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PRECISION PLANETARY REDUCER

High Precision / High Rigidity / High Reliability



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













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Gearbox Selection Reference Table*

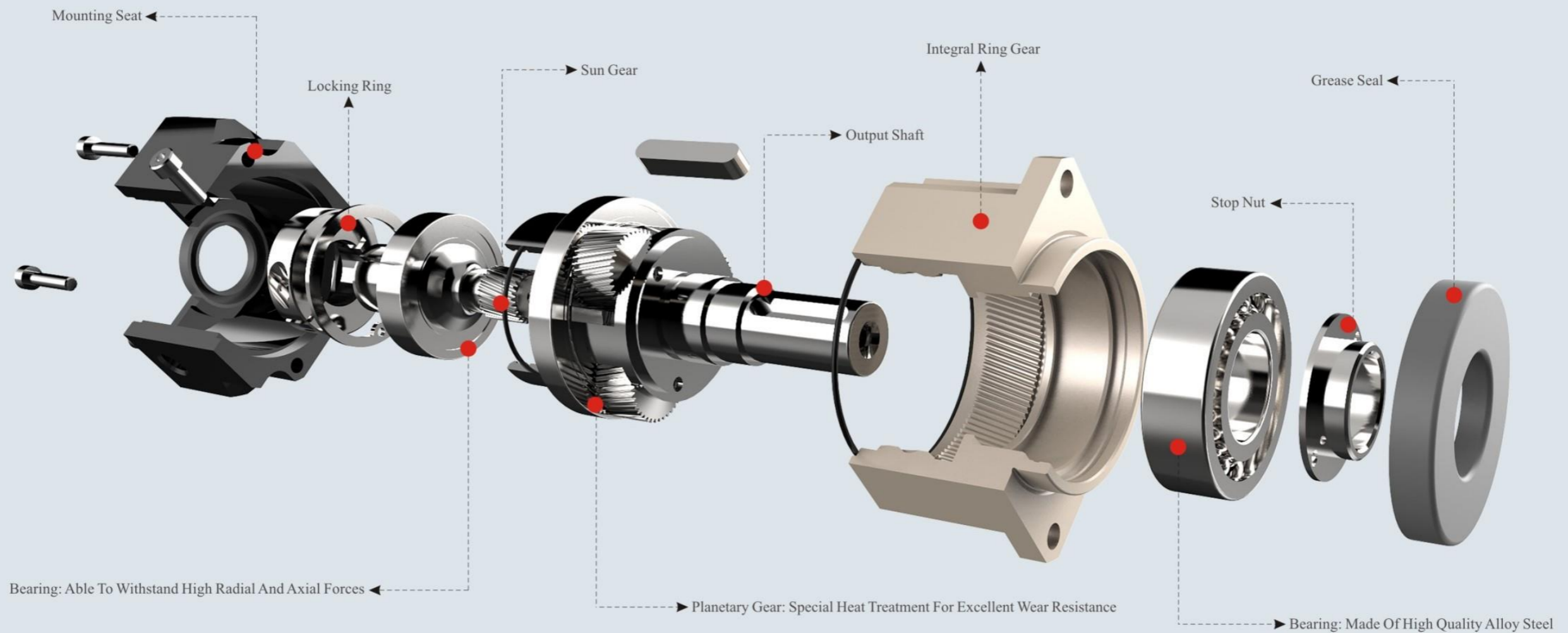
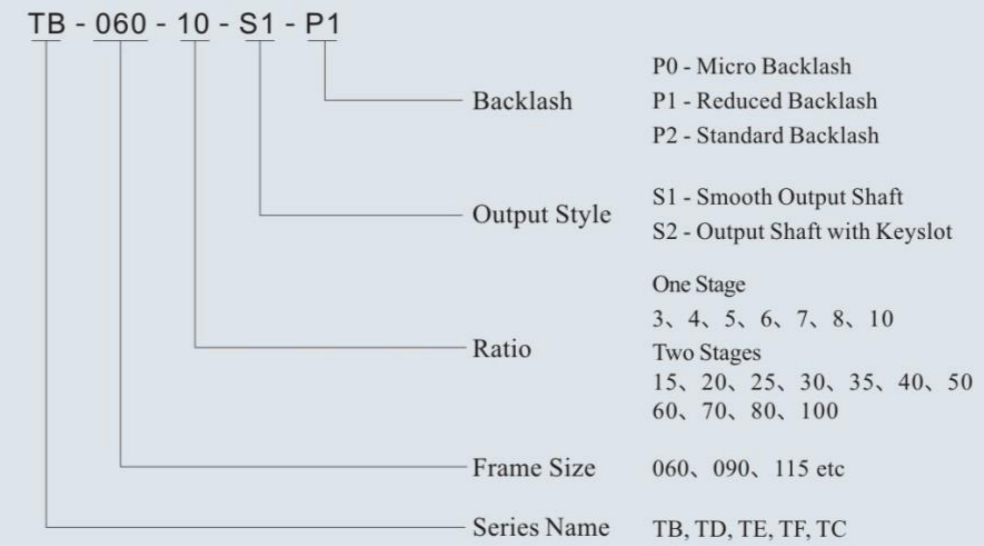
Innovative And Advanced Solutions To Maximize Customer Value

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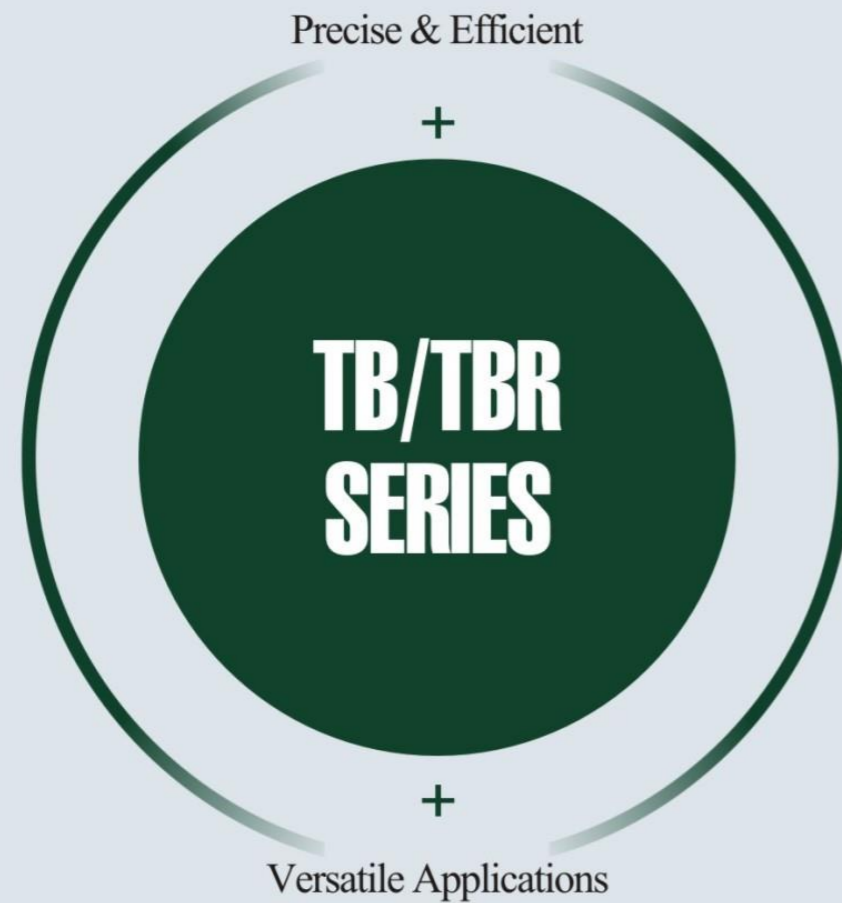
*All technical specifications in this brochure were correct at the time of printing. They are subject to change without notice as part of our continuous improvement initiative.

**ADVANCED TECHNOLOGY TO MAKE
THE DRIVE MORE PRECISELY**

GEARKO QUALITY GUARANTEE STABLE AND EFFICIENT PERFORMANCE



Precision Planetary Reducer



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[®]

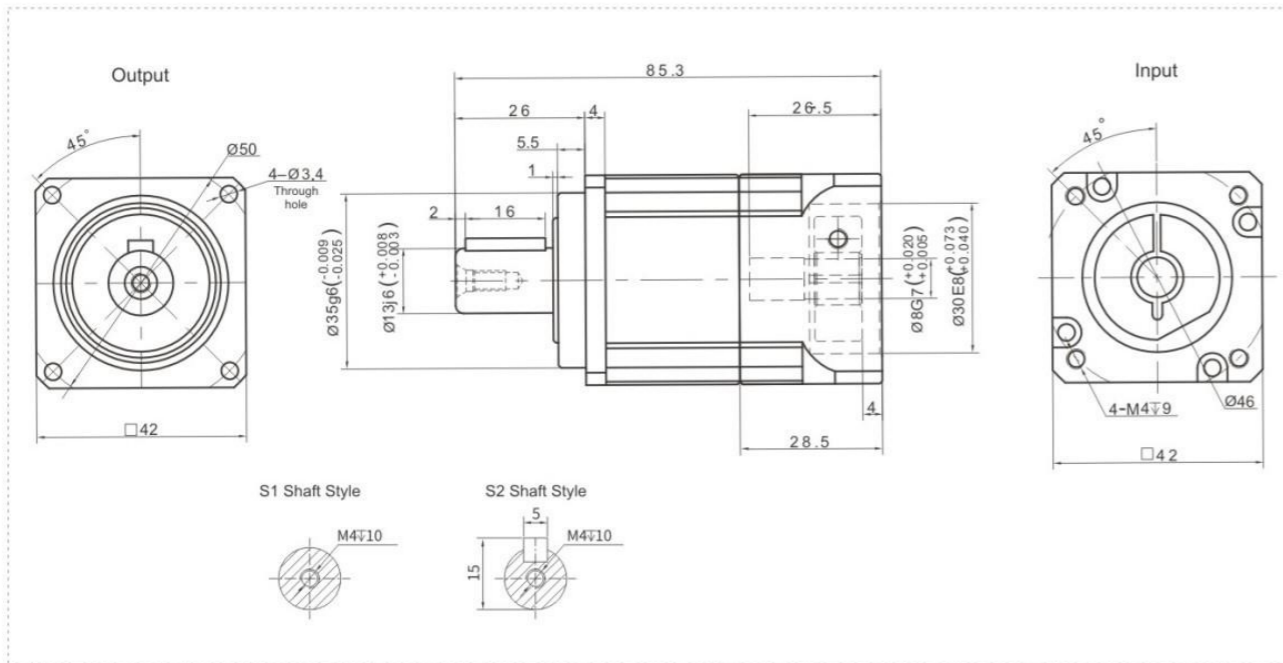
DRIVES

THE PRECISION

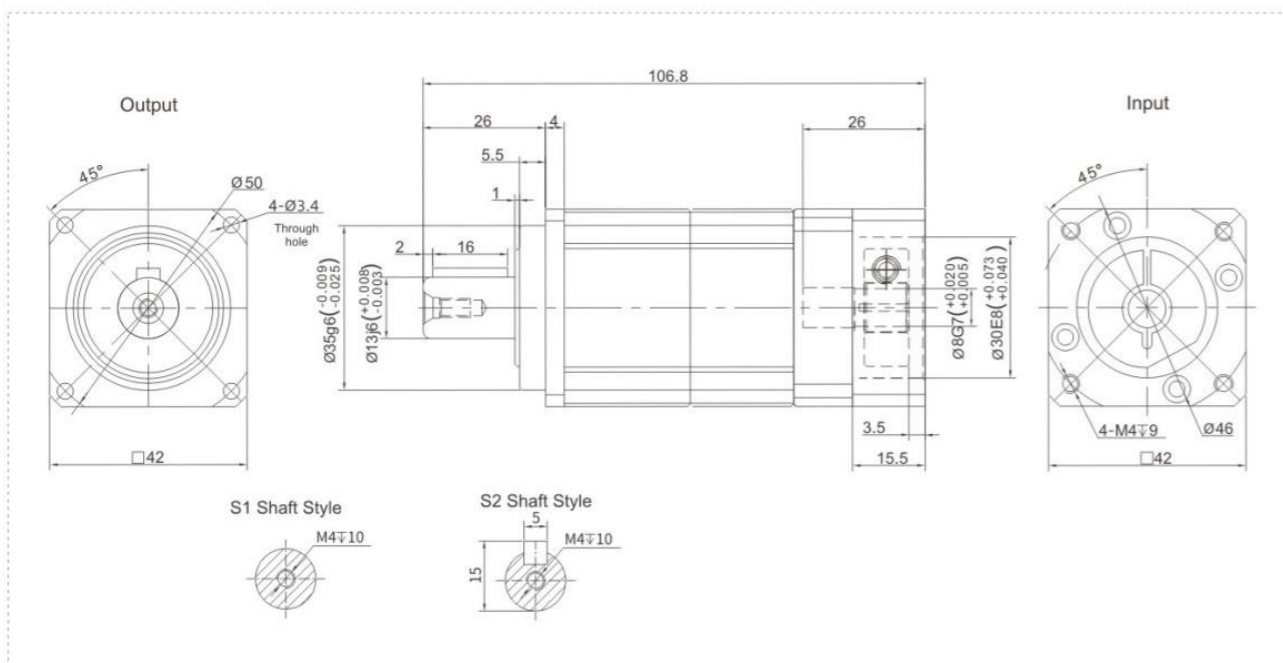


TB042 Series

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 ×3										T ₁ ×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 ×3×60%										T ₁ ×3×60%									
Maximum Radial Force	F _a	N	780										780									
Maximum Axial Force	F _b	N	390										390									
Torsional Rigidity	-	Nm/arcmin	3										3									
Efficiency	η	%	≥97										≥94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤55										≤55									
Weight	-	Kg	0.5										0.7									
Backlash	P0		≤1										≤3									
	P1	arcmin	≤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.cm ²	0.03										0.03									

