	408	980	277	200	210	700	560	232	252	700	100	239.0	176.8	5.131	4.95	59.7	8.92	0.87		2579.3	6	14200
GD6-9009	90	168	223	8500	442	1040	313	230	240	700	560	262	286	700	100	300.0	189.5	6.199	7.48	81.1	15.54	1.52		2039.5	6	12510
GD6-9013	125	265	352	7600	492	1160	346	250	260	700	640	292	318	1200	100	410.0	209.7	7.119	12.79	97.8	23.217	2.28		1738.6	7.5	17550
GD6-9017	160	295	393	6900	546	1290	393	290	310	800	670	337	365	1200	150	571.6	245.0	8.862	22.31	121.2	38.1	3.74		1641.6	8	18610
GD8-530	5	9.6	12.7	24300	155	416	106	75	80	460	256	80	88	25	8	14.9	68.9	0.21	0.04	8.3	0.149	0.015		1/4	532.6	1.2
GD8-840	8	15.3	20.4	21000	179	470	121	85	90	460	290	95	105	45	8	23.1	77.7	0.46	0.09	12.3	0.315	0.031	580.8		1.8	3100
GD8-1100	10	18.3	24.4	18500	204	546	148	110	115	460	316	119	130	45	25	34.5	96.1	0.697	0.19	16.9	0.668	0.066	651.3		2.2	3080
GD8-2300	22.4	44.9	59.7	15700	240	600	165	120	125	460	350	130	142	150	25	52.3	106.6	1.433	0.37	20.1	0.950	0.093	1533		2.2	5650
GD8-2900	28	59.2	78.7	14500	260	665	177	130	140	460	385	146	158	180	25	62.4	117.8	1.659	0.54	22.5	1.326	0.13	1495		2.8	7740
GD8-3700	35.5	69.3	92.2	12500	302	720	212	150	160	460	400	176	190	180	45	94.2	127.7	2.590	1.08	31.6	2.699	0.26	1130		2.8	6710
GD8-5900	56	116	154	10900	345	820	249	180	190	600	440	211	228	350	45	149.0	152.0	3.744	2.32	46.0	5.657	0.55	1999		3.4	9070
GD8-8400	80	155	206	10000	372	900	264	190	200	600	500	225	242	500	45	181.8	161.3	5.705	3.27	49.0	6.808	0.67	3338		4	13720
GD8-9011	100	214	285	9200	408	980	277	200	210	700	560	232	252	700	100	241.6	177.5	7.836	5.03	59.7	8.920	0.87	8431		4.2	16820
GD8-9013	125	238	317	8500	442	1040	313	230	240	700	560	262	286	700	100	301.4	195.6	10.286	7.55	81.1	15.540	1.52	6401		4.4	17020
GD8-9019	180	376	500	7600	492	1160	346	250	260	700	640	292	318	1200	100	414.5	210.6	14.074	12.97	97.8	23.217	2.28	6357	5.2	23500	
GD8-9023	224	420	559	6900	546	1290	393	290	310	800	670	337	365	1200	150	576.7	245.8	17.131	22.51	121.2	38.100	3.74	7386	5.7	24590	
GD8-9033	315	629	836	6200	606	1440	439	320	340	800	760	380	410	1900	120	778.2	266.3	25.036	37.7	146.1	58.169	5.71	8478	6.8	33430	
GD10-1300	12.5	23.6	31.4	18500	204	546	148	110	115	460	316	119	130	45	25	35.1	96.6	0.96	0.19	16.9	0.668	0.066	1/5	4813	1.6	3690
GD10-2900	28	57.7	76.8	15700	240	600	165	120	125	460	350	126	142	150	25	54.8	108.0	1.88	0.39	26.4	1.214	0.119		11198	1.7	7380
GD10-3700	35.5	76	101	14500	260	665	177	130	140	460	385	142	158	180	25	64.8	119.1	2.15	0.56	29.6	1.701	0.17		11095	1.9	9020
GD10-4700	45	89.5	119	12500	302	720	212	150	160	460	400	174	190	180	45	97.1	129.0	3.56	1.11	35.9	3.036	0.30		6834	2.3	9220
GD10-6600	63	149	198	10900	345	825	249	180	190	600	445	211	228	350	45	149.4	152.8	5.613	2.32	46.0	5.657	0.55		9547	2.8	11020
GD10-9011	100	199	265	10000	372	900	264	190	200	600	500	225	242	500	45	183.1	162.3	7.430	3.30	49.0	6.808	0.67		13740	3	17030
GD10-9013	125	276	367	9200	408	980	277	200	210	700	560	232	252	700	100	245.1	178.4	9.138	5.15	59.7	8.920	0.87		30120	3.1	20910
GD10-9015	140	307	408	8500	442	1040	313	230	240	700	560	262	286	700	100	305.5	196.6	13.688	7.69	81.1	15.540	1.52		26750	4	22970
GD10-9023	224	484	644	7600	492	1180	346	250	260	700	660	292	318	1200	100	415.8	212.2	19.963	13.01	97.8	23.217	2.28		29000	4.3	32220
GD10-9026	250	541	720	6900	546	1300	393	290	310	800	680	337	365	1200	150	567.6	246.1	26.12	22.04	121.2	38.100	3.74		33400	4.6	29060
GD10-9042	400	809	1076	6200	606	1460	439	320	340	800	780	380	410	1900	120	785.6	268.4	38.378	38.18	146.1	58.169	5.71		37650	5.6	45980

TGD Series



- ◆ An option for middle/high speed applications
- ◆ Hubs in an inversion form, small additional bending moment, especially suitable for turbine-compressors sets.
- ◆ Relatively small external sizes.
- ◆ Adjusting shims provided to adjust magnitude of pre-stretching or mounting error.
- ◆ Double way transmitting mechanism (back-up gears) equipped to protect turbine machines from load throw-off.
- ◆ Enable disc packs to be replaced separately.
- ◆ If required, the coupling may be designed with one hub in the inversion form, another in the normal form as shown in the left figure.

Direction for use

1. Coupling length B, bore diameter D, hub outside diameter C, hub length E, distance between shaft ends S may be designed separately according to the matching requirements of the machines.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub(with or without key), flange, spline, etc. For straight bore connection to be applied the hub-shaft fit types list in the table are recommended by TRUMY.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	r6 s6 t6 u6	Hot mounting
	P7	h6	Hot mounting
Interference fit, without key connection	Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.		Hot mounting or oil pressure mounting

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between shaft ends. For other sizes of bore diameter, hub outside diameter and distance between shaft ends, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between shaft ends the torsional stiffness K can be calculated using the formula as follows:

$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T}$$

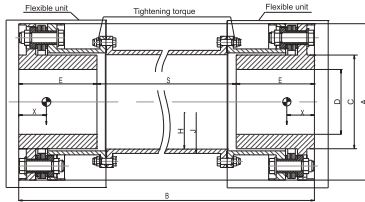
where K— torsional stiffness for a given distance between flange mating faces, K_T— torsional stiffness shown in the catalogue, ΔK_T— torsional stiffness for spacer tube per meter as shown in the catalogue, ΔL— variation of size F relative to TRUMY standard distance between flange mating faces.

