Precision Planetary Reducer

High-end Structure Design

+

TF SERIES

+

Premium Performance

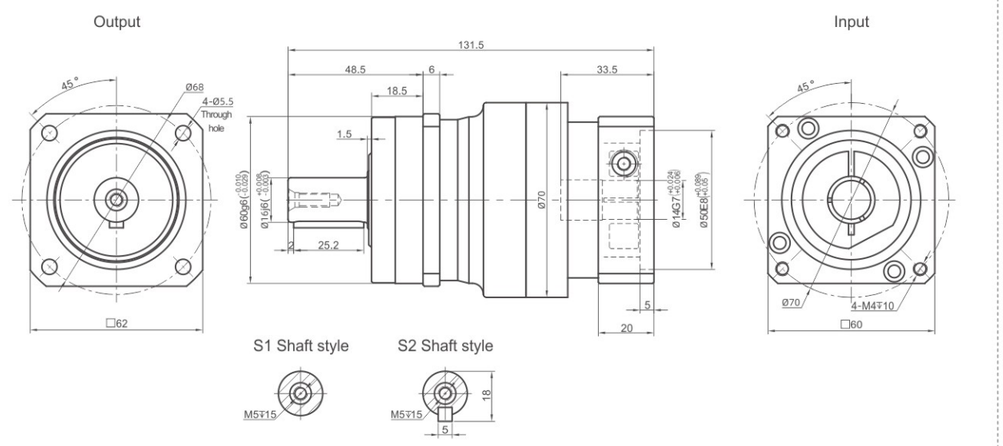
TF series planetary reducer has the characteristics of high rigidity, high precision (single stage can achieve less than 1 arcmin), high transmission efficiency (single stage at 97% -98%), high torque / volume ratio, and lifetime maintenance-free.

GEARKO®

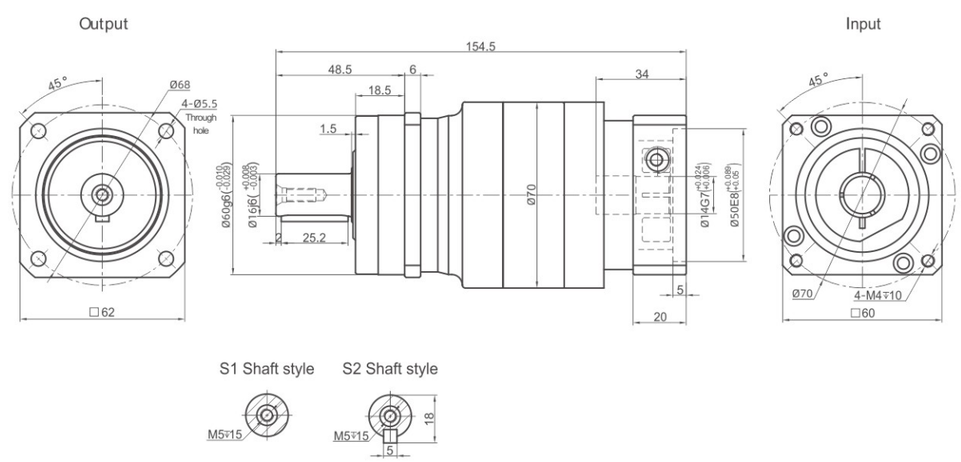
DRIVES THE PRECISION

TF060 Series

TF060 One Stage



TF060 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF060			One Stage								Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	52	50	58	55	50	45	-	42	52	50	58	55	50	45	58	55	50	45	42
Emergency Stop Torque	T_2	Nm	T1×3								T1×3										
Nominal Input Speed	S_1	rpm	5000								5000										
Maximum Input Speed	S_2	rpm	10000								10000										
Maximum Output Torque	T_4	Nm	T1×3×60%								T1×3×60%										
Maximum Radial Force	F_a	N	1400								1400										
Maximum Axial Force	F_b	N	1100								1100										
Torsional Rigidity	–	Nm/arcmin	7								7										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	30000								30000										
Noise	–	dB	⩽58								⩽60										
Weight	–	Kg	1.6								2.1										
Backlash	P0	arcmin	-								-										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	0.16	0.14	0.13						0.13										