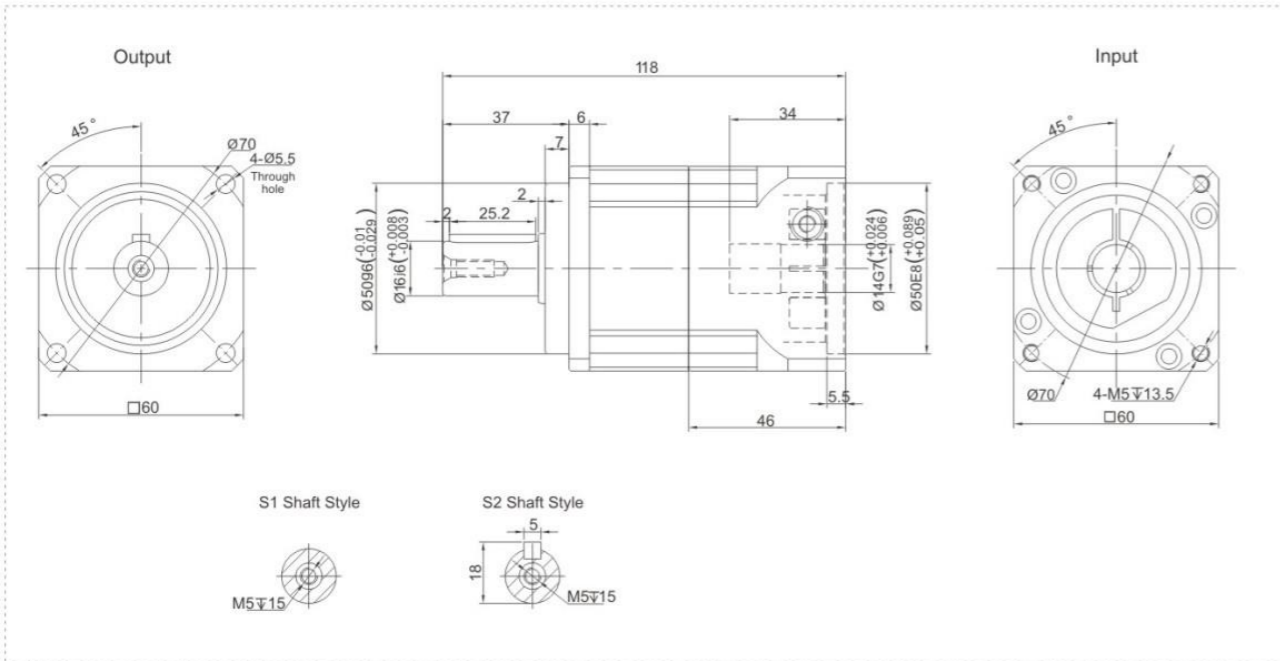
Notes:

- 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.

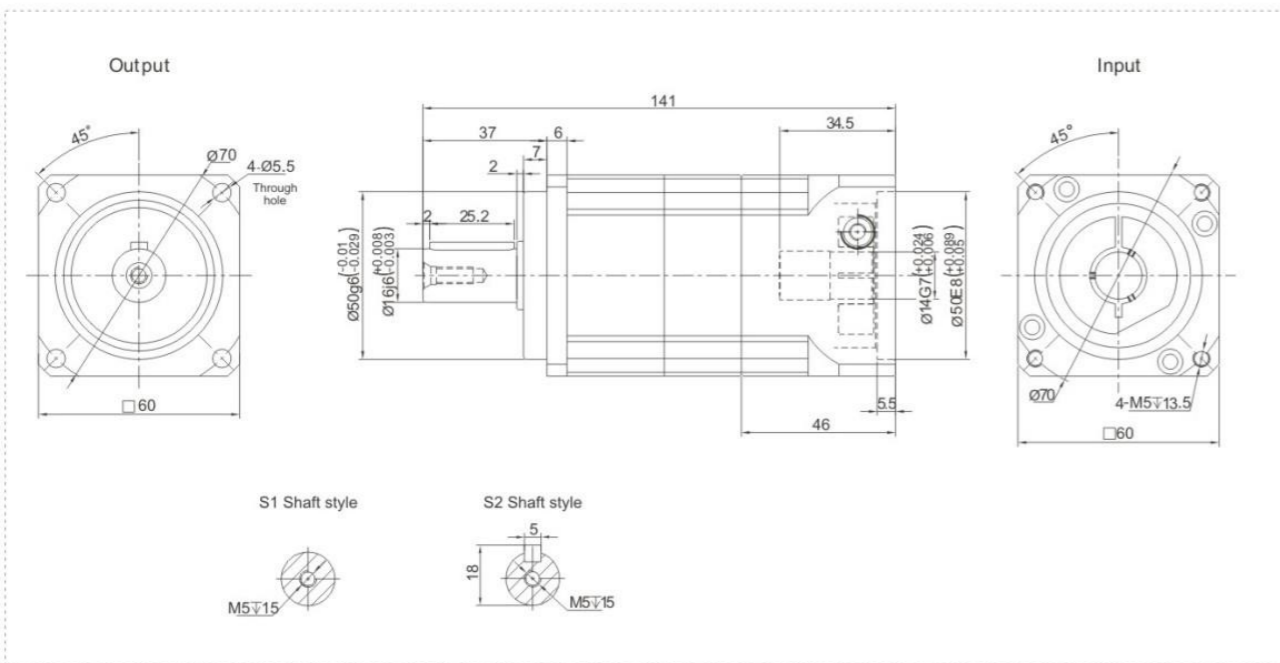
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TB060 Series

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										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	58	50	45	58	55	50	45	42	
Emergency Stop Torque	T ₂	Nm	T ₁ × 3										T ₁ × 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 × 3 × 60%										T ₁ × 3 × 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		≤1										≤3									
	P1	arcmin	≤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.cm ²	0.16	0.14	0.13						0.13											

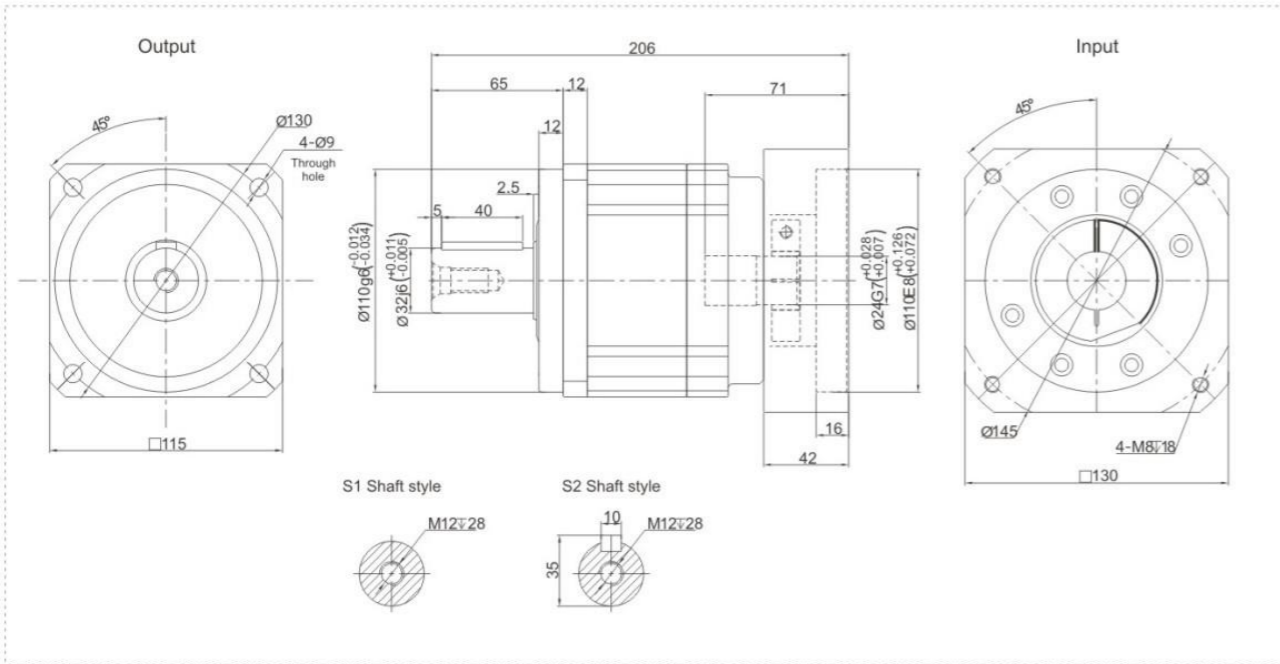
Notes:

- Speed ratio (i=S_{in}/S_{out})
- 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.

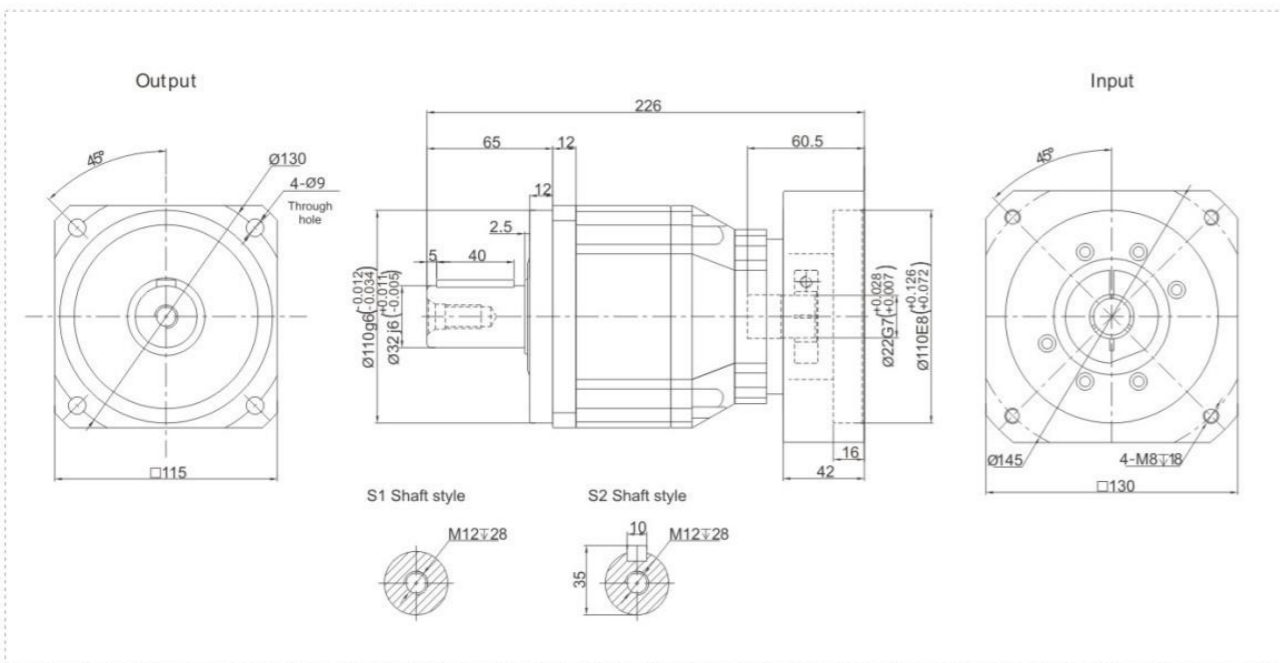
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TB115 Series

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										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	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	-	Nm/arcmin	25										25									
Efficiency	η	%	≥ 97										≥ 94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤ 63										≤ 63									
Weight	-	Kg	8.5										9.5									
Backlash	P0		≤ 1										≤ 3									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57						0.47					0.44	

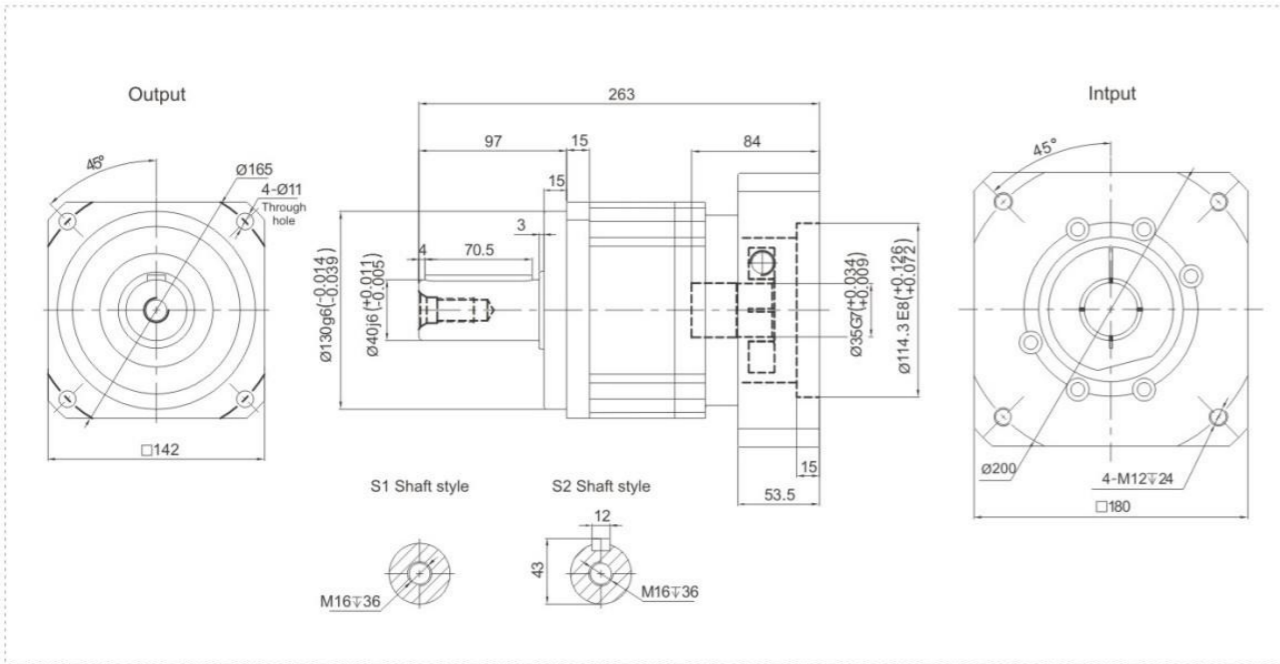
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