4. The standard distance between shaft ends Sstd is in accordance with the requirements in section 8.3, API671(the 4-th edition).The "minimum" S or "minimum" F is referred to as the shortest distance between shaft ends or the shortest distance between flange mating faces which meets the conditions of part machining technology and installing space for the structure. The "minimum" distance should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Coupling Capacity and Main Dimensions & Technical Data

Type	Continuous Torque Rating (kNm)	Peak Torque Rating (kNm)	Momentary Torque Limit (kNm)	Max Speed (r/min)	A (mm)	B (mm)	C _{max} (mm)	D _{max} (mm)	E ⁽¹⁾ (mm)	F ⁽¹⁾⁽⁶⁾ (mm)		H (mm)	J (mm)	Tightening Torque 1(Nm)	Tightening Torque 2(Nm)	Weight of Total Coupling (kg)	Centre of Gravity X ⁽²⁾ (mm)	Torsional Stiffness K _t (MNm/Rad)	Moment of Inertia I ₀ (Kg·m ²)	Spacer Tube Per m			Angular Misalignment		Axial Displacement	
										std	min									Weight (Kg)	Torsional Stiffness ΔK _t (MNm/Rad)	Moment of Inertia I ₀ (Kg·m ²)	Max (deg)	Restoring Moment (Nm/deg)	Max (±mm)	Axial Force (N)
TGD6-130	1.25	2.6	3.4	33000	114	252	58	40	45	460	214	56	63	15	8	7.0	22.8	0.056	0.010	5.1	0.0465	0.0046	1/3	200.8	1.8	900
TGD6-170	1.6	3.1	4.1	27000	138	282	77	55	60	460	244	72	79	15	8	10.3	24.2	0.084	0.022	6.5	0.0948	0.0093		114.5	2	830
TGD6-330	3.15	6.7	9	24300	155	304	85	60	70	460	256	80	88	25	8	13.4	29.8	0.121	0.036	8.3	0.149	0.015		157.9	2	1290
TGD6-580	5.6	10.8	14.4	21000	179	338	97.5	70	80	460	290	95	105	45	8	21.3	30.7	0.262	0.078	12.3	0.315	0.031		227	2.5	2220
TGD6-660	6.3	12.3	16.3	18300	206	372	116	80	90	460	302	110	120	45	15	29.0	40.8	0.308	0.14	14.2	0.479	0.047		203.3	2.5	1860
TGD6-1100	10	24.4	32.5	16000	236	403	135	95	105	460	335	130	142	100	25	45.5	42.1	0.577	0.30	16.7	0.774	0.076		198.1	3.5	3050
TGD6-1800	18	33.9	45.1	14600	258	428	147	105	115	460	350	146	158	150	25	56.0	47.8	0.922	0.44	22.5	1.326	0.13		526.4	3.5	4510
TGD6-2600	25	45.3	60.2	13300	284	478	162	115	130	460	396	160	176	180	45	76.7	52.3	1.102	0.73	33.2	2.389	0.23		435.6	4	5990
TGD6-2900	28	48.5	64.5	12400	305	498	180	125	140	460	416	176	190	180	45	86.6	54.7	1.130	0.94	31.6	2.699	0.26		382.9	4	5730
TGD6-4200	40	76.7	102	11100	338	542	200	140	160	460	448	199	215	350	45	124.7	61.6	1.907	1.73	40.8	4.465	0.44		533.3	4.5	7320
TGD6-5800	56	109	145	10000	372	604	223	158	185	600	500	225	242	500	45	175.7	70.3	2.743	2.97	49.0	6.808	0.67		1519.2	5.5	9900
TGD6-8400	80	150	200	9200	408	670	232	165	190	700	560	232	252	700	100	233.2	73.5	4.062	4.61	59.7	8.92	0.87		2579.3	6	14200
TGD6-9009	90	168	223	8500	442	670	264	185	220	700	560	262	286	700	100	303.5	79.8	5.067	7.00	81.1	15.54	1.52		2039.5	6	12510
TGD6-9013	125	265	352	7600	492	776	298	210	240	700	640	292	318	1200	100	419.7	91.0	5.961	12.28	97.8	23.217	2.28	1738.6	7.5	17550	
TGD6-9017	160	295	393	6900	546	806	335	235	270	800	670	337	365	1200	150	576.7	96.5	7.583	20.84	121.2	38.1	3.74	1641.6	8	18610	
TGD8-530	5	9.6	12.7	24300	155	304	85	60	70	460	256	80	88	25	8	13.8	29.9	0.177	0.037	8.3	0.149	0.015	1/4	532.6	1.2	1660
TGD8-840	8	15.3	20.4	21000	179	338	98	70	80	460	290	95	105	45	8	21.4	39.6	0.365	0.078	12.3	0.315	0.031		580.8	1.8	3100
TGD8-1100	10	18.3	24.4	18500	204	380	122	87	97	460	316	119	130	45	25	32.8	39.5	0.577	0.17	16.9	0.668	0.066		651.3	2.2	3080
TGD8-2300	22.4	44.9	59.7	15700	240	428	134	95	105	460	350	130	142	150	25	49.5	46.5	1.053	0.34	20.1	0.95	0.093		1533	2.2	5650
TGD8-2900	28	59.2	78.7	14500	260	465	150	105	115	460	385	146	158	180	25	59.3	49.5	1.309	0.49	22.5	1.326	0.13		1495	2.8	7740
TGD8-3700	35.5	69.3	92.2	12500	302	482	180	127	145	460	400	176	190	180	45	88.5	55.5	2.025	0.96	31.6	2.699	0.26		1130	2.8	6710
TGD8-5900	56	116	154	10900	345	534	215	153	175	600	440	211	228	350	45	145.7	64.9	3.037	2.14	46.0	5.657	0.55		1999	3.4	9070
TGD8-8400	80	155	206	10000	372	604	229	160	185	600	500	225	242	500	45	179.0	71.3	4.368	3.04	49.0	6.808	0.67		3338	4	13720
TGD8-9011	100	214	285	9200	408	670	236	168	190	700	560	232	252	700	100	234.3	73.9	5.845	4.68	59.7	8.92	0.87		8431	4.2	16820
TGD8-9013	125	238	317	8500	442	670	268	190	220	700	560	262	286	700	100	300.8	80.1	7.801	7.05	81.1	15.54	1.52		6401	4.4	17020
TGD8-9019	180	376	500	7600	492	776	298	210	240	700	640	292	318	1200	100	410.9	91.3	10.813	12.14	97.8	23.217	2.28		6357	5.2	23500
TGD8-9023	224	420	559	6900	546	806	342	240	270	800	670	337	365	1200	150	560.6	98.0	13.710	20.38	121.2	38.1	3.74		7386	5.7	24590
TGD8-9033	315	629	836	6200	606	920	385	270	300	800	760	380	410	1900	120	766.7	112.5	19.962	35.03	146.1	58.169	5.71		8478	6.8	33430
TGD10-1300	12.5	23.6	31.4	18500	205	380	124	87	97	460	316	119	130	45	25	34.4	39.7	0.728	0.18	16.9	0.668	0.066	1/5	4813	1.6	3690
TGD10-2900	28	57.7	76.8	15700	240	428	136	95	105	460	350	126	142	150	25	53.7	46.7	1.349	0.36	26.4	1.214	0.119		11198	1.7	7380
TGD10-3700	35.5	76	101	14500	260	465	150	105	115	460	385	142	158	180	25	63.7	49.7	1.614	0.52	29.6	1.701	0.17		11095	1.9	9020
TGD10-4700	45	89.5	119	12500	302	482	180	127	145	460	400	174	190	180	45	93.4	55.4	2.561	2.01	35.9	3.036	0.30		6834	2.3	9220
TGD10-6600	63	149	198	10900	345	539	215	153	175	600	445	211	228	350	45	145.6	65.8	4.156	2.14	46.0	5.657	0.55		9547	2.8	11020
TGD10-9011	100	199	265	10000	372	606	229	160	185	600	500	225	242	500	45	180.0	72.6	5.318	3.06	49.0	6.808	0.67		13740	3	17030
TGD10-9013	125	276	367	9200	408	670	236	168	190	700	560	232	252	700	100	237.8	74.1	6.540	4.80	59.7	8.92	0.87		30120	3.1	20910
TGD10-9015	140	307	408	8500	442	670	268	190	220	700	560	262	286	700	100	304.5	80.1	9.613	7.18	81.1	15.54	1.52		26750	4	22970
TGD10-9023	224	484	644	7600	492	796	298	210	240	700	660	292	318	1200	100	411.1	92.9	13.968	12.16	97.8	23.217	2.28		29000	4.3	32220
TGD10-9026	250	541	720	6900	546	816	342	240	270	800	680	337	365	1200	150	560.8	99.5	18.906	20.40	121.2	38.1	3.74		33400	4.6	29060
TGD10-9042	400	809	1076	6200	606	940	385	270	300	800	780	380	410	1900	120	772.5	113.9	27.598	35.40	146.1	58.169	5.71		37650	5.6	45980

