GEARKO®

REDUCER CATALOG

PASSION FOR PRECISION TRANSMISSION

GEARKO 2023 REV 1.0

GEARKO®

www.gearkoreducer.com

REDUCER CATALOG

PRECISION PLANETARY REDUCER

High Precision / High Rigidity / High Reliability

Advanced Technology

High-end Design

Customer Support

Know-how Process

"We customize high precision, high rigidity, high reliability planetary reducers for our customers."

High Output Torque

Light Reliability

Maintenance Free

Customization Service

GEARKO®

DRIVES THE PRECISION

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Gearbox Selection Reference Table*

Gearbox Selection Reference Table											
Product Line Series	TB	TBR	TD	TDR		TE	TER	TF	TCB	TCBR	TCE
Backlash Range (for single stage)	⩽5	⩽6	⩽5	⩽6		⩽5	⩽6	⩽5	⩽5	⩽8	⩽5
Lowest Backlash Available (for single stage)	⩽1	⩽2	⩽1	⩽2		⩽3	⩽4	⩽1	⩽3	⩽4	⩽3
Frame Size	042/060/090/ 115/142/180/ 220 (available for customization for beyond 220)	042/060/090/ 115/142/180	047/064/090/ 110/140/200 /255	064/090 / 110/140		050 / 070 / 090 / 120/155/205 /235	070 / 090 / 120/155	060 /075/100 /140 /180	042/060/090/120/ 140/180	042/060/090/120	070/090/120/155
Double Stage Available	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
All Gearing Helical	Yes	Helical & Spiral Bevel	Yes	Helical & Spiral Bevel		Yes	Helical & Spiral Bevel	Yes	Yes	Yes	Yes
Bearing Load Capacity Rating	High	High	High	High		High	High	Very High	High	High	High
Lubricated for Life	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Efficiency (for one stage)	⩾97%	⩾95%	⩾97%	⩾95%		⩾97%	⩾95%	⩾97%	⩾97%	⩾95%	⩾97%
One-piece Ring Gear & Housing	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Housing Material	Steel	Steel	Steel	Steel		Steel	Steel	Steel	Steel	Steel	Steel
Housing Nickel Plating	Yes	Yes	Yes	Yes		Yes	Yes	Yes	No	No	No
One-piece Output Shaft & Planet Carrier	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
One-piece Sun Gear and Input Collet	Yes	Yes	Yes	Yes		Yes	Yes	Yes	No	No	No
Customized Flange for Motor Installation	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Page Range	05-18	19-30	31-44	45-52		53-66	67-74	75-84	85-96	97-104	105-112

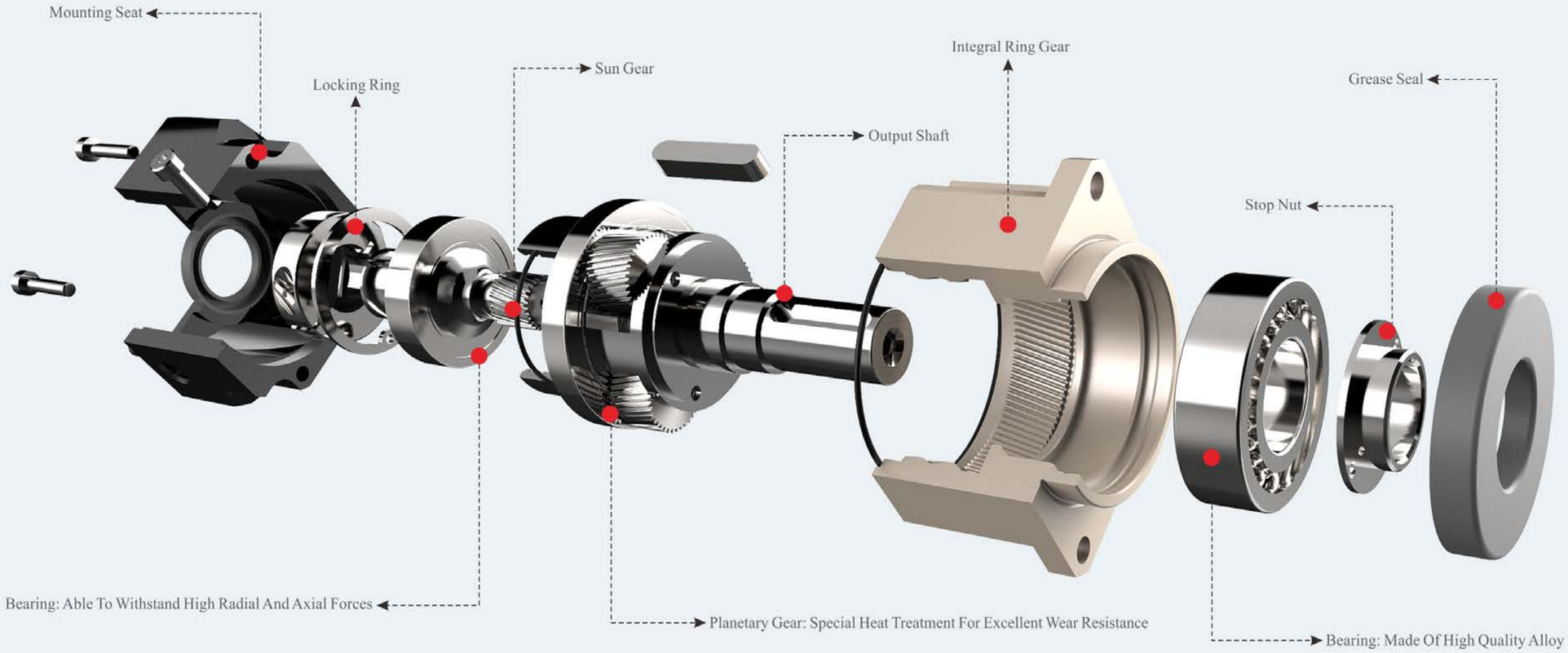
*All technical specifications in this brochure were correct at the time of printing. They are subject to change without notice as part of our continuous improvement initiative.

ADVANCED TECHNOLOGY TO MAKE THE DRIVE MORE PRECISELY

GEARKO QUALITY GUARANTEE STABLE AND EFFICIENT PERFORMANCE

TB - 060 - 10 - S1 - P1

Backlash	P0 - Micro Backlash P1 - Reduced Backlash P2 - Standard Backlash
Output Style	S1 - Smooth Output Shaft S2 - Output Shaft with Keyslot
Ratio	One Stage 3、4、5、6、7、8、10 Two Stages 15□ 20□ 25□ 30□ 35□ 40□ 50 60□ 70□ 80□ 100
Frame Size	060、090、115 etc
Series Name	TB, TD, TE, TF, TC



Precision Planetary Reducer

Precise & Efficient

+

TB/TBR SERIES

+

Versatile Applications

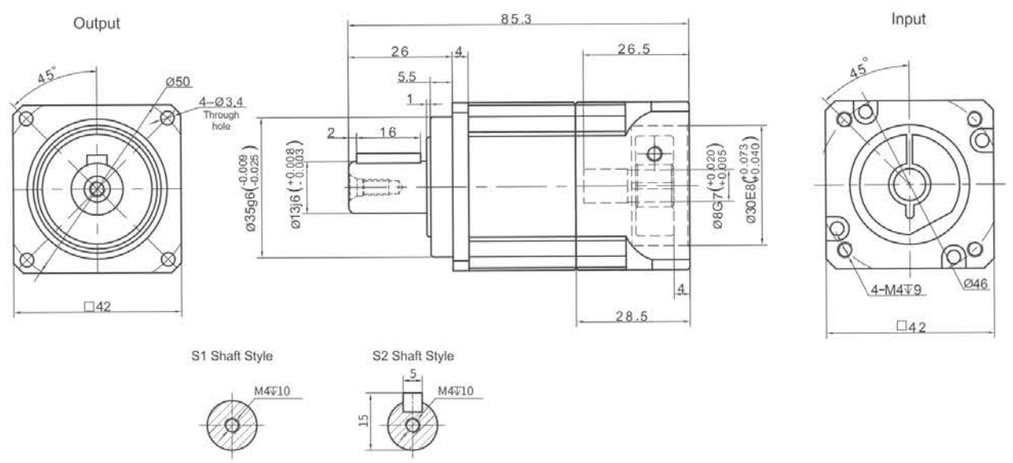
TB/TBR Series planetary reducer achieves maximum efficiency even at the highest speed and load.
Robust structure and low backlash enable it to be applied in almost any shaft-output applications.

GEARKO®

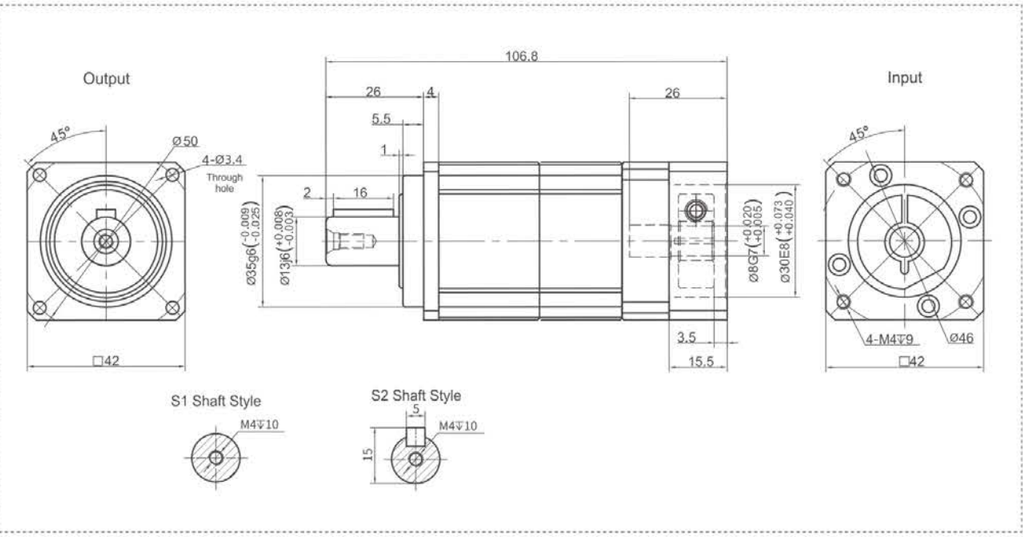
DRIVES THE PRECISION

TB042 Series

TB042 One Stage



TB042 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB042			One Stage								Two Stage									
Speed Ratio	i		–	4	5	6	7	8	9	10	–	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	–	19	20	19	19	17	-	14	–	19	20	19	19	17	20	19	19	17	14
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$									
Nominal Input Speed	S_1	rpm	5000								5000									
Maximum Input Speed	S_2	rpm	10000								10000									
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$									
Maximum Radial Force	F_a	N	780								780									
Maximum Axial Force	F_b	N	390								390									
Torsional Rigidity	η	Nm/arcmin	3								3									
Efficiency		%	⩾97								⩾94									
Service Life	–	h	20000								20000									
Noise	–	dB	⩽55								⩽55									
Weight	–	Kg	0.5								0.7									
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	0.03								0.03									

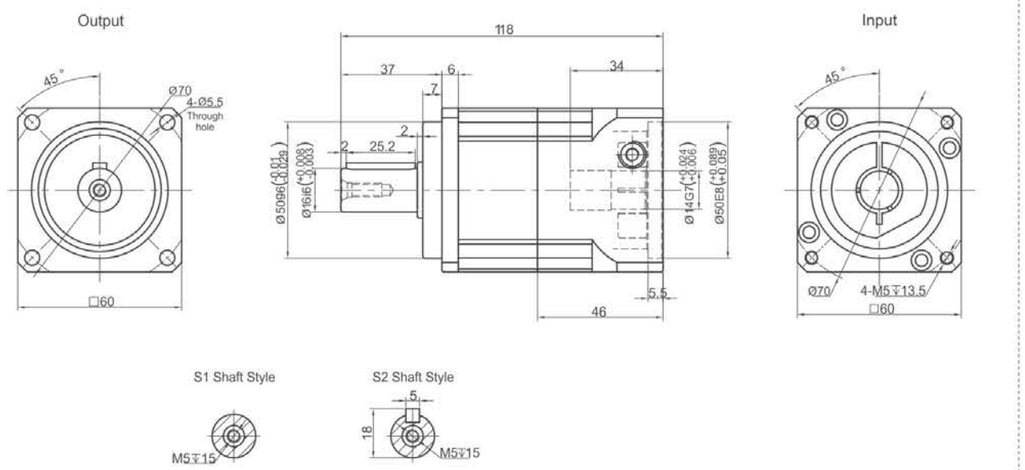
Notes:

- 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.

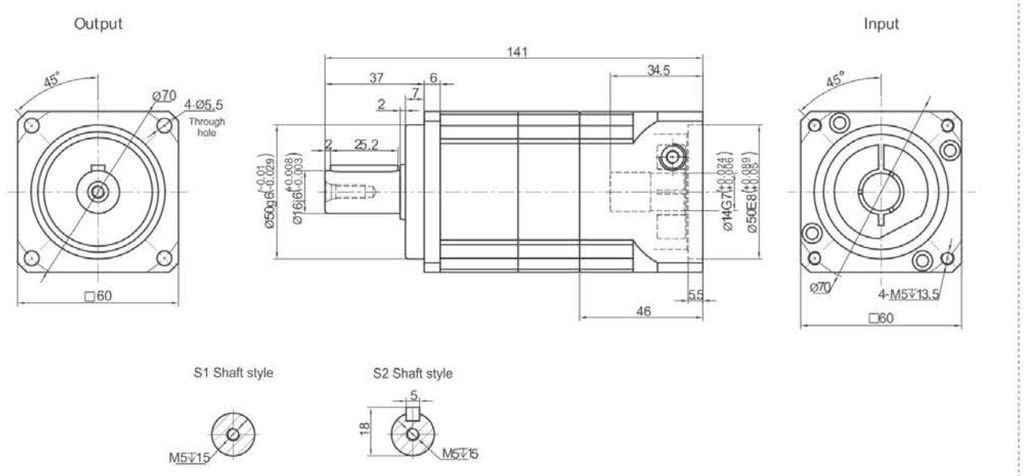
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TB060 Series

TB060 One Stage



TB060 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB060			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	52	50	58	55	50	45	-	42	52	50	58	58	50	45	58	55	50	45	42	
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$											$T_1 \times 3$								
Nominal Input Speed	S_1	rpm	5000											5000								
Maximum Input Speed	S_2	rpm	10000											10000								
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$											$T_1 \times 3 \times 60\%$								
Maximum Radial Force	F_a	N	1530											1530								
Maximum Axial Force	F_b	N	765											765								
Torsional Rigidity	-	Nm/arcmin	7											7								
Efficiency	η	%	≥97											≥94								
Service Life	–	h	20000											20000								
Noise	–	dB	≤58											≤60								
Weight	–	Kg	1.3											1.9								
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	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.

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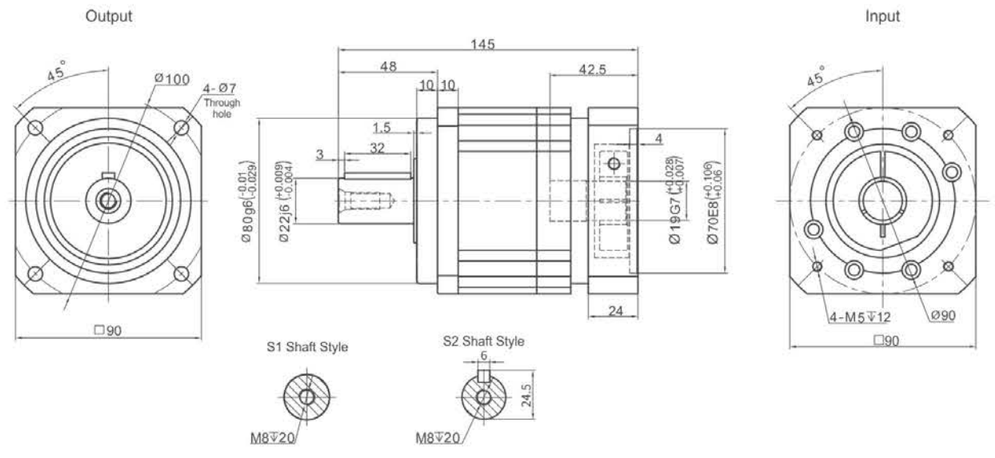
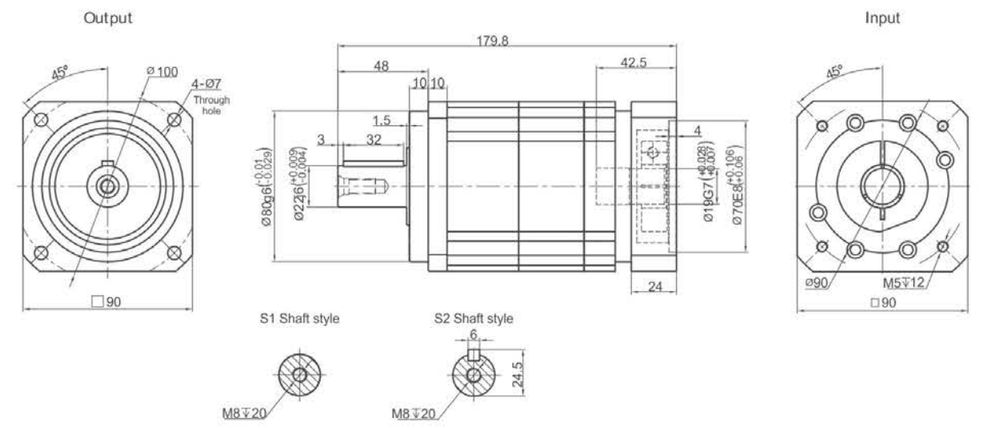
TB090 Series

TB090 One Stage



TB090 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB090			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	$T_1 \times 3$										$T_1 \times 3$								
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	3250										3250								
Maximum Axial Force	F_b	N	1625										1625								
Torsional Rigidity	η	Nm/arcmin	14										14								
Efficiency		%	⩾97										⩾94								
Service Life	–	h	20000										20000								
Noise	–	dB	⩽60										⩽63								
Weight	–	Kg	3.6										4.5								
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	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.

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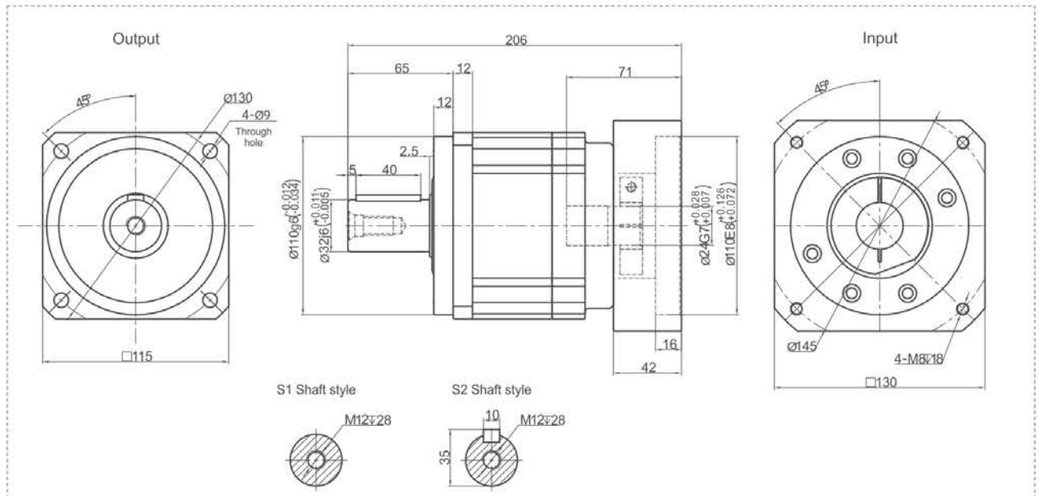
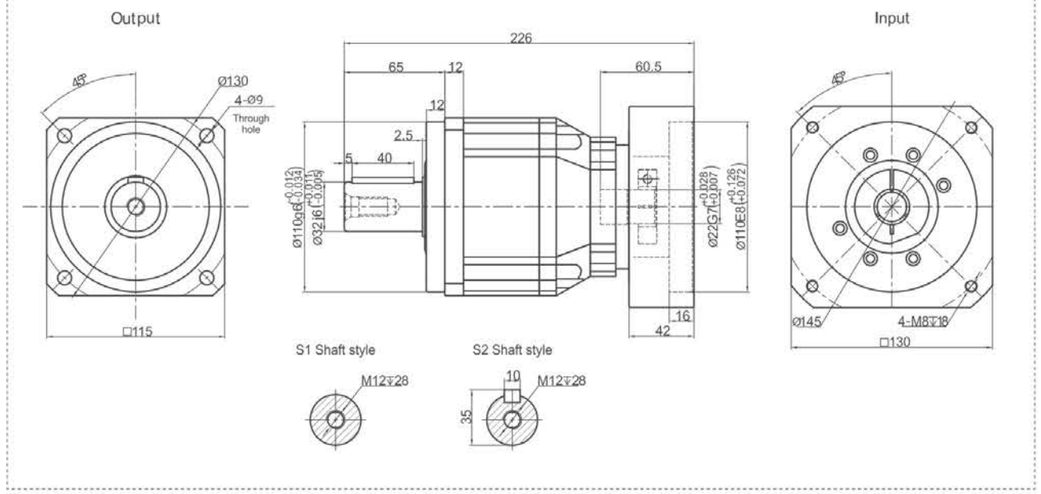
TB115 Series

TB115 One Stage



TB115 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB115			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	6700											6700								
Maximum Axial Force	F_b	N	3350											3350								
Torsional Rigidity	η	Nm/arcmin	25											25								
Efficiency		%	⩾97											⩾94								
Service Life	–	h	20000											20000								
Noise	–	dB	⩽63											⩽63								
Weight	–	Kg	8.5											9.5								
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								

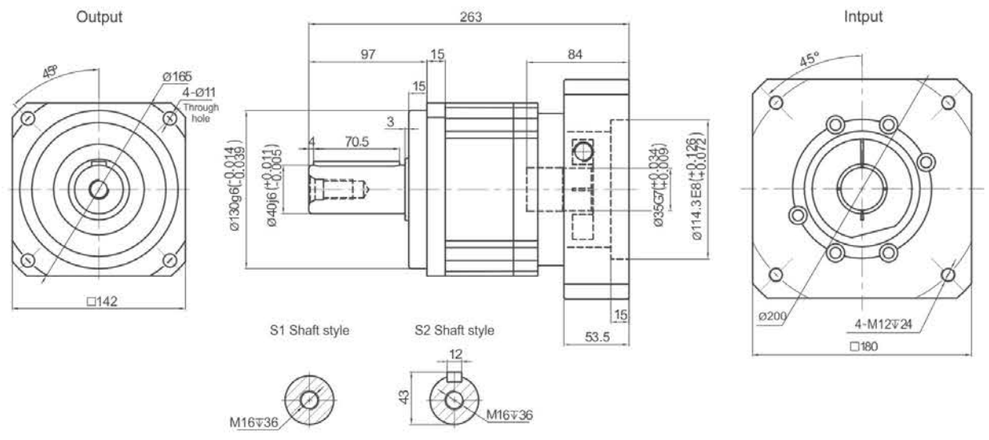
Notes:

- 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.

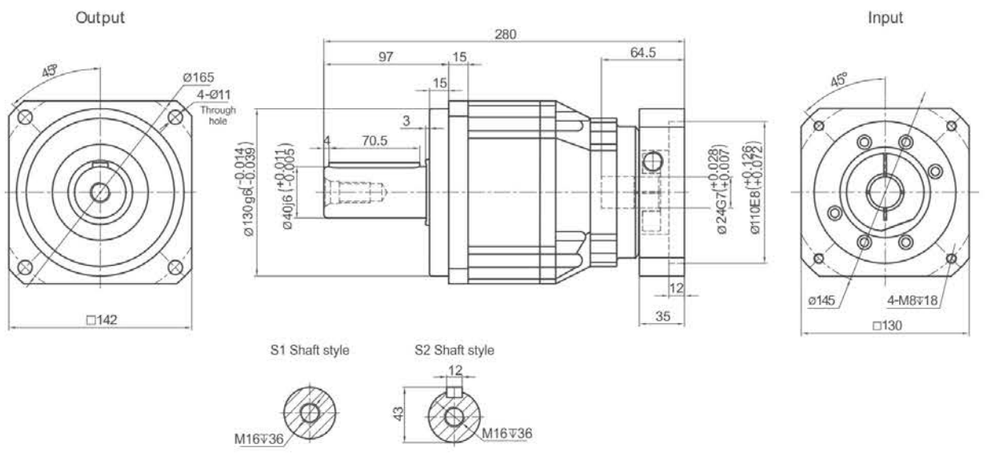
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TB142 Series

TB142 One Stage



TB142 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB142			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	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	9400											9400								
Maximum Axial Force	F_b	N	4700											4700								
Torsional Rigidity	η	Nm/arcmin	50											50								
Efficiency		%	⩾97											⩾94								
Service Life	–	h	20000											20000								
Noise	–	dB	⩽65											⩽65								
Weight	–	Kg	16.5											16.4								
Backlash	P0	arcmin	⩽1											⩽3								
	P1		⩽3											⩽5								
	P2		⩽5											⩽10								
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	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	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.

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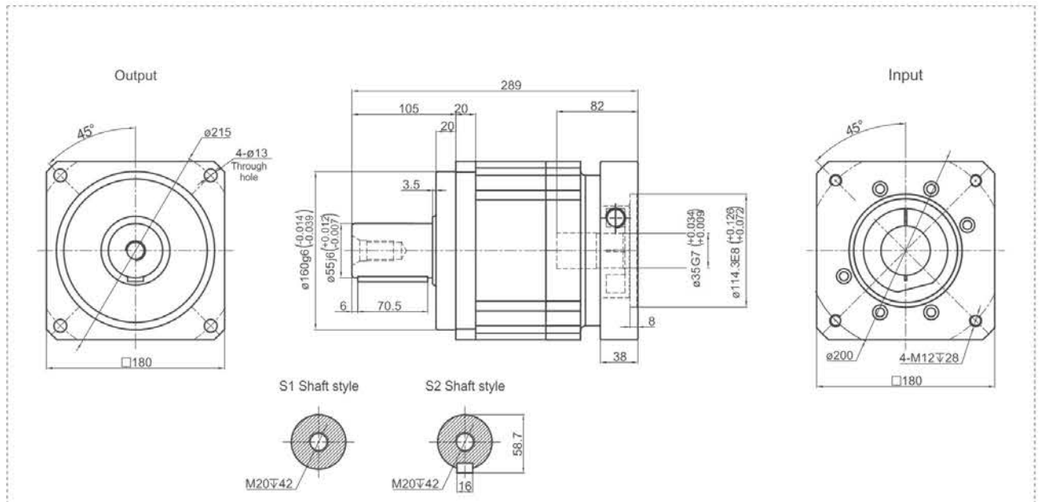
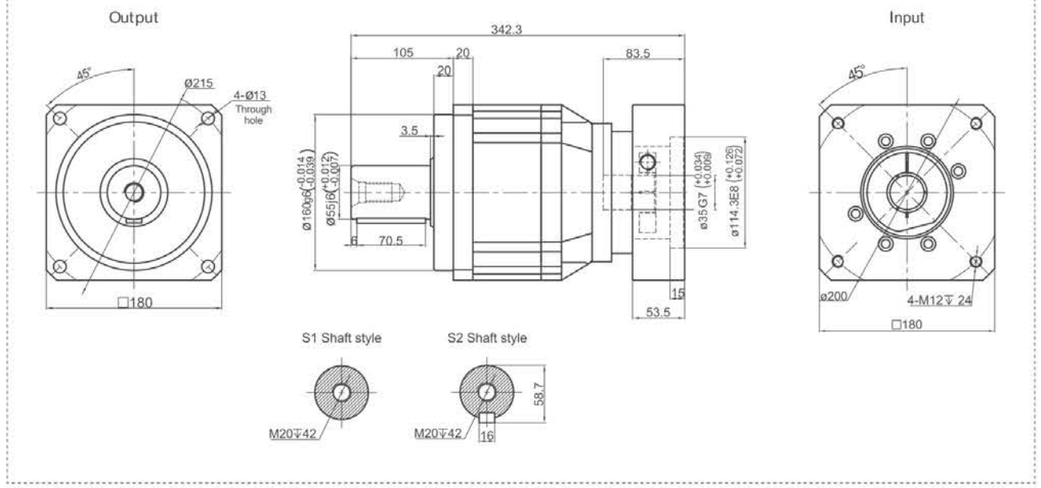
TB180 Series

TB180 One Stage



TB180 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB180			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	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	14500								14500											
Maximum Axial Force	F_b	N	7250								7250											
Torsional Rigidity	η	Nm/arcmin	145								145											
Efficiency		%	⩾97								⩾94											
Service Life	–	h	20000								20000											
Noise	–	dB	⩽66								⩽66											
Weight	–	Kg	27								34											
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.