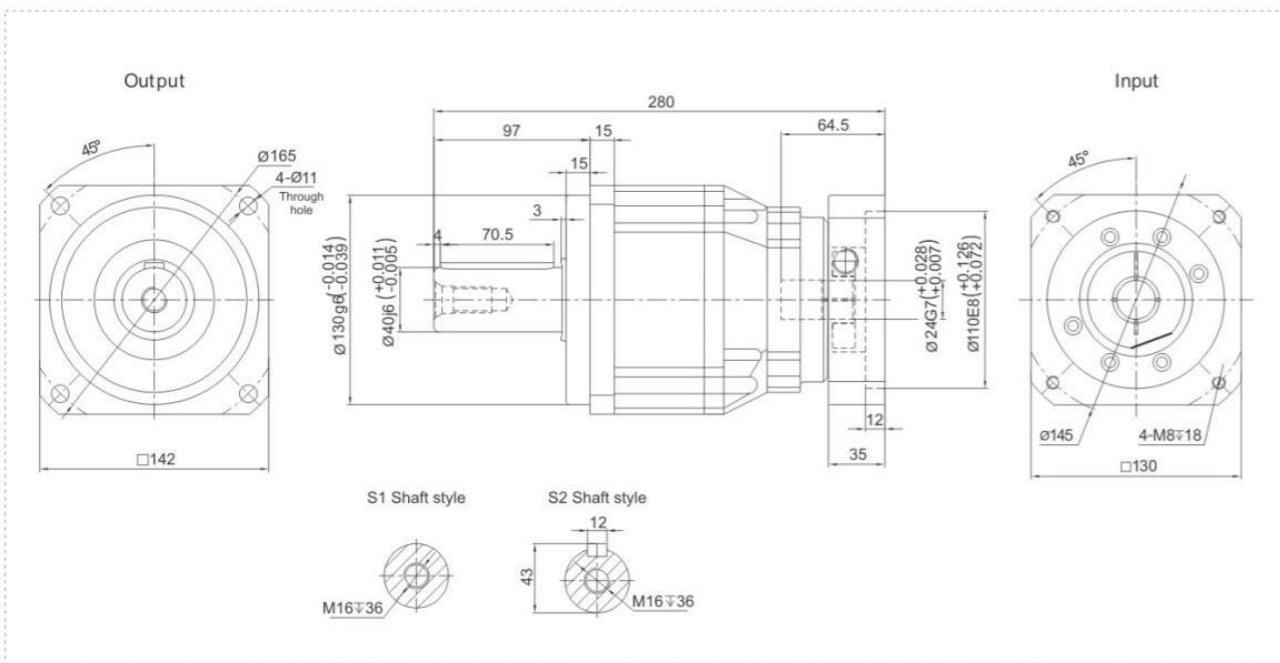
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TB142 Series

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										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	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	16.5										16.4									
Backlash	P0		≤ 1										≤ 3									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 10									
Operating Temperature	-	$^{\circ}\text{C}$	-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	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	2.71					2.57						

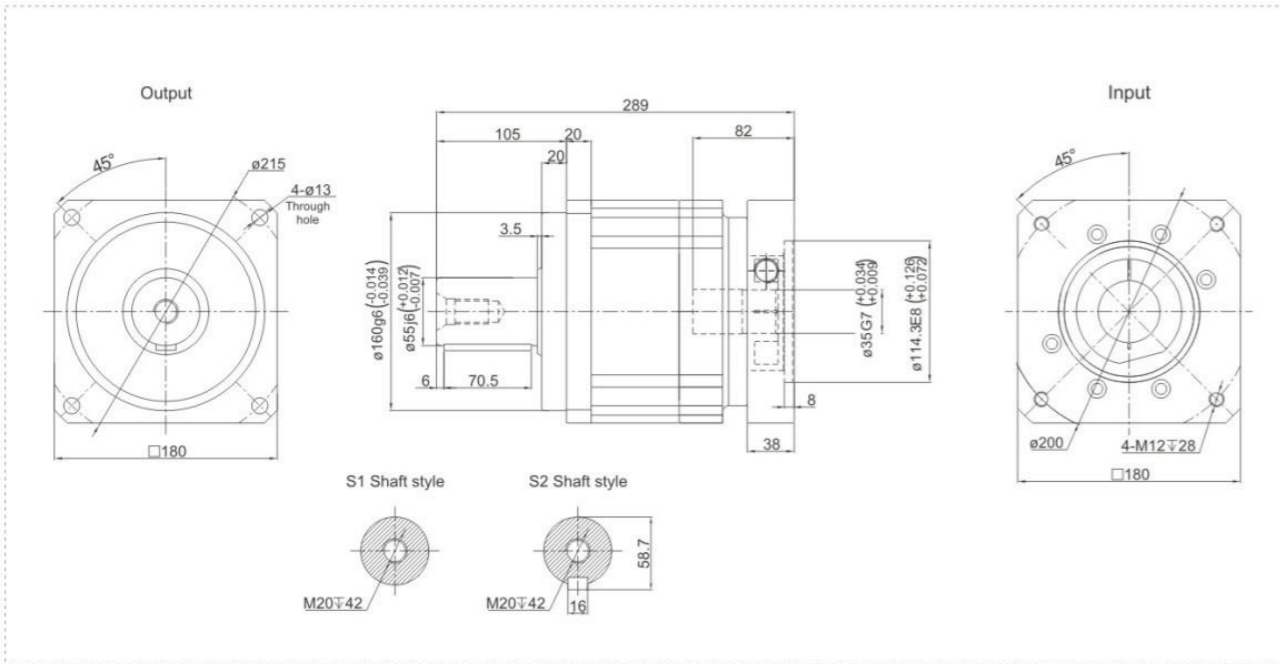
Notes:

- Speed ratio ($i = \text{Sin}/\text{Sout}$)
- 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, $i=10$.

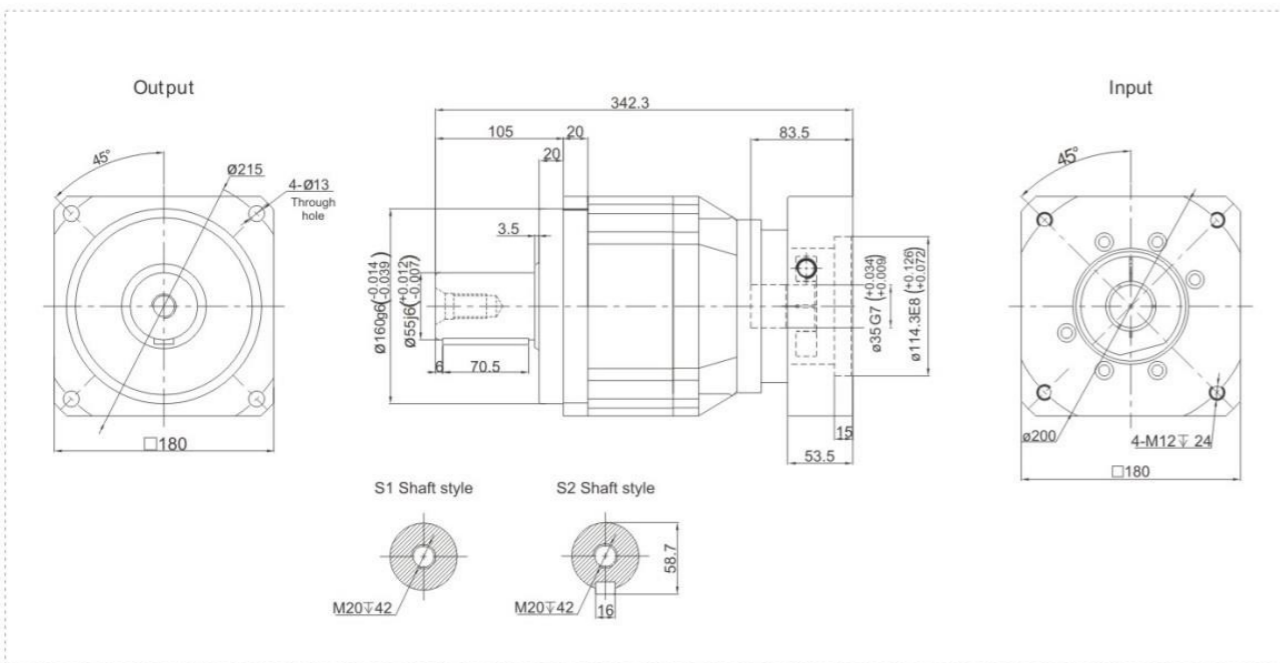
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TB180 Series

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										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	14500										14500									
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	≤ 66										≤ 66									
Weight	-	Kg	27										34									
Backlash	P0		≤ 1										≤ 3									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51						7.42					7.03	

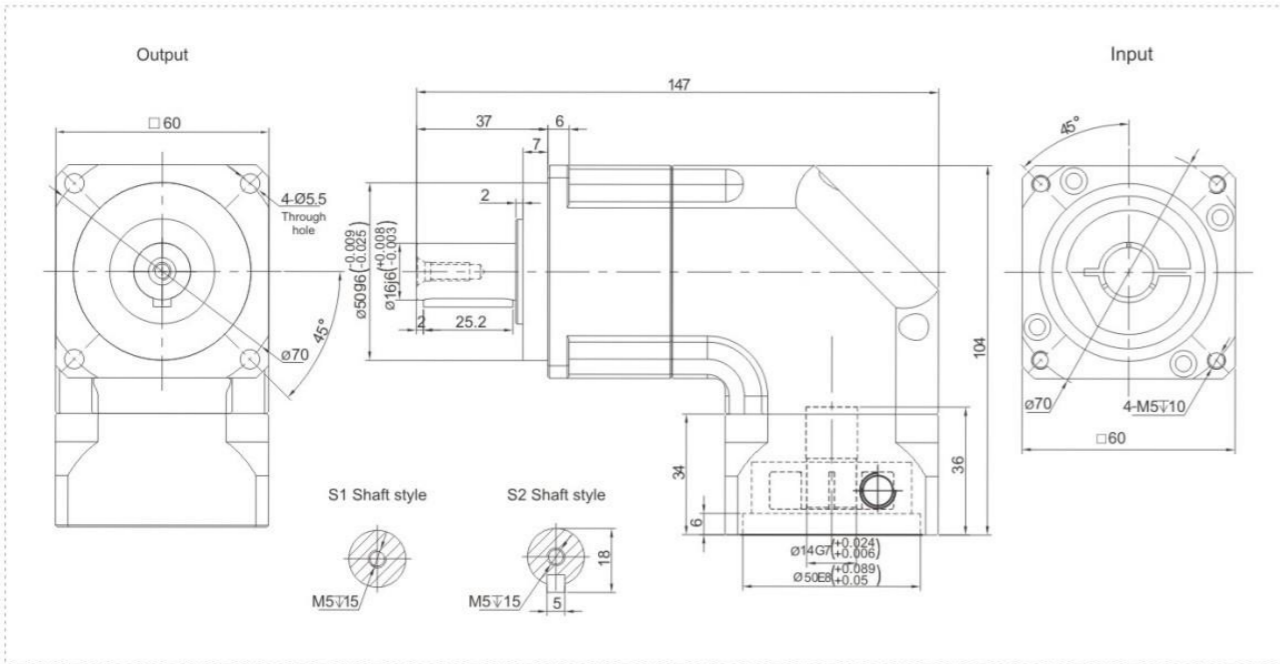
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