TDS Series



- ◆ Hubs in the inversion form, small additional bending moment, especially applicable to high speed turbine –compressor sets.
- ◆ Factory-assembled flexible unit, dynamic balance precision well kept.
- ◆ Relatively small external sizes.
- ◆ Adjusting shims provided to adjust magnitude of pre-stretching or mounting error.
- ◆ Keyless-interference fit for hub–shaft connection is recommended.

Direction for use

1. Coupling length B, bore diameter D, hub outside diameter C, hub length E, distance between shaft ends S may be designed separately according to the matching requirements of the machines.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub(with or without key), flange, spline, etc. For straight bore connection to be applied the hub–shaft fit types list in the table are recommended by TRUMY.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	r6 s6 t6 u6	Hot mounting
	P7	h6	Hot mounting
Interference fit, without key connection	Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.		Hot mounting or oil pressure mounting

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between shaft ends. For other sizes of bore diameter, hub outside diameter and distance between shaft ends, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between shaft ends the torsional stiffness K can be calculated using the formula as follows:

$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T}$$

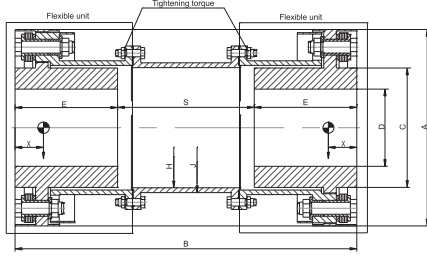
where K– torsional stiffness for a given distance between flange mating faces, K_T– torsional stiffness shown in the catalogue, ΔK_T– torsional stiffness for spacer tube per meter as shown in the catalogue, ΔL– variation of size F relative to TRUMY standard distance between flange mating faces.

4. The standard distance between shaft ends S is in accordance with the requirements in section 8.3, API671(the 4–th edition).The “minimum” coupling length B is referred to as the shortest length which meets the conditions of part machining technology and installing space for the structure. The “minimum” coupling length should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Coupling Capacity and Main Dimensions & Technical Data