Notes:

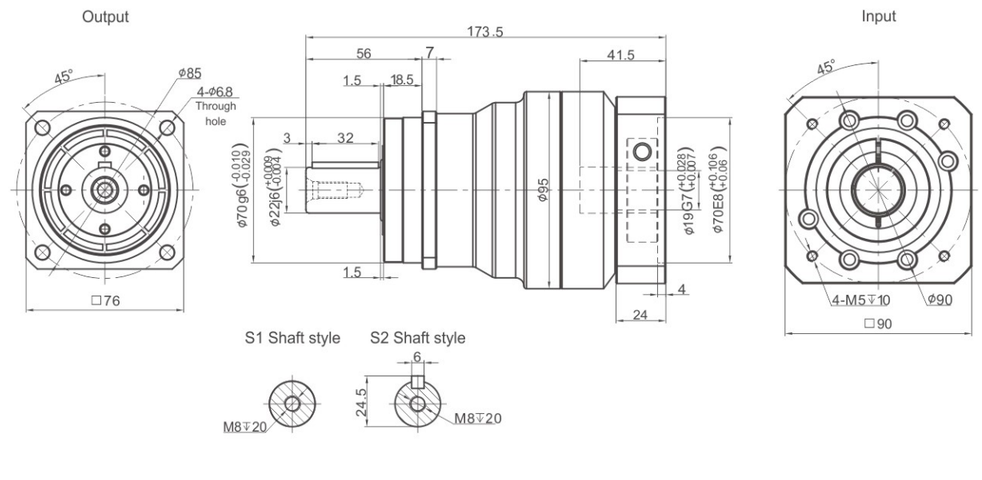
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

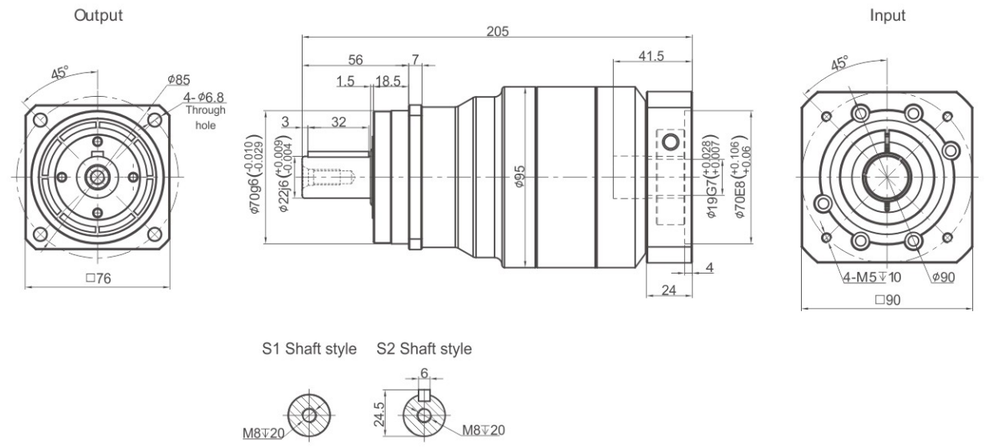
TF Series - High-end Design and Premium Performance

TF075 Series

TF075 One Stage



TF075 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF075			One Stage								Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102
Emergency Stop Torque	T_2	Nm	$T_1\times3$								$T_1\times3$										
Nominal Input Speed	S_1	rpm	4000								4000										
Maximum Input Speed	S_2	rpm	8000								8000										
Maximum Output Torque	T_4	Nm	$T_1\times3\times60\%$								$T_1\times3\times60\%$										
Maximum Radial Force	F_a	N	4100								4100										
Maximum Axial Force	F_b	N	3700								3700										
Torsional Rigidity	–	Nm/arcmin	14								14										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	30000								30000										
Noise	–	dB	⩽60								⩽60										
Weight	–	Kg	3.9								5.1										
Backlash	P0	arcmin	⩽1								–										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	kg.cm²	0.61	0.48	0.47	0.45		0.44			0.47								0.44		

