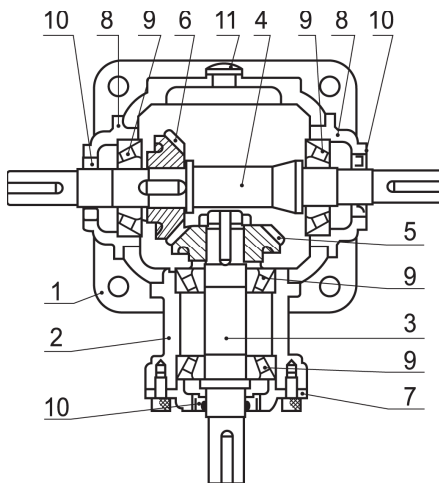




T series spiral bevel gear units

- The exact ratio of T series can be 1:1, 1.5:1, 2:1, 2.5:1, 3:1, 4:1, 5:1.
- Mounting position can be selected by clients.
- Double input shaft.
- Multiple output shaft.
- T series can be used for speed increase and decrease when the ratio is not 1:1.
- The spiral bevel gear can be forward reverse, transmission stability, quiet running, small vibration and large bearing capacity.

Sectional drawings:



1. Housing
2. X-shaft seat
3. X-shaft
4. Y-shaft
5. Spiral bevel gear
6. Spiral bevel gear
7. Cover
8. Cover
9. Bearing
10. Seal
11. Oil immersion lens

T

Direction of rotation:

One X-shaft		Two X-shafts	
Two extended shafts	Three extended shafts	Three extended shafts	4 extended shafts

Note: Direction of rotation of the output shaft varies with that of input shaft.



Relation between input shaft and speed.

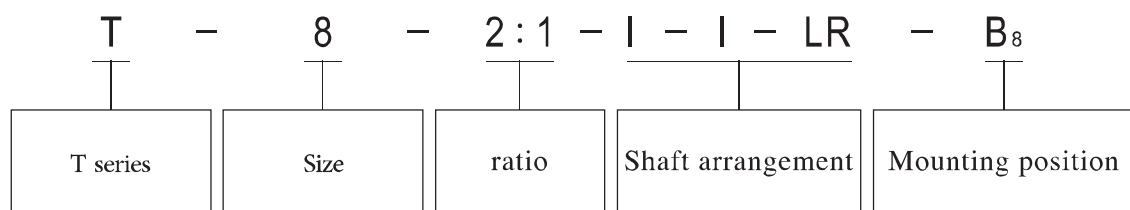
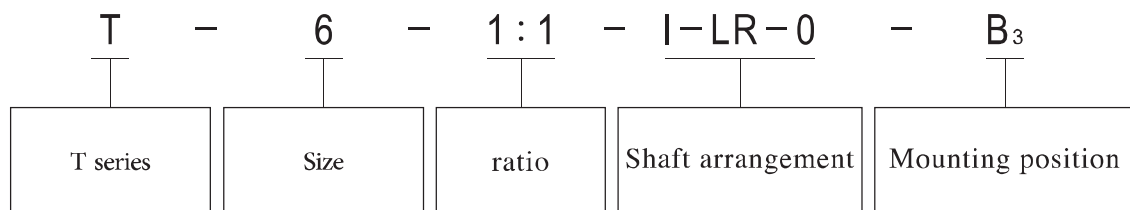
e. g. : $i = 2$

<p>[Reducer]</p> <p>50r/min</p> <p>100r/min</p> <p>When X shaft inputs 100 r/min, Y shaft outputs 50 r/min.</p>	<p>[Increaser]</p> <p>100r/min</p> <p>200r/min</p> <p>When Y-shaft inputs 100 r/min, X shaft outputs 200 r/min.</p>
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Application examples:

<p>Side by side transmission</p>	<p>Lifter</p>
<p>Stereo Garage</p> <p>One gear unit drives both chain pulleys to roll at the same speed.</p>	<p>Amusement</p>
<p>Packer</p>	

Type designation:





Gear unit weight:

Type	T2	T4	T6	T7	T8	T10	T12	T16	T20	T25
Weight(kgs)	2	10	21	32	49	78	124	188	297	488