Type	Continuous Torque Rating (kNm)	Peak Torque Rating ⁽¹⁾ (kNm)	Momentary Torque Limit ⁽²⁾ (kNm)	Max Speed (r/min)	A (mm)	B ⁽¹⁾⁽⁴⁾ min (mm)	C ⁽¹⁾ (mm)	D _{max} ⁽¹⁾ (mm)	E ⁽¹⁾ (mm)	S ⁽¹⁾⁽⁴⁾ std (mm)	H (mm)	J (mm)	Tightening Torque (Nm)	Weight of Total Coupling ⁽³⁾ (Kg)	Centre of Gravity X ⁽³⁾ (mm)	Torsional Stiffness K _T ⁽³⁾ (MNm/Rad)	Moment of Inertia ⁽³⁾ (Kg·m ²)	Spacer Tube Per m			Angular Misalignment		Axial Displacement	
																		Weight (Kg)	Torsional Stiffness ΔK _T (MNm/Rad)	Moment of Inertia (Kg·m ²)	Max (deg)	Restoring Moment (Nm/deg)	Max (±mm)	Axial Force (N)
TDS6-170	1.6	4	5.3	33000	112	222	58	40	45	460	56	63	15	7.0	20.1	0.058	0.010	5.1	0.0465	0.0046	1/3	200.8	1.8	1160
TDS6-210	2	4.8	6.4	27000	133	222	77	55	60	460	72	79	15	9.9	21.8	0.082	0.020	6.5	0.0948	0.0093		114.5	2	1040
TDS6-420	4	10.9	14.5	24300	153	261	85	60	70	460	80	88	45	13.5	25.6	0.138	0.035	8.3	0.149	0.015		157.9	2	1640
TDS6-660	6.3	18.5	24.6	21000	175	315	97.5	70	80	460	95	105	100	21.9	32.3	0.298	0.080	12.3	0.315	0.031		227	2.5	2490
TDS6-1100	10	21.1	28	18500	198	315	115	80	90	460	110	120	100	28.3	34.1	0.350	0.130	14.2	0.479	0.047		203.3	2.5	2950
TDS6-1500	14	33.8	45	16000	228	375	135	95	105	460	130	142	150	43.4	40.5	0.621	0.27	20.1	0.950	0.093		198.1	3.5	4270
TDS6-2100	20	49.6	66	14600	252	375	147	105	115	460	146	158	150	53.5	40.0	0.908	0.41	22.5	1.326	0.13		526.4	3.5	5020
TDS6-2900	28	64.1	85.3	13300	278	408	165	115	130	460	160	176	180	74.3	45.2	1.252	0.67	33.2	2.389	0.23		435.6	4	6700
TDS6-3300	31.5	68.7	91.4	12500	300	408	179	125	140	460	176	190	180	84.4	47.5	1.329	0.88	31.6	2.699	0.26		382.9	4	6440
TDS6-4700	45	97	129	11100	330	471	199	140	160	460	199	215	350	117.2	56.5	2.066	1.54	40.8	4.465	0.44		533.3	4.5	8230
TDS6-7400	71	142	189	10000	366	525	224	155	185	500	225	242	500	168.4	64.5	3.229	2.74	49.0	6.808	0.67		1519.2	5.5	12550
TDS6-9011	100	212	283	9200	398	604	236	168	190	500	232	252	700	212.3	68.0	4.558	4.09	59.7	8.92	0.87		2579.3	6	17750
TDS6-9013	125	237	315	8500	434	604	265	185	220	500	262	286	700	277.9	75.6	5.309	6.29	81.1	15.54	1.52		2039.5	6	17380
TDS6-9017	160	355	472	7600	484	660	298	210	240	550	292	318	1200	376.1	84.6	7.357	10.62	97.8	23.217	2.28	1738.6	7.5	22460	
TDS6-9021	200	396	527	6900	536	720	337	235	270	550	337	365	1200	502.4	92.2	9.474	17.45	121.2	38.1	3.74	1641.6	8	23260	
TDS8-840	8	15.5	20.6	24300	153	261	85	60	70	460	75	88	45	13.6	25.6	0.192	0.036	13.1	0.222	0.021	1/4	532.6	1.2	2660
TDS8-1100	10	26.3	35	21000	175	315	98	70	80	460	94	105	100	22.4	32.3	0.381	0.082	13.5	0.341	0.034		580.8	1.8	3870
TDS8-1300	12.5	31.4	41.8	18500	202	335	122	87	97	460	119	130	100	31.9	35.1	0.641	0.16	16.9	0.668	0.066		651.3	2.2	3850
TDS8-2900	28	65.8	87.5	15700	236	371	136	95	105	460	130	144	150	47.9	38.2	1.064	0.32	20.1	0.95	0.093		1533	2.2	7060
TDS8-3300	31.5	83.5	111	14600	256	398	150	105	115	460	146	160	180	57.8	42.5	1.452	0.45	22.5	1.326	0.13		1495	2.8	8710
TDS8-4700	45	97.7	130	12500	296	408	180	127	145	460	176	190	180	85.8	48.6	2.046	0.89	31.6	2.699	0.26		1130	2.8	8500
TDS8-6600	63	145	193	10900	340	476	215	153	175	460	211	228	350	132.4	60.5	3.453	1.89	46.0	5.657	0.55		1999	3.4	10200
TDS8-9011	100	202	269	10000	366	525	229	160	185	500	225	242	500	167.6	65.2	4.943	2.75	49.0	6.808	0.67		3338	4	17150
TDS8-9015	140	302	402	9200	398	604	233	168	190	500	232	252	700	214.4	68.2	6.680	4.16	59.7	8.92	0.87		8431	4.2	23550
TDS8-9018	180	336	447	8500	434	604	268	190	220	500	262	286	700	277.6	75.7	8.359	6.37	81.1	15.54	1.52		6401	4.4	24510
TDS8-9023	224	505	671	7600	484	660	298	210	240	550	292	318	1200	376.0	84.8	12.424	10.65	97.8	23.217	2.28		6357	5.2	29250
TDS8-9029	280	564	750	6900	536	720	342	240	270	550	337	365	1200	504.9	92.8	16.349	17.71	121.2	38.1	3.74		7386	5.7	30740
TDS8-9047	400	812	1080	6200	598	790	385	270	300	600	380	410	1900	700.9	104.3	23.955	30.89	146.1	58.169	5.71		8478	6.8	42450
TDS10-2100	20	40.4	53.7	18500	202	335	124	87	97	460	116	130	100	32.7	35.2	0.799	0.17	21.2	0.821	0.081	1/5	4813	1.6	910
TDS10-3700	35.5	85	113	15700	236	371	136	95	105	460	124	144	150	48.5	38.9	1.239	0.32	33.0	1.520	0.15		11198	1.7	9350
TDS10-5300	50	108	144	14600	256	398	150	105	115	460	136	160	180	59.5	42.6	1.674	0.47	43.8	2.460	0.24		11095	1.9	12710
TDS10-6600	63	126	168	12500	296	408	180	127	145	460	170	190	180	87.2	48.5	2.638	0.91	44.4	3.676	0.36		6834	2.3	12910
TDS10-8400	80	186	248	10900	340	476	215	153	175	460	211	228	350	135.4	60.4	4.624	1.94	46.0	5.657	0.55		9547	2.8	14000
TDS10-9013	125	260	346	10000	366	525	229	160	185	500	225	242	500	171.5	65.1	5.836	2.84	49.0	6.808	0.67		13740	3	21290
TDS10-9017	160	389	518	9200	398	604	233	168	190	500	232	252	700	214.7	68.4	7.542	4.17	59.7	8.92	0.87		30120	3.1	26770
TDS10-9019	180	433	576	8500	434	604	268	190	220	500	262	286	700	280.2	75.8	10.560	6.46	81.1	15.54	1.52		26750	4	29530
TDS10-9026	250	649	863	7600	484	660	298	210	240	550	292	318	1200	380.6	84.9	15.249	10.86	97.8	23.217	2.28		29000	4.3	35960
TDS10-9037	355	726	965	6900	536	720	342	240	270	550	337	365	1200	510.3	92.7	21.642	18.01	121.2	38.1	3.74		33400	4.6	41260
TDS10-9058	500	1044	1389	6200	598	790	385	270	300	600	380	410	1900	711.0	104.2	31.457	31.56	146.1	58.169	5.71		37650	5.6	57480

TDR Series



- ◆ Small external sizes with the hubs in the inversion form, small additional bending moment.
- ◆ Smaller additional bending moment than TDS series, especially suitable for high speed applications where the requirements for additional bending moment are ultra rigorous.
- ◆ Interlocking flanges. Double way transmitting arrangement, able to protect the turbine machines from load throw-off.
- ◆ Factory-assembled flexible unit, dynamic balance precision well kept.
- ◆ Adjusting shims provided to adjust magnitude of pre-stretching or mounting error.
- ◆ Keyless interference fit for hub-shaft connection is recommended.