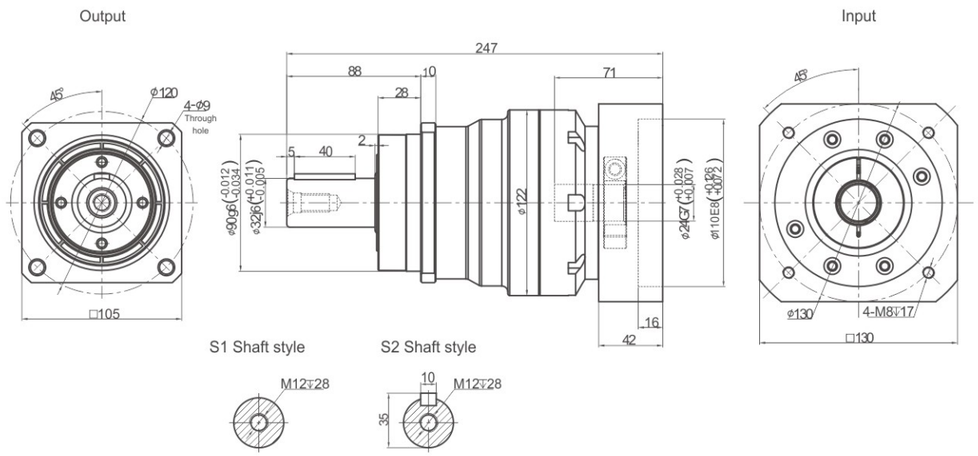
Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

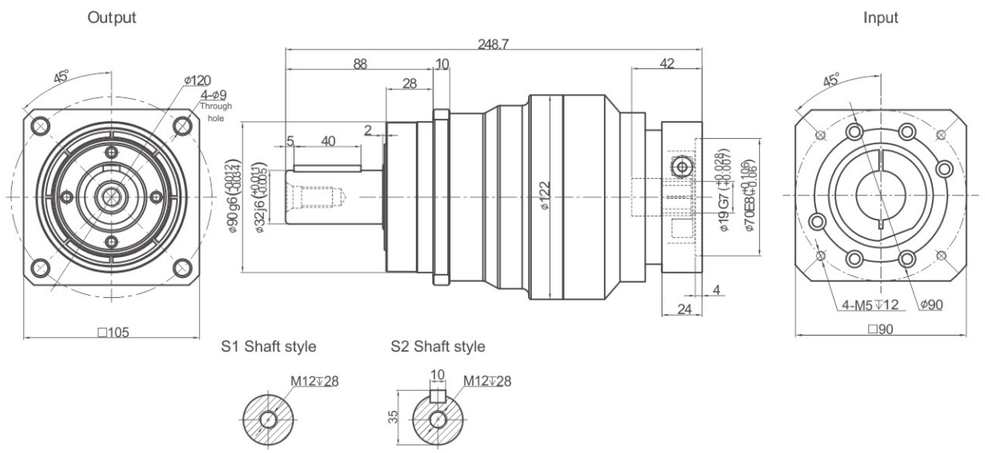
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TF100 Series

TF100 One Stage



TF100 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF100			One Stage																		
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	210	290	333	310	300	260	-	235	210	290	333	310	300	260	333	310	300	260	235
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$											$T_1 \times 3$							
Nominal Input Speed	S_1	rpm	4000											4000							
Maximum Input Speed	S_2	rpm	8000											8000							
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$											$T_1 \times 3 \times 60\%$							
Maximum Radial Force	F_a	N	9200											9200							
Maximum Axial Force	F_b	N	5820											5820							
Torsional Rigidity	–	Nm/arcmin	25											25							
Efficiency	η	%	⩾97											⩾94							
Service Life	–	h	30000											30000							
Noise	–	dB	⩽63											⩽63							
Weight	–	Kg	8.9											8.1							
Backlash	P0	arcmin	⩽1											⩽3							
	P1		⩽3											⩽5							
	P2		⩽5											⩽7							
Operating Temperature	–	℃	-20~90											-20~90							
Lubrication	–		Synthetic Grease											Synthetic Grease							
Protection Class	–		IP65											IP65							
Mounting Position	–		Any Direction											Any Direction							
Moment of Inertia	J	kg.cm²	3.25	2.74	2.71	2.65	2.62	2.58	–	2.57	0.47			0.44							