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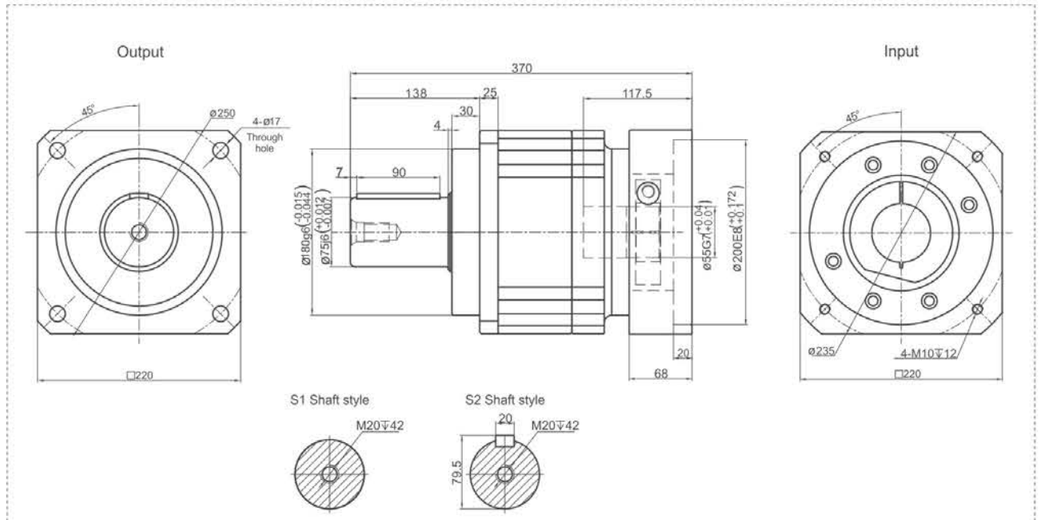
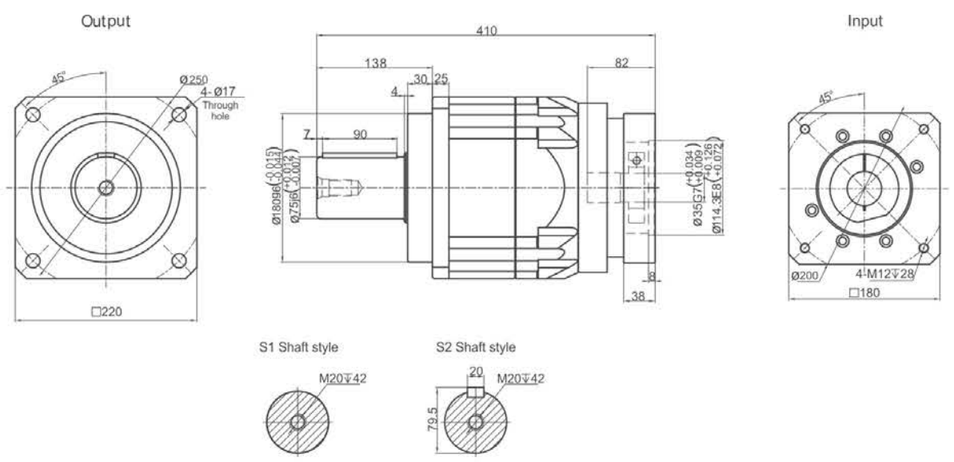
TB220 Series

TB220 One Stage



TB220 Two Stage



Performance Data

The TB series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TB220			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	1150	1700	2008	1900	1810	1600	-	1550	1150	1700	2008	1900	1810	1600	2008	1900	1810	1600	1550	
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$											
Nominal Input Speed	S_1	rpm	2000								2000											
Maximum Input Speed	S_2	rpm	4000								4000											
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$											
Maximum Radial Force	F_a	N	50000								50000											
Maximum Axial Force	F_b	N	25000								25000											
Torsional Rigidity	–	Nm/arcmin	225								225											
Efficiency	η	%	⩾97								⩾94											
Service Life	–	h	20000								20000											
Noise	–	dB	⩽70								⩽70											
Weight	–	Kg	51.5								63.5											
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	69.61	54.37	53.27	51.72	50.97	50.84	–	50.56	23.29			22.51								

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.

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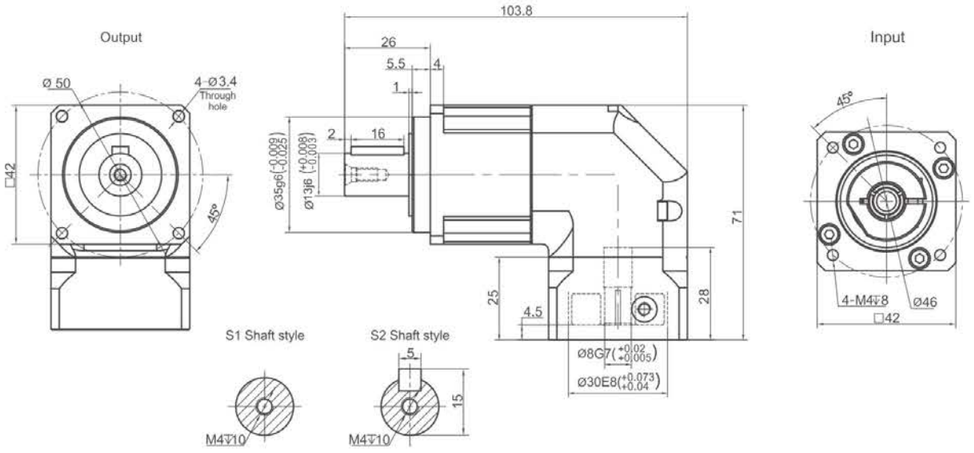
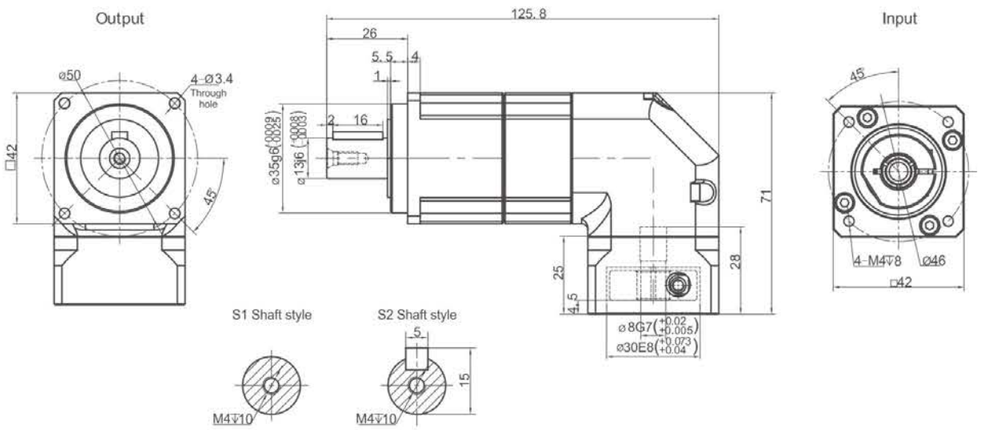
TBR042 Series

TBR042 One Stage



TBR042 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR042			One Stage								Two Stage									
Speed Ratio		i	–	4	5	6	7	8	9	10	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	–	15	18	18	19	17	–	14	15	18	18	19	17	18	18	19	17	14
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$									
Nominal Input Speed	S_1	rpm	5000								5000									
Maximum Input Speed	S_2	rpm	10000								10000									
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$									
Maximum Radial Force	F_a	N	780								780									
Maximum Axial Force	F_b	N	390								390									
Torsional Rigidity	–	Nm/arcmin	3								3									
Efficiency	η	%	⩾95								⩾92									
Service Life	–	h	20000								20000									
Noise	–	dB	⩽61								⩽61									
Weight	–	Kg	0.7								0.9									
Backlash	P0	arcmin	–								–									
	P1		⩽4								⩽7									
	P2		⩽6								⩽9									
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	$kg.cm^2$	0.09								0.09									

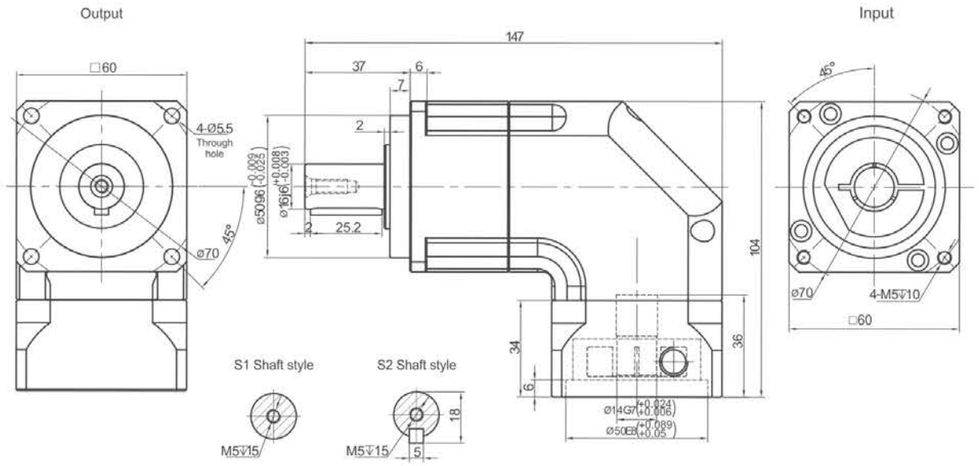
Notes:

- 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.

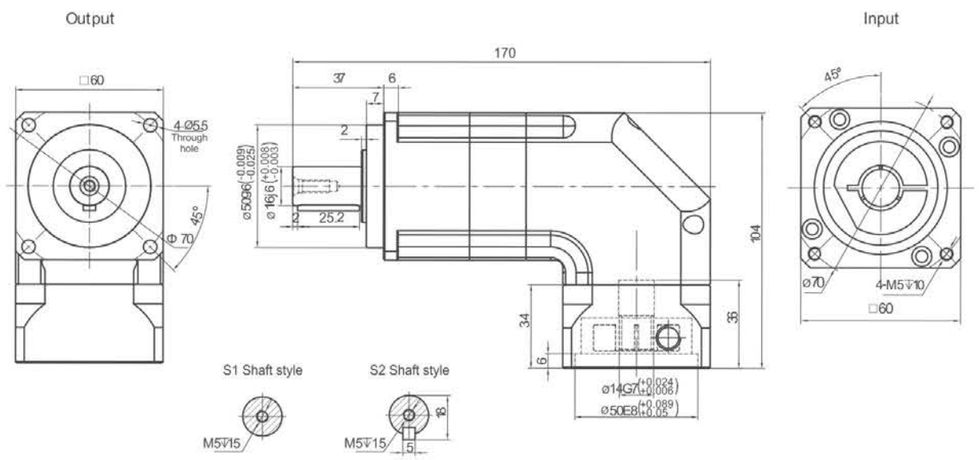
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR060 Series

TBR060 One Stage



TBR060 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR060			One Stage		Two Stage
Speed Ratio	i		3 4 5 6 7 8 9 10 12 14 16 20 25 30 35 40 50 60 70 80 100 120 140 160 180 200		
Nominal Output Torque	T_1	Nm	50 48 58 55 50 45 - 42 55 42 45 42 58 55 50 45 58 55 50 45 42 55 50 45 - 42		
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$		$T_1 \times 3$
Nominal Input Speed	S_1	rpm	5000		5000
Maximum Input Speed	S_2	rpm	10000		10000
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$		$T_1 \times 3 \times 60\%$
Maximum Radial Force	F_a	N	1530		1530
Maximum Axial Force	F_b	N	765		765
Torsional Rigidity	–	Nm/arcmin	7		7
Efficiency	η	%	⩾95		⩾92
Service Life	–	h	20000		20000
Noise	–	dB	⩽63		⩽63
Weight	–	Kg	2		2.5
Backlash	P0	arcmin	-		-
	P1		⩽4		⩽7
	P2		⩽6		⩽9
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	0.35	0.07	0.09

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.

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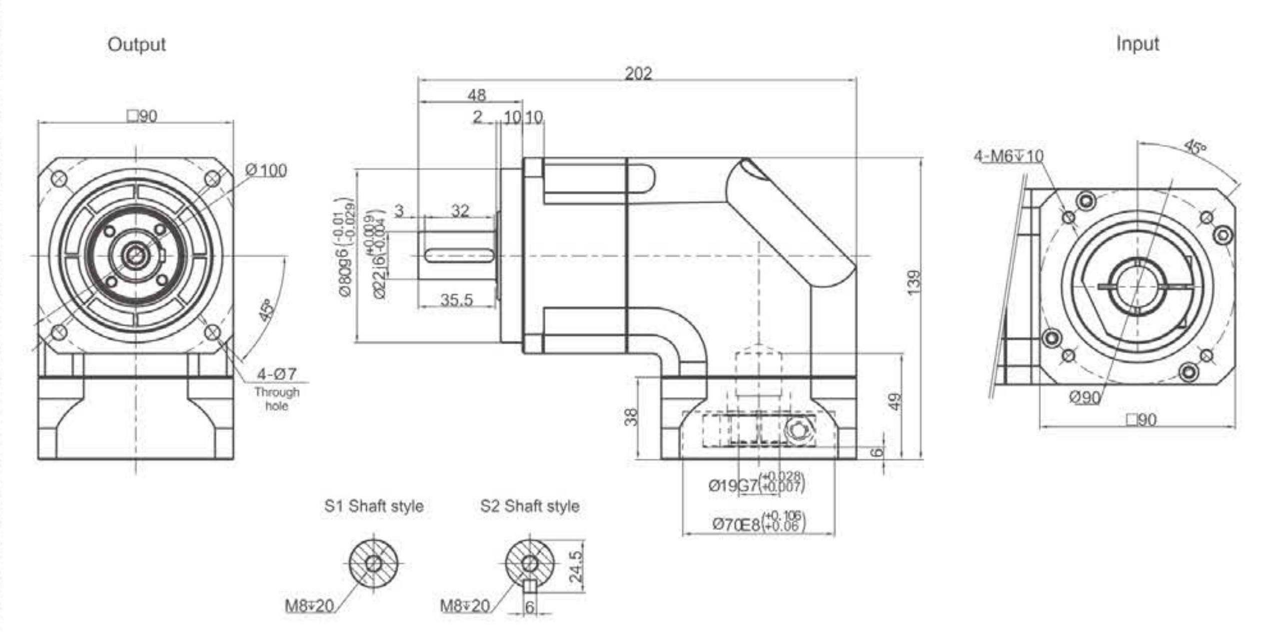
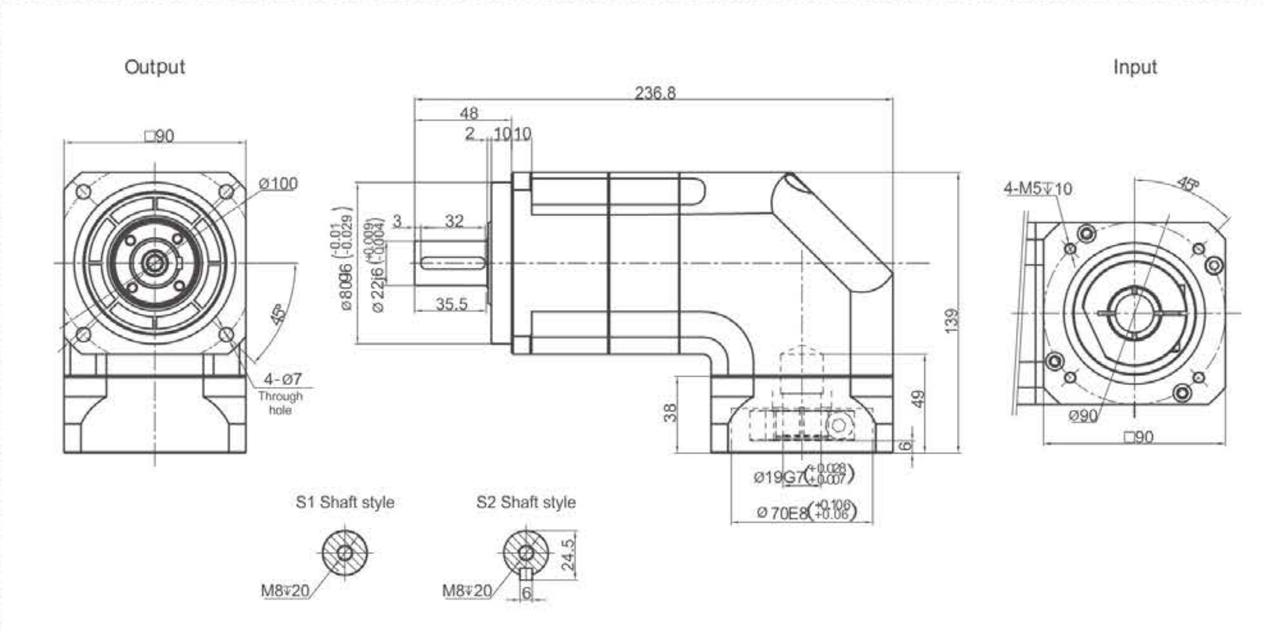
TBR090 Series

TBR090 One Stage



TBR090 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

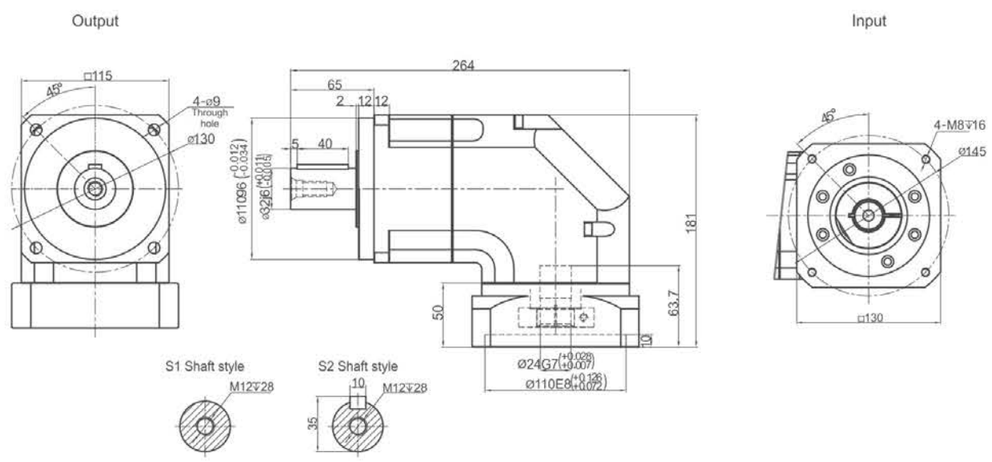
TBR090			One Stage												Two Stage													
Speed Ratio		i	3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200
Nominal Output Torque	T_1	Nm	100	120	150	148	140	123	-	102	148	140	123	102	150	148	140	120	150	148	140	123	102	148	140	123	-	102
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$												$T_1 \times 3$													
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	3250												3250													
Maximum Axial Force	F_b	N	1625												1625													
Torsional Rigidity	–	Nm/arcmin	14												14													
Efficiency	η	%	≥95												≥92													
Service Life	–	h	20000												20000													
Noise	–	dB	≤65												≤65													
Weight	–	Kg	6												6.3													
Backlash	P0	arcmin	≤2												≤4													
	P1	arcmin	≤4												≤7													
	P2	arcmin	≤6												≤9													
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	2.25									1.87			2.25									1.87				

Notes:

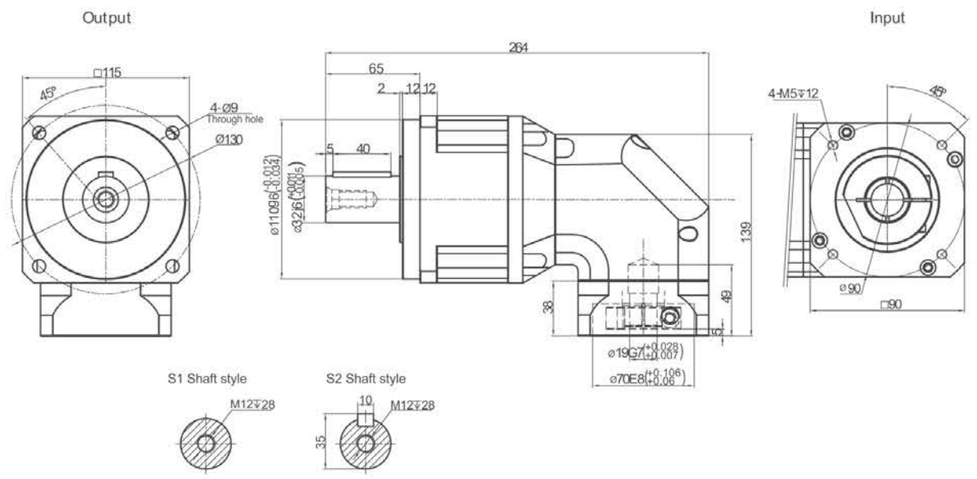
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

TBR115 Series

TBR115 One Stage



TBR115 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR115			One Stage				Two Stage			
Speed Ratio	i		3	4	5	6	7	8	9	10
Nominal Output Torque	T_1	Nm	200	260	330	310	300	260	-	235
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$							
Nominal Input Speed	S_1	rpm	4000							
Maximum Input Speed	S_2	rpm	8000							
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$							
Maximum Radial Force	F_a	N	6700							
Maximum Axial Force	F_b	N	3350							
Torsional Rigidity	–	Nm/arcmin	25							
Efficiency	η	%	⩾95							
Service Life	–	h	20000							
Noise	–	dB	⩽68							
Weight	–	Kg	13							
Backlash	P0	arcmin	⩽2							
	P1		⩽4							
	P2		⩽6							
Operating Temperature	–	℃	-20~90							
Lubrication	–		Synthetic Grease							
Protection Class	–		IP65							
Mounting Position	–		Any Direction							
Moment of Inertia	J	kg.cm²	6.84				6.25			

TBR115			Two Stage							
Speed Ratio	i		12	14	16	20	25	30	35	40
Nominal Output Torque	T_1	Nm	310	300	260	235	330	310	300	260
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$							
Nominal Input Speed	S_1	rpm	4000							
Maximum Input Speed	S_2	rpm	8000							
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$							
Maximum Radial Force	F_a	N	6700							
Maximum Axial Force	F_b	N	3350							
Torsional Rigidity	–	Nm/arcmin	25							
Efficiency	η	%	⩾92							
Service Life	–	h	20000							
Noise	–	dB	⩽68							
Weight	–	Kg	12.5							
Backlash	P0	arcmin	⩽4							
	P1		⩽7							
	P2		⩽9							
Operating Temperature	–	℃	-20~90							
Lubrication	–		Synthetic Grease							
Protection Class	–		IP65							
Mounting Position	–		Any Direction							
Moment of Inertia	J	kg.cm²	2.25				1.87			

TBR115			Two Stage							
Speed Ratio	i		50	60	70	80	100	120	140	160
Nominal Output Torque	T_1	Nm	330	310	300	260	235	310	300	260
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$							
Nominal Input Speed	S_1	rpm	4000							
Maximum Input Speed	S_2	rpm	8000							
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$							
Maximum Radial Force	F_a	N	6700							
Maximum Axial Force	F_b	N	3350							
Torsional Rigidity	–	Nm/arcmin	25							
Efficiency	η	%	⩾92							
Service Life	–	h	20000							
Noise	–	dB	⩽68							
Weight	–	Kg	12.5							
Backlash	P0	arcmin	⩽4							
	P1		⩽7							
	P2		⩽9							
Operating Temperature	–	℃	-20~90							
Lubrication	–		Synthetic Grease							
Protection Class	–		IP65							
Mounting Position	–		Any Direction							
Moment of Inertia	J	kg.cm²	2.25				1.87			

TBR115			Two Stage							
Speed Ratio	i		180	200						
Nominal Output Torque	T_1	Nm	-	235						
Emergency Stop Torque	T_2	Nm								
Nominal Input Speed	S_1	rpm								
Maximum Input Speed	S_2	rpm								
Maximum Output Torque	T_4	Nm								
Maximum Radial Force	F_a	N								
Maximum Axial Force	F_b	N								
Torsional Rigidity	–	Nm/arcmin								
Efficiency	η	%								
Service Life	–	h								
Noise	–	dB								
Weight	–	Kg								
Backlash	P0	arcmin								
	P1									
	P2									
Operating Temperature	–	℃								
Lubrication	–									
Protection Class	–									
Mounting Position	–									
Moment of Inertia	J	kg.cm²								

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.