Direction for use

1. Coupling length B, bore diameter D, hub outside diameter C, hub length E, distance between shaft ends S may be designed separately according to the matching requirements of the machines.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub(with or without key), flange, spline, etc. For straight bore connection to be applied the hub-shaft fit types list in the table are recommended by TRUMY.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	r6 s6 t6 u6	Hot mounting
	P7	h6	Hot mounting
Interference fit, without key connection	Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.		Hot mounting or oil pressure mounting

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between shaft ends. For other sizes of bore diameter, hub outside diameter and distance between shaft ends, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between shaft ends the torsional stiffness K can be calculated using the formula as follows:

$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T}$$

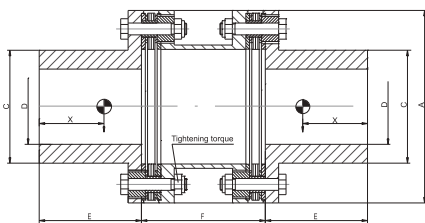
where K- torsional stiffness for a given distance between flange mating faces, K_T- torsional stiffness shown in the catalogue, ΔK_T- torsional stiffness for spacer tube per meter as shown in the catalogue, ΔL- variation of size F relative to TRUMY standard distance between flange mating faces.

4. The standard distance between shaft ends S is in accordance with the requirements in section 8.3, API671(the 4-th edition).The "minimum" coupling length B is referred to as the shortest length which meets the conditions of part machining technology and installing space for the structure. The "minimum" coupling length should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Coupling Capacity and Main Dimensions & Technical Data

Type	Continuous Torque Rating (kNm)	Peak Torque Rating (kNm)	Momentary Torque Limit (kNm)	Max Speed (r/min)	A (mm)	B ⁽¹⁾ (mm)	C ⁽¹⁾ (mm)	D _{max} ⁽¹⁾ (mm)	E ⁽¹⁾ (mm)	S ⁽¹⁾⁽⁴⁾ std (mm)	H (mm)	J (mm)	Tightening Torque (Nm)	Weight of Total Coupling ⁽²⁾ (Kg)	Centre of Gravity X ⁽³⁾ (mm)	Torsional Stiffness K _T ⁽³⁾ (MNm/Rad)	Moment of Inertia I _x ⁽³⁾ (kgm ²)	Spacer Tube Per m			Angular Misalignment		Axial Displacement	
																		Weight (Kg)	Torsional Stiffness ΔK _T (MNm/Rad)	Moment of Inertia I _x (kgm ²)	Max (deg)	Restoring Moment (Nm/deg)	Max (±mm)	Axial Force (N)
TDR6-170	1.6	4	5.3	33000	116	222	58	40	45	460	56	63	15	6.2	21.6	0.058	0.010	5.1	0.0465	0.0046	1/3	200.8	1.8	1160
TDR6-210	2	4.8	6.4	27000	138	222	77	55	60	460	72	79	15	9.0	23.1	0.082	0.022	6.5	0.0948	0.0093		114.5	2	1040
TDR6-420	4	10.9	14.5	24300	157	261	85	60	70	460	80	88	45	13.0	27.5	0.138	0.034	8.3	0.149	0.015		157.9	2	1640
TDR6-660	6.3	18.5	24.6	21000	179	315	97.5	70	80	460	95	105	100	19.7	30.6	0.298	0.077	12.3	0.315	0.031		227	2.5	2490
TDR6-1100	10	21.1	28	18500	206	315	115	80	90	460	110	120	100	26.4	32.5	0.350	0.13	14.2	0.479	0.047		203.3	2.5	2950
TDR6-1500	14	33.8	45	16000	236	375	135	95	105	460	130	142	150	37.5	36.0	0.621	0.25	20.1	0.950	0.093		198.1	3.5	4270
TDR6-2100	20	49.6	66	14600	260	375	147	105	115	460	146	158	150	52.0	41.4	0.908	0.43	22.5	1.326	0.13		526.4	3.5	5020
TDR6-2900	28	64.1	85.3	13300	284	408	165	115	130	460	160	176	180	70.0	46.7	1.252	0.68	33.2	2.389	0.23		435.6	4	6700
TDR6-3300	31.5	68.7	91.4	12500	305	408	179	125	140	460	176	190	180	81.7	49.0	1.329	0.91	31.6	2.699	0.26		382.9	4	6440
TDR6-4700	45	97	129	11100	338	471	199	140	160	460	199	215	350	123.7	60.7	2.066	1.76	40.8	4.465	0.44		533.3	4.5	8230
TDR6-7400	71	142	189	10000	372	525	224	155	185	500	225	242	500	175.7	70.3	3.229	2.97	49.0	6.808	0.67		1519.2	5.5	12550
TDR6-9011	100	212	283	9200	408	604	236	168	190	500	232	252	700	233.2	73.5	4.558	4.61	59.7	8.92	0.87		2579.3	6	17750
TDR6-9013	125	237	315	8500	442	604	265	185	220	500	262	286	700	303.5	79.8	5.309	7.00	81.1	15.54	1.52		2039.5	6	17380
TDR6-9017	160	355	472	7600	492	660	298	210	240	550	292	318	1200	419.7	91.0	7.357	12.28	97.8	23.217	2.28	1738.6	7.5	22460	
TDR6-9021	200	396	527	6900	546	720	337	235	270	550	337	365	1200	576.7	96.5	9.474	20.84	121.2	38.1	3.74	1641.6	8	23260	
TDR8-840	8	15.5	20.6	24300	157	261	85	60	70	460	75	88	45	13.8	29.9	0.192	0.037	13.1	0.222	0.021	1/4	532.6	1.2	2660
TDR8-1100	10	26.3	35	21000	179	315	98	70	80	460	94	105	100	21.4	39.6	0.381	0.078	13.5	0.341	0.034		580.8	1.8	3870
TDR8-1300	12.5	31.4	41.8	18500	206	335	122	87	97	460	119	130	100	29.4	34.3	0.641	0.16	16.9	0.668	0.066		651.3	2.2	3850
TDR8-2900	28	65.8	87.5	15700	246	371	136	95	105	460	130	144	150	45.0	39.9	1.064	0.32	20.1	0.95	0.093		1533	2.2	7060
TDR8-3300	31.5	83.5	111	14600	261	398	150	105	115	460	146	160	180	55.9	43.8	1.452	0.47	22.5	1.326	0.13		1495	2.8	8710
TDR8-4700	45	97.7	130	12500	302	408	180	127	145	460	176	190	180	83.4	50.0	2.046	0.92	31.6	2.699	0.26		1130	2.8	8500
TDR8-6600	63	145	193	10900	345	476	215	153	175	460	211	228	350	141.4	64.5	3.453	2.14	46.0	5.657	0.55		1999	3.4	10200
TDR8-9011	100	202	269	10000	372	525	229	160	185	500	225	242	500	172.5	69.0	4.943	2.97	49.0	6.808	0.67		3338	4	17150
TDR8-9015	140	302	402	9200	408	604	233	168	190	500	232	252	700	219.3	70.7	6.680	4.50	59.7	8.92	0.87		8431	4.2	23550
TDR8-9018	180	336	447	8500	442	604	268	190	220	500	262	286	700	282.0	78.1	8.359	6.72	81.1	15.54	1.52		6401	4.4	24510
TDR8-9023	224	505	671	7600	492	660	298	210	240	550	292	318	1200	381.8	87.3	12.424	11.32	97.8	23.217	2.28		6357	5.2	29250
TDR8-9029	280	564	750	6900	546	720	342	240	270	550	337	365	1200	503.8	96.2	16.349	18.24	121.2	38.1	3.74		7386	5.7	30740
TDR8-9047	400	812	1080	6200	606	790	385	270	300	600	380	410	1900	691.4	108.7	23.955	31.34	146.1	58.169	5.71		8478	6.8	42450
TDR10-2100	20	40.4	53.7	18500	206	335	124	87	97	460	116	130	100	34.4	39.7	0.799	0.18	21.2	0.821	0.081	1/5	4813	1.6	910
TDR10-3700	35.5	85	113	15700	246	371	136	95	105	460	124	144	150	53.7	46.7	1.239	0.36	33.0	1.520	0.15		11198	1.7	9350
TDR10-5300	50	108	144	14600	261	398	150	105	115	460	136	160	180	63.7	49.7	1.674	0.52	43.8	2.460	0.24		11095	1.9	12710
TDR10-6600	63	126	168	12500	302	408	180	127	145	460	170	190	180	93.4	55.4	2.638	2.01	44.4	3.676	0.36		6834	2.3	12910
TDR10-8400	80	186	248	10900	345	476	215	153	175	460	211	228	350	143.6	65.0	4.624	2.19	46.0	5.657	0.55		9547	2.8	14000
TDR10-9013	125	260	346	10000	372	525	229	160	185	500	225	242	500	173.6	69.4	5.836	3.00	49.0	6.808	0.67		13740	3	21290
TDR10-9017	160	389	518	9200	408	604	233	168	190	500	232	252	700	215.9	70.9	7.542	4.38	59.7	8.92	0.87		30120	3.1	26770
TDR10-9019	180	433	576	8500	442	604	268	190	220	500	262	286	700	284.3	78.1	10.560	6.80	81.1	15.54	1.52		26750	4	29530
TDR10-9026	250	649	863	7600	492	660	298	210	240	550	292	318	1200	387.0	88.1	15.249	11.55	97.8	23.217	2.28		29000	4.3	35960
TDR10-9037	355	726	965	6900	546	720	342	240	270	550	337	365	1200	510.8	96.8	21.642	18.62	121.2	38.1	3.74		33400	4.6	41260
TDR10-9058	500	1044	1389	6200	606	790	385	270	300	600	380	410	1900	701.3	109.4	31.457	32.01	146.1	58.169	5.71		37650	5.6	57480