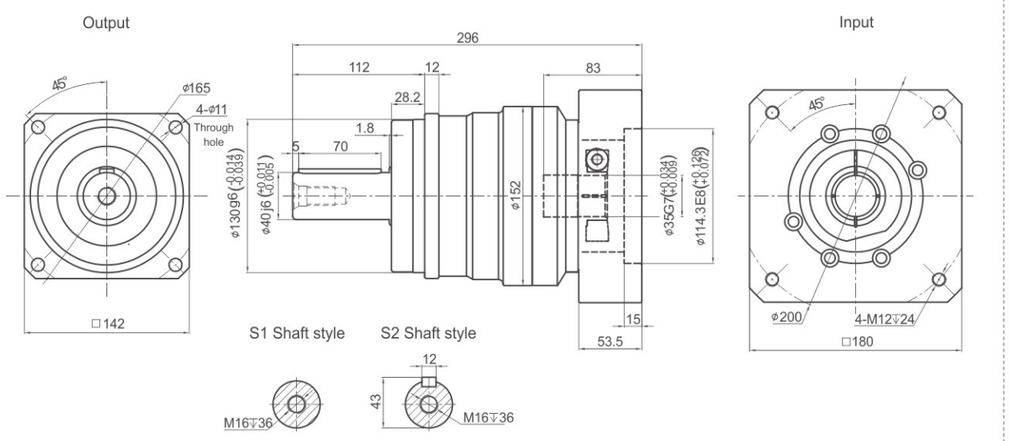
Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

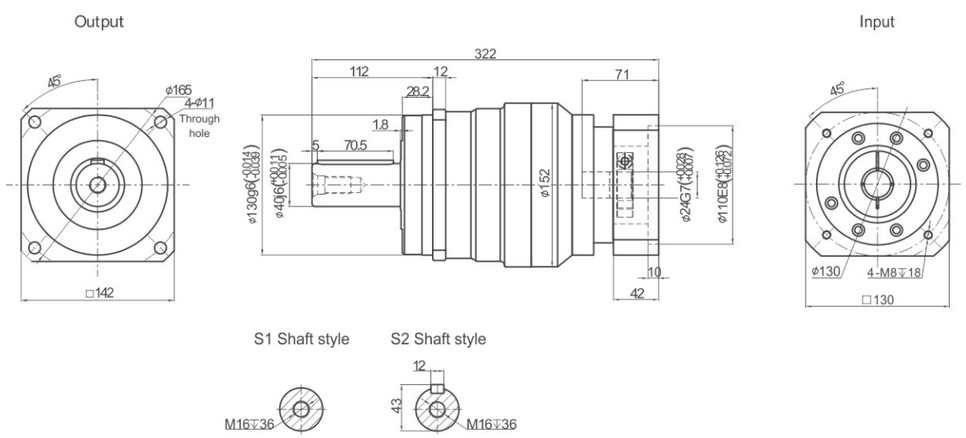
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TF140 Series

TF140 One Stage



TF140 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF140			One Stage								Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	340	545	650	600	555	500	–	460	340	545	650	600	555	500	650	600	555	500	460
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	3000								3000										
Maximum Input Speed	S_2	rpm	6000								6000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	14000								14000										
Maximum Axial Force	F_b	N	11400								11400										
Torsional Rigidity	–	Nm/arcmin	50								50										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	30000								30000										
Noise	–	dB	⩽65								⩽65										
Weight	–	Kg	18								16.6										
Backlash	P0	arcmin	⩽1								⩽3										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	9.2	7.5	7.4	7.2	7.1	7.0	-	7.0	2.71		2.57								