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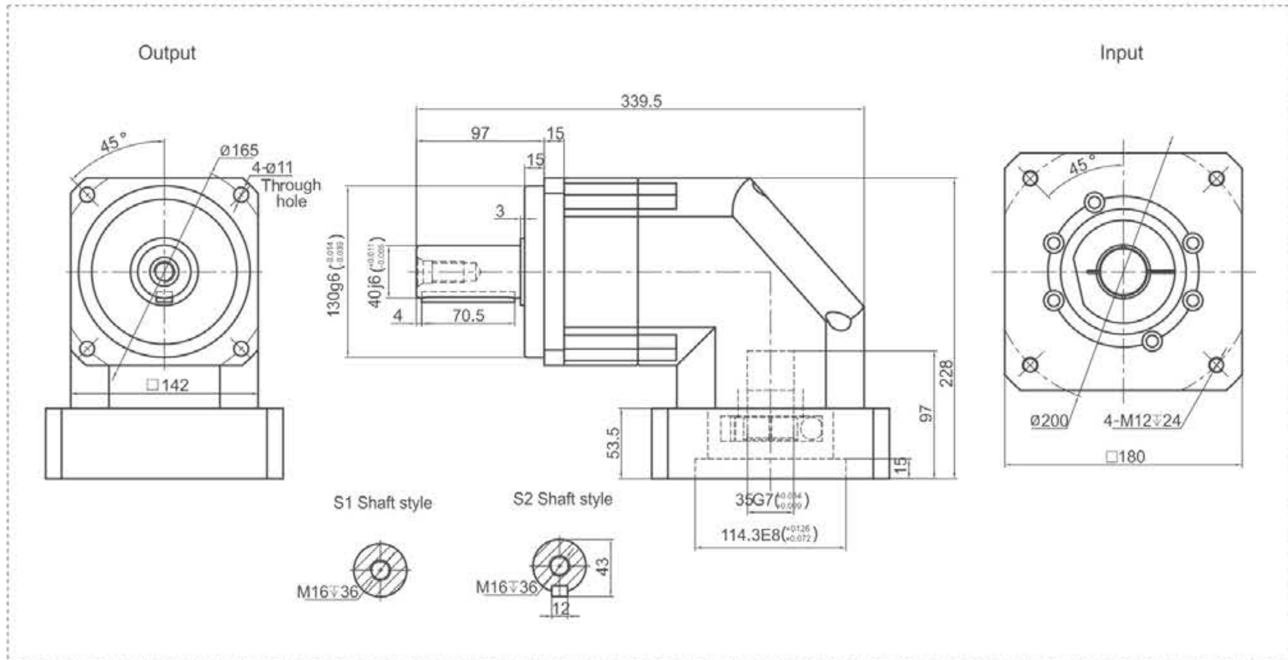
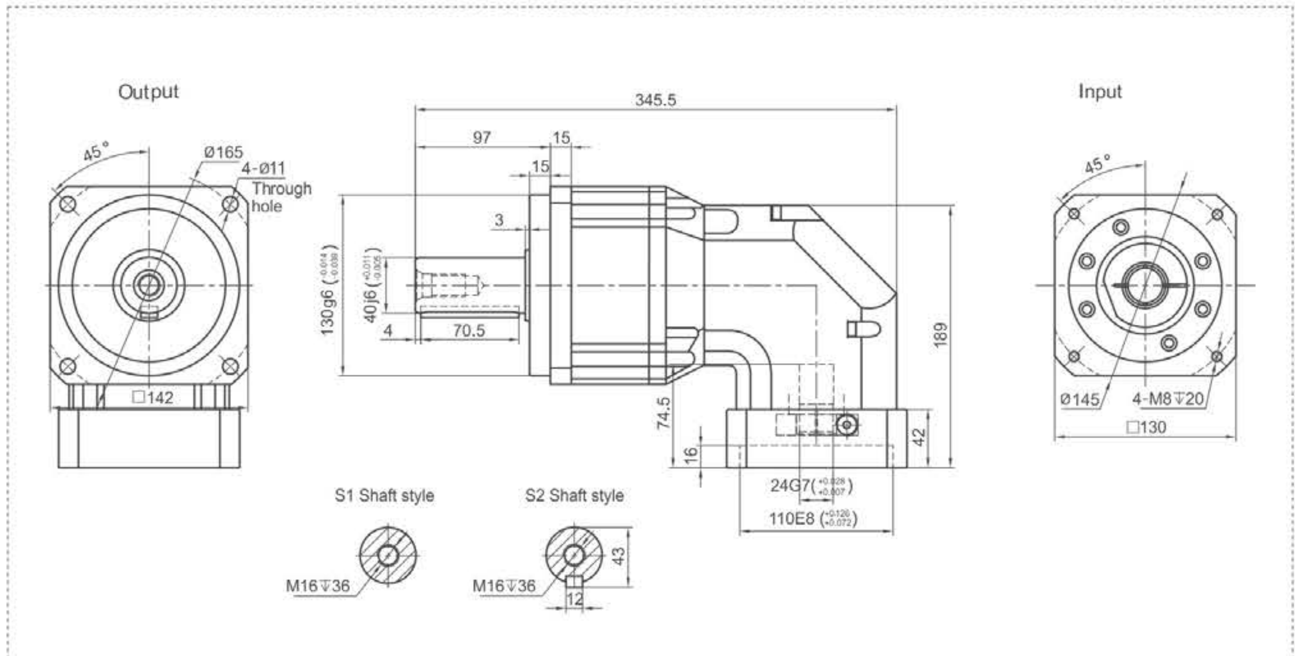
TBR Series - High Speed and Precision

TBR142 Series

TBR142 One Stage



TBR142 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR142			One Stage												Two Stage													
Speed Ratio		i	3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200
Nominal Output Torque	T_1	Nm	340	540	650	600	555	500	-	460	600	555	500	450	650	600	555	500	650	600	555	500	460	600	555	500	-	460

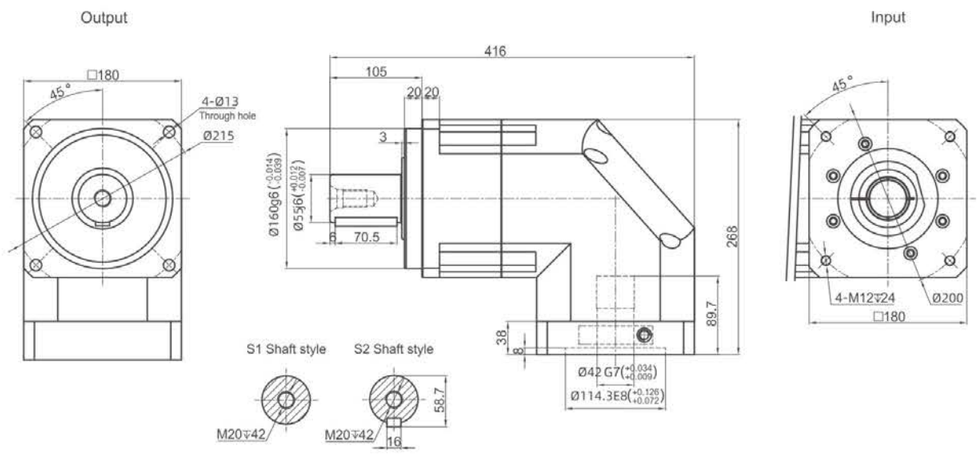
Parameter	Symbol	Unit	One Stage		Two Stage	
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$		$T_1 \times 3$	
Nominal Input Speed	S_1	rpm	3000		3000	
Maximum Input Speed	S_2	rpm	6000		6000	
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$		$T_1 \times 3 \times 60\%$	
Maximum Radial Force	F_a	N	9400		9400	
Maximum Axial Force	F_b	N	4700		4700	
Torsional Rigidity	–	Nm/arcmin	50		50	
Efficiency	η	%	≥95		≥92	
Service Life	–	h	20000		20000	
Noise	–	dB	≤70		≤70	
Weight	–	Kg	25.2		21.4	
Backlash	P0	arcmin	≤2		≤4	
	P1	arcmin	≤4		≤7	
	P2	arcmin	≤6		≤9	
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	23.4	21.8	6.84	6.25

Notes:

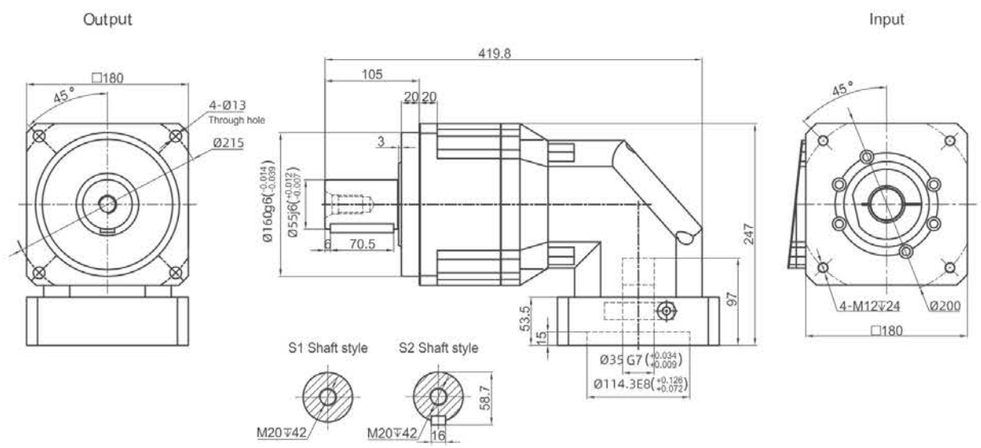
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

TBR180 Series

TBR180 One Stage



TBR180 Two Stage



Performance Data

The TBR series reducer adopts a standardized flange interface. The installation is convenient and quick. Due to its integral structure design, this high-precision model can operate excellently in many demanding working application.

TBR180			One Stage				Two Stage			
Speed Ratio	i		3 4 5 6 7 8 9 10 12 14 16 20 25 30 35 40 50 60 70 80 100 120 140 160 180 200							
Nominal Output Torque	T_1	Nm	590 1040 1200 1108 1100 1000 - 910 1108 1100 1000 910 1200 1108 1100 1000 1200 1108 1100 1000 910 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	14500				14500			
Maximum Axial Force	F_b	N	7250				7250			
Torsional Rigidity	–	Nm/arcmin	145				145			
Efficiency	η	%	⩾95				⩾92			
Service Life	–	h	20000				20000			
Noise	–	dB	⩽72				⩽72			
Weight	–	Kg	46.5				43			
Backlash	P0	arcmin	⩽2				⩽4			
	P1		⩽4				⩽7			
	P2		⩽6				⩽9			
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	$kg.cm^2$	68.9		65.6		23.4		21.8	

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.

Precision Planetary Reducer

Enhanced Load Bearing Capacity

+

TD/TDR SERIES

+

Low Vibration & Noise

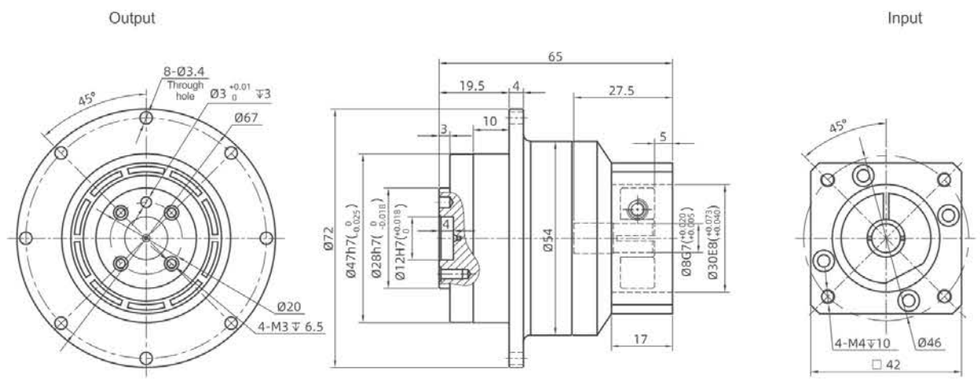
TD/TDR series planetary reducer offers you innovative and advanced solutions in terms of technology, which has achieved outstanding results in any flange-driven applications.

GEARKO®

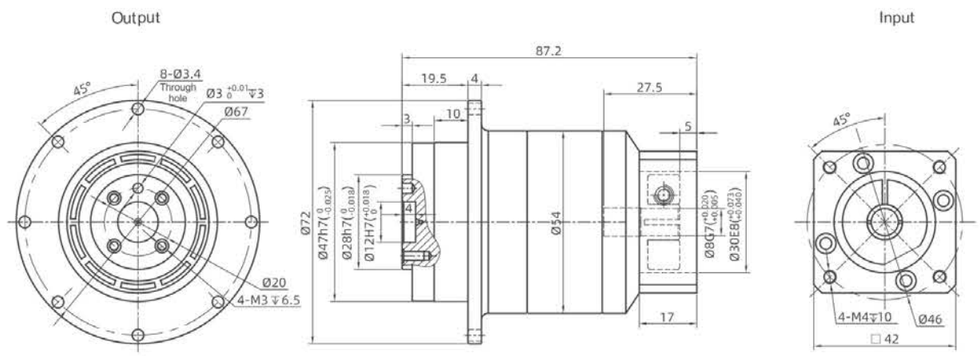
DRIVES THE PRECISION

TD047 Series

TD047 One Stage



TD047 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD047			One Stage				Two Stage						
Speed Ratio		i	4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T_1	Nm	19	20	19	14	19	20	19	17	20	19	14
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 Bending Moment	M_a	Nm	780				780						
Maximum Axial Force	F_b	N	390				390						
Torsional Rigidity	–	Nm/arcmin	3				3						
Efficiency	η	%	⩾97				⩾94						
Service Life	–	h	20000				20000						
Noise	–	dB	⩽55				⩽55						
Weight	–	Kg	0.65				0.98						
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	0.03				0.03						

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.

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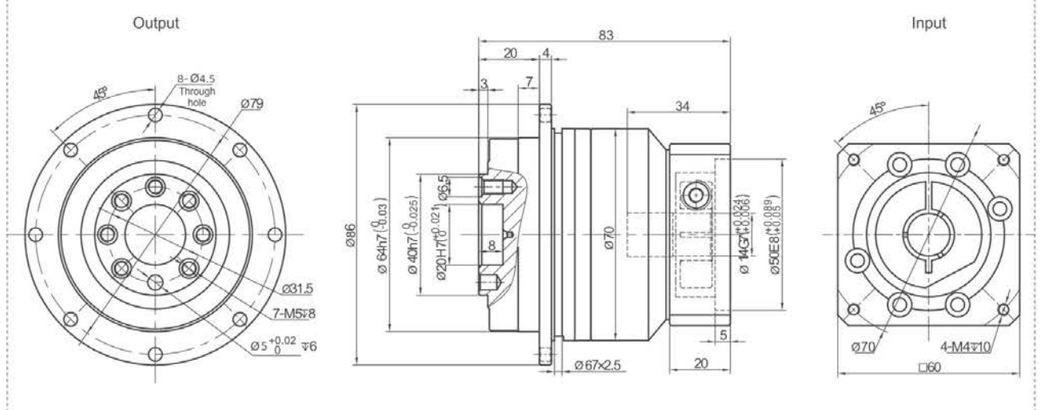
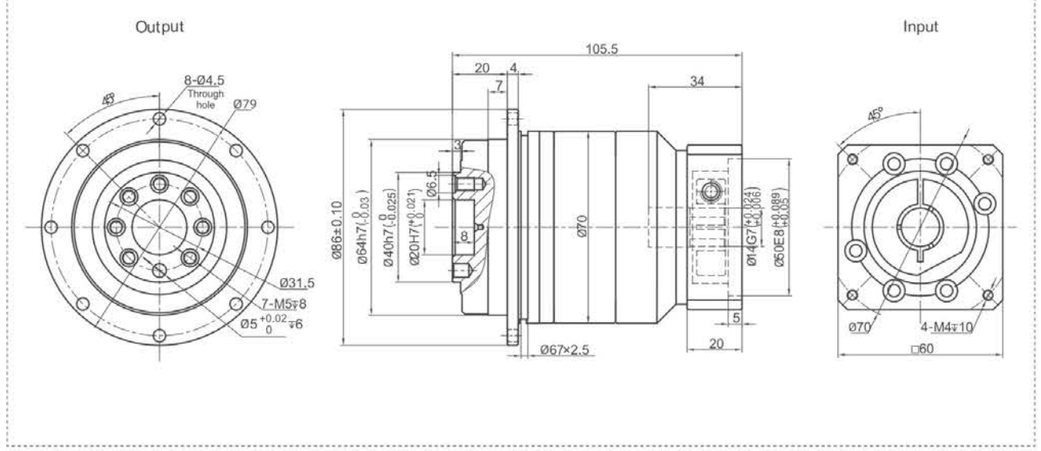
TD064 Series

TD064 One Stage



TD064 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD064			One Stage				Two Stage						
Speed Ratio		i	4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T_1	Nm	50	58	50	42	50	58	50	48	58	50	42
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$				$T_1 \times 3$						
Nominal Input Speed	S_1	rpm	5000				5000						
Maximum Input Speed	S_2	rpm	10000				10000						
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$				$T_1 \times 3 \times 60\%$						
Maximum Bending Moment	M_a	Nm	125				125						
Maximum Axial Force	F_b	N	1050				1050						
Torsional Rigidity	–	Nm/arcmin	13				13						
Efficiency	η	%	⩾97				⩾94						
Service Life	–	h	30000				30000						
Noise	–	dB	⩽58				⩽58						
Weight	–	Kg	1.3				1.8						
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	$kg.cm^2$	0.14	0.13			0.13						

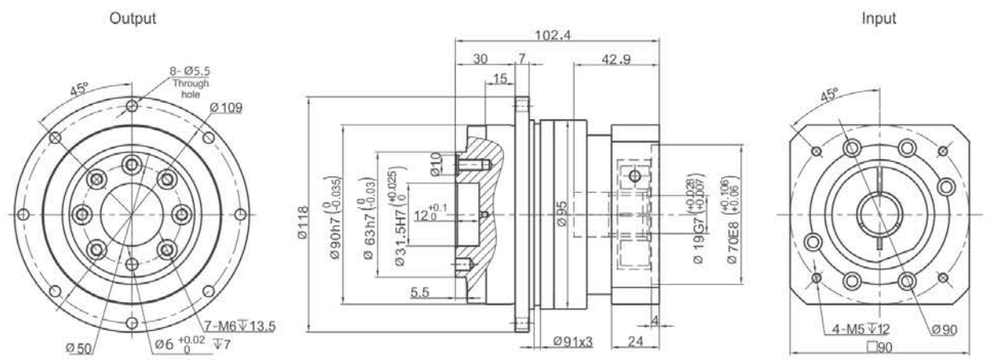
Notes:

- 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.

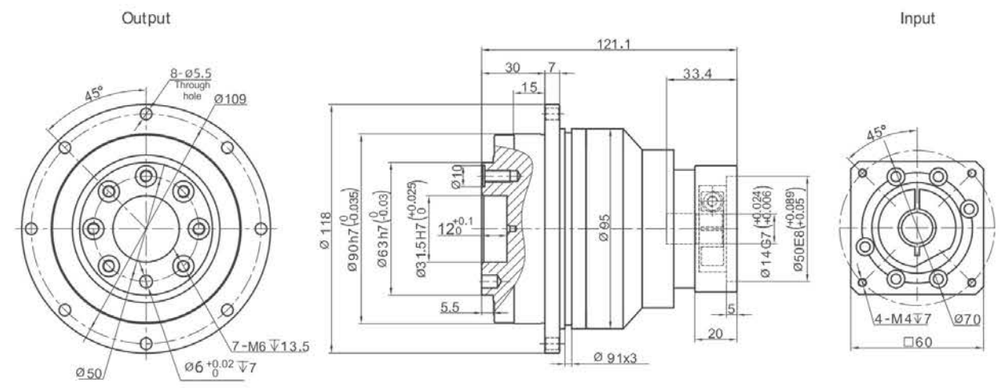
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD090 Series

TD090 One Stage



TD090 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD090			One Stage				Two Stage						
Speed Ratio		i	4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T_1	Nm	130	160	140	102	130	160	140	123	160	140	102
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 Bending Moment	M_a	Nm	235				235						
Maximum Axial Force	F_b	N	2850				2850						
Torsional Rigidity	–	Nm/arcmin	31				31						
Efficiency	η	%	≥97				≥94						
Service Life	–	h	30000				30000						
Noise	–	dB	≤60				≤60						
Weight	–	Kg	3.9				3.1						
Backlash	P0	arcmin	≤1				≤3						
	P1		≤3				≤5						
	P2		≤5				≤7						
Operating Temperature	–	°C	-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	0.51	0.47	0.45	0.44	0.13						

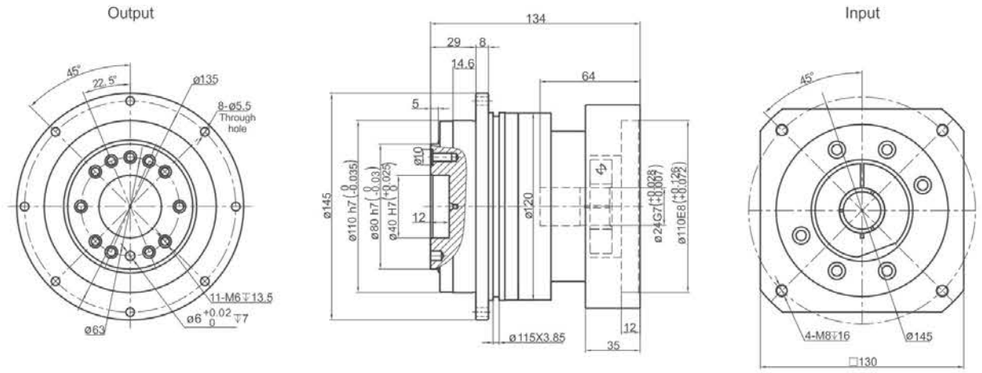
Notes:

- 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.

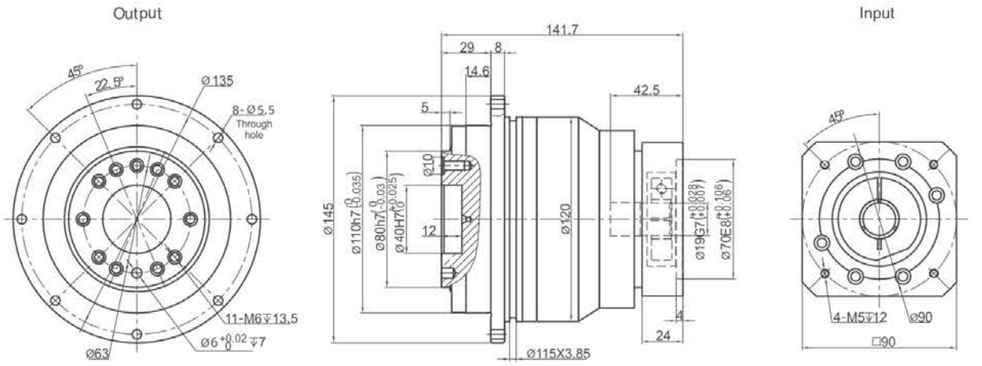
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD110 Series

TD110 One Stage



TD110 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD110			One Stage				Two Stage						
Speed Ratio		i	4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T_1	Nm	290	333	300	235	290	333	300	260	333	300	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 Bending Moment	M_a	Nm	430				430						
Maximum Axial Force	F_b	N	2990				2990						
Torsional Rigidity	–	Nm/arcmin	82				82						
Efficiency	η	%	⩾97				⩾94						
Service Life	–	h	30000				30000						
Noise	–	dB	⩽63				⩽63						
Weight	–	Kg	5.9				7.9						
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	2.87	2.71	2.62	2.57	0.47		0.44				

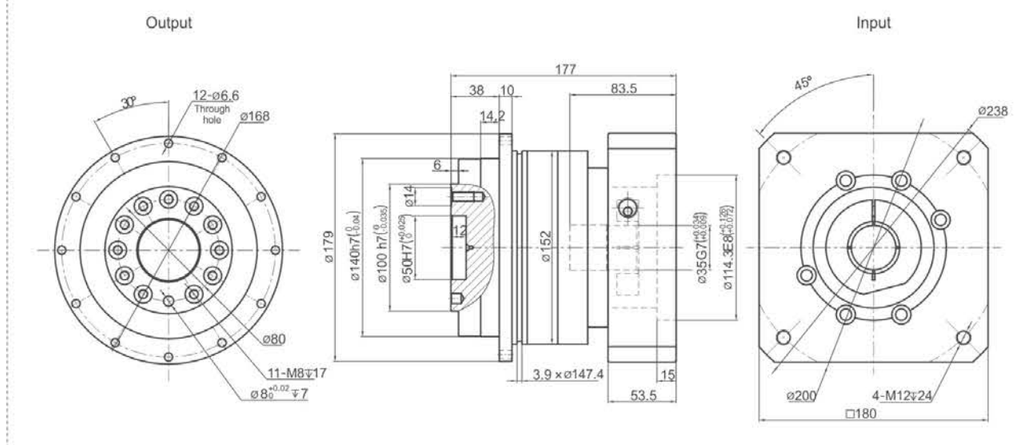
Notes:

- 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.

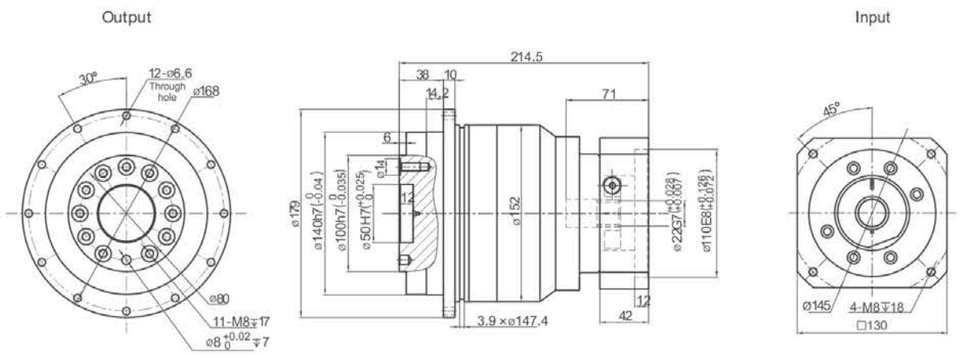
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD140 Series

TD140 One Stage



TD140 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD140			One Stage				Two Stage						
Speed Ratio		i	4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T_1	Nm	545	650	555	460	545	650	555	560	650	555	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 Bending Moment	M_a	Nm	1300				1300						
Maximum Axial Force	F_b	N	10590				10590						
Torsional Rigidity	–	Nm/arcmin	151				151						
Efficiency	η	%	⩾97				⩾94						
Service Life	–	h	30000				30000						
Noise	–	dB	⩽65				⩽65						
Weight	–	Kg	14.6				15.5						
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	7.54	7.42	7.14	7.03	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.

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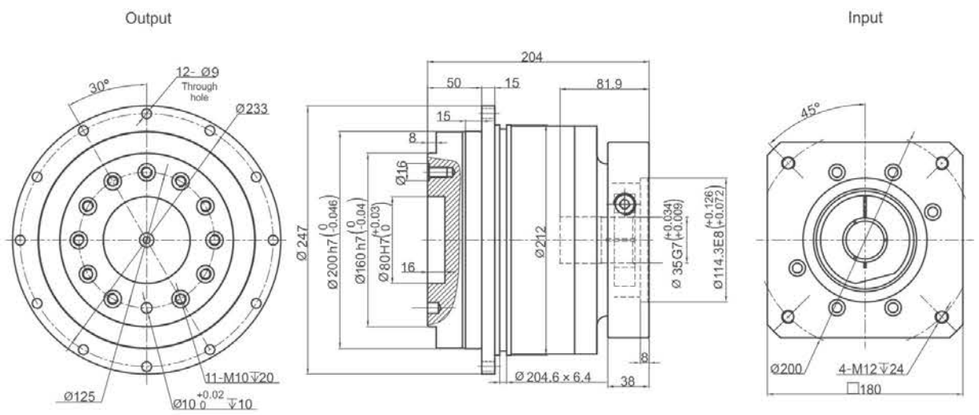
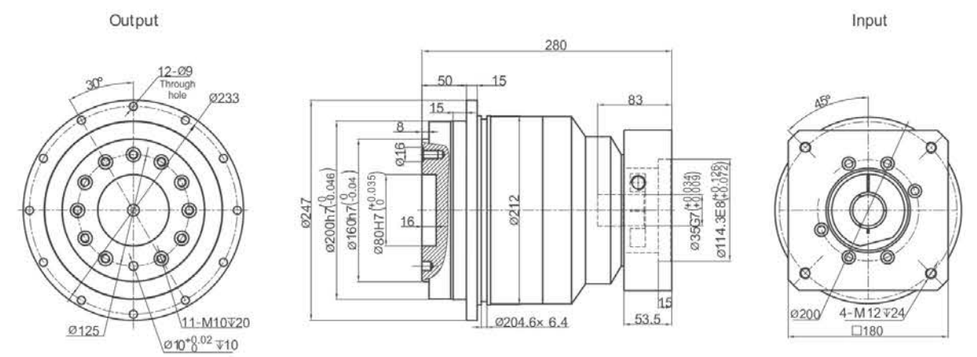
TD200 Series

TD200 One Stage



TD200 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD200			One Stage				Two Stage						
Speed Ratio		i	4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T_1	Nm	1050	1200	1100	910	1050	1200	1100	1100	1200	1100	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 Bending Moment	M_a	Nm	3064				3064						
Maximum Axial Force	F_b	N	16660				16660						
Torsional Rigidity	–	Nm/arcmin	440				440						
Efficiency	η	%	⩾97				⩾94						
Service Life	–	h	30000				30000						
Noise	–	dB	⩽66				⩽66						
Weight	–	Kg	35.1				34.9						
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	25.03	23.29	22.48	22.51	7.42		7.03				

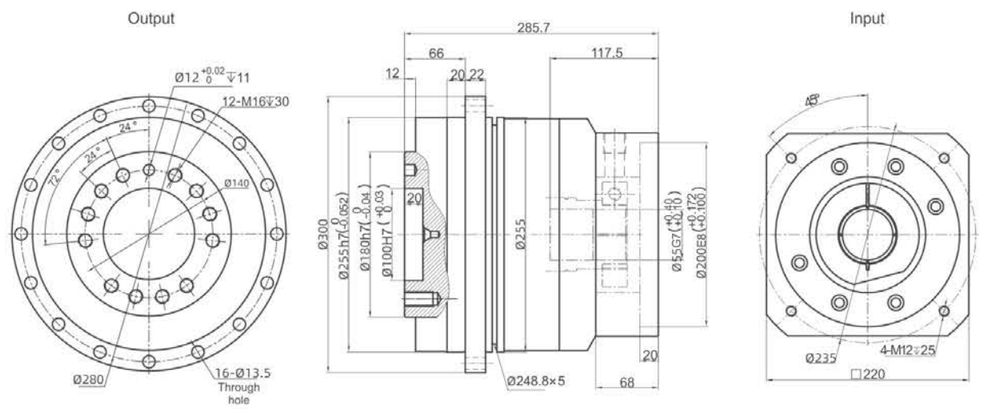
Notes:

- 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.