TDX Series



- ◆ An option especially suitable for middle/high speed applications where DBSE is limited.
- ◆ Small dimensions, compact structure.
- ◆ Enable the disc pack to be replaced separately.

Direction for use

1. Bore diameter D, hub outside diameter C, hub length E, distance between flange mating faces F may be designed separately according to the matching requirements of the machines. The TRUMY recommended "F" will also be your preferred selection in order to obtain optimum price and shorter lead time.
2. Based on the needs the connection between the driving and driven machines may be designed with taper bored hub(with or without key), flange, spline, etc. For straight bore connection to be applied the hub-shaft fit types list in the table are recommended by TRUMY.

Fit type	Bore tolerance for hub	Recommendation for shaft tolerance	Mounting method
Interference fit, with single or double key connection	H7	r6 s6 t6 u6	Hot mounting
	P7	h6	Hot mounting
Interference fit, without key connection	Bore tolerance defined according to shaft tolerance, magnitude of interference needed can be determined by the calculation according to GB/T 5371 or API671.		Hot mounting or oil pressure mounting

3. In the catalogue the total weight, centre of gravity, torsional stiffness and moment of inertia are calculated according to max. allowable bore diameter, max. hub outside diameter, standard distance between flange mating faces. For other sizes of bore diameter, hub outside diameter, distance between flange mating faces, above mentioned parameters should be calculated or corrected separately, where the torsional stiffness is taken in the fitting section of the shaft. For various distances between flange mating faces the torsional stiffness K can be calculated using the formula as follows:

$$\frac{1}{K} = \frac{1}{K_T} + \frac{\Delta L}{\Delta K_T} \quad \text{where } K - \text{torsional stiffness for a given distance between flange mating faces, } K_T - \text{torsional stiffness shown in the catalogue, } \Delta K_T - \text{torsional stiffness for spacer tube per meter as shown in the catalogue, } \Delta L - \text{variation of size F relative to TRUMY standard distance between flange mating faces.}$$

4. The "minimum" distance between flange mating faces F is referred to as the shortest distance between flange mating faces which meets the conditions of part machining technology and installing space for the structure. The "minimum" distance should not be selected as far as possible. If shorter distances are needed, please consult TRUMY sales engineer.
5. Peak torque rating is the max. torque the coupling can tolerate for short period. Momentary torque limit is the torque that corresponds to a factor of safety of 1.0 with respect to the most highly stressed component's material yield strength, allowing for a combination of speed, angular misalignment and axial displacement.
6. If you have any questions or any other particular requirements, please consult TRUMY sales engineer.