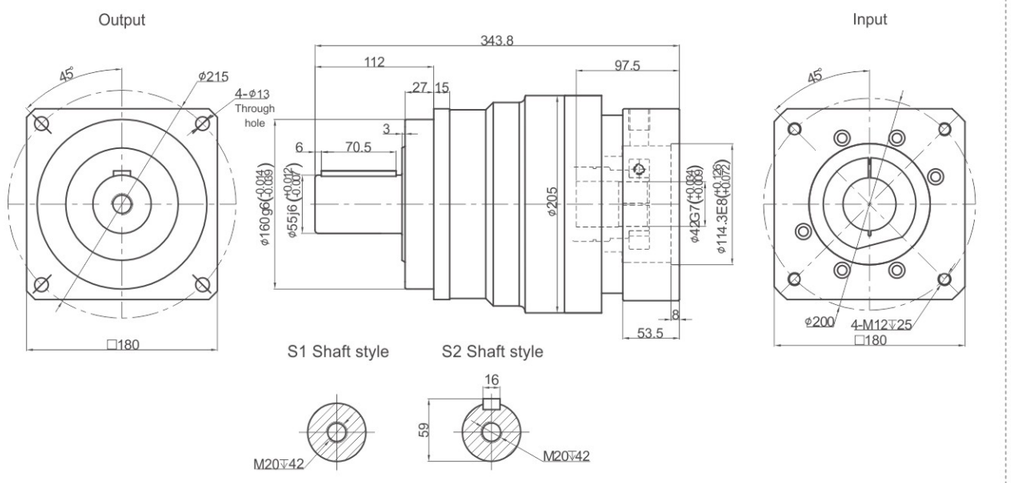
Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

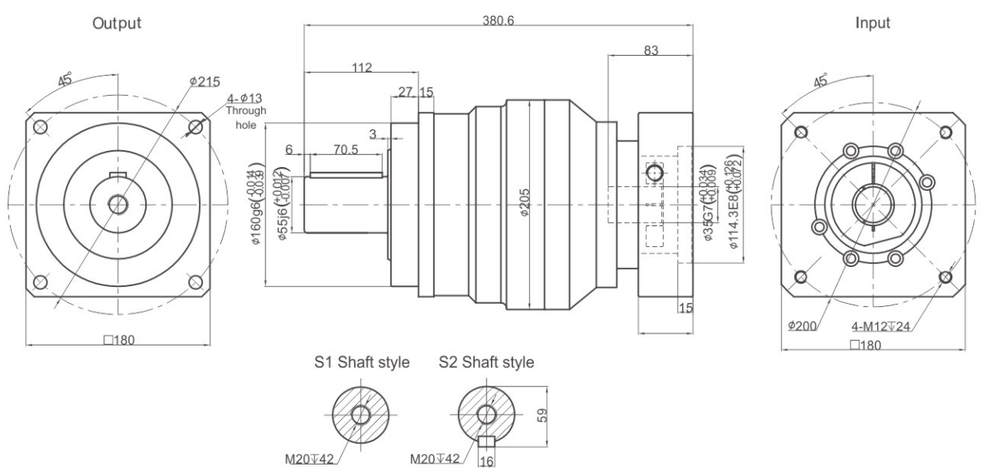
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TF180 Series

TF180 One Stage



TF180 Two Stage



Performance Data

The TF series reducer targets those applications requiring extremely smooth operation even at high axial or radial load at high speed. The enhanced load bearing capacity guarantees its design precision at almost any demanding condition.

TF180			One Stage								Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	590	1050	1200	1108	1100	1000	–	910	590	1050	1200	1108	1100	1000	1200	1108	1100	1000	910
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	3000								3000										
Maximum Input Speed	S_2	rpm	6000								6000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	18000								18000										
Maximum Axial Force	F_b	N	19500								19500										
Torsional Rigidity	–	Nm/arcmin	145								145										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	30000								30000										
Noise	–	dB	⩽67								⩽67										
Weight	–	Kg	35.5								42										
Backlash	P0	arcmin	⩽1								⩽3										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51	7.42		7.03								

Notes:

- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.