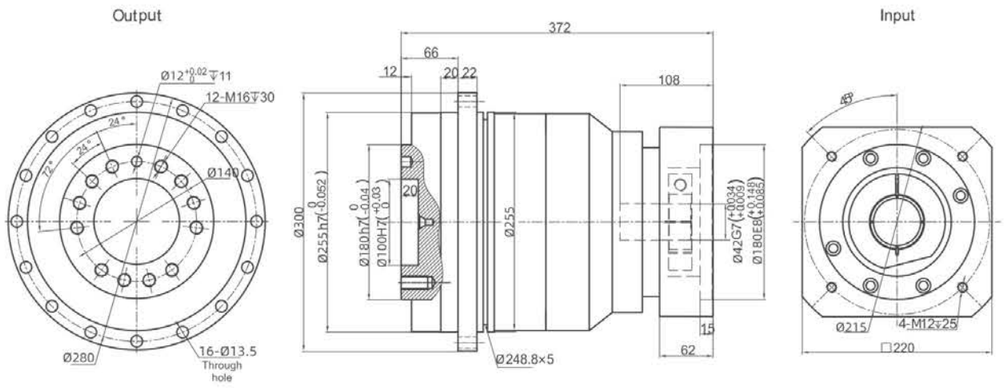
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TD255 Series

TD255 One Stage



TD255 Two Stage



Performance Data

TD series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TD255			One Stage				Two Stage						
Speed Ratio		i	4	5	7	10	20	25	35	40	50	70	100
Nominal Output Torque	T_1	Nm	1700	2008	1810	1550	1700	2008	1810	1700	2008	1810	1550
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$				$T_1 \times 3$						
Nominal Input Speed	S_1	rpm	2000				2000						
Maximum Input Speed	S_2	rpm	4000				4000						
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$				$T_1 \times 3 \times 60\%$						
Maximum Bending Moment	M_a	Nm	5900				5900						
Maximum Axial Force	F_b	N	29430				29430						
Torsional Rigidity	–	Nm/arcmin	1006				1006						
Efficiency	η	%	⩾97				⩾94						
Service Life	–	h	30000				30000						
Noise	–	dB	⩽70				⩽70						
Weight	–	Kg	64.5				70.4						
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	$kg.cm^2$	58.31	53.27	50.97	50.56	23.29		22.51				

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.

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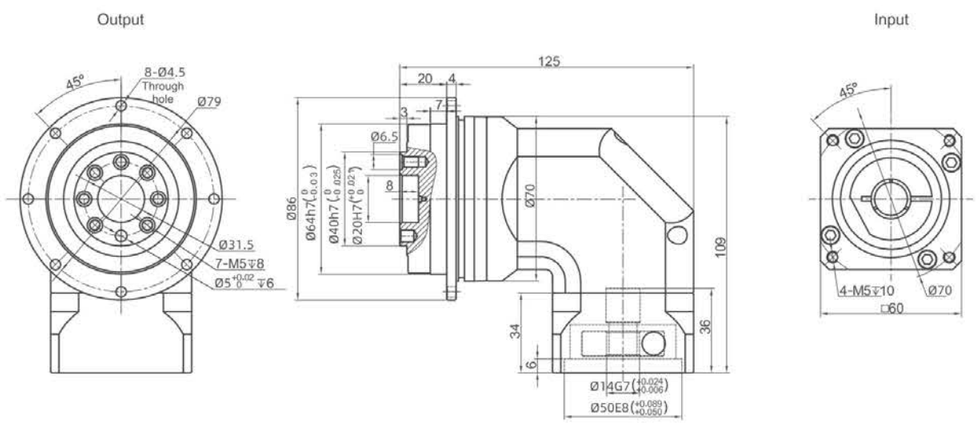
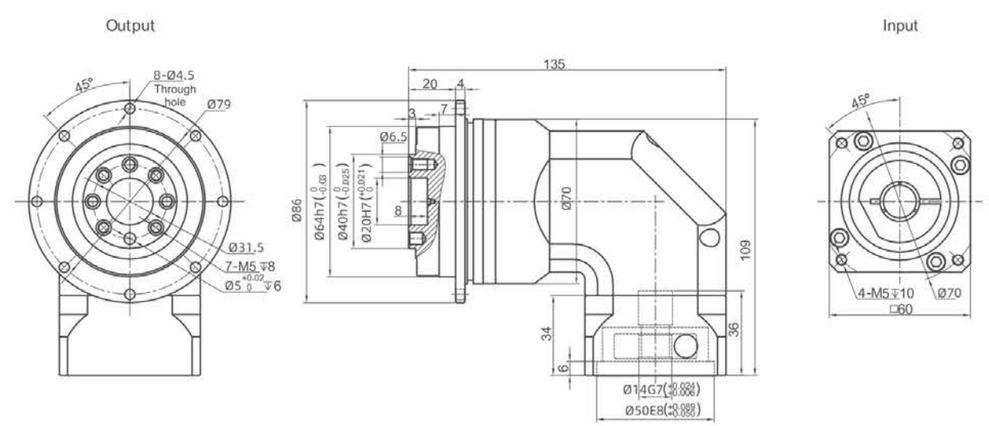
TDR064 Series

TDR064 One Stage



TDR064 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR064			One Stage						Two Stage							
Speed Ratio		i	4	5	7	10	14	20	25	35	40	50	70	100	140	200
Nominal Output Torque	T_1	Nm	48	58	50	42	42	42	58	50	48	58	50	42	-	-
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$						$T_1 \times 3$							
Nominal Input Speed	S_1	rpm	5000						5000							
Maximum Input Speed	S_2	rpm	10000						10000							
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$						$T_1 \times 3 \times 60\%$							
Maximum Bending Moment	M_a	Nm	125						125							
Maximum Axial Force	F_b	N	1050						1050							
Torsional Rigidity	–	Nm/arcmin	13						13							
Efficiency	η	%	⩾95						⩾92							
Service Life	–	h	30000						30000							
Noise	–	dB	⩽63						⩽63							
Weight	–	Kg	2.2						2.6							
Backlash	P0	arcmin	-						-							
	P1		⩽4						⩽7							
	P2		⩽6						⩽9							
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	0.35			0.07			0.09							

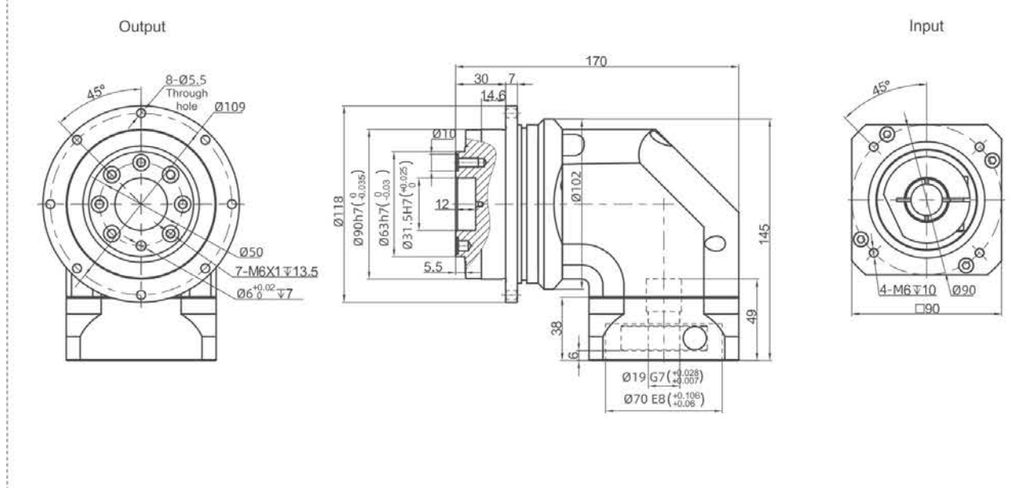
Notes:

- 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.

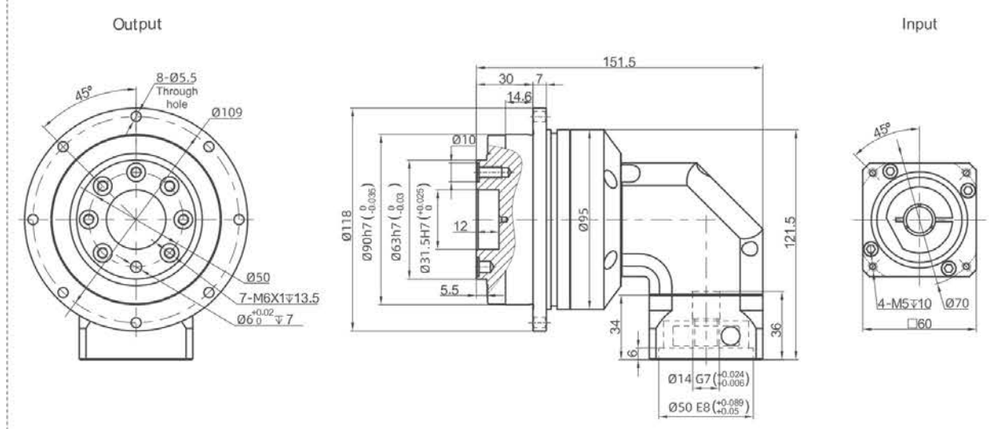
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TDR090 Series

TDR090 One Stage



TDR090 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR090			One Stage						Two Stage							
Speed Ratio		i	4	5	7	10	14	20	25	35	40	50	70	100	140	200
Nominal Output Torque	T_1	Nm	120	150	140	102	140	102	160	148	120	150	140	102	140	102
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 Bending Moment	M_a	Nm	235						235							
Maximum Axial Force	F_0	N	2850						2850							
Torsional Rigidity	–	Nm/arcmin	31						31							
Efficiency	η	%	⩾95						⩾92							
Service Life	–	h	30000						30000							
Noise	–	dB	⩽65						⩽65							
Weight	–	Kg	5						3.7							
Backlash	P0	arcmin	⩽2						⩽4							
	P1		⩽4						⩽7							
	P2		⩽6						⩽9							
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	2.25			1.87			0.35				0.31			

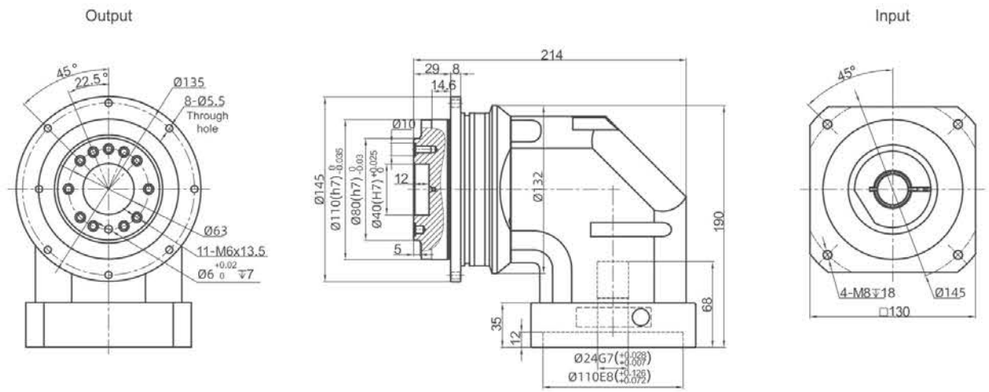
Notes:

- 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.

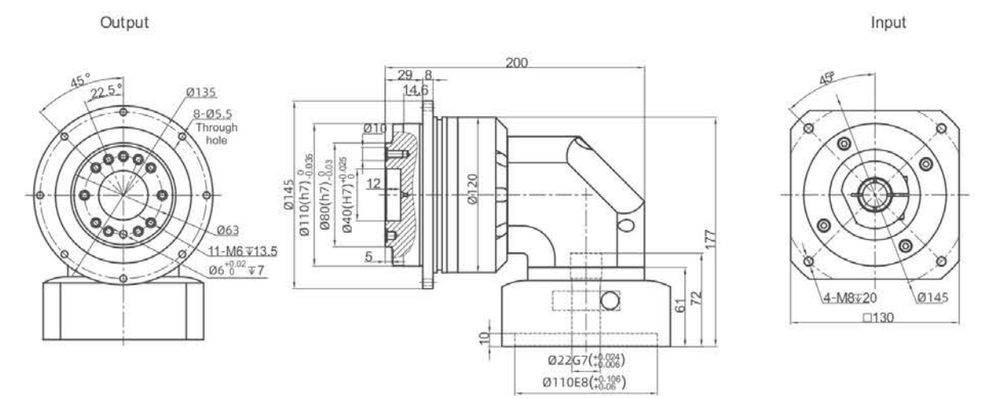
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TDR110 Series

TDR110 One Stage



TDR110 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR110			One Stage						Two Stage							
Speed Ratio	i		4	5	7	10	14	20	25	35	40	50	70	100	140	200
Nominal Output Torque	T_1	Nm	260	330	300	235	300	235	330	300	260	330	300	235	300	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 Bending Moment	M_a	Nm	430						430							
Maximum Axial Force	F_0	N	2990						2990							
Torsional Rigidity	–	Nm/arcmin	82						82							
Efficiency	η	%	⩾95						⩾92							
Service Life	–	h	30000						30000							
Noise	–	dB	⩽68						⩽68							
Weight	–	Kg	10.5						11							
Backlash	P0	arcmin	⩽2						⩽4							
	P1		⩽4						⩽7							
	P2		⩽6						⩽9							
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	6.84			6.25			2.25				1.87			

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.

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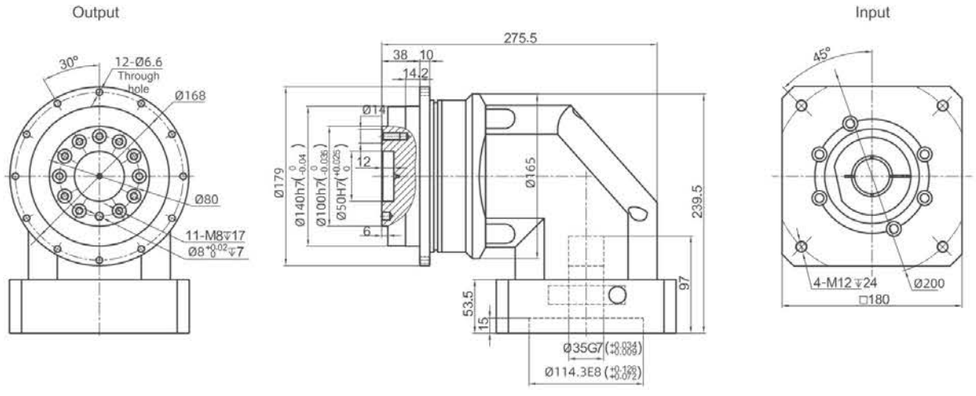
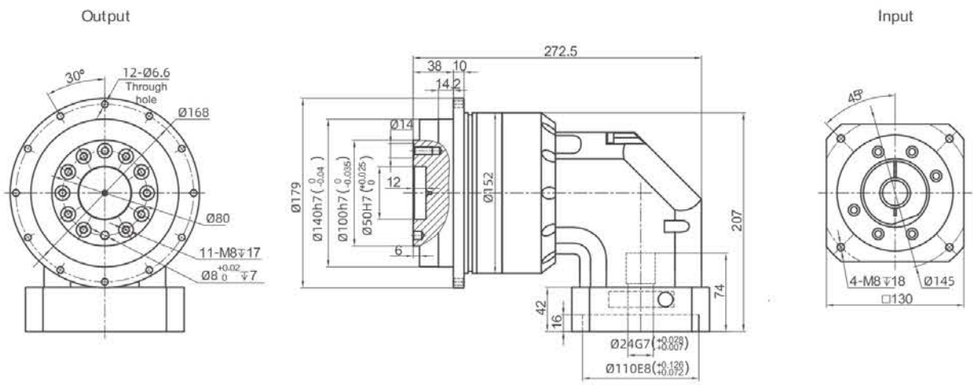
TDR140 Series

TDR140 One Stage



TDR140 Two Stage



Performance Data

TDR series reducer offers quiet operation with high axial load and tilt moment. High quality and capacity load bearing ensures smooth operation for any flange-operated applications.

TDR140			One Stage						Two Stage							
Speed Ratio	i		4	5	7	10	14	20	25	35	40	50	70	100	140	200
Nominal Output Torque	T_1	Nm	540	650	555	460	555	450	650	555	560	650	555	460	555	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 Bending Moment	M_a	Nm	1300						1300							
Maximum Axial Force	F_b	N	10590						10590							
Torsional Rigidity	–	Nm/arcmin	151						151							
Efficiency	η	%	⩾95						⩾92							
Service Life	–	h	30000						30000							
Noise	–	dB	⩽70						⩽70							
Weight	–	Kg	25						22.1							
Backlash	P0	arcmin	⩽2						⩽4							
	P1		⩽4						⩽7							
	P2		⩽6						⩽9							
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	23.4			21.8			6.84			6.25				

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.

Precision Planetary Reducer

Creative Structure Design

+

TE/TER SERIES

+

Optimized Backlash & High Rigidity

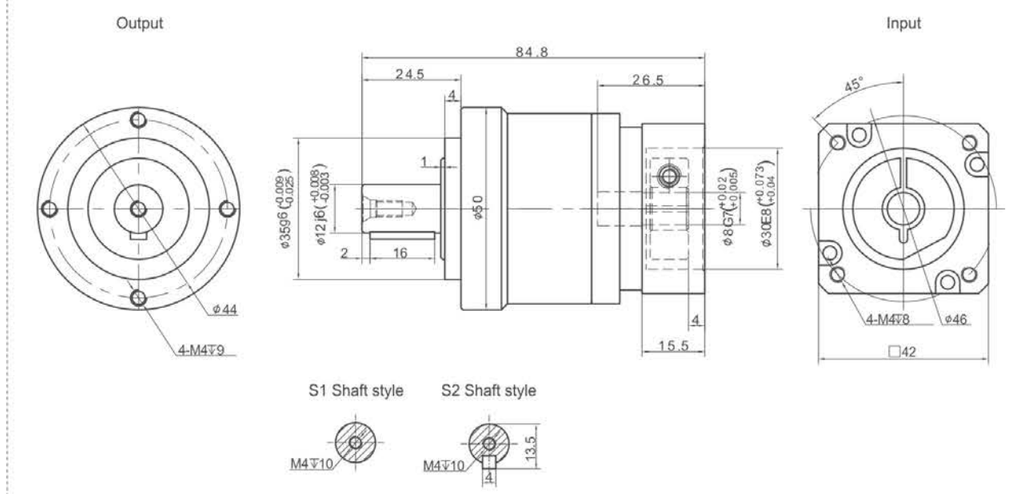
TE/TER series planetary reducer combines innovation, efficiency and quality, maximizing customer value and performance.

GEARKO®

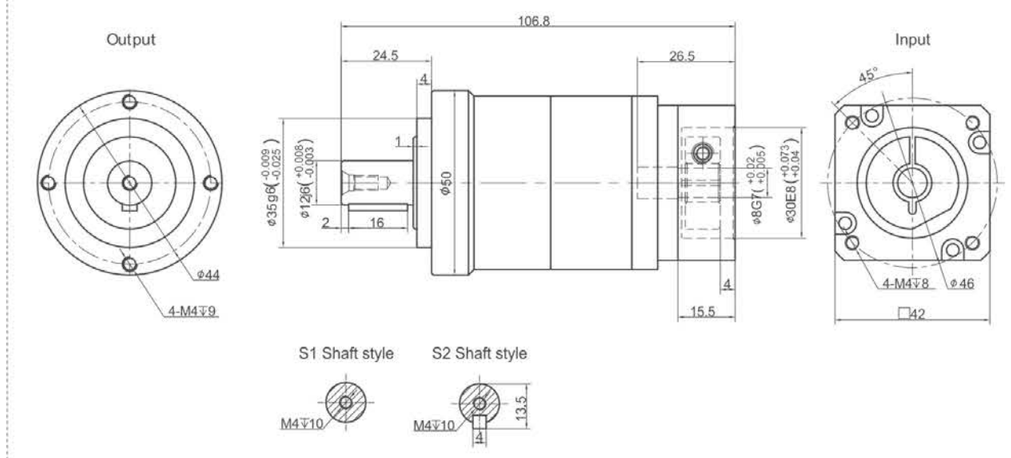
DRIVES THE PRECISION

TE050 Series

TE050 One Stage



TE050 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE050			One Stage								Two Stage									
Speed Ratio	i		-	4	5	6	7	8	9	10	-	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	-	19	20	19	19	17	-	14	-	19	20	19	19	17	20	19	19	17	14
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$									
Nominal Input Speed	S_1	rpm	5000								5000									
Maximum Input Speed	S_2	rpm	10000								10000									
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$									
Maximum Radial Force	F_a	N	702								702									
Maximum Axial Force	F_b	N	390								390									
Torsional Rigidity	–	Nm/arcmin	3								3									
Efficiency	η	%	⩾97								⩾94									
Service Life	–	h	20000								20000									
Noise	–	dB	⩽56								⩽56									
Weight	–	Kg	0.6								0.9									
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.cm²	0.03								0.13									

Notes:

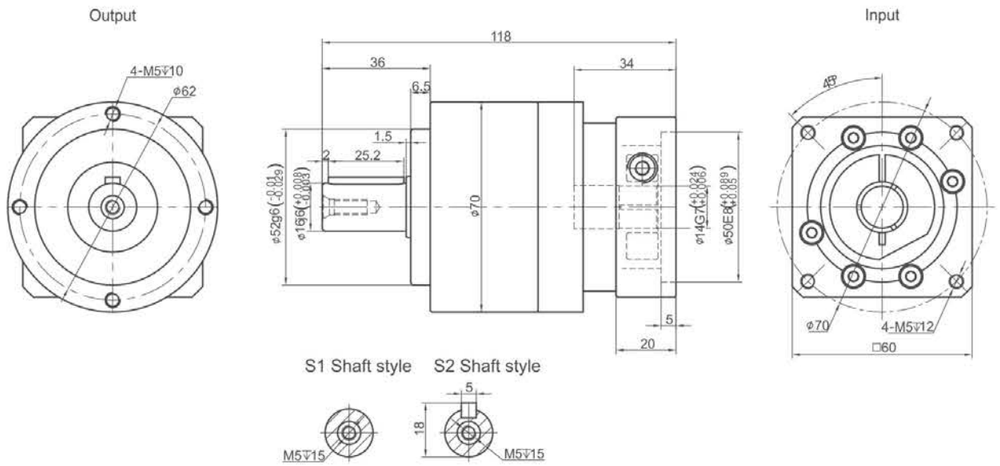
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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

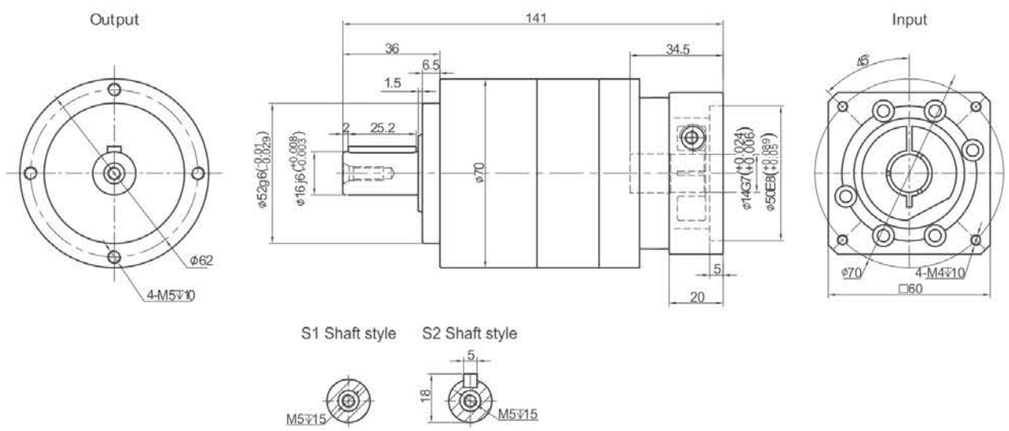
TE Series - High Precision Planetary Reducer

TE070 Series

TE070 One Stage



TE070 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE070			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	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	5000								5000										
Maximum Input Speed	S_2	rpm	10000								10000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	1377								1377										
Maximum Axial Force	F_b	N	765								765										
Torsional Rigidity	–	Nm/arcmin	7								7										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽58								⩽58										
Weight	–	Kg	1.4								1.6										
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										

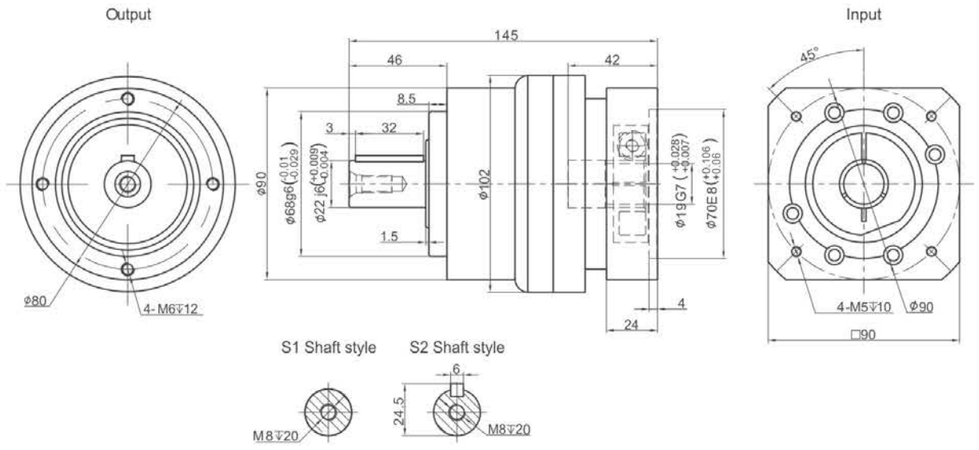
Notes:

- 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.

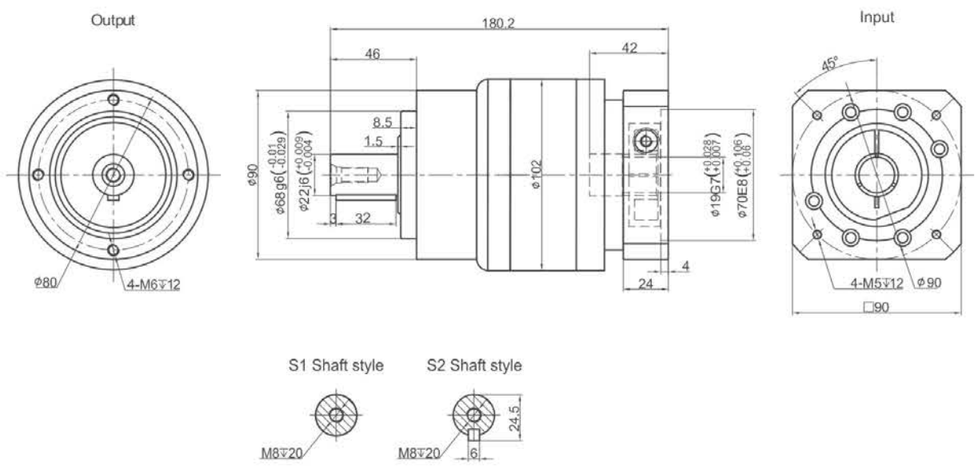
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TE090 Series

TE090 One Stage



TE090 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE090			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	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
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	2985								2985										
Maximum Axial Force	F_b	N	1625								1625										
Torsional Rigidity	–	Nm/arcmin	14								14										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽60								⩽60										
Weight	–	Kg	3.4								5.1										
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	$kg.cm^2$	0.61	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.