Coupling Capacity and Main Dimensions & Technical Data

Type	Continuous Torque Rating (kNm)	Peak Torque Rating (kNm)	Momentary Torque Limit (kNm)	Max Speed (r/min)	A (mm)	C _{max} (mm)	D _{max} (mm)	E ⁽¹⁾ (mm)	F ⁽¹⁾⁽⁴⁾ (mm)		Tightening Torque (Nm)	Weight of Total Coupling (Kg)	Centre of Gravity X ⁽²⁾ (mm)	Torsional Stiffness K _t ⁽³⁾ (MNm/Rad)	Moment of Inertia I ⁽⁴⁾ (Kgm ²)	Spacer Tube Per m			Angular Misalignment		Axial Displacement	
									TRUMY recommended	min						Weight (Kg)	Torsional Stiffness ΔK _t (MNm/Rad)	Moment of Inertia (Kgm ²)	Max (deg)	Restoring Moment (Nm/deg)	Max (±mm)	Axial Force (N)
TDX6-66	0.63	2	2.7	22600	118	74	50	55	140	80	15	5.6	49.7	0.408	0.0076	4.7	0.0472	0.00463	1/3	200.8	2	510
TDX6-150	1.4	2.5	3.3	19600	136	93	65	70	140	80	15	7.9	57.7	0.672	0.015	6.1	0.104	0.0102		114.5	2.3	830
TDX6-210	2	5.4	7.2	16900	158	107	75	80	140	80	25	12.4	66.1	1.151	0.033	7.8	0.163	0.0160		157.9	2.6	1070
TDX6-370	3.55	8.6	11.5	14900	179	122	85	90	180	100	45	18.4	74.1	1.748	0.064	10.4	0.291	0.0286		227	2.9	1630
TDX6-520	5	9.8	13	13500	198	141	100	105	180	100	45	24.8	83	2.609	0.11	14.6	0.815	0.0900		147.9	3.5	1860
TDX6-840	8	19.5	26	11600	230	162	120	125	180	100	100	35.5	94.7	3.843	0.2	14.6	0.815	0.0800		198.1	3.6	2510
TDX6-1300	12.5	27.1	36.1	10400	255	180	130	140	200	120	150	50.3	108.2	5.998	0.37	23.7	1.546	0.152		526.4	3.6	3220
TDX6-2100	20	36.1	48.1	9500	279	196	145	155	200	120	180	62.2	119.5	7.182	0.54	25.9	2.023	0.198		435.6	3.8	4550
TDX6-2700	25	38.8	51.6	8800	302	212	155	165	200	120	180	76.6	125.4	8.312	0.77	28.3	2.629	0.258		382.9	3.8	4860
TDX6-3300	31.5	61.7	82	8000	332	236	170	180	250	150	350	107.9	135.9	12.655	1.48	46.8	5.322	0.522		533.3	4.8	6150
TDX6-4200	40	85.7	114	7100	372	260	190	200	250	180	500	151.2	156.2	17.667	2.41	51.9	7.256	0.712	707.6	6	8070	
TDX8-840	8	14.7	19.5	12900	206	149	110	115	180	100	45	26.7	89.3	3.794	0.13	16.2	0.707	0.0694	1/4	651.3	2	2240
TDX8-1700	16	35.9	47.8	11200	238	166	120	125	200	100	150	40.8	99.9	6.871	0.26	25.0	1.344	0.132		1533	2.2	4030
TDX8-2700	25	47.4	63	10400	255	178	130	140	200	120	180	51.3	111.6	7.233	0.39	19.5	1.240	0.122		1495	2.4	5930
TDX8-3300	31.5	55.4	73.7	9000	295	213	150	160	200	120	180	77.6	119.4	12.535	0.76	33.0	3.069	0.301		1130	3	6380
TDX8-4200	40	92.5	123	7700	345	251	180	190	250	150	350	128.6	143.2	18.621	1.85	44.8	5.887	0.578		1999	3.8	7240
TDX8-6600	63	124	165	7200	370	266	190	200	250	180	500	155	152.2	23.196	2.51	47.5	7.044	0.691		3338	4.2	11350
TDX8-8400	80	171	228	6600	400	279	200	210	250	180	700	198.4	168.4	31.274	3.56	55.3	8.742	0.858		8431	4.8	15380
TDX8-9011	100	191	254	6100	434	315	230	240	300	180	700	243.5	181.5	43.928	5.39	70.0	14.410	1.414		6401	5.2	16090
TDX8-9015	140	300	400	5500	484	348	250	260	300	200	1200	339.1	196.8	58.095	9.37	92.9	23.377	2.294		6357	5.5	19330
TDX8-9021	200	337	448	4900	538	395	290	310	300	200	1200	458.1	225.8	80.407	15.62	106.8	35.511	3.484		7386	6	23110
TDX8-9026	250	503	669	4400	598	441	320	340	350	250	1900	653	249.2	107.361	27.62	139.5	58.073	5.698	8478	7	27310	
TDX10-5300	50	119	159	7700	345	251	180	190	250	150	350	130.8	144.8	22.584	1.9	44.8	5.887	0.578	1/5	9547	2.8	8750
TDX10-8400	80	159	212	7200	370	266	190	200	250	180	500	156.1	153.2	25.827	2.53	47.5	7.044	0.691		13740	3	13630
TDX10-9011	100	220	225	6600	400	279	200	210	250	180	700	193.5	167	33.102	3.49	55.3	8.742	0.858		30120	3.3	17810
TDX10-9013	125	246	327	6100	434	315	230	240	300	180	700	245.7	182.5	49.205	5.46	70.0	14.410	1.414		26750	3.7	18970
TDX10-9019	180	387	515	5500	484	348	250	260	300	200	1200	344.5	199	67.252	9.58	92.9	23.377	2.294		29000	4.2	25290
TDX10-9023	224	433	576	4900	538	395	290	310	300	200	1200	465.3	228.2	97.421	15.94	106.8	35.511	3.484		33400	5	28300
TDX10-9033	315	647	861	4400	598	441	320	340	350	250	1900	655.5	250.3	127.773	28.18	139.5	58.073	5.698		37650	5.8	37500

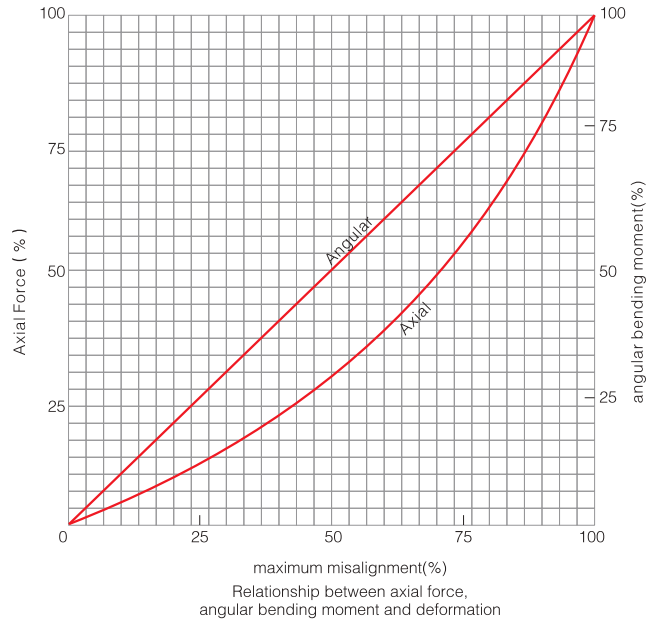
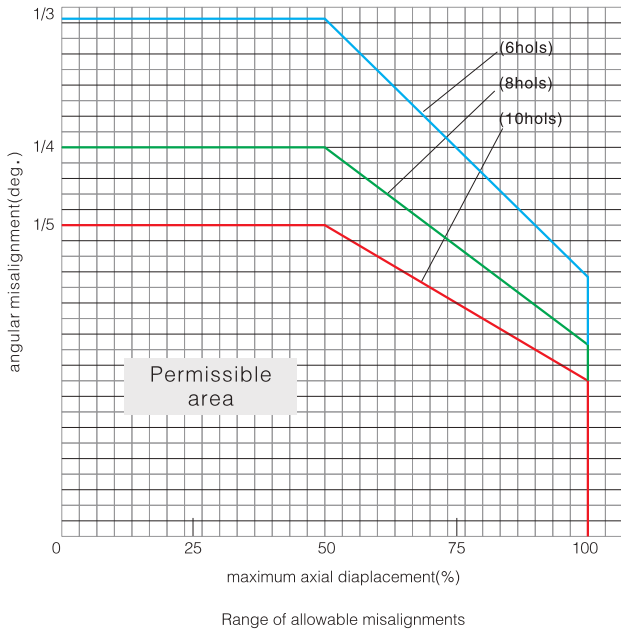
Description of TRUMY coupling balance