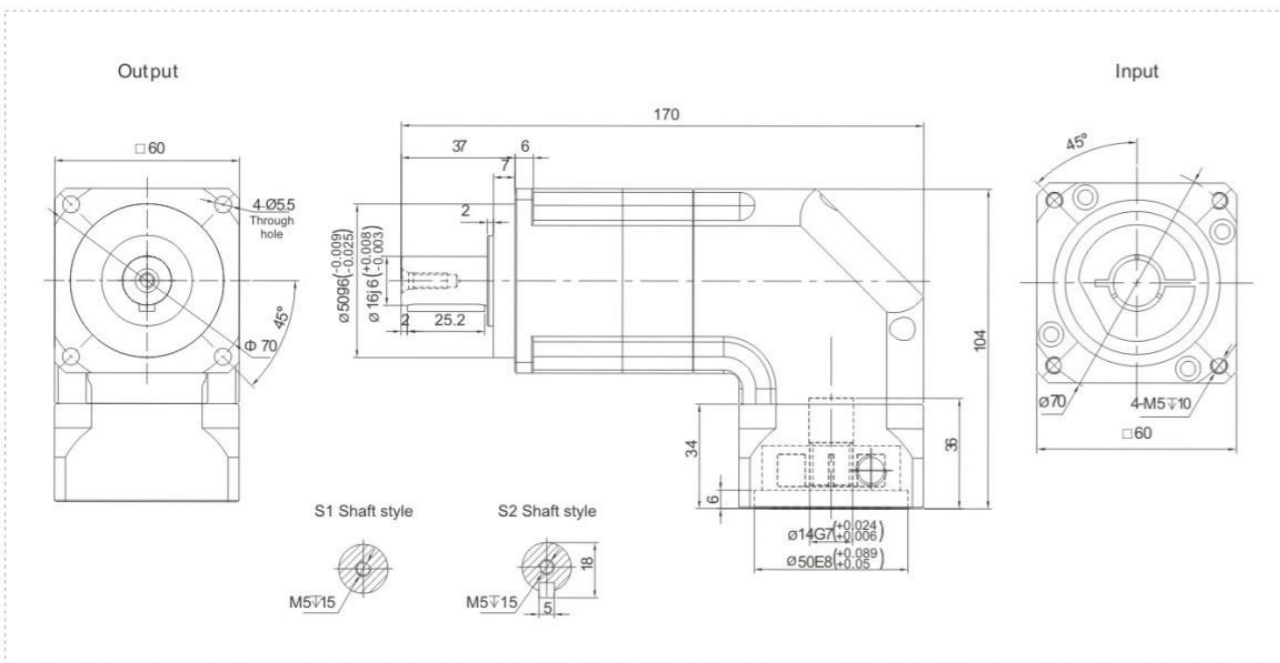
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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	-														-													
	P1 arcmin	≤ 4														≤ 7													
	P2	≤ 6														≤ 9													
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							0.09													

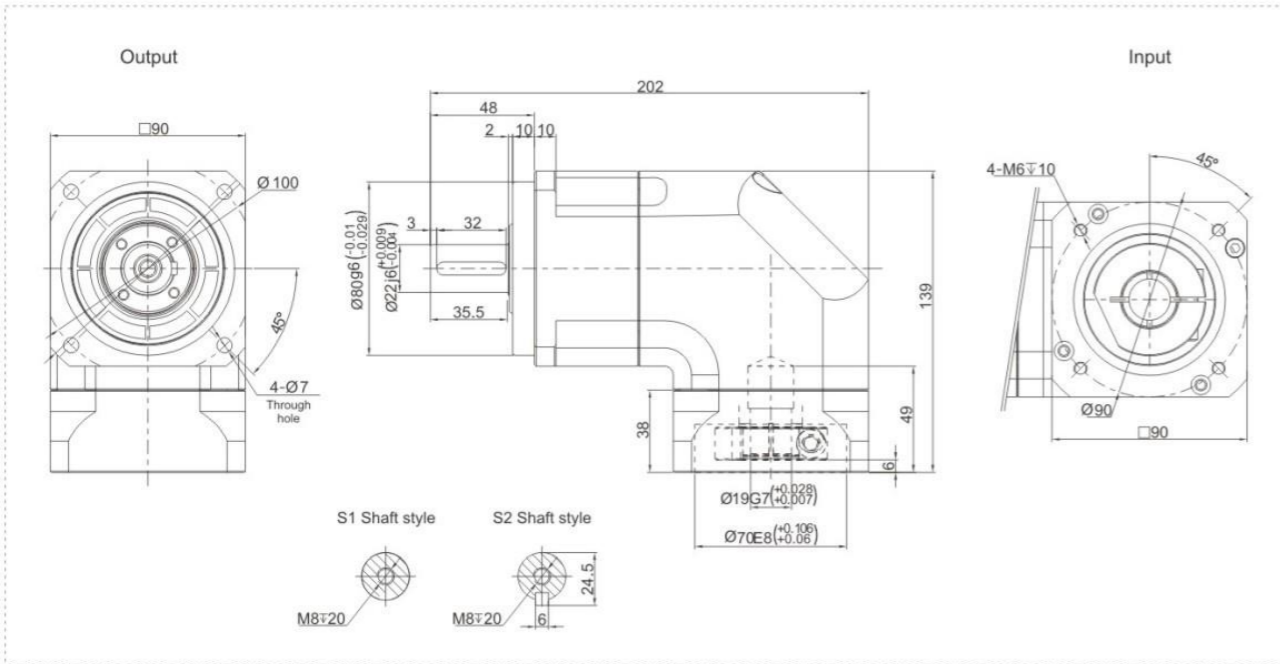
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

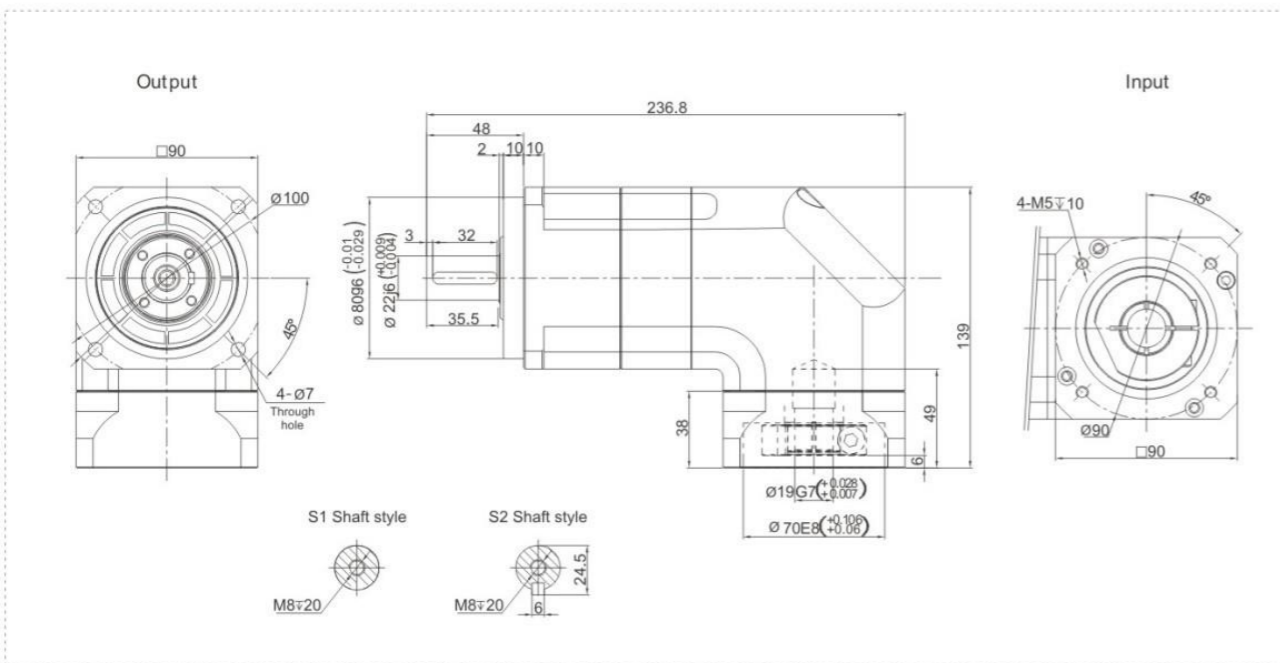
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TBR090 Series

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_2 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_r 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	P_0	≤ 2																≤ 4															
	P_1 arcmin	≤ 4																≤ 7															
	P_2	≤ 6																≤ 9															
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	2.25								1.87								2.25								1.87							

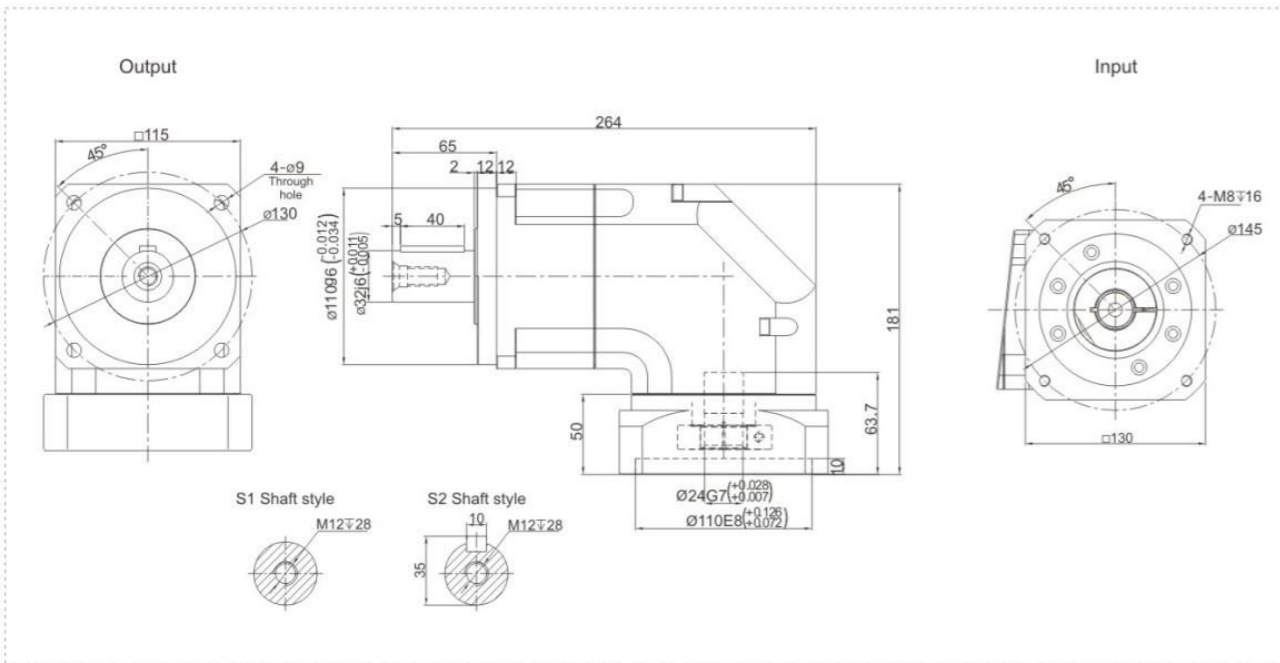
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

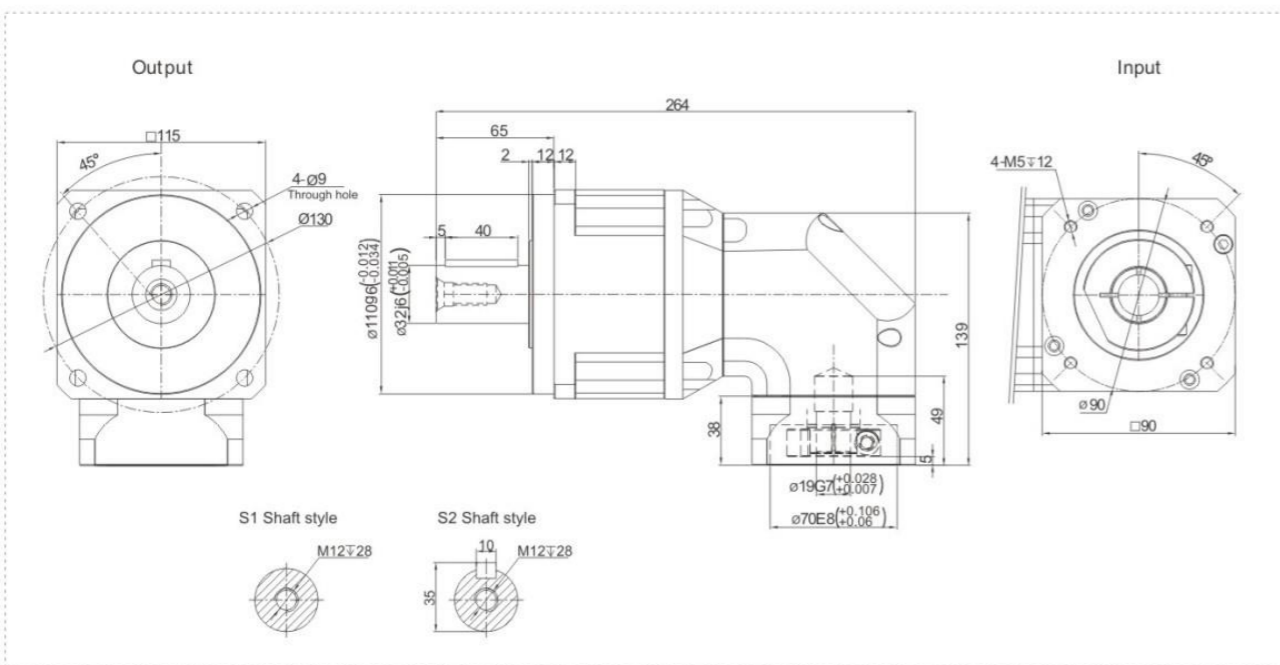
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TBR115 Series

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	12	14	16	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	310	300	260	235	330	310	300	260	330	310	300	260	235	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	P_0																≤ 2											
	P_1	arcmin															≤ 4											
	P_2																≤ 6											
Operating Temperature	-	$^{\circ}\text{C}$															-20-90											
Lubrication	-																Synthetic Grease											
Protection Class	-																IP65											
Mounting Position	-																Any Direction											
Moment of Inertia	J	kg.cm ²				6.84			6.25			2.25			1.87													