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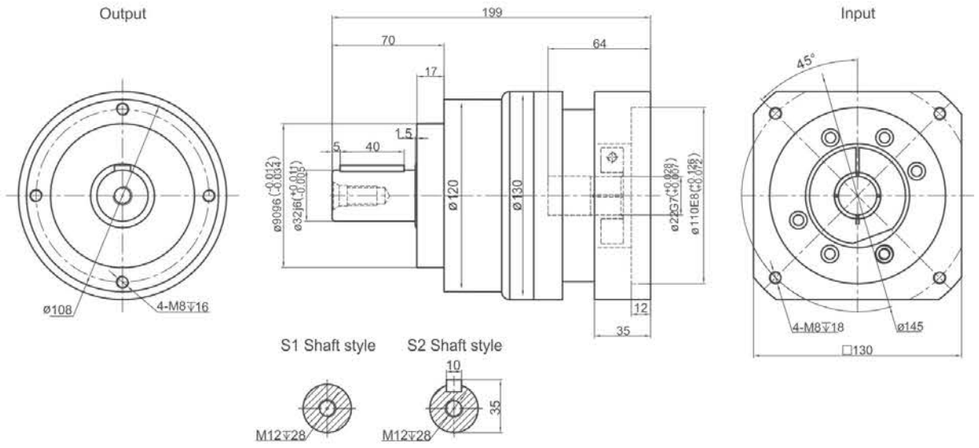
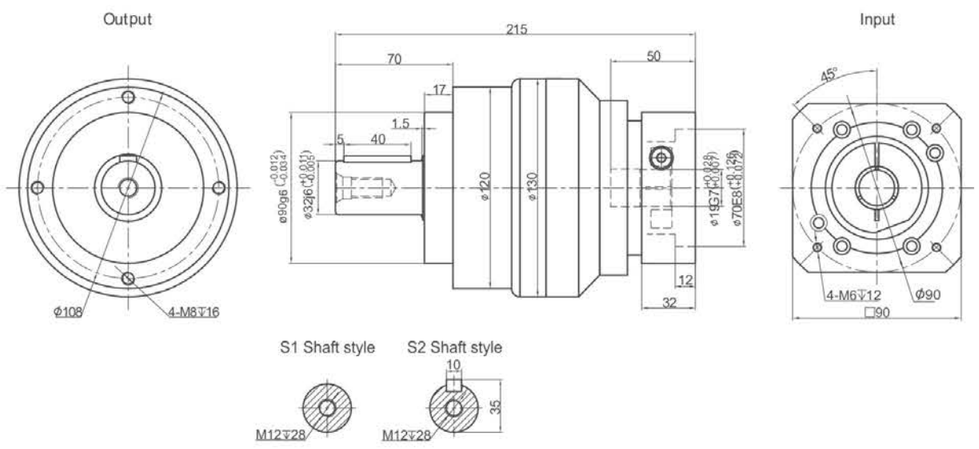
TE120 Series

TE120 One Stage



TE120 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE120			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	$T_1 \times 3$																		
Nominal Input Speed	S_1	rpm	4000																		
Maximum Input Speed	S_2	rpm	8000																		
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$																		
Maximum Radial Force	F_a	N	6100																		
Maximum Axial Force	F_b	N	3350																		
Torsional Rigidity	–	Nm/arcmin	25																		
Efficiency	η	%	⩾97																		
Service Life	–	h	20000																		
Noise	–	dB	⩽63																		
Weight	–	Kg	7.5																		
Backlash	P0	arcmin	–																		
	P1		⩽3																		
	P2		⩽5																		
Operating Temperature	–	℃	-20~90																		
Lubrication	–		Synthetic Grease																		
Protection Class	–		IP65																		
Mounting Position	–		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.

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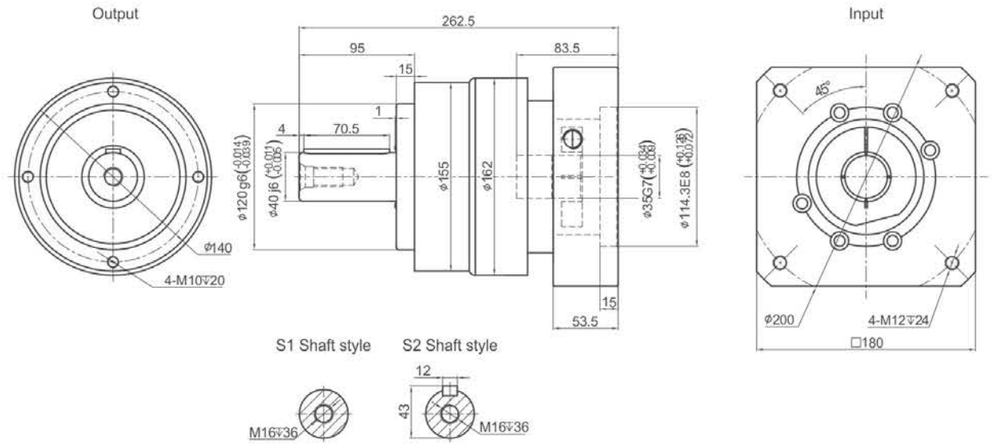
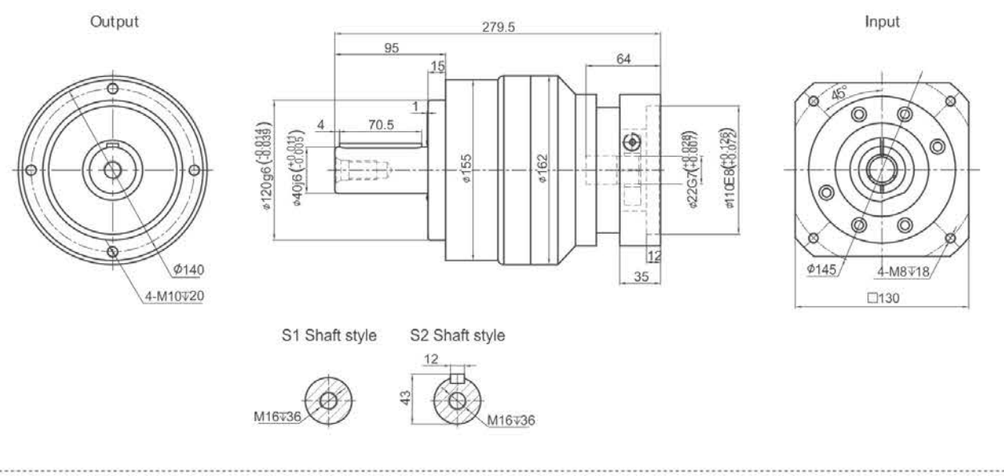
TE155 Series

TE155 One Stage



TE155 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE155			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	8460								8460										
Maximum Axial Force	F_b	N	4700								4700										
Torsional Rigidity	–	Nm/arcmin	50								50										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽65								⩽65										
Weight	–	Kg	18								17										
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.cm²	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	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.

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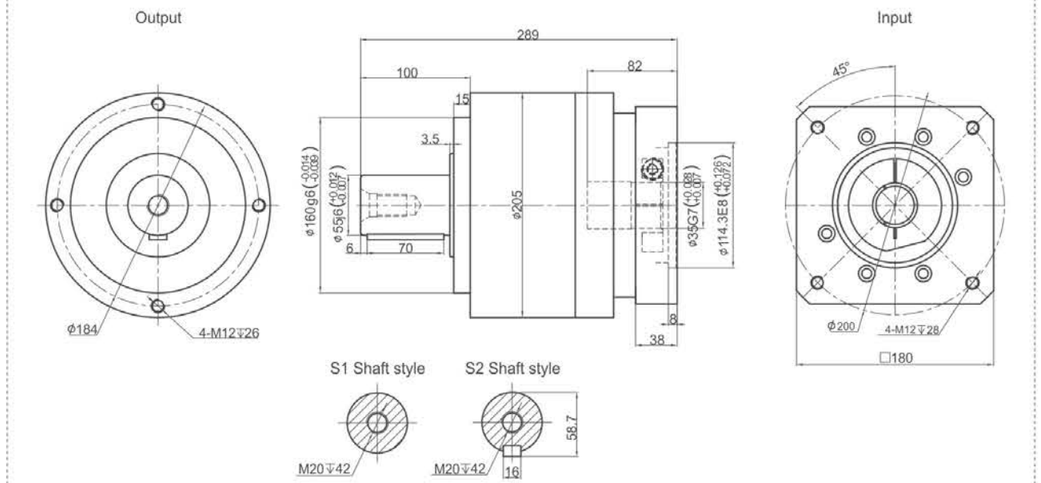
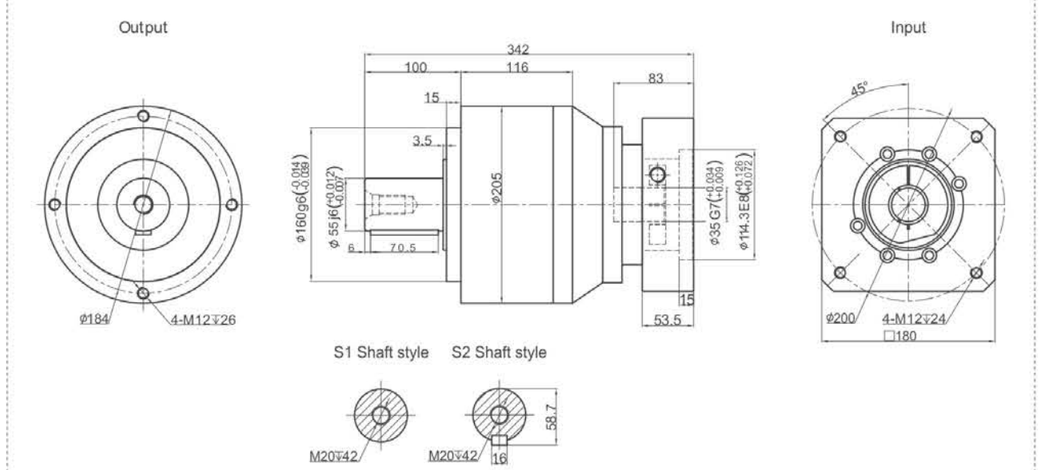
TE205 Series

TE205 One Stage



TE205 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE205			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	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	13050								13050										
Maximum Axial Force	F_b	N	7250								7250										
Torsional Rigidity	–	Nm/arcmin	145								145										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽67								⩽67										
Weight	–	Kg	34								35										
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.cm²	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51	7.42						7.03				

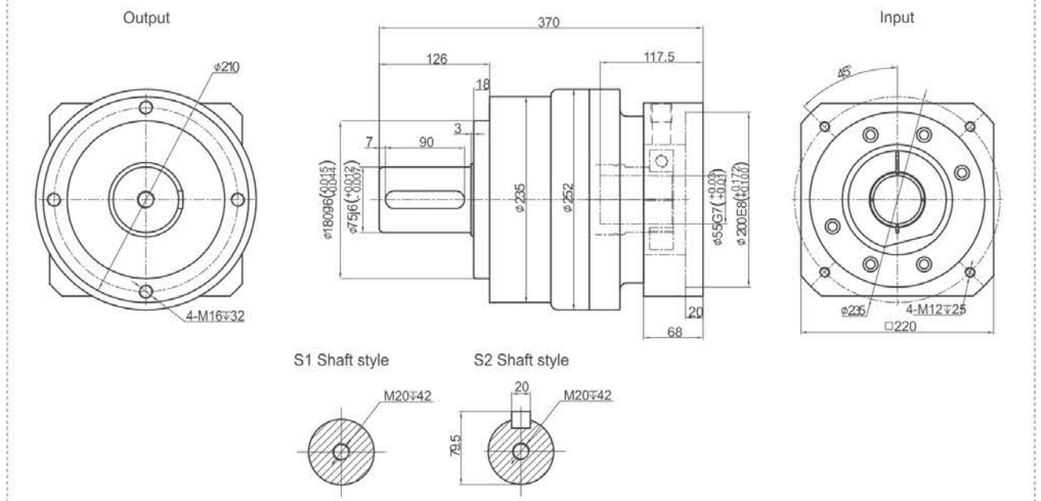
Notes:

- 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.

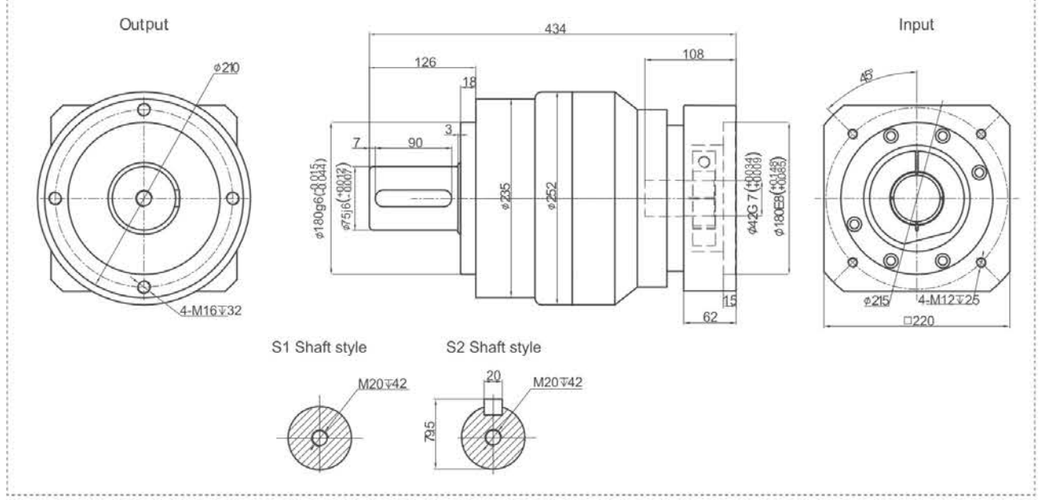
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TE235 Series

TE235 One Stage



TE235 Two Stage



Performance Data

TE series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TE235			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	1150	1700	2008	1900	1810	1600	-	1550	1150	1700	2008	1900	1810	1600	2008	1900	1810	1600	1550
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	2000								2000										
Maximum Input Speed	S_2	rpm	4000								4000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	48700								48700										
Maximum Axial Force	F_b	N	18000								18000										
Torsional Rigidity	-	Nm/arcmin	225								225										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽70								⩽70										
Weight	–	Kg	53								66										
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.cm²	69.61	54.37	53.27	51.72	50.97	50.84	–	50.56	23.29								22.51		

Notes:

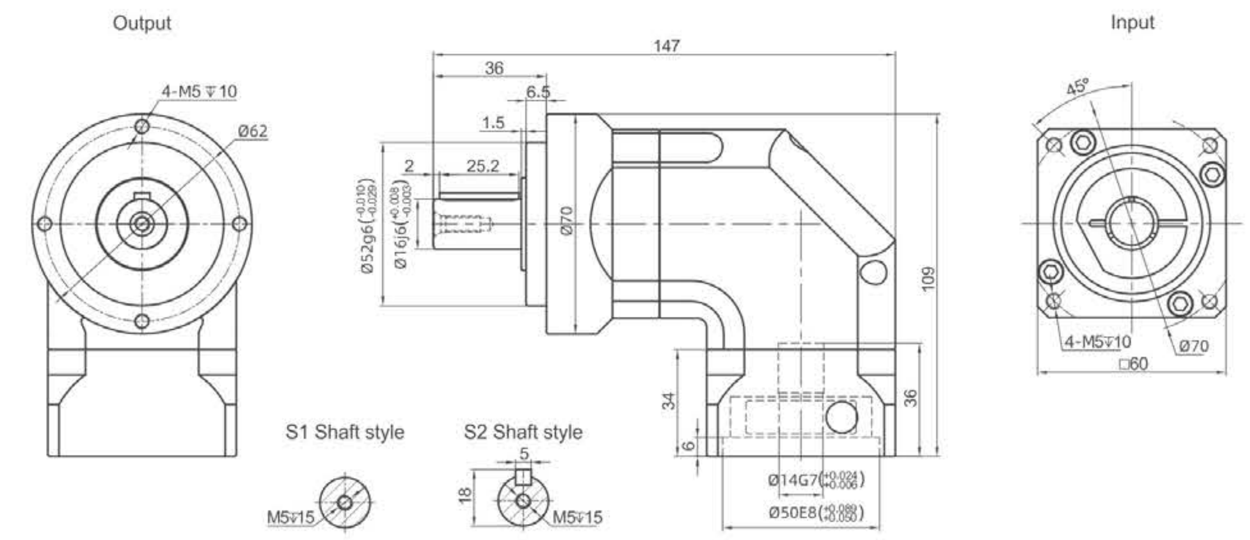
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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

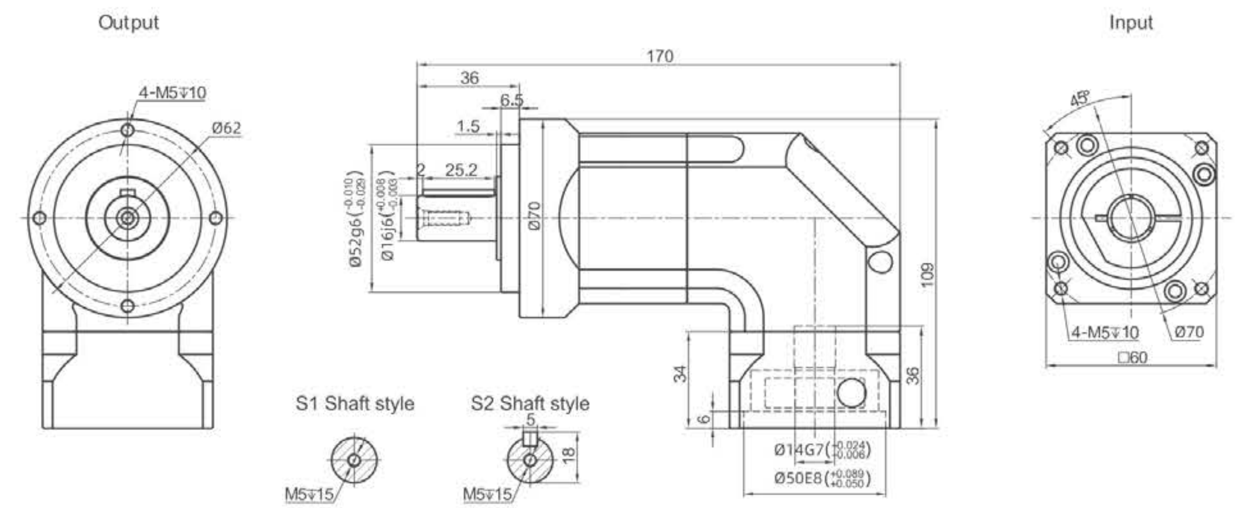
TB
TBR
TD
TDR
TE
TER
TF
TCB
TCBR
TCE
TM

TER070 Series

TER070 One Stage



TER070 Two Stage



Performance Data

TER series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

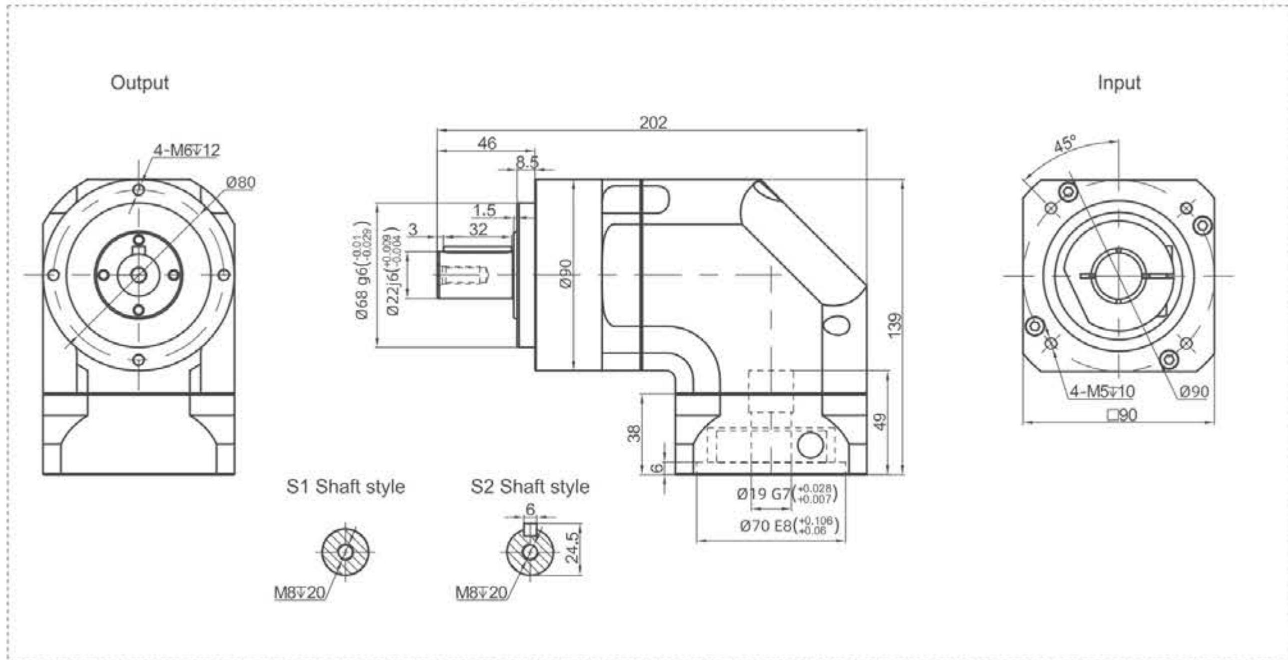
TER070			One Stage										Two Stage													
Speed Ratio		i	3	4	5	6	7	8	9	10	14	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200
Nominal Output Torque	T_1	Nm	50	48	58	55	50	45	-	42	42	42	58	55	50	45	58	55	50	45	42	55	50	45	-	42
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$										$T_1 \times 3$													
Nominal Input Speed	S_1	rpm	5000										5000													
Maximum Input Speed	S_2	rpm	10000										10000													
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$										$T_1 \times 3 \times 60\%$													
Maximum Radial Force	F_a	N	1377										1377													
Maximum Axial Force	F_b	N	765										765													
Torsional Rigidity	–	Nm/arcmin	7										7													
Efficiency	η	%	≥95										≥92													
Service Life	–	h	20000										20000													
Noise	–	dB	≤63										≤63													
Weight	–	Kg	2.1										2.5													
Backlash	P0	arcmin	–										–													
	P1	arcmin	≤4										≤7													
	P2	arcmin	≤6										≤9													
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	$kg.cm^2$	0.35								0.07		0.09													

Notes:

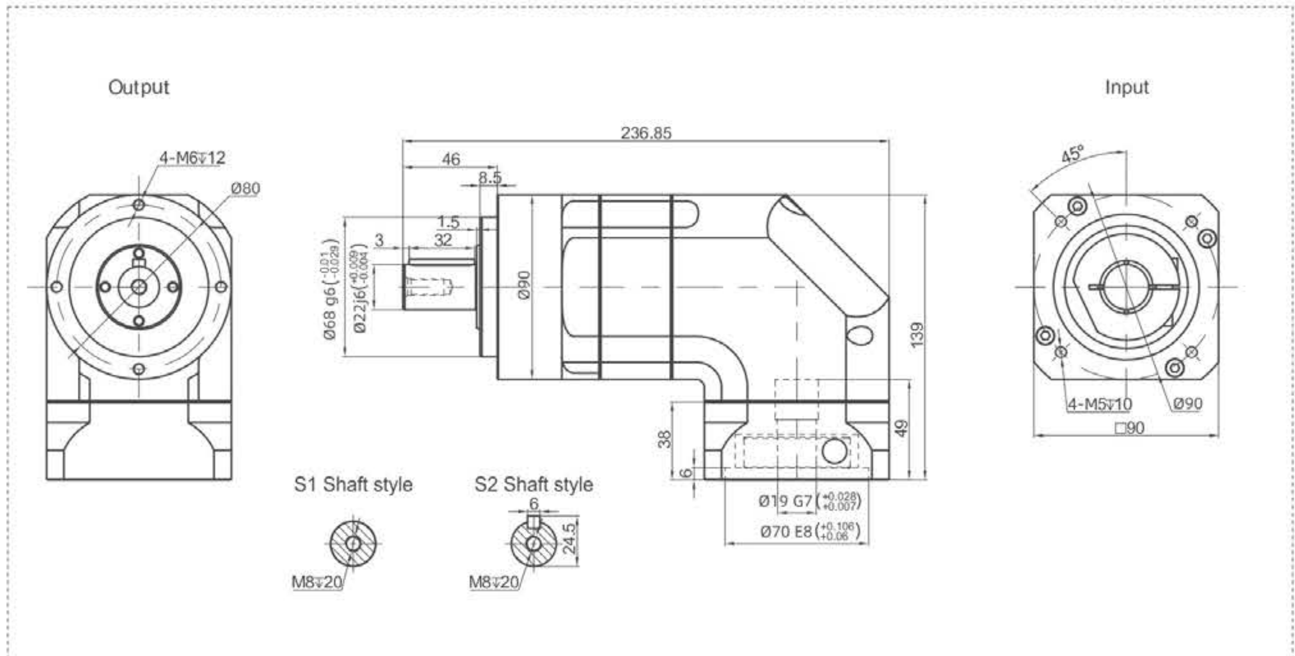
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

TER090 Series

TER090 One Stage



TER090 Two Stage



Performance Data

TER series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

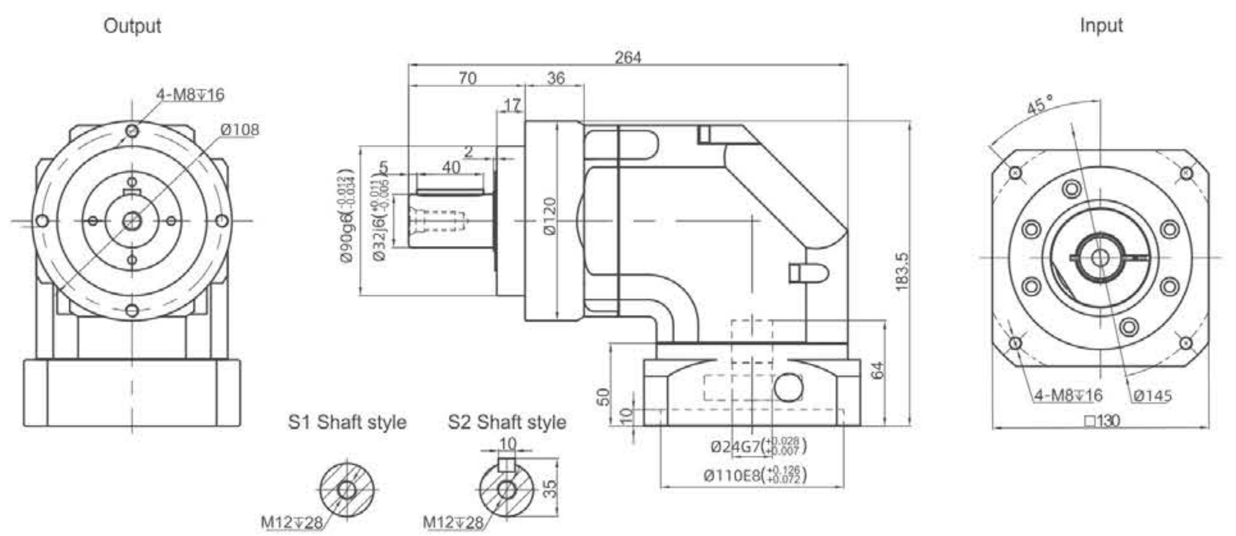
TER090			One Stage										Two Stage													
Speed Ratio		i	3	4	5	6	7	8	9	10	14	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200
Nominal Output Torque	T_1	Nm	100	120	150	148	140	123	-	102	140	102	150	148	140	120	150	148	140	123	102	148	140	123	-	102
Emergency Stop Torque	T_2	Nm	T_1×3										T_1×3													
Nominal Input Speed	S_1	rpm	4000										4000													
Maximum Input Speed	S_2	rpm	8000										8000													
Maximum Output Torque	T_4	Nm	T_1×3×60%										T_1×3×60%													
Maximum Radial Force	F_a	N	2985										2985													
Maximum Axial Force	F_b	N	1625										1625													
Torsional Rigidity	–	Nm/arcmin	14										14													
Efficiency	η	%	≥95										≥92													
Service Life	–	h	20000										20000													
Noise	–	dB	≤65										≤65													
Weight	–	Kg	5										6.4													
Backlash	P0	arcmin	–										–													
	P1		≤4										≤7													
	P2		≤6										≤9													
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	2.25								1.87		2.25									1.87				