1. Owing to precise positioning of coupling parts in design and precise machining, TRUMY high speed flexible disc couplings have been well balanced. The coupling parts should be carefully handled in processes of storage, transportation and installation in order to ensure high dynamic balancing quality. The couplings for delivery tested by dynamic balancing should be aligned with match marks inscribed after balancing, when mounted.
2. To ensure repeatability of balance the rabbets are usually used for centering of the removable parts of a high speed coupling. A great attention should be paid to protecting of those rabbets in processes of storage, transportation and installation. For a few product series diaphragms or discs are combined with the connected parts in a Factory-assembled flexible unit which is not allowed to be disassembled on the site of installation.
3. On the basis of the concrete coupling design and working conditions our company can conduct coupling balancing according either to the company norms or to the procedures corresponding to the standard API 671 alternatively. The coupling balance precision is not lower than ISO1940-G1.6.
4. The maximum allowable speed values listed in the catalogue are company guided ones on the basis of the coupling structure characteristics and balance precision. If a higher speed is needed, please select TRUMY diaphragm coupling series or consult with the sales engineer of our company.

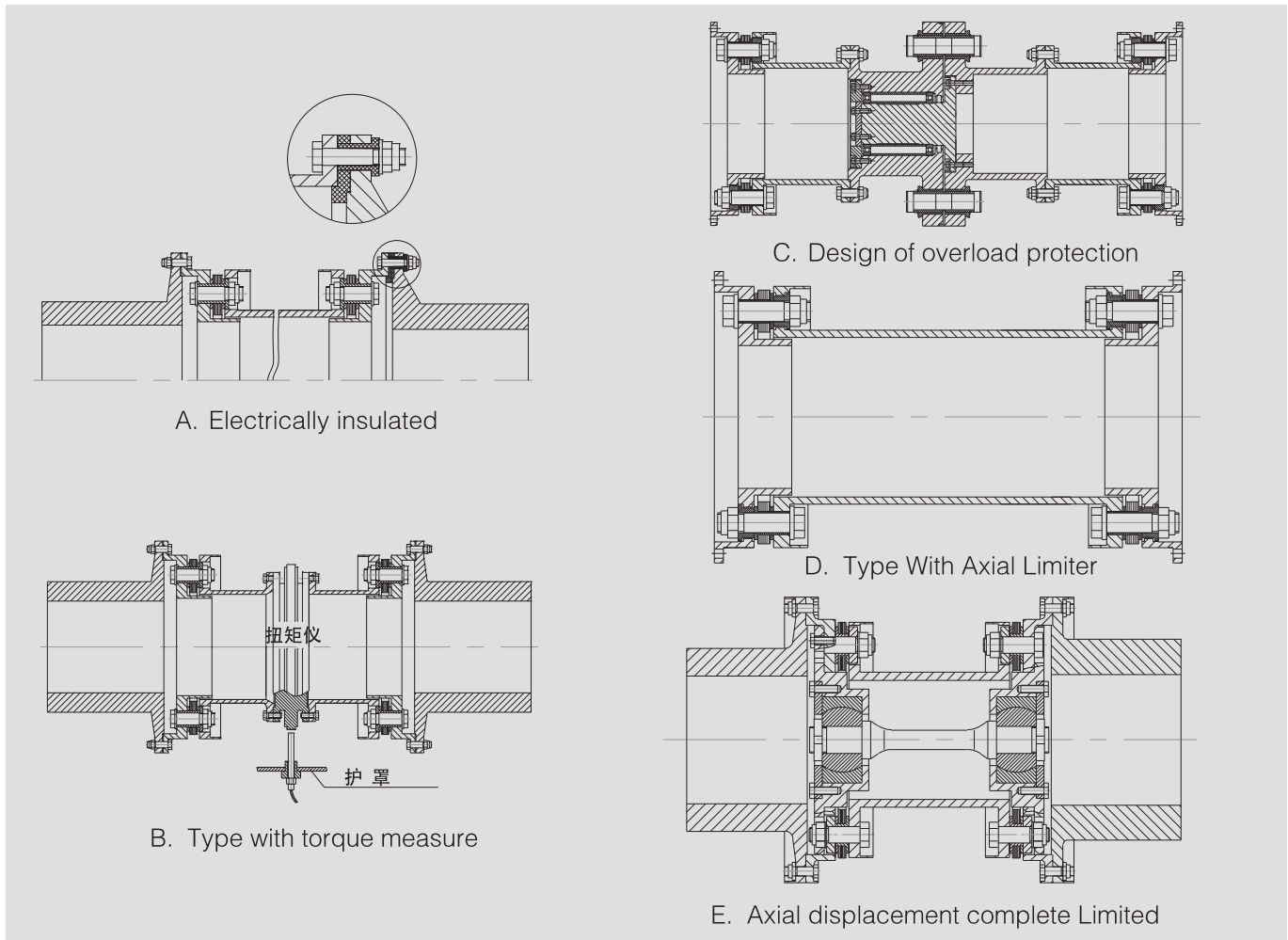
Description of compensating capability, axial force and angular bending moment

Transmitting torque and motion, the coupling in operation has to endure angular and radial misalignments and axial displacement simultaneously, as shown in the figure. The capability for compensating radial misalignment, a function of angular deformation and distance between the ends of shafts, is usually realized by angular deformation of the flexible elements. Deformations of the coupling, when in operation, should not beyond the range of permissible misalignments.

The flexible elements with axial deformation will generate axial bounce force (axial force), while angular deformation will lead to angular bounce moment (angular bending moment). The relation between axial force, angular bending moment and deformation is illustrated as follows:



Specialized design to meet customer particular requirements



- ◆ For pumps, fans, compressors driven by electromotors, internal combustion engines or other middle/low speed applications, please select TRUMY low & middle speed flexible disc coupling series .
- ◆ For some low speed applications TRUMY grid coupling series may be selected.



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