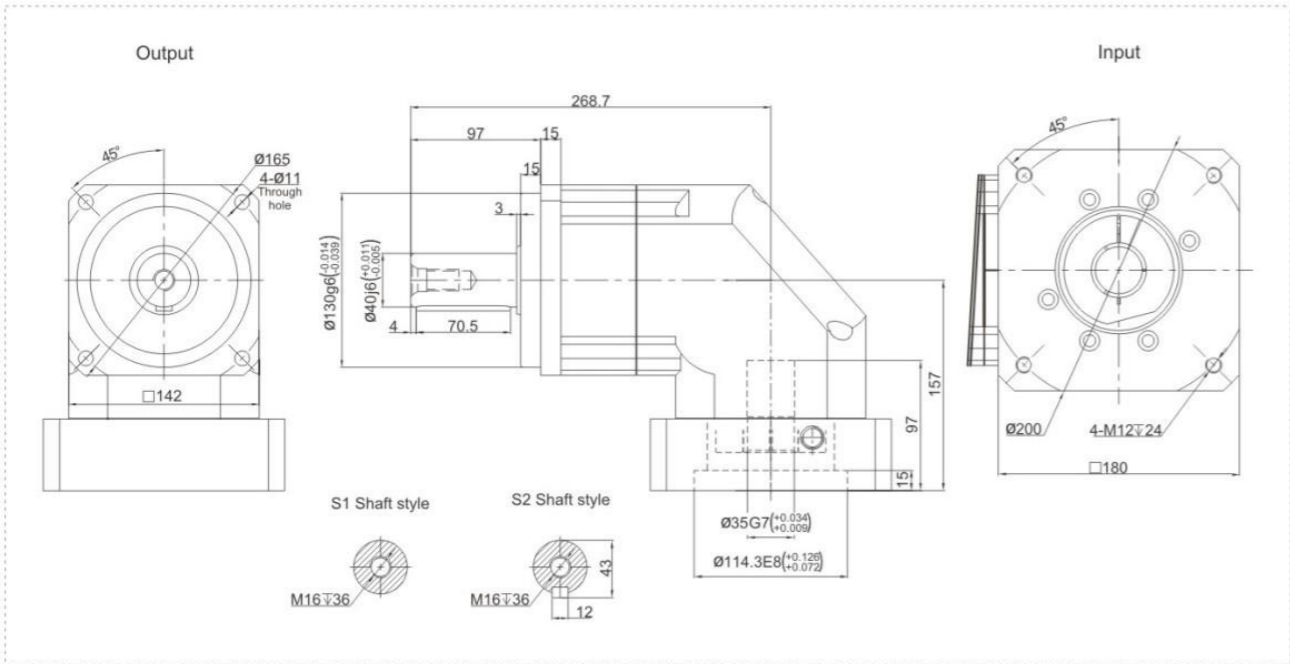
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

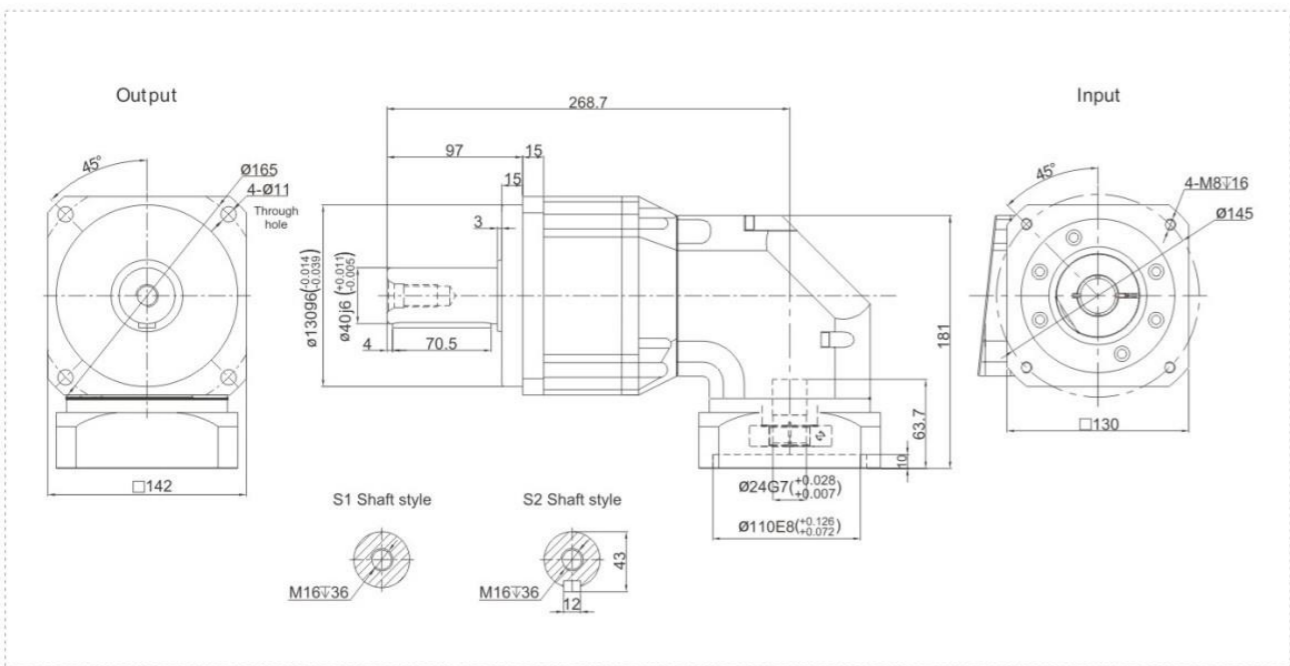
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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	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	- 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	≤ 2														≤ 4															
	P1 arcmin	≤ 4														≤ 7															
	P2	≤ 6														≤ 9															
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	23.4							21.8							6.84							6.25								

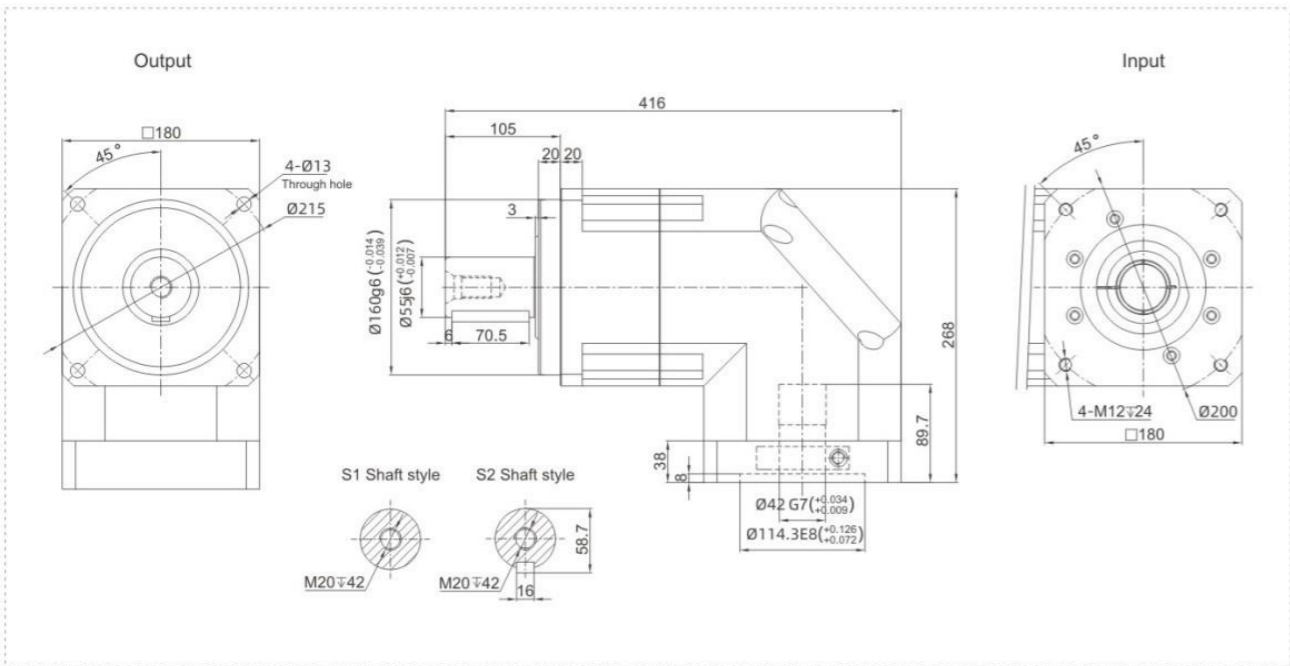
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

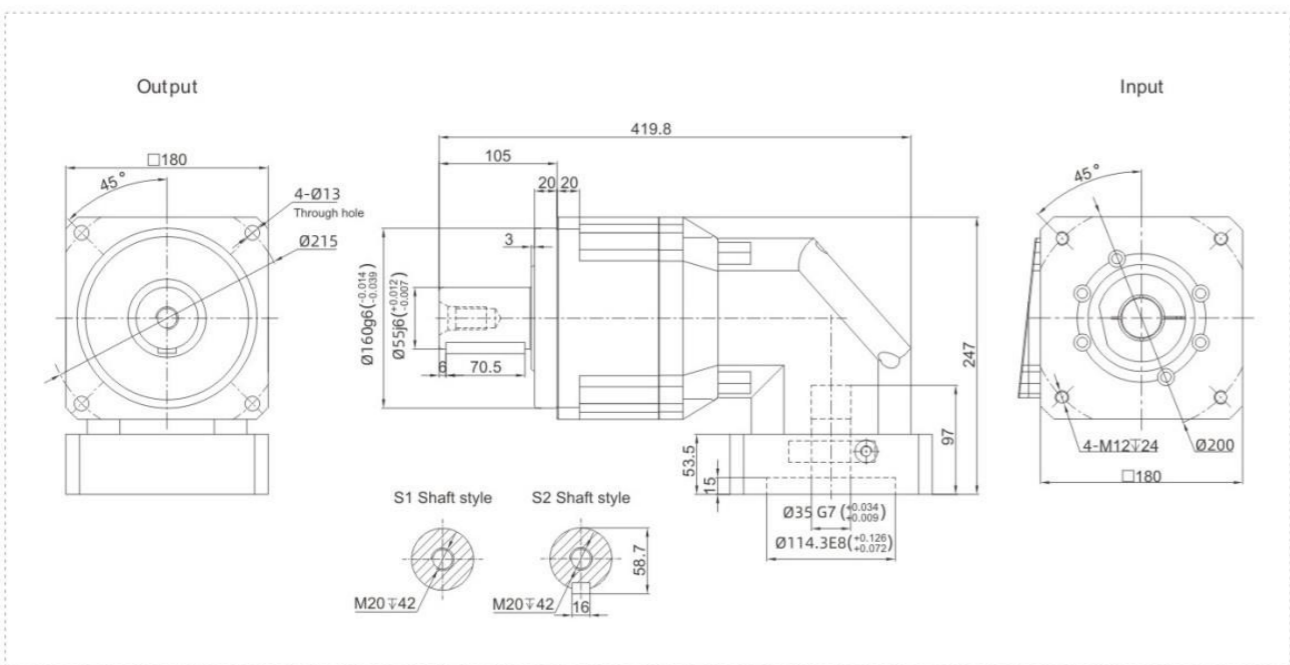
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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.

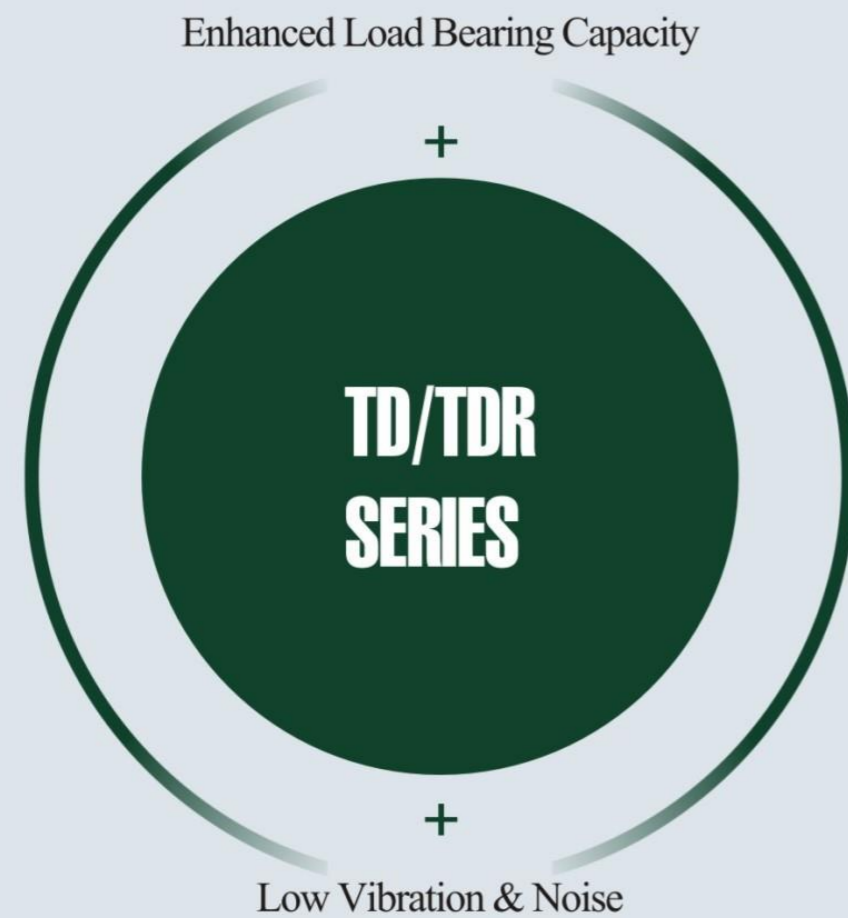
TBR180		One Stage														Two Stage														
Speed Ratio	i	3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200			
Nominal Output Torque	T_1	Nm	590	1040	1200	1108	1100	1000	-	910	1108	1100	1000	910	1200	1108	1100	1000	1200	1108	1100	1000	910	1108	1100	1000	-	910		
Emergency 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	P_0		≤ 2														≤ 4													
	P_1	arcmin	≤ 4														≤ 7													
	P_2		≤ 6														≤ 9													
Operating Temperature	-	$^{\circ}\text{C}$	-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	68.9							65.6							23.4							21.8						