Notes:

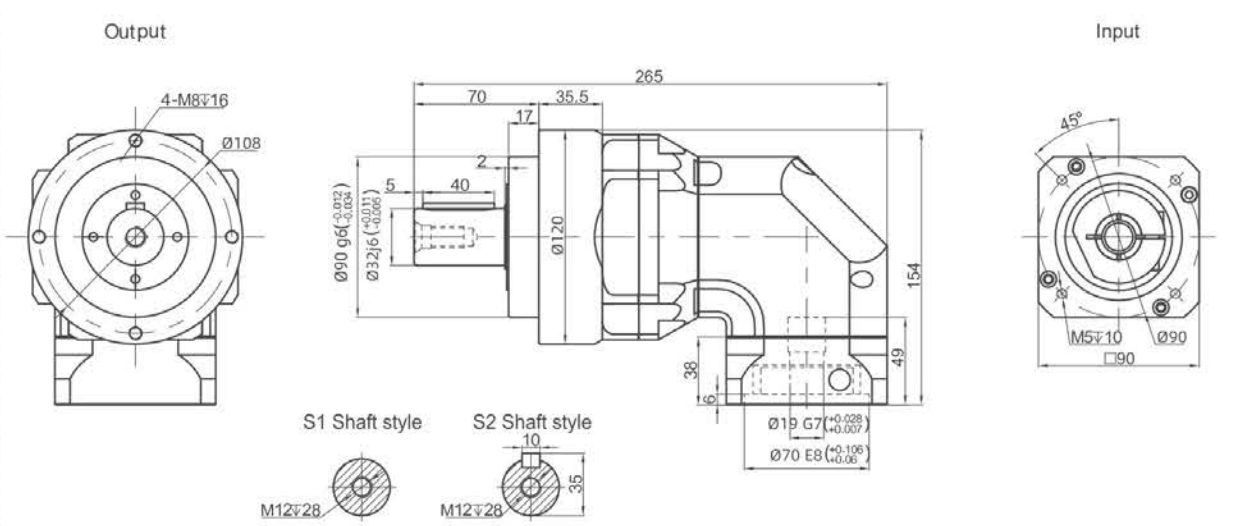
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

TER120 Series

TER120 One Stage



TER120 Two Stage



Performance Data

TER series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

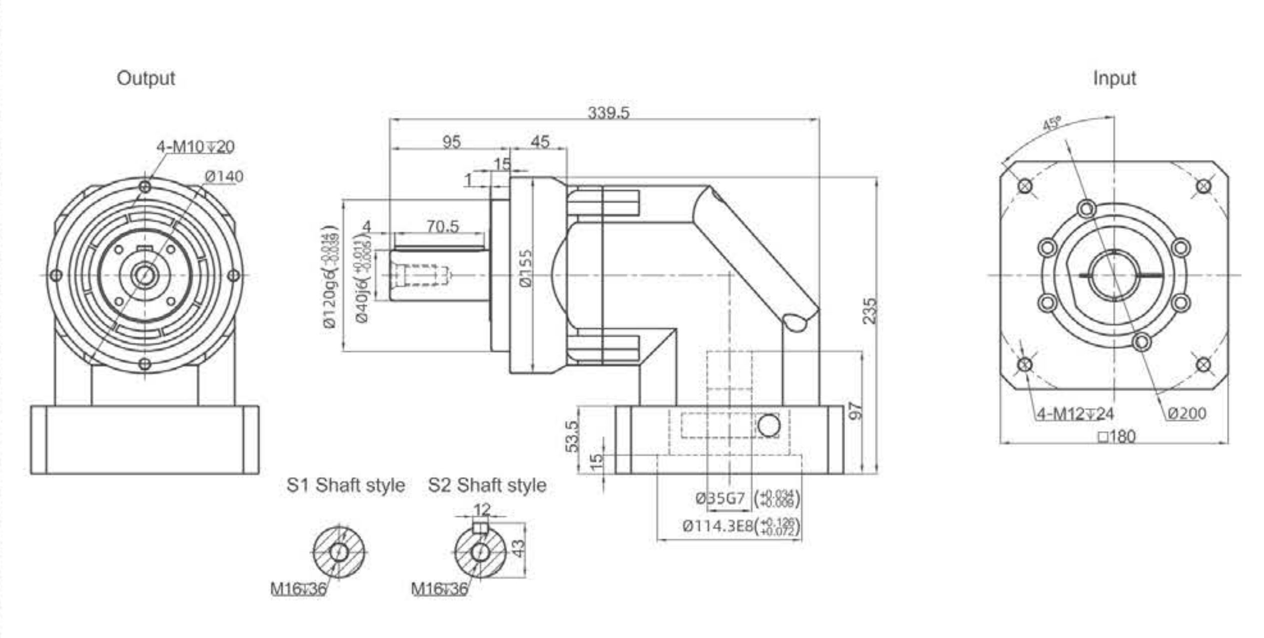
TER120			One Stage										Two Stage													
Speed Ratio		i	3	4	5	6	7	8	9	10	14	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200
Nominal Output Torque	T_1	Nm	200	260	330	310	300	260	-	235	300	235	330	310	300	260	330	310	300	260	235	310	300	260	-	235
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$										$T_1 \times 3$													
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	6100										6100													
Maximum Axial Force	F_b	N	3350										3350													
Torsional Rigidity	–	Nm/arcmin	25										25													
Efficiency	η	%	≥95										≥92													
Service Life	–	h	20000										20000													
Noise	–	dB	≤68										≤68													
Weight	–	Kg	13										12.5													
Backlash	P0	arcmin	–										–													
	P1	arcmin	≤4										≤7													
	P2	arcmin	≤6										≤9													
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	$kg.cm^2$	6.84								6.25		2.25									1.87				

Notes:

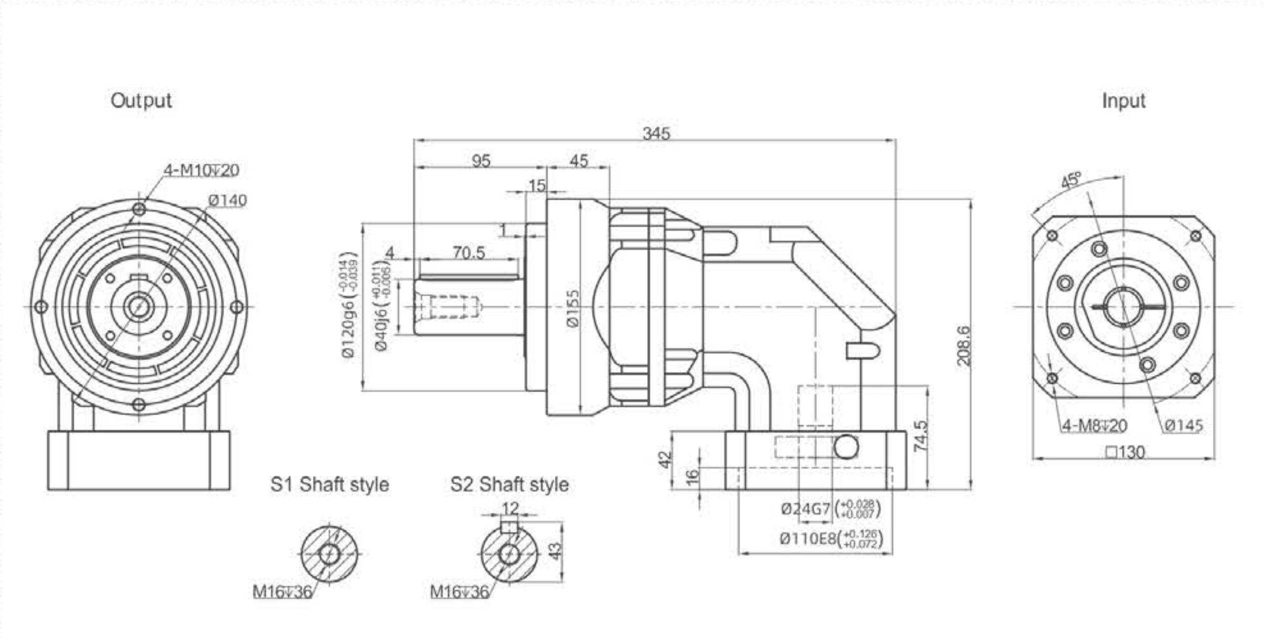
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

TER155 Series

TER155 One Stage



TER155 Two Stage



Performance Data

TER series offer additional installation flexibility in addition to TB series but with zero compromise in performance. It is with high precision and robust design.

TER155			One Stage										Two Stage													
Speed Ratio		i	3	4	5	6	7	8	9	10	14	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200
Nominal Output Torque	T_1	Nm	340	540	650	600	555	500	-	460	555	450	650	600	555	500	650	600	555	500	460	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	8460										8460													
Maximum Axial Force	F_b	N	4700										4700													
Torsional Rigidity	–	Nm/arcmin	50										50													
Efficiency	η	%	≥95										≥92													
Service Life	–	h	20000										20000													
Noise	–	dB	≤70										≤70													
Weight	–	Kg	25.1										21.5													
Backlash	P0	arcmin	–										–													
	P1	arcmin	≤4										≤7													
	P2	arcmin	≤6										≤9													
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	$kg.cm^2$	23.4								21.8		6.84									6.25				

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.

Precision Planetary Reducer

High-end Structure Design

+

TF SERIES

+

Premium Performance

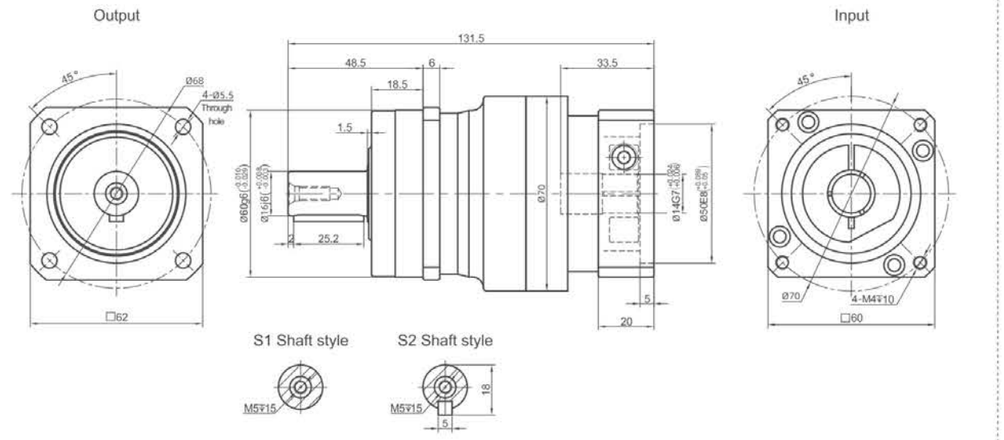
TF series planetary reducer has the characteristics of high rigidity, high precision (single stage can achieve less than 1 arcmin), high transmission efficiency (single stage at 97% -98%), high torque / volume ratio, and lifetime maintenance-free.

GEARKO®

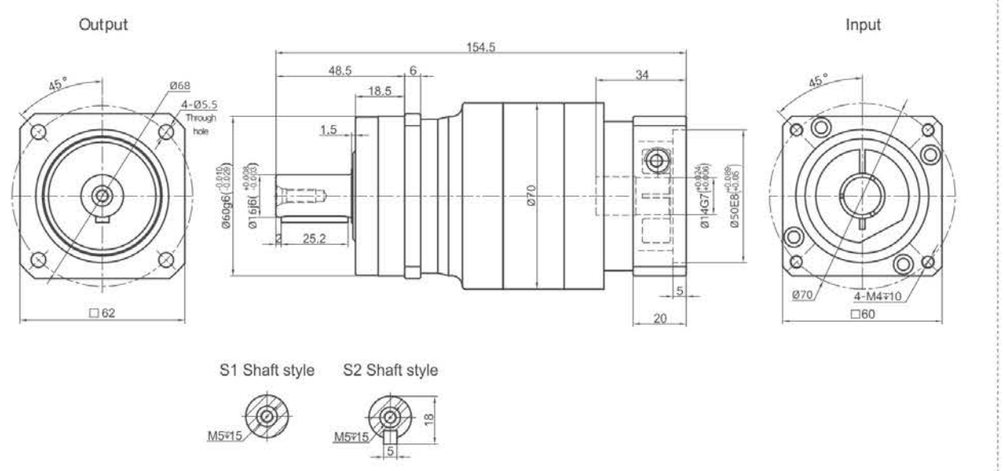
DRIVES THE PRECISION

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.cm²	0.16	0.14	0.13						0.13										

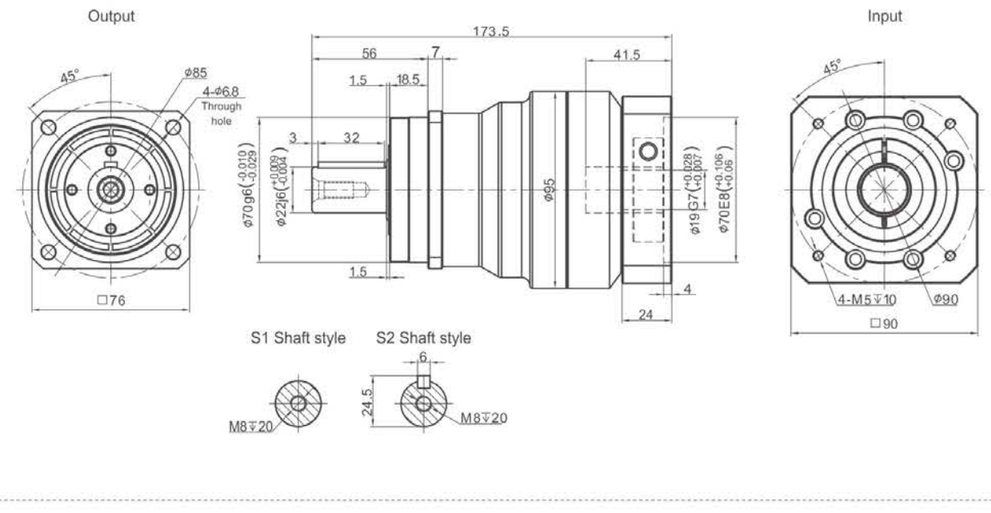
Notes:

- 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.

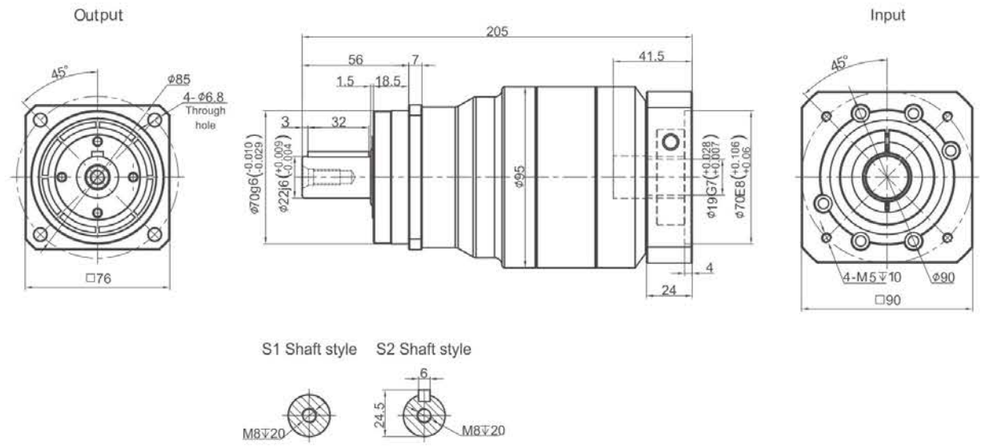
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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			

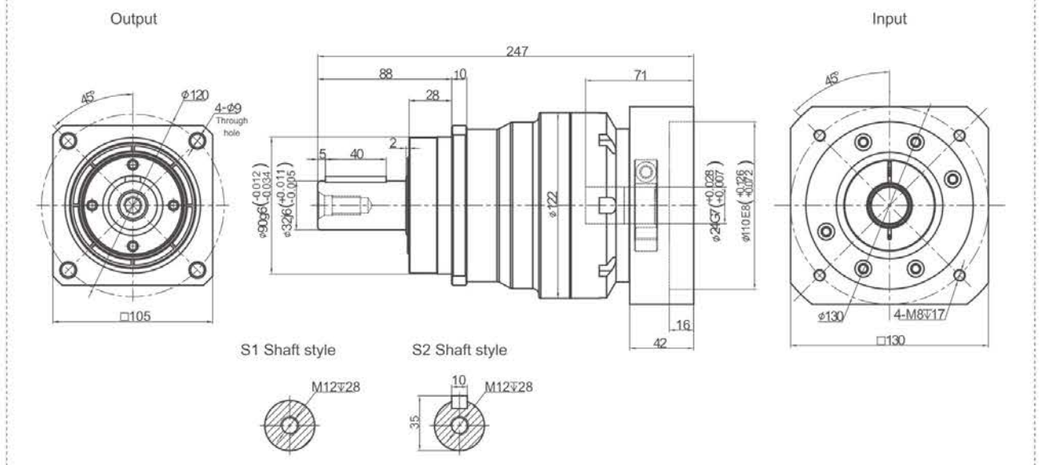
Notes:

- 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.

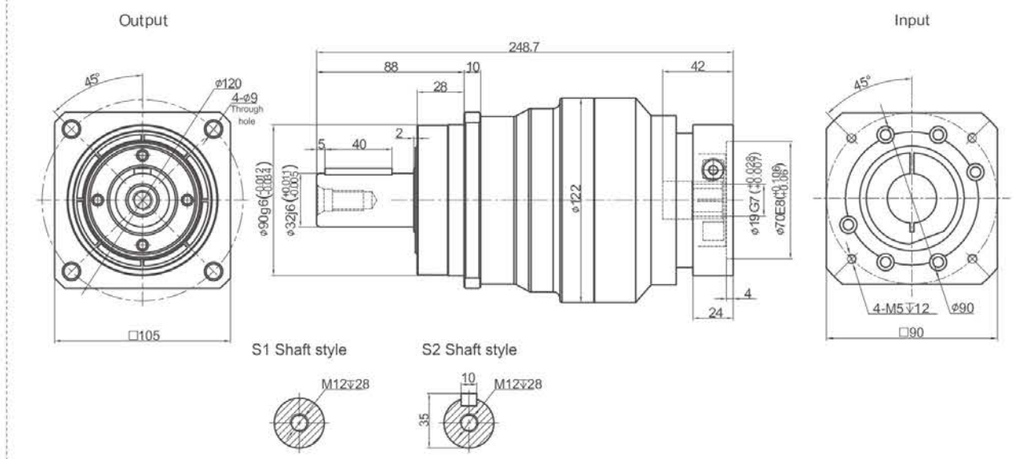
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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				

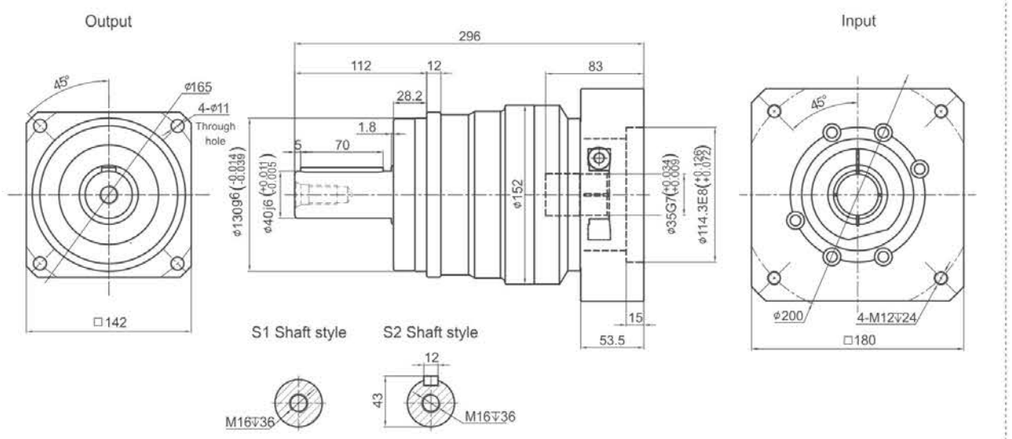
Notes:

- 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.

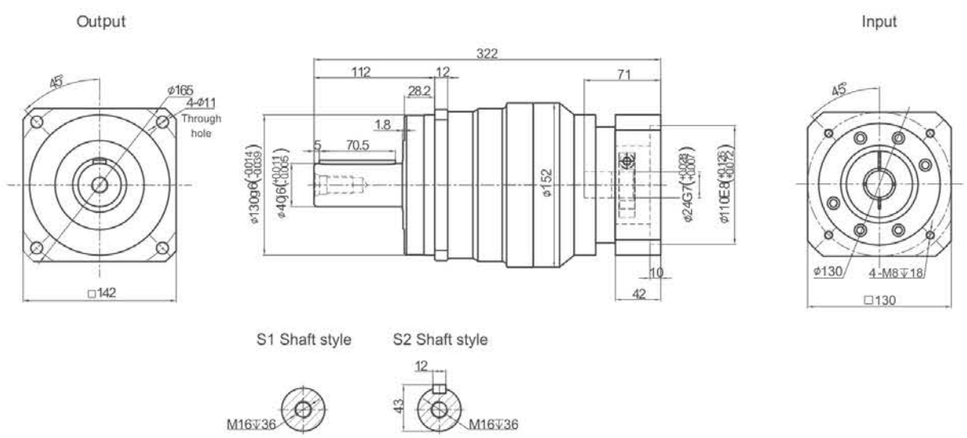
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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.cm²	9.2	7.5	7.4	7.2	7.1	7.0	-	7.0	2.71										2.57

Notes:

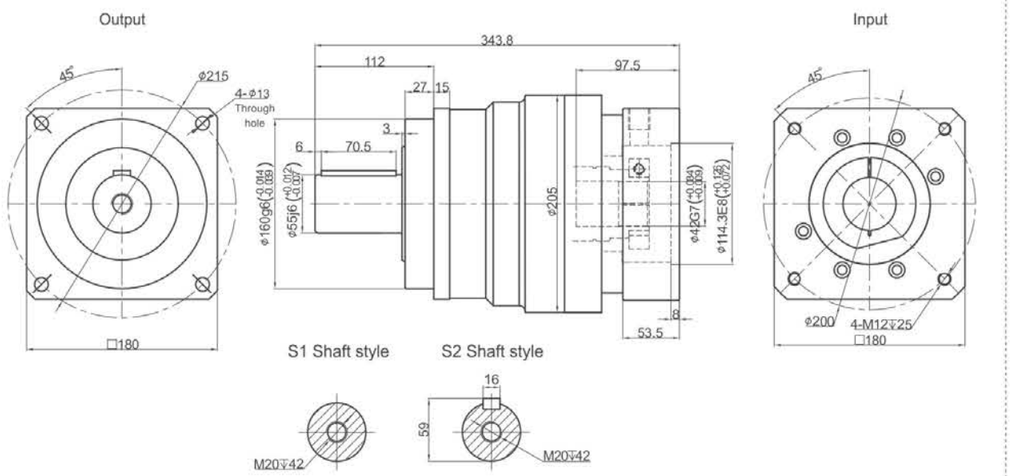
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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

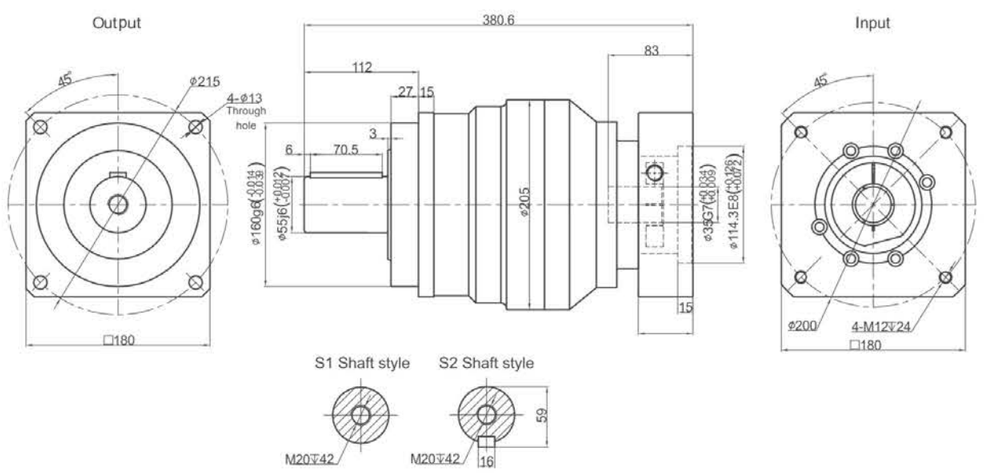
TF Series - High-end Design and Premium Performance

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.

Precision Planetary Reducer

Modular & Economical Design

+

TCB/TCBR/TCE SERIES

+

Optimized Performance

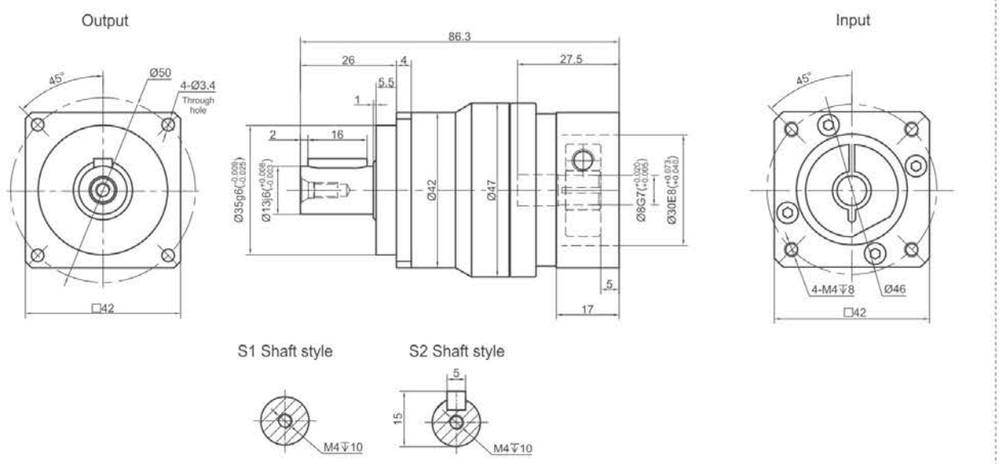
TCB/TCBR/TCE series planetary reducer backlash is low and its transmission capacity is strong, the input end can be matched with servo, stepping and any other motors.