Radial force on shaft(Fr)(N`m):

i _N	n ₁ (r/min)	T2		T4		T6		T7		T8		T10		T12		T16		T20		T25	
		X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft	X-shaft	Y-shaft
1:1	1450	265	216	833	951	1911	2450	2450	3136	3234	3381	4165	4508	5096	5586	10633	10976				
	1150	323	235	882	1029	2058	2597	2744	3234	3479	3626	4459	4851	5488	6076	11368	11760	15386	15608		
	870	402	255	960	1127	2205	2842	2989	3381	3773	3969	4851	5292	5880	6566	12446	12740	16660	17150	24794	25480
	580	549	314	1078	1323	2499	3185	3381	3822	4263	4459	5488	5880	6713	7301	14014	14504	18816	19404	28028	28910
	400	637	353	1372	1715	3185	3528	4018	4900	4851	5978	6272	7056	7742	8134	15680	16170	21070	21756	31360	32340
	300	696	392	1519	1960	3430	3528	4410	5537	5243	6958	6713	7987	8232	9065	17150	17640	23422	24108	34300	35280
	200	784	441	1911	1960	3430	3528	5096	6272	7889	8820	8575	9604	9261	10290	19600	19894	25970	26754	38612	39788
	100	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11368	12593	22540	22540	28420	32928	39200	49000
	10	980	588	1911	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000
1.5:1	1450			1078	1960	2548	2842	3430	5390	4361	7987	5194	9212	5978	10486	5978	12152	7693	14602		
	1150			1078	1960	3038	3087	4067	5978	5096	8820	6174	10486	7252	12152	6419	13083	8771	17934	12985	24647
	870			1078	1960	3430	3332	4753	6076	6076	8820	7448	11760	8869	14504	6958	14210	9506	19453	13573	29400
2:1	580			1078	1960	3430	3528	5096	6174	7644	8820	9555	11760	11466	14504	7840	16072	10780	22001	15680	33222
	400			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	8820	17934	12005	24598	17542	37142
2.5:1	300			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	9604	19600	13132	27342	19159	40474
	200			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	10829	22148	14798	30282	21658	45766
3:1	100			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	13328	22540	18228	33320	26656	49000
	10			1078	1960	3430	3528	5096	6272	8428	8820	9996	11760	11858	14504	22540	22540	28420	33320	39200	49000

Note: For lower output speed, apply the largest Fr2 value in each type.

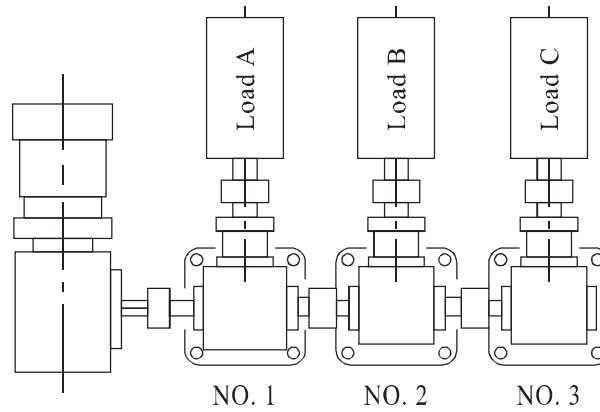
Driven machine factor f1:

Load characteristic	Operating hours per day (h)		
	≤2	2~10	10~24
Uniform	1.00(1.00)	1.00(1.25)	1.25(1.50)
Moderate	1.00(1.25)	1.25(1.50)	1.50(1.75)
Heavy	1.25(1.50)	1.50(1.75)	1.75(2.00)

Note: Apply values in the brackets when starts per hour are 10 times or more.



Examples of type selection:



Torque loaded on each gearbox is 196Nm, uniform shock, duration of operation is 8 hour per day, service factor $f_1=1.25$, input speed is 300rpm, ratio is 1 : 1.

Calculate according to formula:

$$\text{Required torque of each gearbox } T_2 \geq T_1 \times f_1 = 196 \times 1.25 = 245 \text{ N} \cdot \text{m}$$

No.1 gearbox No.1 gearbox carry torque 245Nm, but No.2 and No.3 gearbox need transfer torque through No.1, Consequently No.1 gearbox should carry torque 735Nm (245Nm+245Nm+245Nm), select T 12 according to transmission capacity table.

No.2 gearbox No.3 gearbox still transfers torque of No.3 gearbox besides torque of 245Nm,so,the total torque is 490Nm(245Nm+245Nm),select T10 according to transmission capacity table.

No.3 gearbox Required torque is more than 245Nm because of only load C according to transmission capacity table.

Notes:

1. If ratio is not 1:1, if input speed on single-extendable shaft, output speed will be reduced; if input speed on double-extendable shaft, output speed will be reduced. When mounting position and dimension are determined, the position of shafts can not be changed.
2. Several T boxes are linked, please verify the load capacity of these boxes.