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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



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[®]

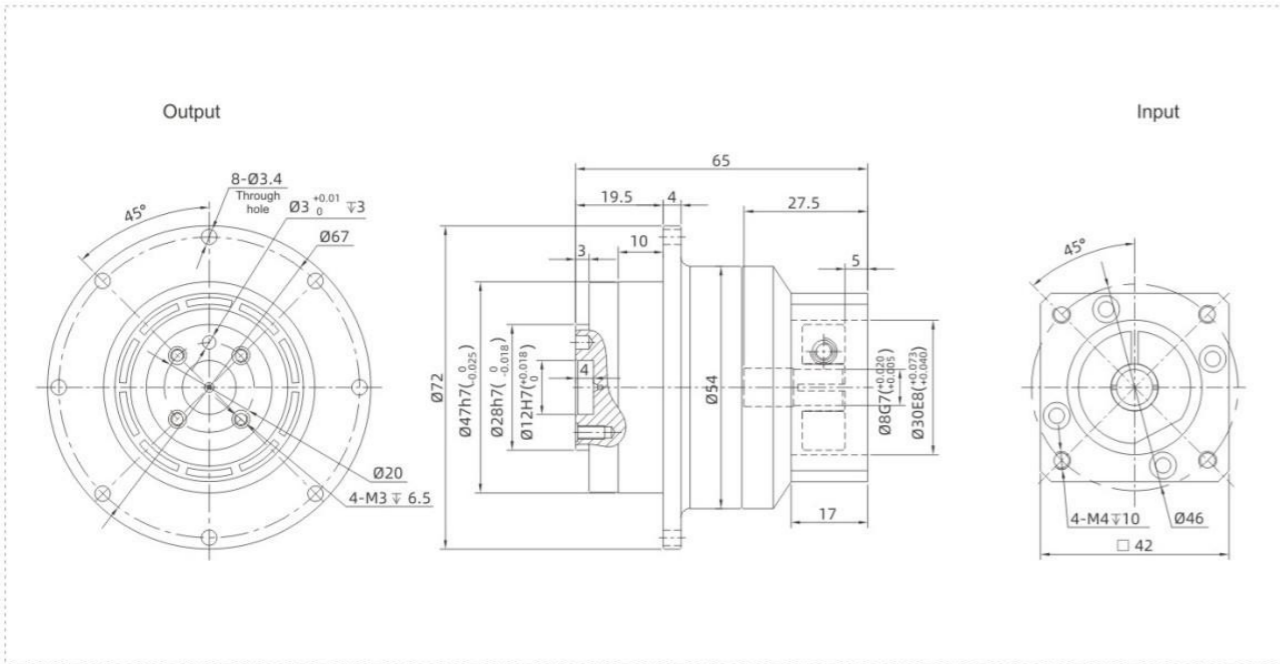
DRIVES

THE PRECISION

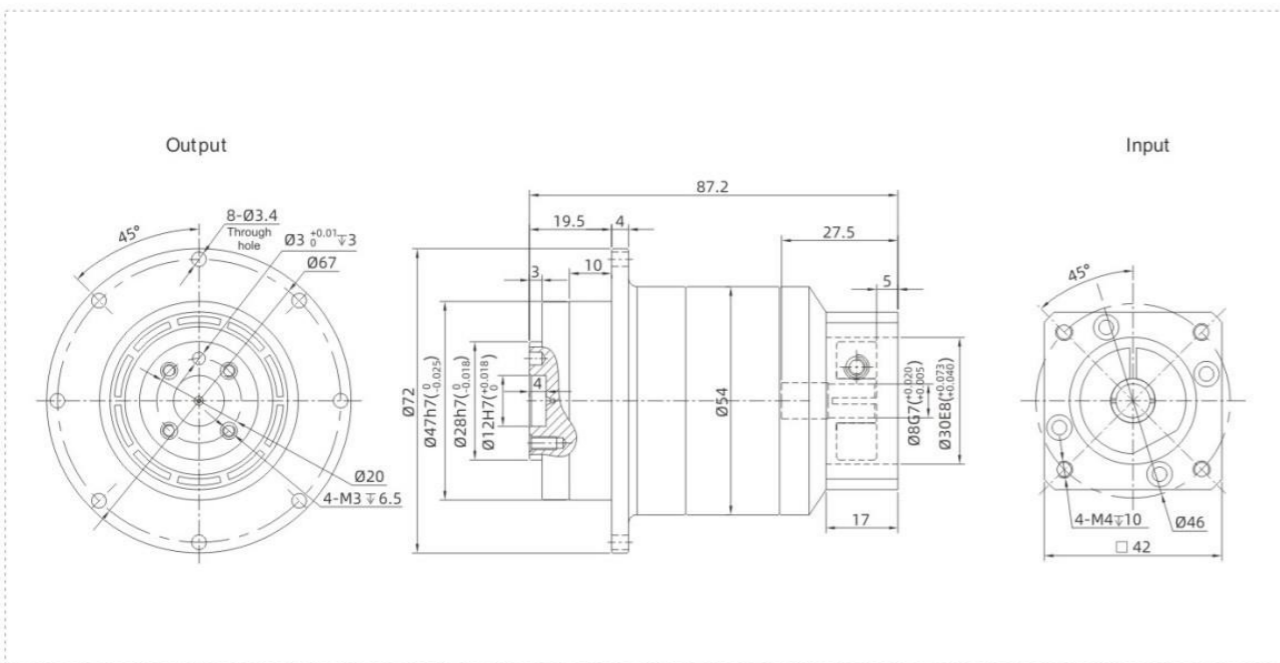


TD047 Series

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	$T_1 \times 3$						$T_1 \times 3$					
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	780						780					
Maximum Axial Force	F_a 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	≤ 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.cm ²	0.03						0.03					

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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.

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 × 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 Bending Moment	M _b 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	≤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.cm ²	0.51	0.47	0.45	0.44	0.13							

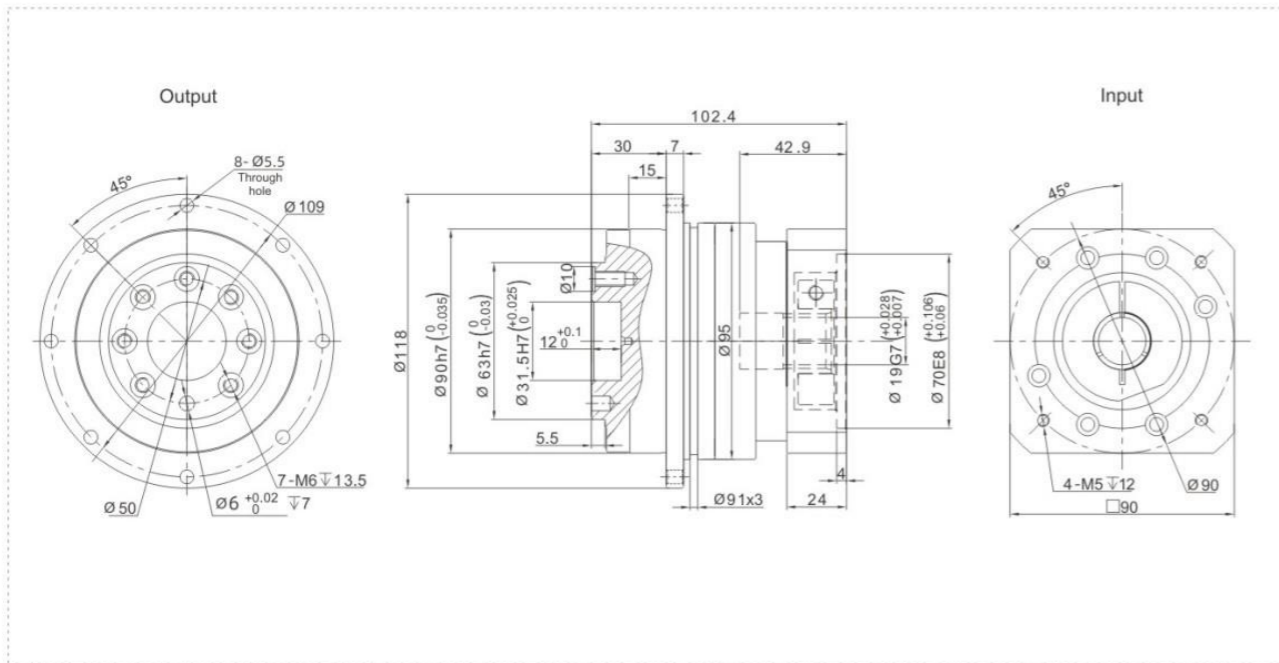
Notes:

- 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.

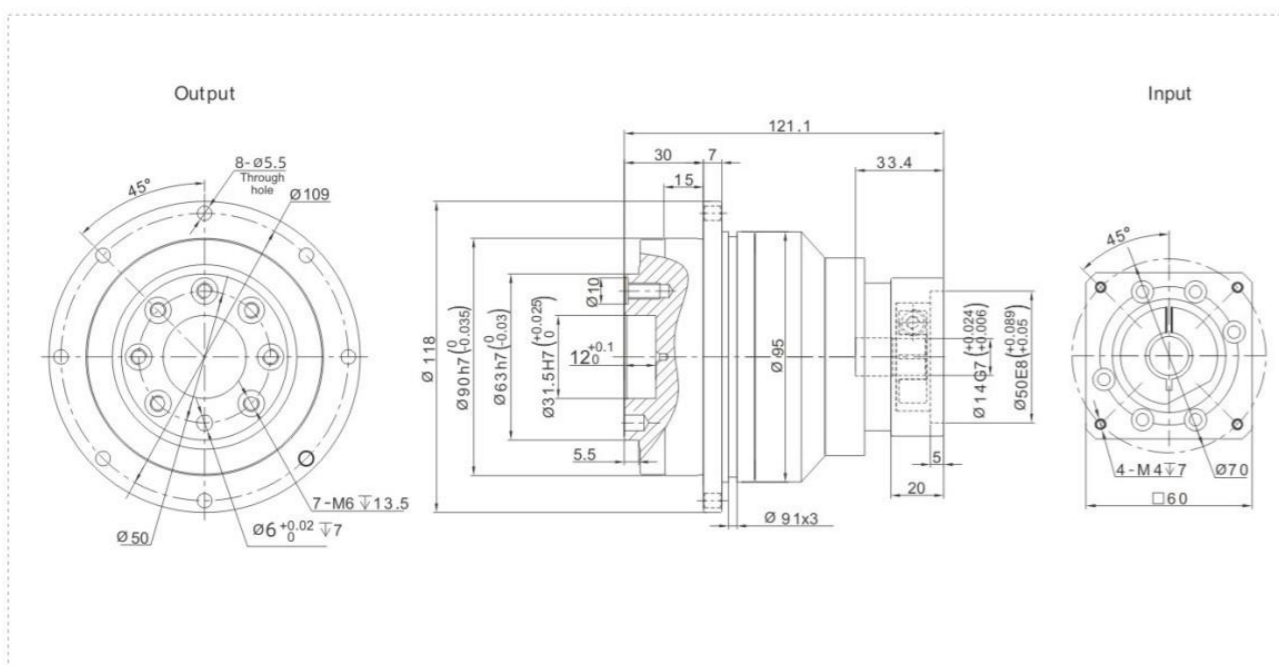
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TD090 Series

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.