GEARKO®

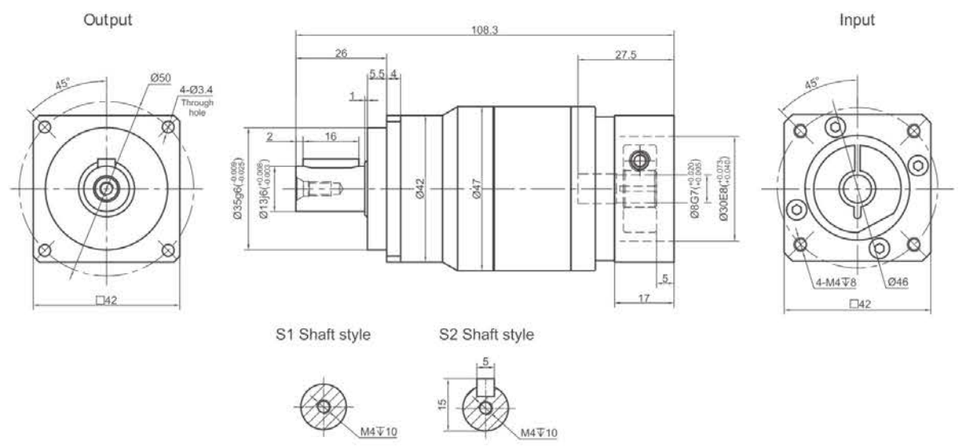
DRIVES THE PRECISION

TCB042 Series

TCB042 One Stage



TCB042 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCB042			One Stage								Two Stage									
Speed Ratio	i		-	4	5	6	7	8	9	10	-	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	-	17	19	18	19	16	-	14	-	17	19	18	18	16	19	18	18	16	14
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	760								760										
Maximum Axial Force	F_b	N	380								380										
Torsional Rigidity	–	Nm/arcmin	3								3										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽56								⩽56										
Weight	–	Kg	0.5								0.7										
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	$kg.cm^2$	0.03								0.03										

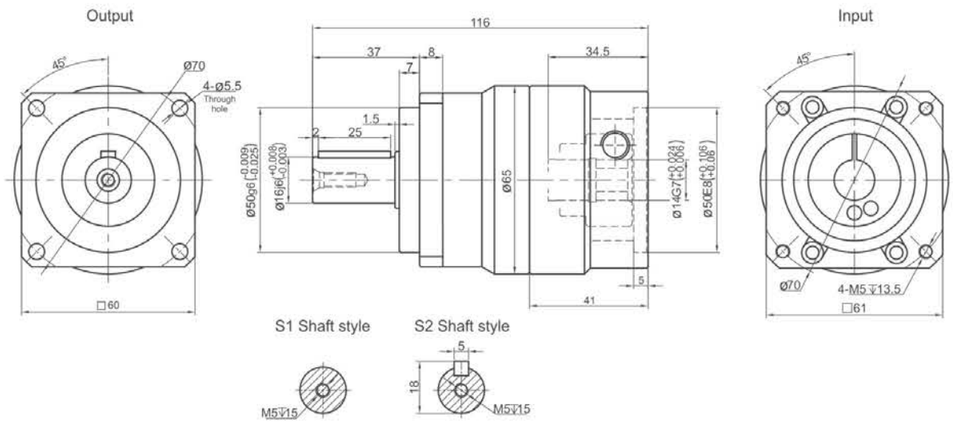
Notes:

- 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.

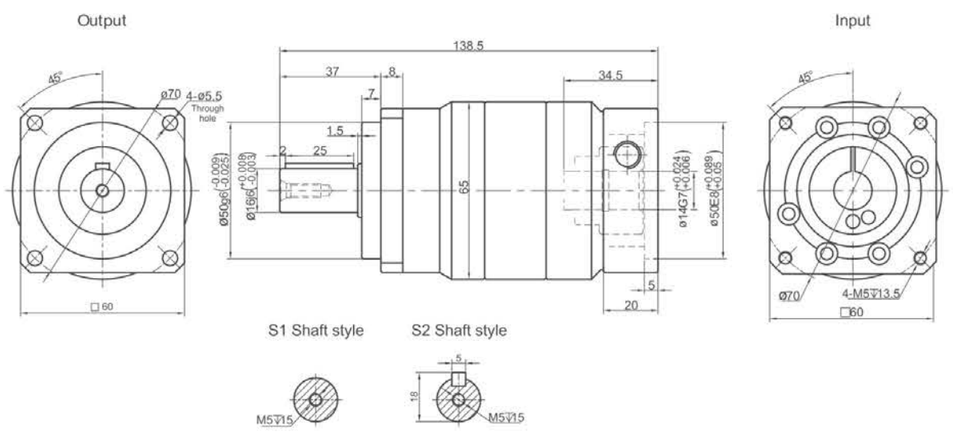
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCB060 Series

TCB060 One Stage



TCB060 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCB060			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	40	45	55	50	45	45	-	35	40	45	55	50	45	45	55	50	45	45	35
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	1530								1530										
Maximum Axial Force	F_b	N	765								765										
Torsional Rigidity	–	Nm/arcmin	7								7										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽58								⩽58										
Weight	–	Kg	1.3								1.7										
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.cm²	0.16	0.14	0.13						0.13										

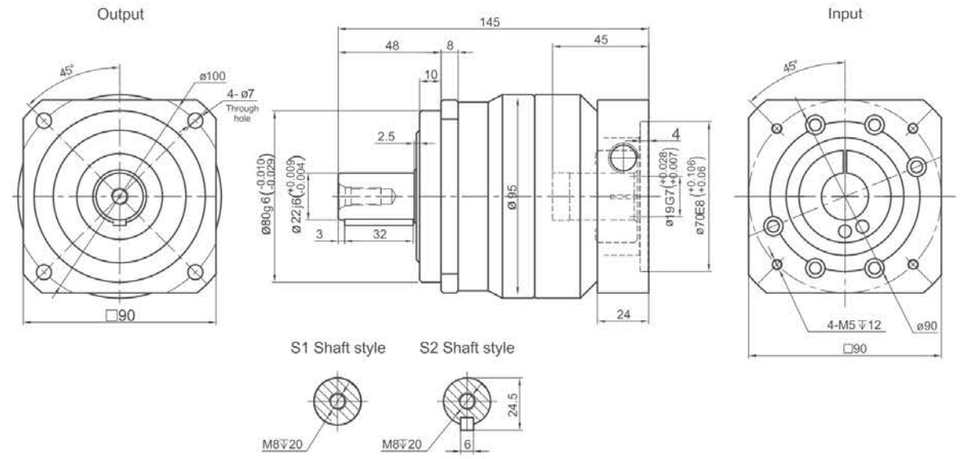
Notes:

- 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.

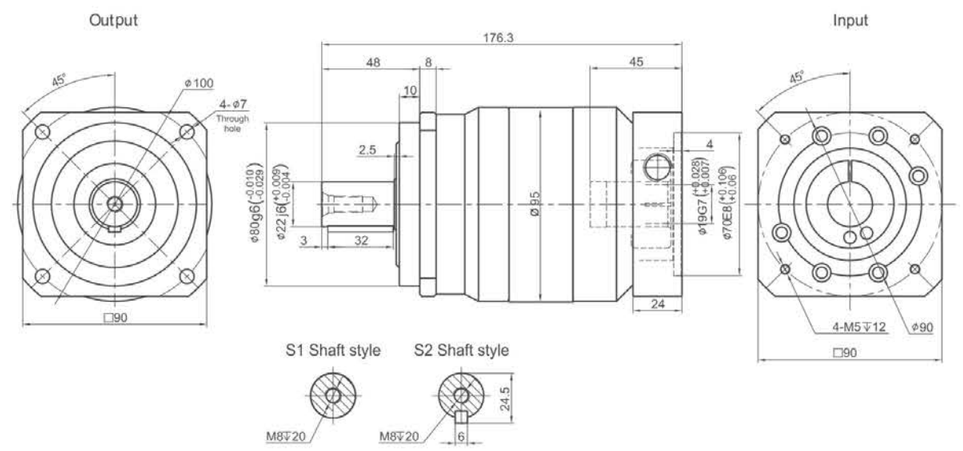
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCB090 Series

TCB090 One Stage



TCB090 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCB090			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	100	110	150	140	135	120	-	100	100	110	150	140	135	120	150	140	135	120	100
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	3250								3250										
Maximum Axial Force	F_b	N	1625								1625										
Torsional Rigidity	–	Nm/arcmin	14								14										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽60								60										
Weight	–	Kg	3.5								5.1										
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.cm²	0.61	0.48	0.47	0.45	0.45	0.44	-	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.

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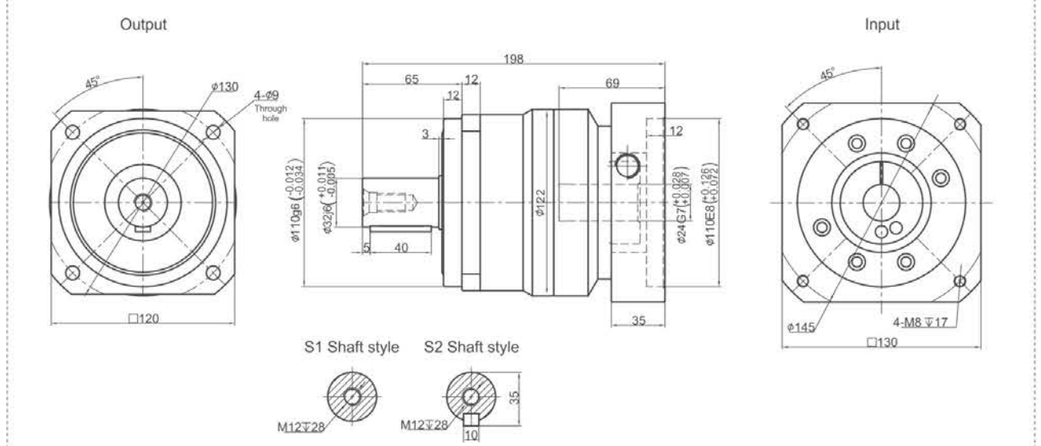
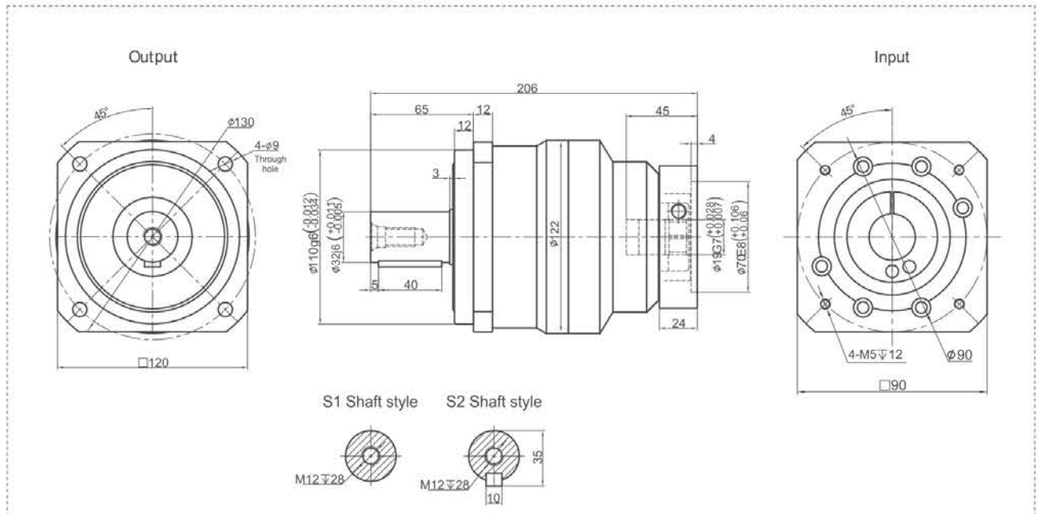
TCB120 Series

TCB120 One Stage



TCB120 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCB120			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	200	280	320	310	300	255	-	220	200	280	320	310	300	255	320	310	300	255	220
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	6700								6700										
Maximum Axial Force	F_b	N	3350								3350										
Torsional Rigidity	–	Nm/arcmin	25								25										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽63								⩽63										
Weight	–	Kg	8								9.5										
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	$kg.cm^2$	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.

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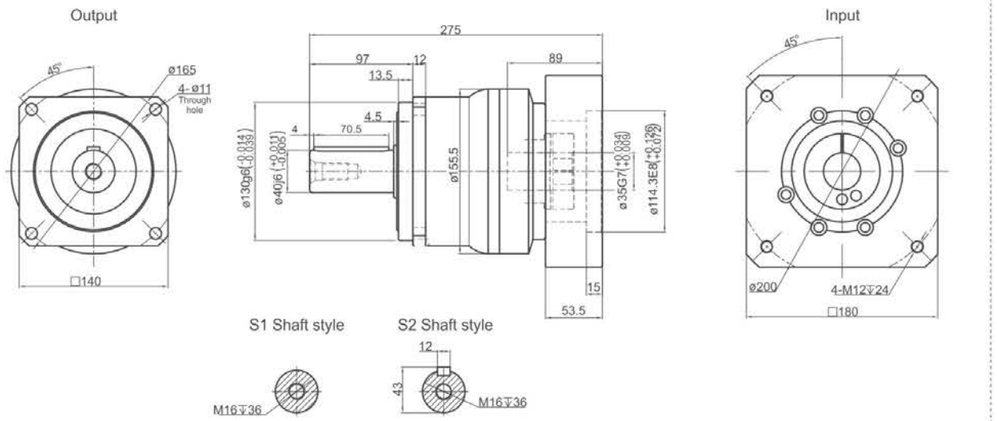
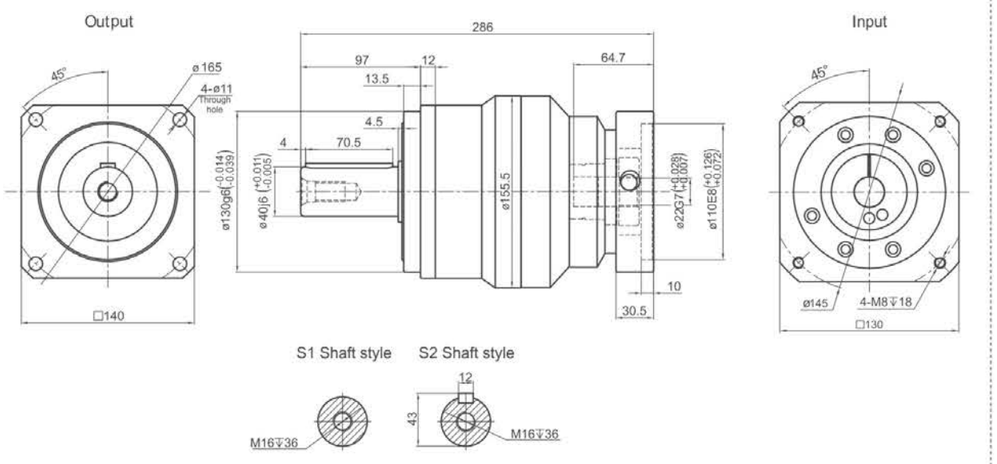
TCB140 Series

TCB140 One Stage



TCB140 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCB140			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	535	650	600	550	500	-	445	340	535	650	600	550	500	650	600	550	500	445
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	2000								2000										
Maximum Input Speed	S_2	rpm	4000								4000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	9400								9400										
Maximum Axial Force	F_b	N	4700								4700										
Torsional Rigidity	–	Nm/arcmin	50								50										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽65								⩽65										
Weight	–	Kg	17								19.8										
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.cm²	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	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.

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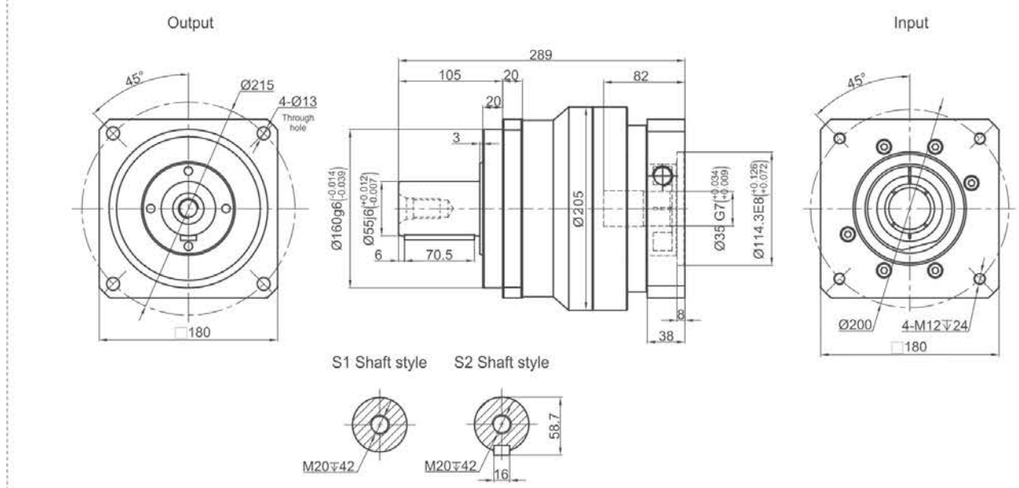
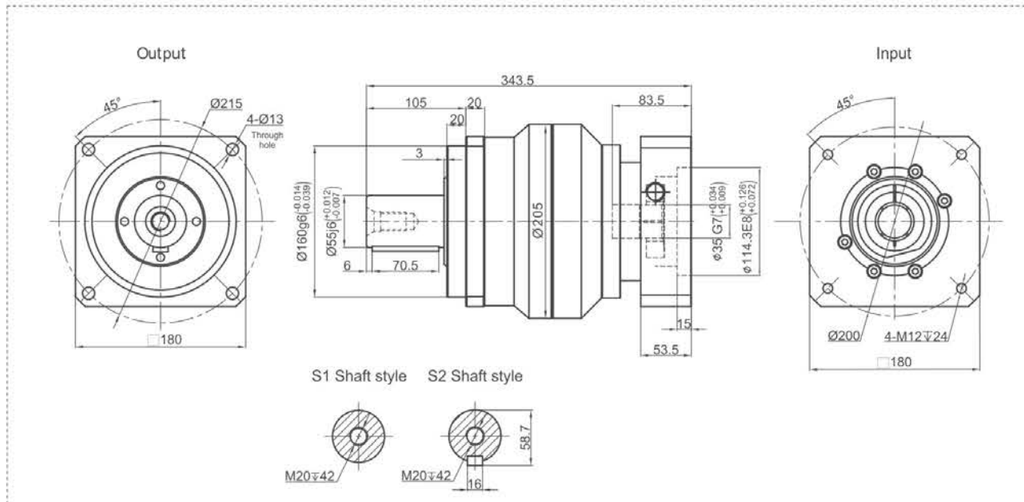
TCB180 Series

TCB180 One Stage



TCB180 Two Stage



Performance Data

TCB series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCB180			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	580	1020	1180	1050	1050	970	-	870	580	1020	1180	1050	1050	970	1180	1050	1050	970	870
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	2000								2000										
Maximum Input Speed	S_2	rpm	4000								4000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	14100								14100										
Maximum Axial Force	F_b	N	7050								7050										
Torsional Rigidity	–	Nm/arcmin	140								140										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽67								⩽67										
Weight	–	Kg	20.7								27										
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.cm²	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.

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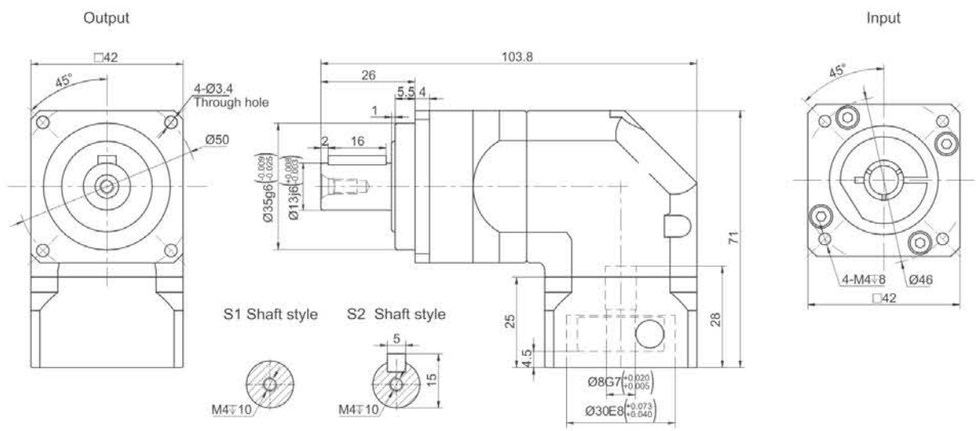
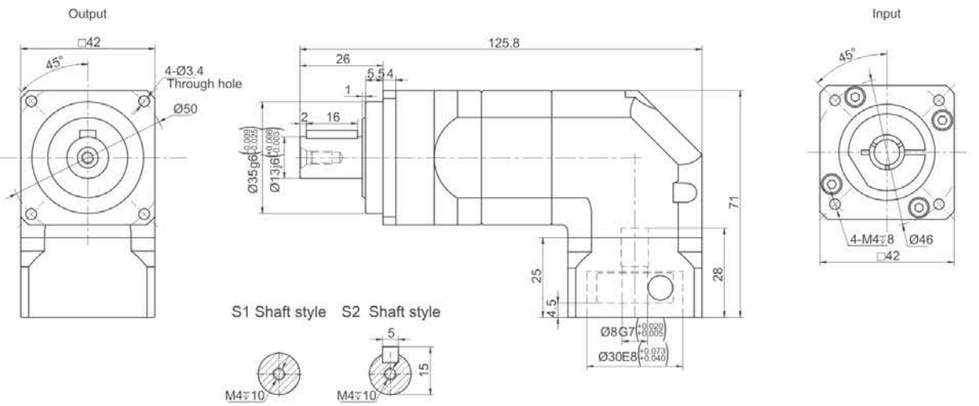
TCBR042 Series

TCBR042 One Stage



TCBR042 Two Stage



Performance Data

TCBR series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCBR042			One Stage						Two Stage									
Speed Ratio	i	-	4	5	6	7	8	10	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	-	11	13	16	17	15	13	13	13	16	17	15	13	16	17	15	13
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	760						760									
Maximum Axial Force	F_b	N	380						380									
Torsional Rigidity	–	Nm/arcmin	3						3									
Efficiency	η	%	⩾95						⩾92									
Service Life	–	h	20000						20000									
Noise	–	dB	⩽63						⩽63									
Weight	–	Kg	0.9						1.1									
Backlash	P0	arcmin	-						-									
	P1		⩽6						⩽9									
	P2		⩽8						⩽12									
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	$kg.cm^2$	0.09						0.09									

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.

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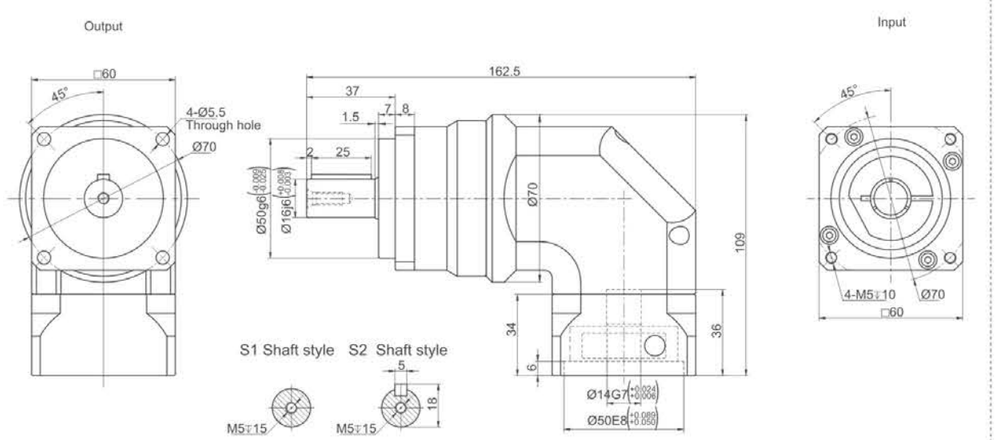
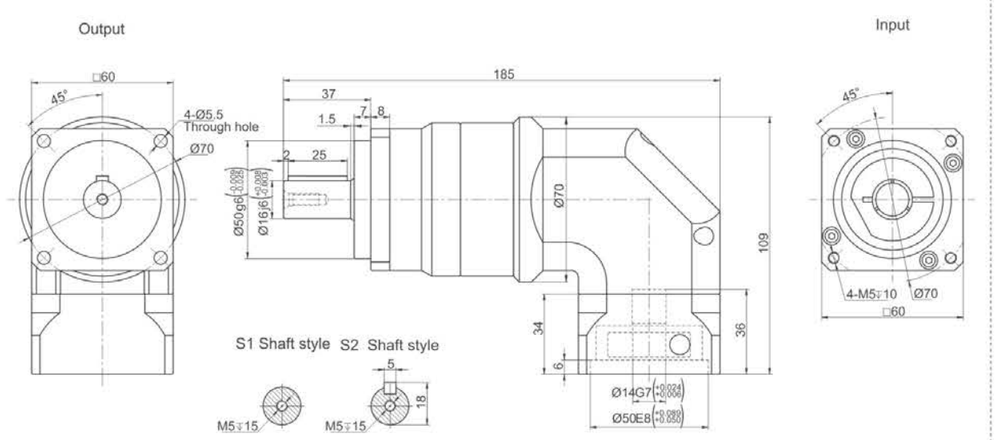
TCBR060 Series

TCBR060 One Stage



TCBR060 Two Stage



Performance Data

TCBR series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCBR060			One Stage												Two Stage													
Speed Ratio	i		3	4	5	6	7	8	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	200
Nominal Output Torque	T_1	Nm	35	45	55	50	46	43	40	50	40	43	40	55	50	46	43	55	50	46	43	40	50	46	43	40
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	1450												1450											
Maximum Axial Force	F_b	N	724												724											
Torsional Rigidity	–	Nm/arcmin	6												6											
Efficiency	η	%	⩾95												⩾92											
Service Life	–	h	20000												20000											
Noise	–	dB	⩽66												⩽66											
Weight	–	Kg	1.5												2.1											
Backlash	P0	arcmin	-												-											
	P1		⩽6												⩽9											
	P2		⩽8												⩽12											
Operating Temperature	–	°C	-20~90												-20~90											
Lubrication	–		Synthetic Grease												Synthetic grease											
Protection Class	–		IP65												IP65											
Mounting Position	–		Any Direction												Any Direction											
Moment of Inertia	J	$kg.cm^2$	0.35												0.07											

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.

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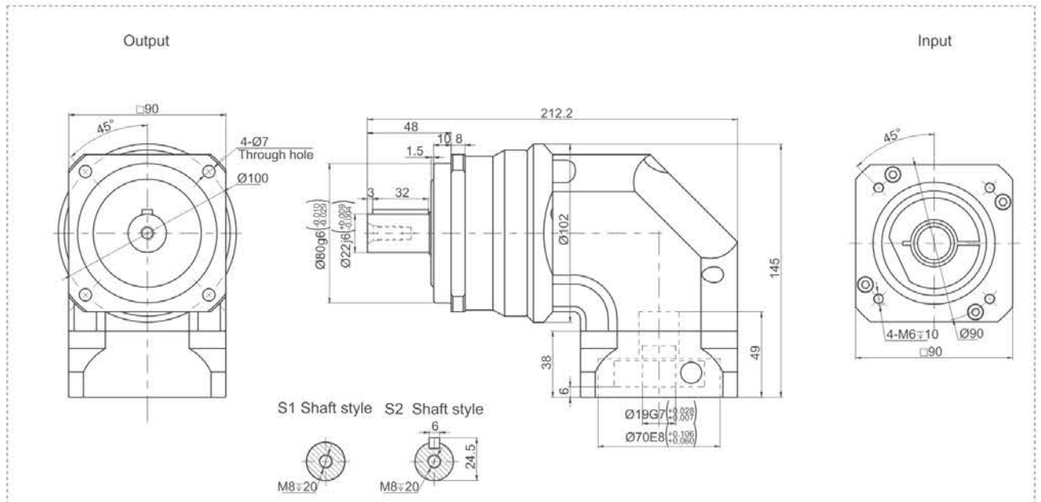
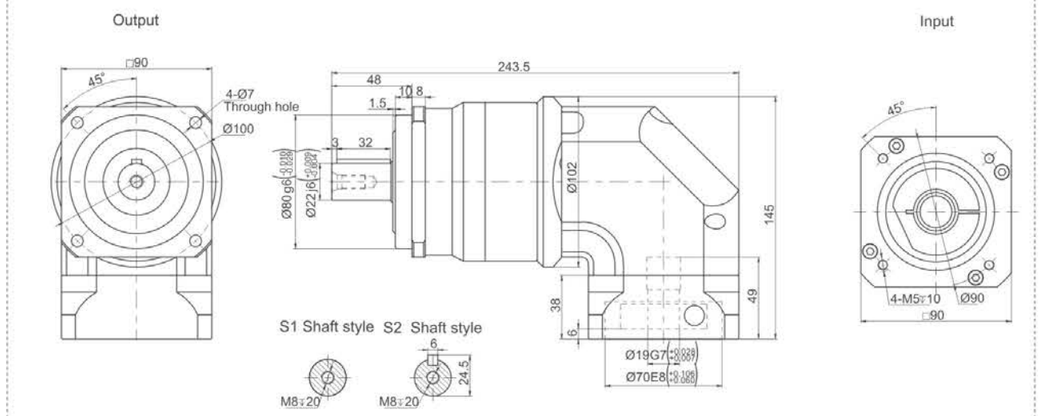
TCBR090 Series

TCBR090 One Stage



TCBR090 Two Stage



Performance Data

TCBR series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCBR090			One Stage												Two Stage											
Speed Ratio	i		3	4	5	6	7	8	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	200
Nominal Output Torque	T_1	Nm	85	115	140	140	135	115	97	140	135	115	97	140	140	135	115	140	140	135	115	97	140	135	115	97
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	3200											3200												
Maximum Axial Force	F_b	N	1600											1600												
Torsional Rigidity	–	Nm/arcmin	14											14												
Efficiency	η	%	⩾95											⩾92												
Service Life	–	h	20000											20000												
Noise	–	dB	⩽67											⩽67												
Weight	–	Kg	6.4											7.7												
Backlash	P0	arcmin	⩽4											⩽7												
	P1		⩽6											⩽9												
	P2		⩽8											⩽12												
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	2.25									1.87		0.35												0.31

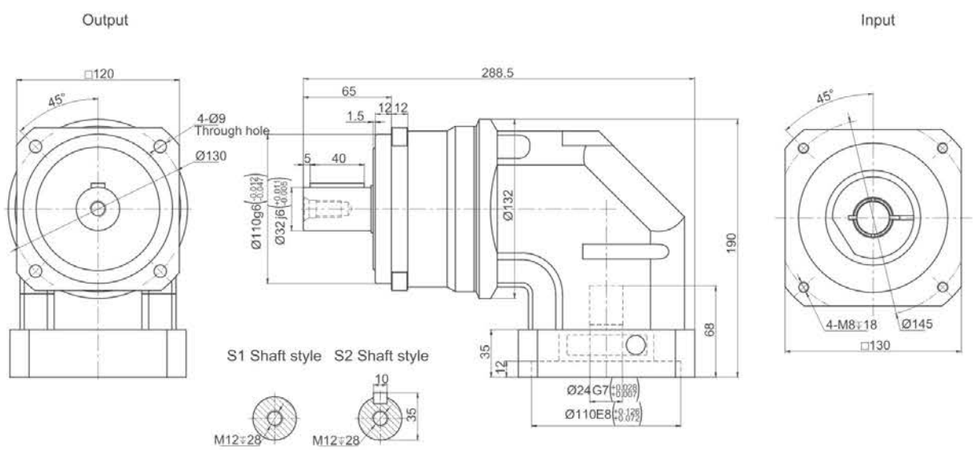
Notes:

- 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.

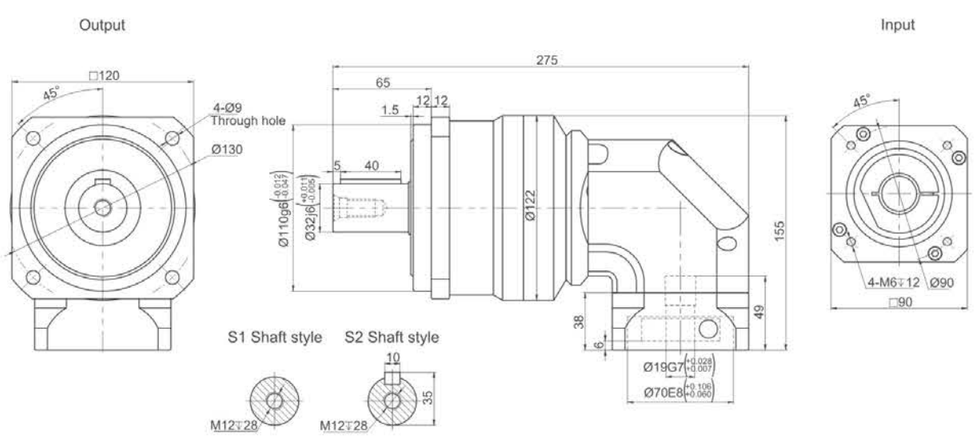
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCBR120 Series

TCBR120 One Stage



TCBR120 Two Stage



Performance Data

TCBR series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCBR120			One Stage														Two Stage													
Speed Ratio	i		3	4	5	6	7	8	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	200				
Nominal Output Torque	T_1	Nm	190	245	315	305	290	255	225	305	290	255	225	315	305	290	255	315	305	290	255	225	305	290	255	225				
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	5000														5000													
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$														$T_1 \times 3 \times 60\%$													
Maximum Radial Force	F_a	N	6600														6600													
Maximum Axial Force	F_b	N	3200														3200													
Torsional Rigidity	–	Nm/arcmin	25														25													
Efficiency	η	%	⩾95														⩾92													
Service Life	–	h	20000														20000													
Noise	–	dB	⩽70														⩽70													
Weight	–	Kg	13														14													
Backlash	P0	arcmin	⩽4														⩽7													
	P1		⩽6														⩽9													
	P2		⩽8														⩽12													
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	$kg.cm^2$	6.84														6.25										2.25			
																												1.87		

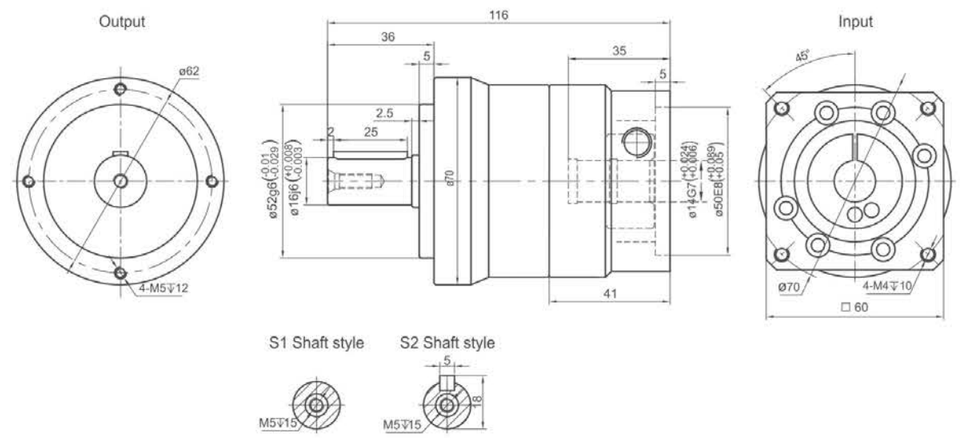
Notes:

- 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.

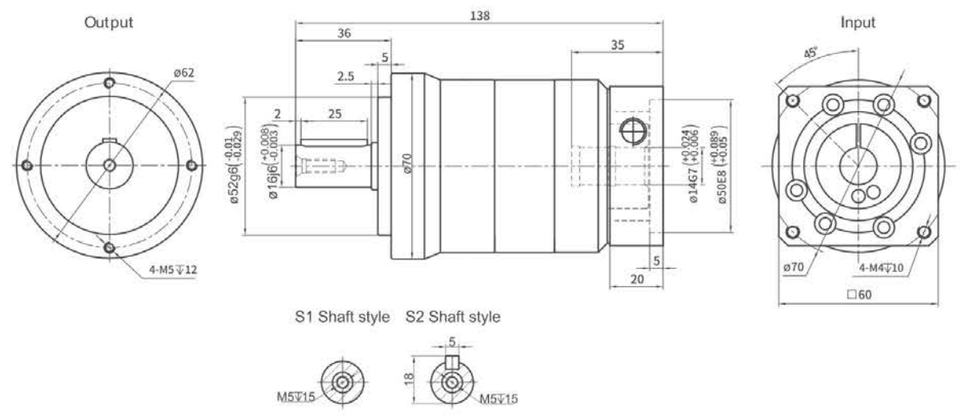
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCE070 Series

TCE070 One Stage



TCE070 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCE070			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	40	45	55	50	45	45	-	35	40	45	55	50	45	45	55	50	45	45	35
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	1530								1530									
Maximum Axial Force	F_b	N	765								765									
Torsional Rigidity	–	Nm/arcmin	7								7									
Efficiency	η	%	⩾97								⩾94									
Service Life	–	h	20000								20000									
Noise	–	dB	⩽58								⩽58									
Weight	–	Kg	1.6								1.9									
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.

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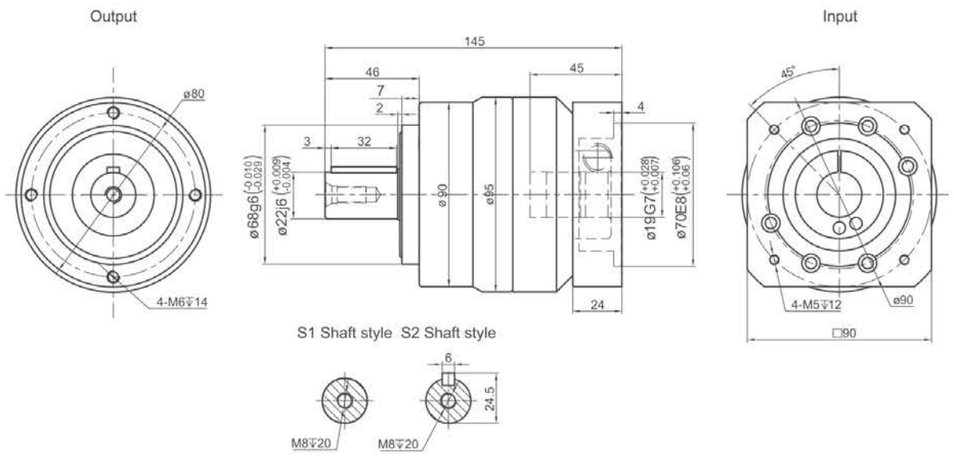
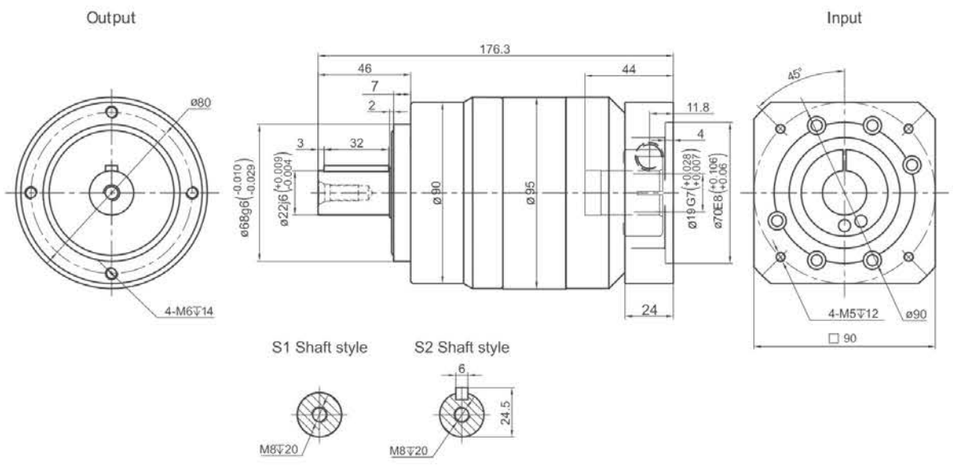
TCE090 Series

TCE090 One Stage



TCE090 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCE090			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	100	110	150	140	135	120	-	100	100	110	150	140	135	120	150	140	135	120	100
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	3250								3250									
Maximum Axial Force	F_b	N	1625								1625									
Torsional Rigidity	–	Nm/arcmin	14								14									
Efficiency	η	%	⩾97								⩾94									
Service Life	–	h	20000								20000									
Noise	–	dB	⩽60								⩽60									
Weight	–	Kg	3.4								5.2									
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.cm²	0.61	0.48	0.47	0.45	0.45	0.44	-	0.44	0.47									0.44

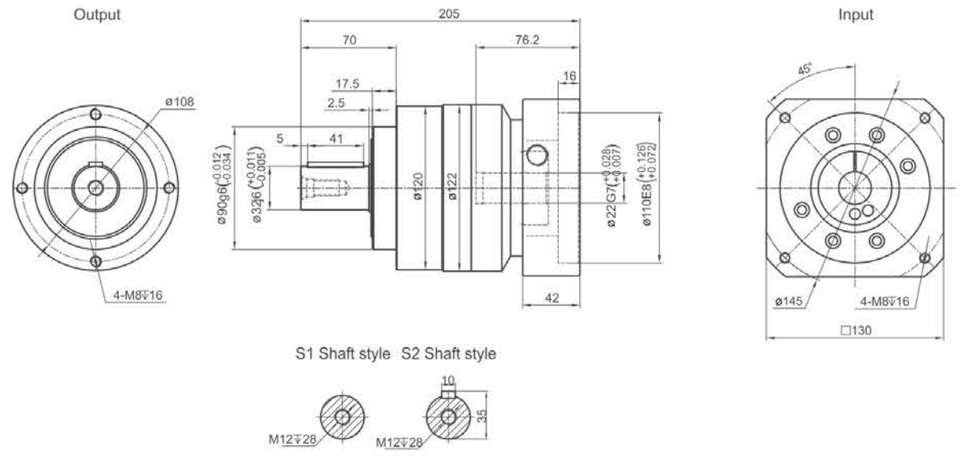
Notes:

- 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.

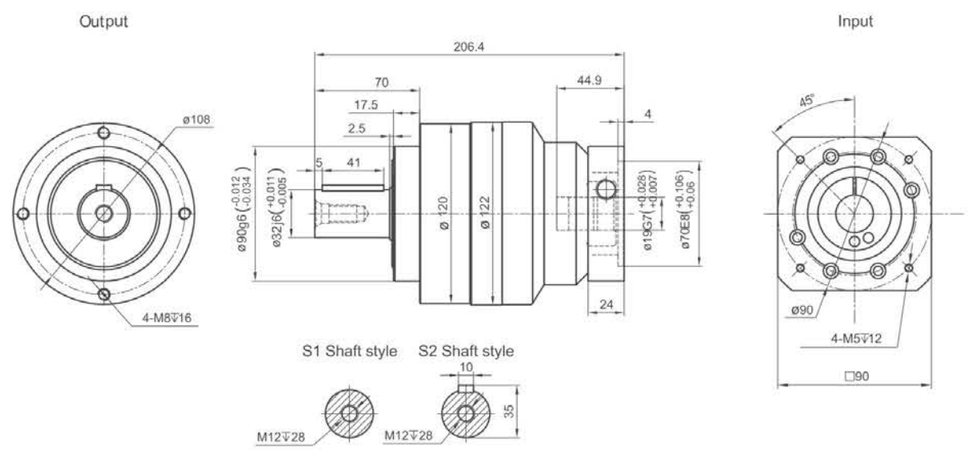
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCE120 Series

TCE120 One Stage



TCE120 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

TCE120			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	200	280	320	310	300	255	-	220	200	280	320	310	300	255	320	310	300	255	220
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	6700								6700										
Maximum Axial Force	F_b	N	3350								3350										
Torsional Rigidity	–	Nm/arcmin	25								25										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽63								⩽63										
Weight	–	Kg	7.8								8.5										
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.cm²	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57	0.47						0.44				

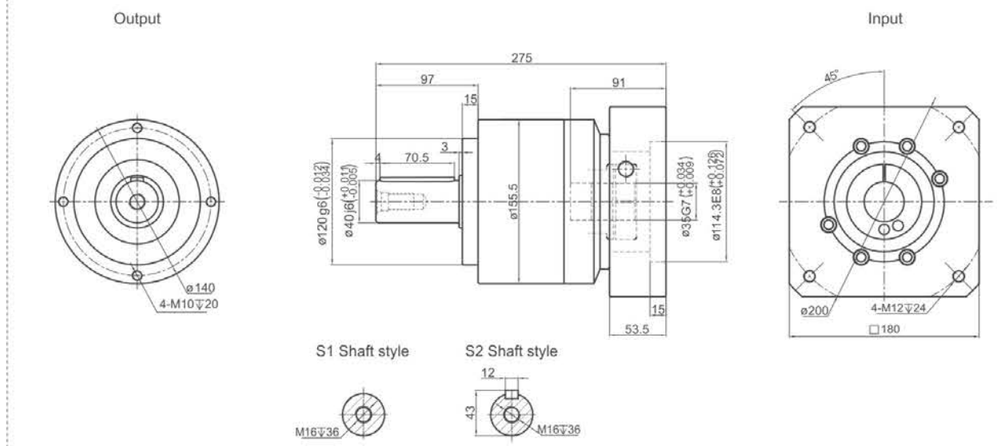
Notes:

- 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.

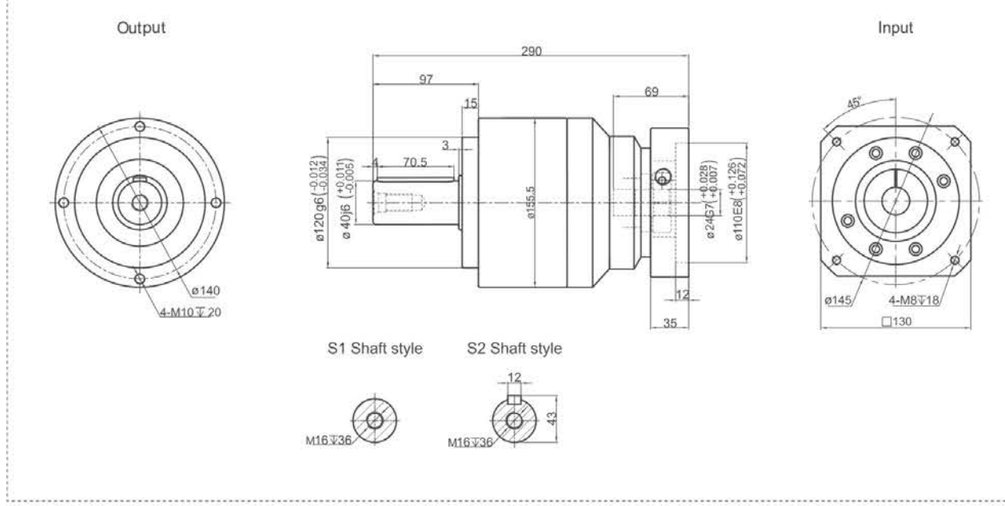
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TCE155 Series

TCE155 One Stage



TCE155 Two Stage



Performance Data

TCE series planetary reducer has modular design compact structure with high reliability and efficiency.
It is a perfect optimization of both performance and cost.

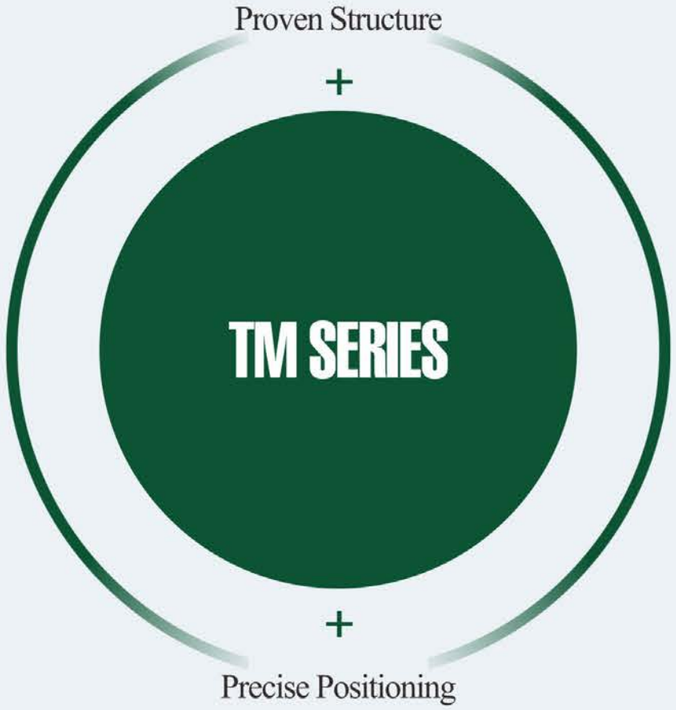
TCE155			One Stage								Two Stage									
Speed Ratio	i		3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	340	535	650	600	550	500	-	445	340	535	650	600	550	500	650	600	550	500	445
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	2000								2000										
Maximum Input Speed	S_2	rpm	4000								4000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	9400								9400										
Maximum Axial Force	F_b	N	4700								4700										
Torsional Rigidity	–	Nm/arcmin	50								50										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽65								⩽65										
Weight	–	Kg	19								20										
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.cm²	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	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.

Hollow Rotating Platform



The hollow rotating platform can be driven by different brand servo motors with high precision. The operation is stable and the positioning is precision.

GEARKO®

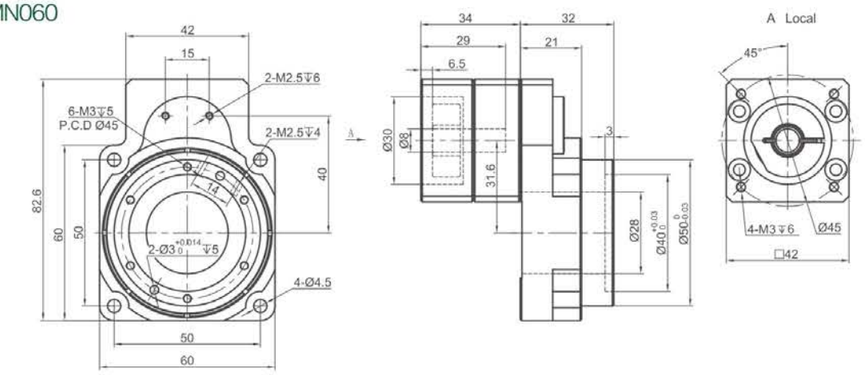
DRIVES THE PRECISION

TMN Series

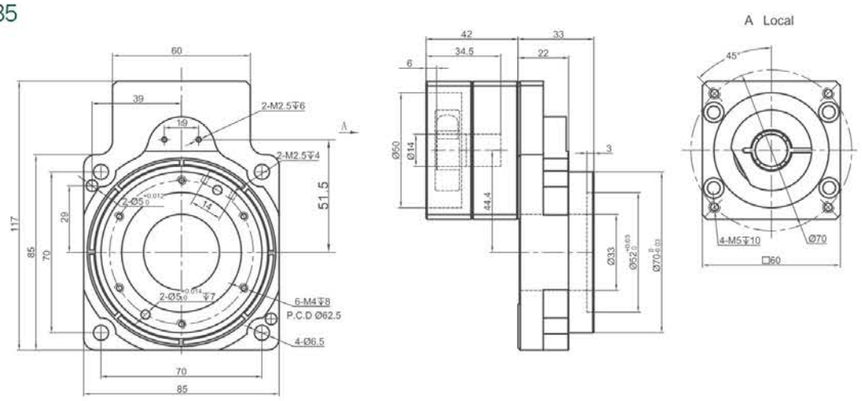
TMN – 060 – 05 – N

Rotate platform series	specification	Reduction ratio	Optional
	060 085 130 200	05 10 18	N: servo motor B: Stepper motor S: closed loop stepper motor

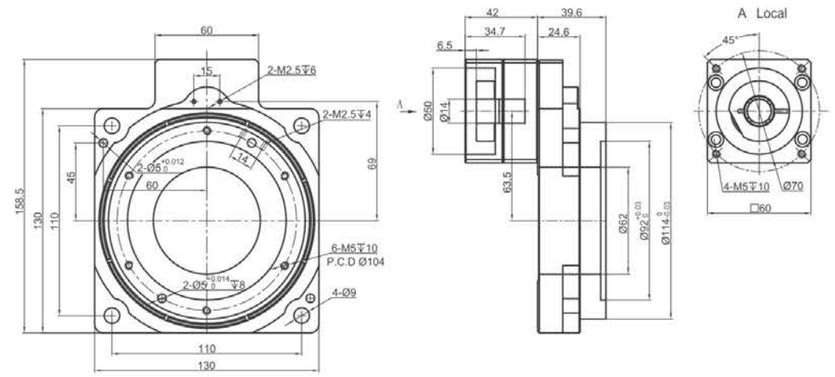
TMN060



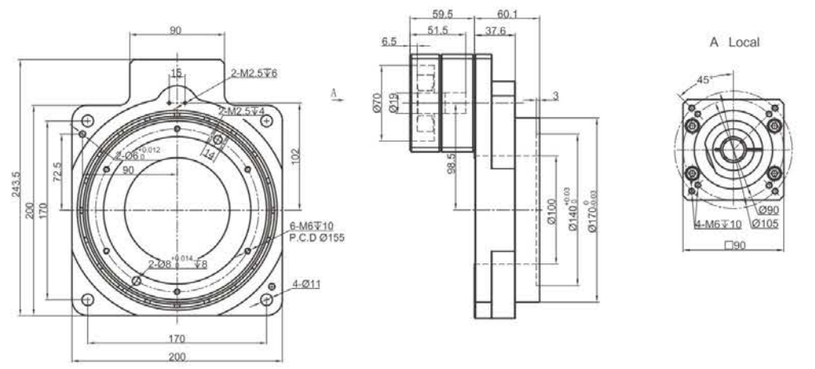
TMN085



TMN130



TMN200



		TMN60		TMN85		TMN130		TMN200	
Speed Ratio		5	10	5	10	10	18	10	18
Matching Servo Motor	W	50~100		200~400		200~400		750	
Bearing Type		Crossed Roller Bearing		Crossed Roller Bearing		Crossed Roller Bearing		Crossed Roller Bearing	
Allowable Torque	N.m	5.3		20	16	32	20	65	50
Allowable Disk Output Speed	rpm	200		300	250	250	150	250	
Allowable axial load	N	250		500		2000		4000	
Repeat Positioning Accuracy	arcsec	±10		±10		±10		±10	
Positioning Precision	arcmin	3		3		3		3	
Flatness of Rotating Platform	mm	0.01		0.01		0.01		0.01	
Outside Diameter Runout of Output End	mm	0.01		0.01		0.01		0.01	
Serivce Life	h	20000		20000		20000		20000	
Noise	dB	≤65		≤65		≤65		≤65	
Backlash	arcmin	≤1		≤1		≤1		≤1	
Protection Class		IP40		IP40		IP40		IP40	
Weight	kg	1.2		1.8		2.5		8	

The above technical parameters are for reference only. Actually, according to the data provided by the customer, relevant technical parameters and dimensions will be issued.
Origin Sensor Kit: TMN Series with OMRON EE-SX674