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_b 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	≤ 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.cm ²	2.87	2.71	2.62	2.57	0.47				0.44			

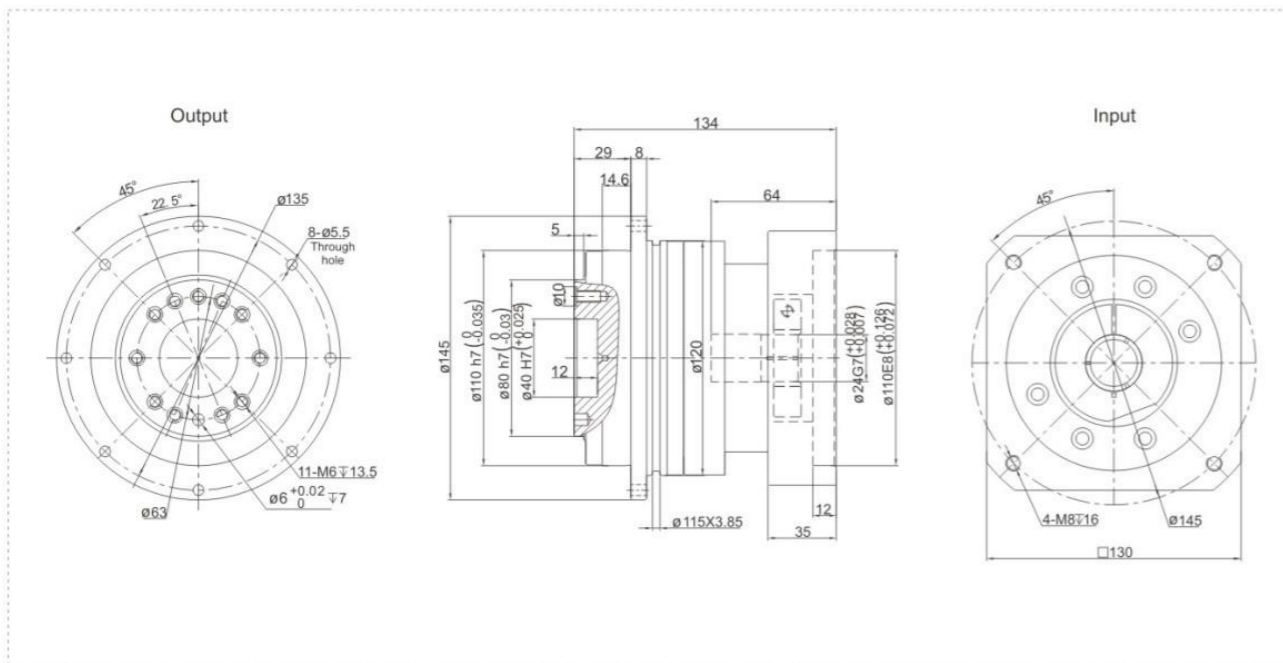
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

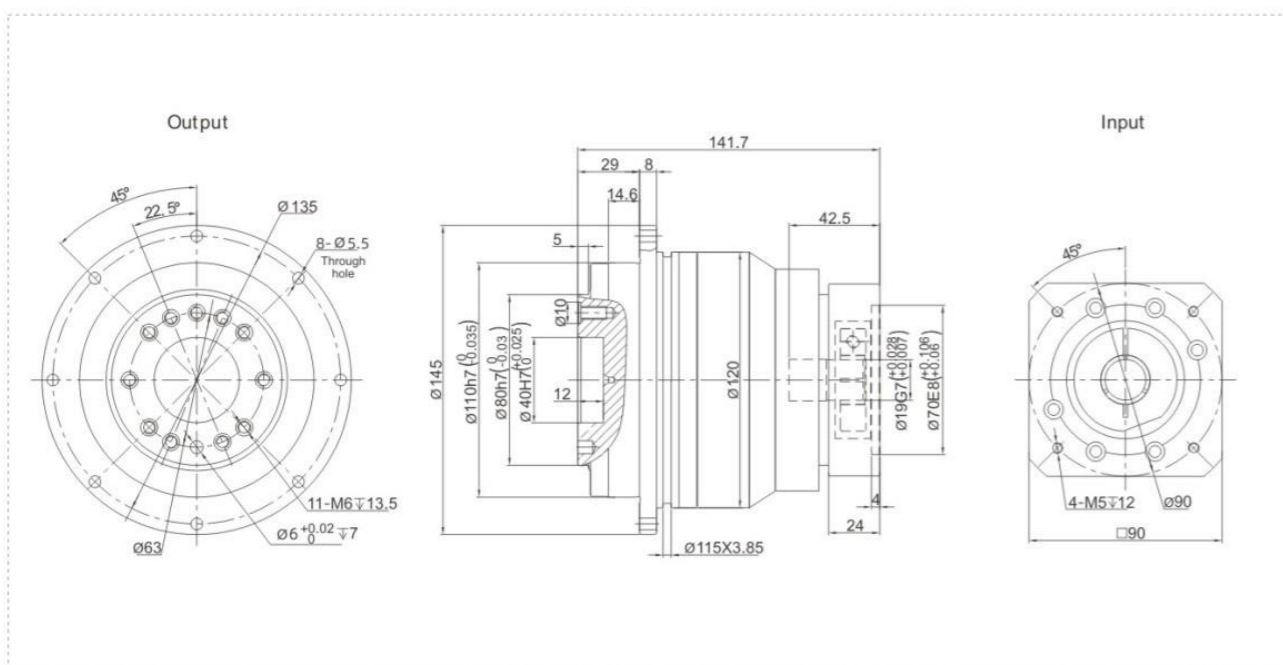
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TD110 Series

TD110 One Stage

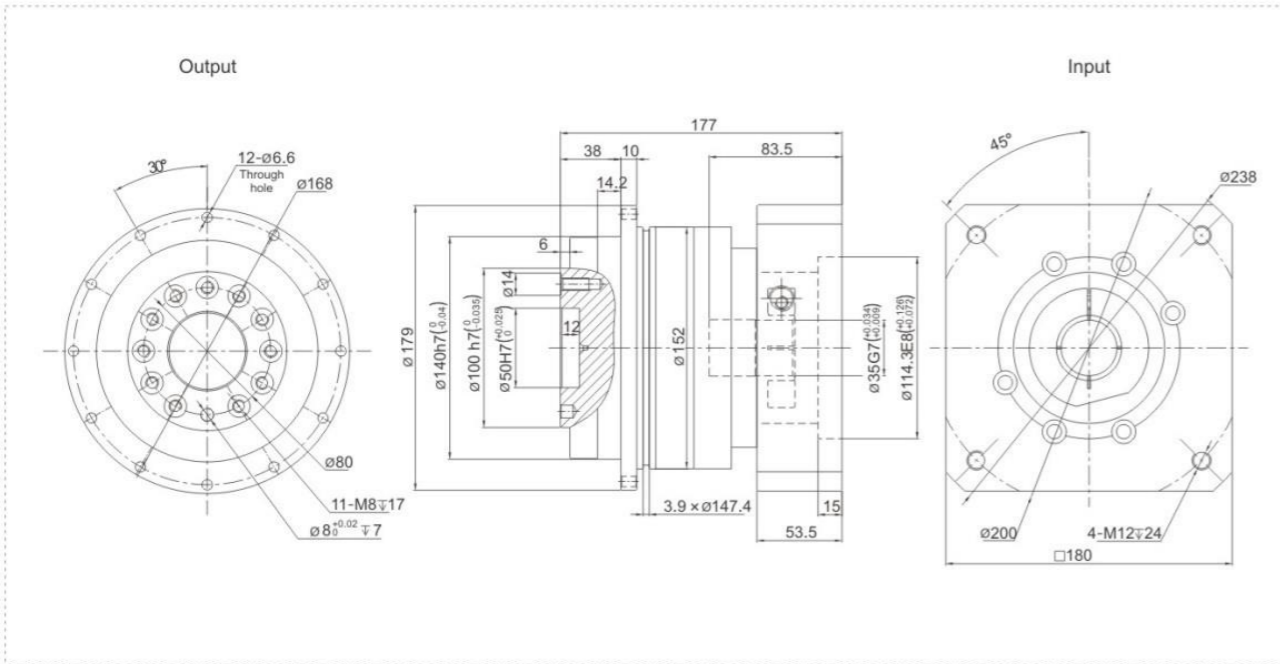


TD110 Two Stage

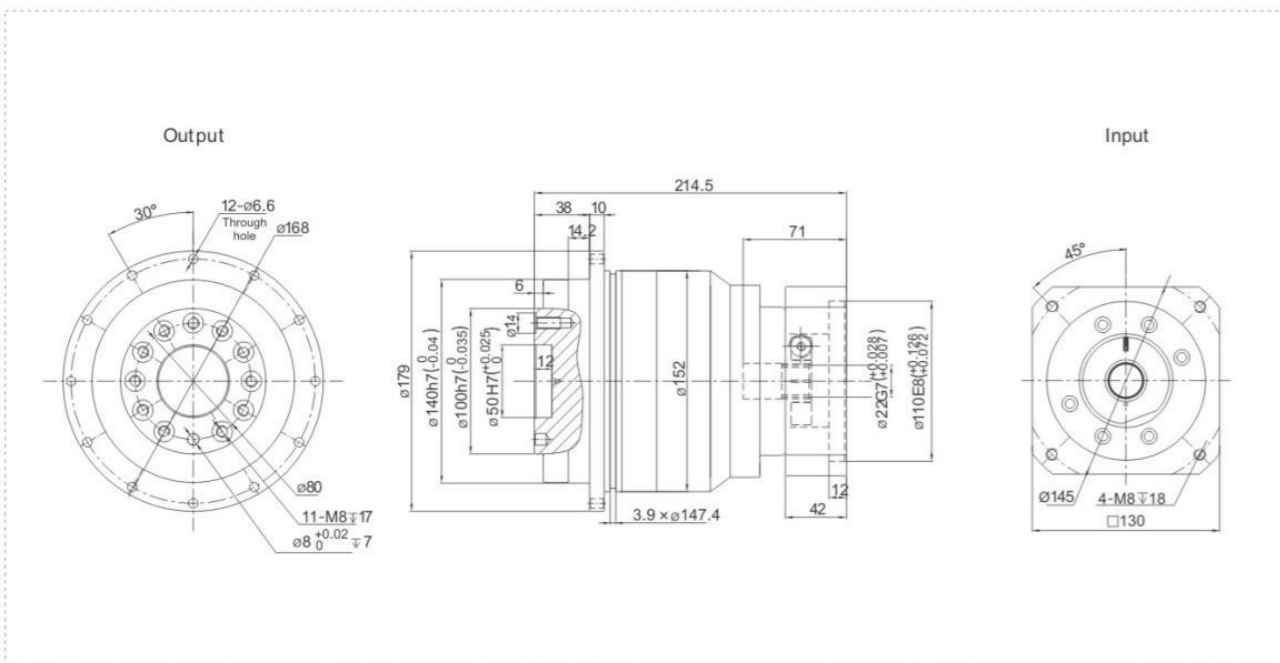


TD140 Series

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_b 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	≤ 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.cm ²	7.54	7.42	7.14	7.03	2.71		2.57					

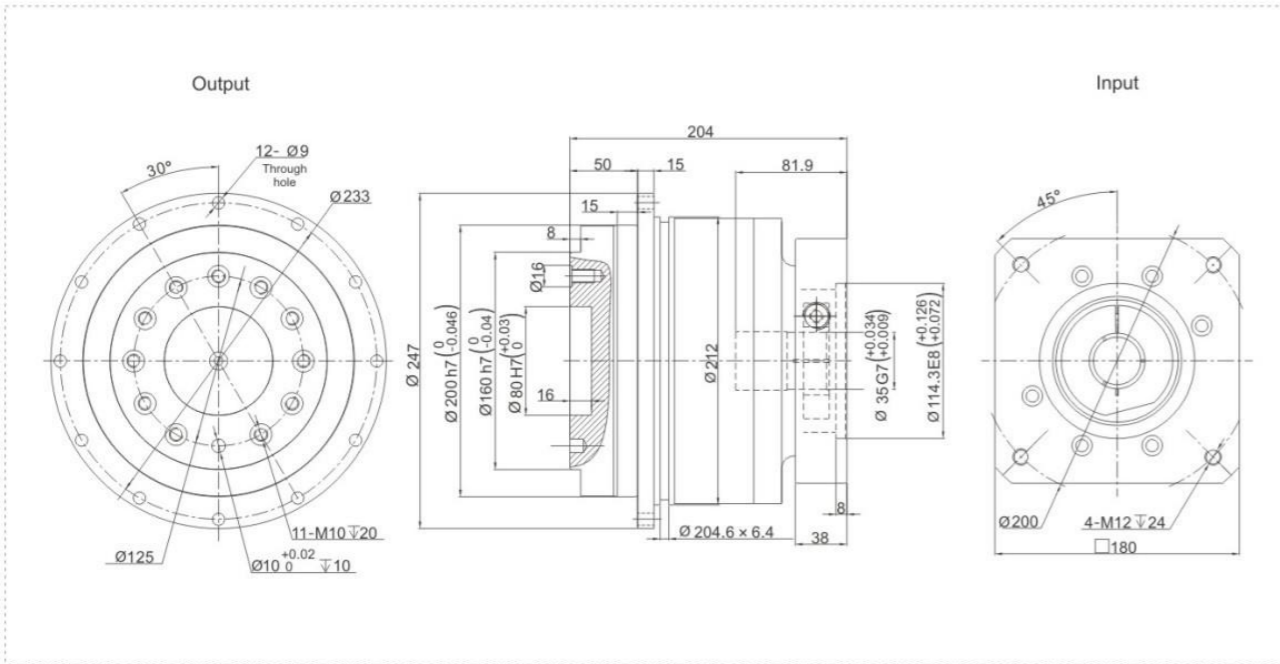
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

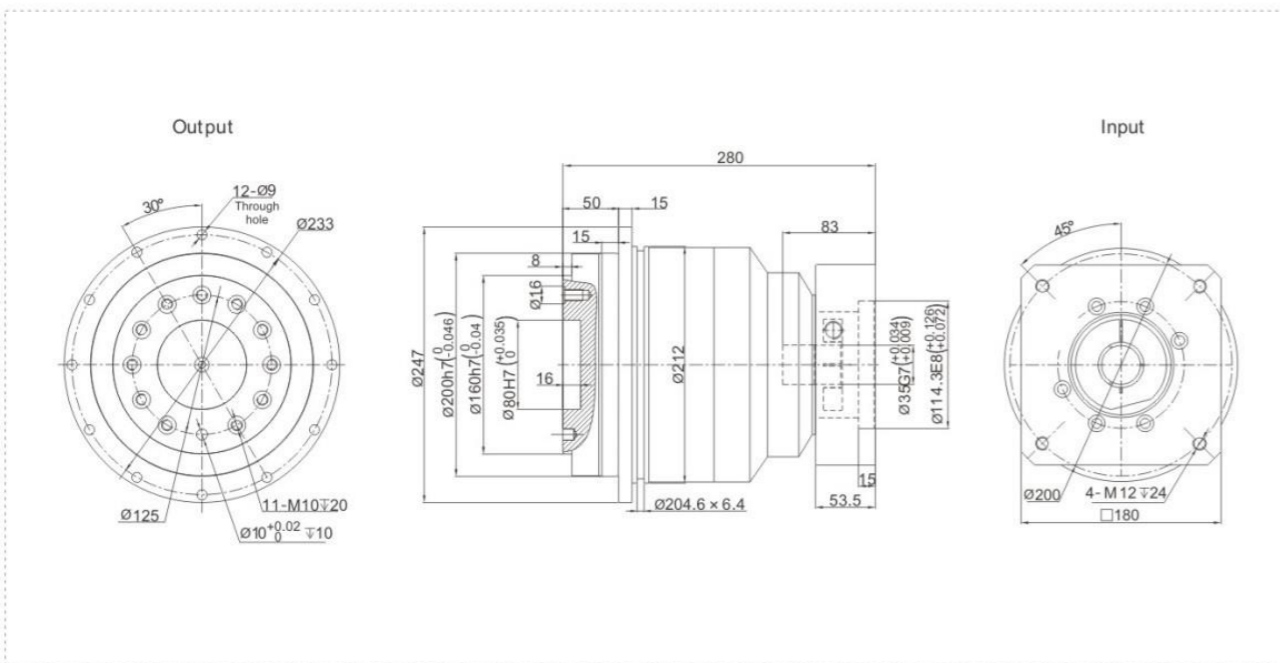
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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 × 3						T ₁ × 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 × 3 × 60%						T ₁ × 3 × 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	≤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.cm ²	25.03	23.29	22.48	22.51	7.42		7.03					

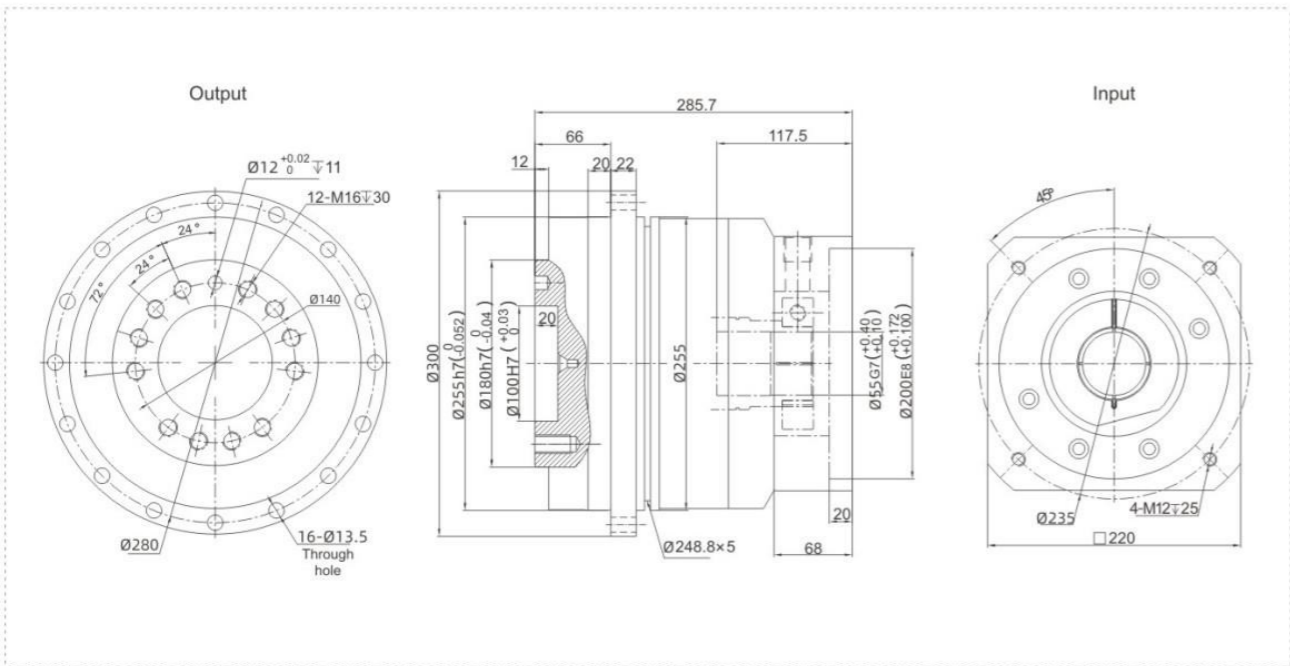
Notes:

- 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.

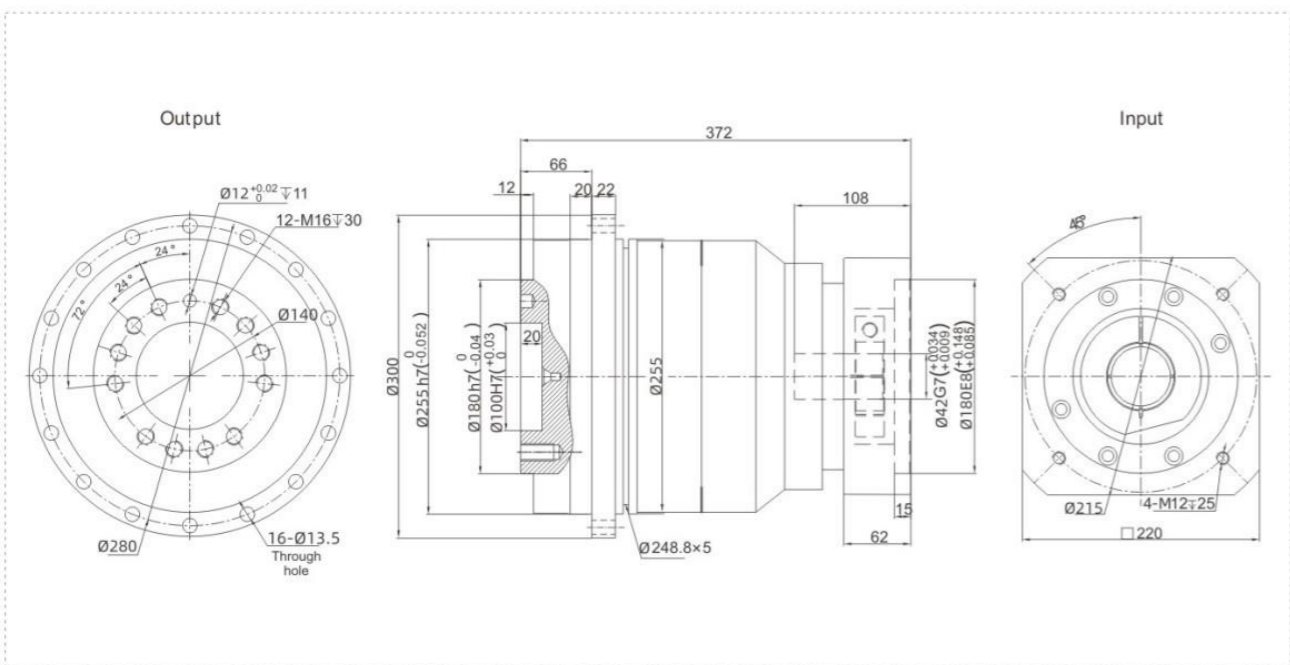
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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_b 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	≤ 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.cm ²	58.31	53.27	50.97	50.56	23.29	22.51						

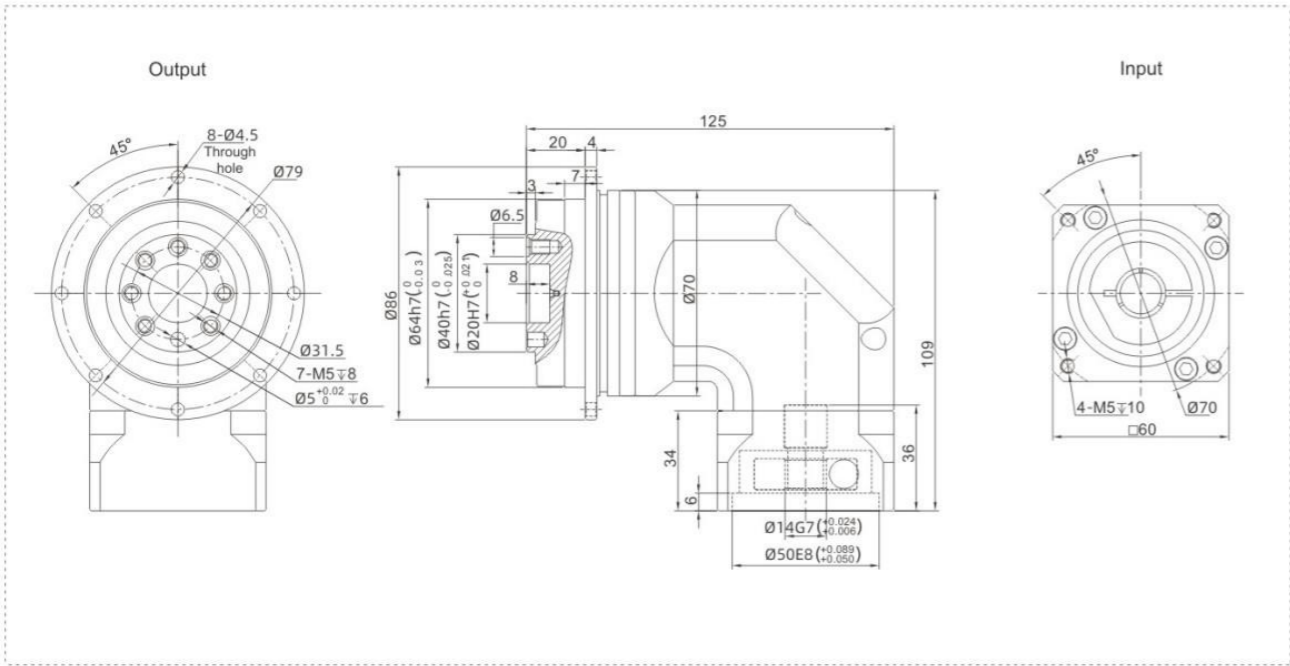
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

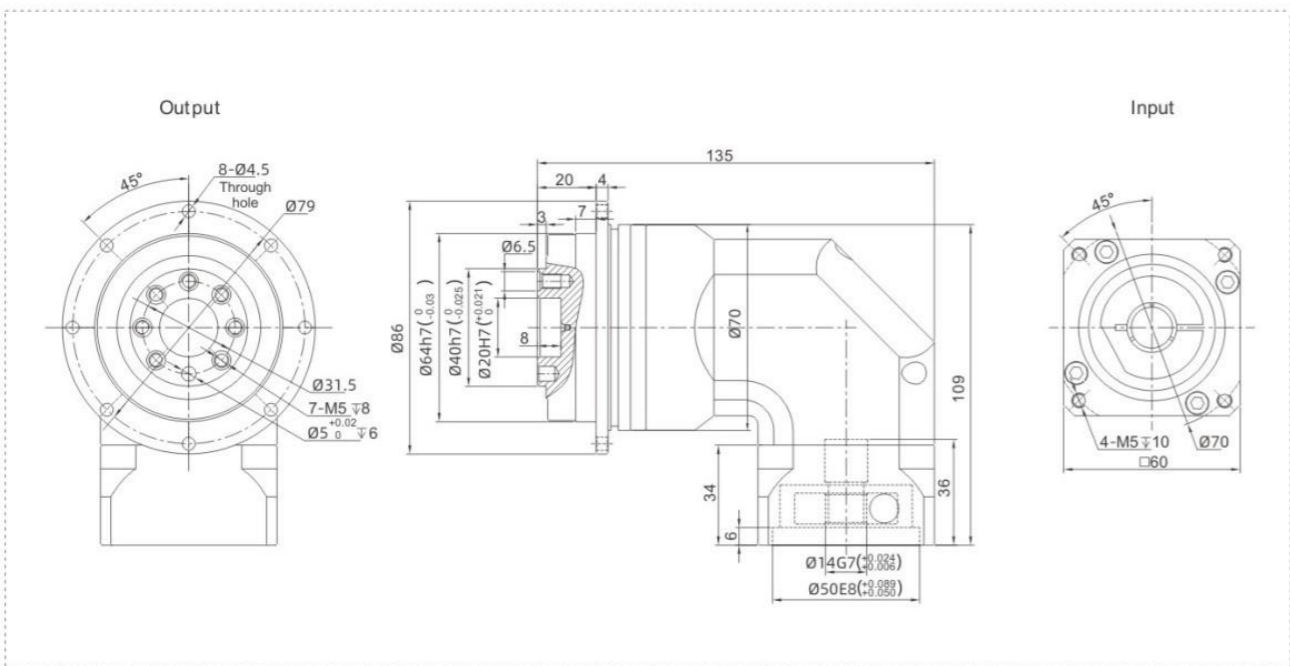
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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_b 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	-										-			
	P1 arcmin	≤ 4										≤ 7			
	P2	≤ 6										≤ 9			
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					0.09			

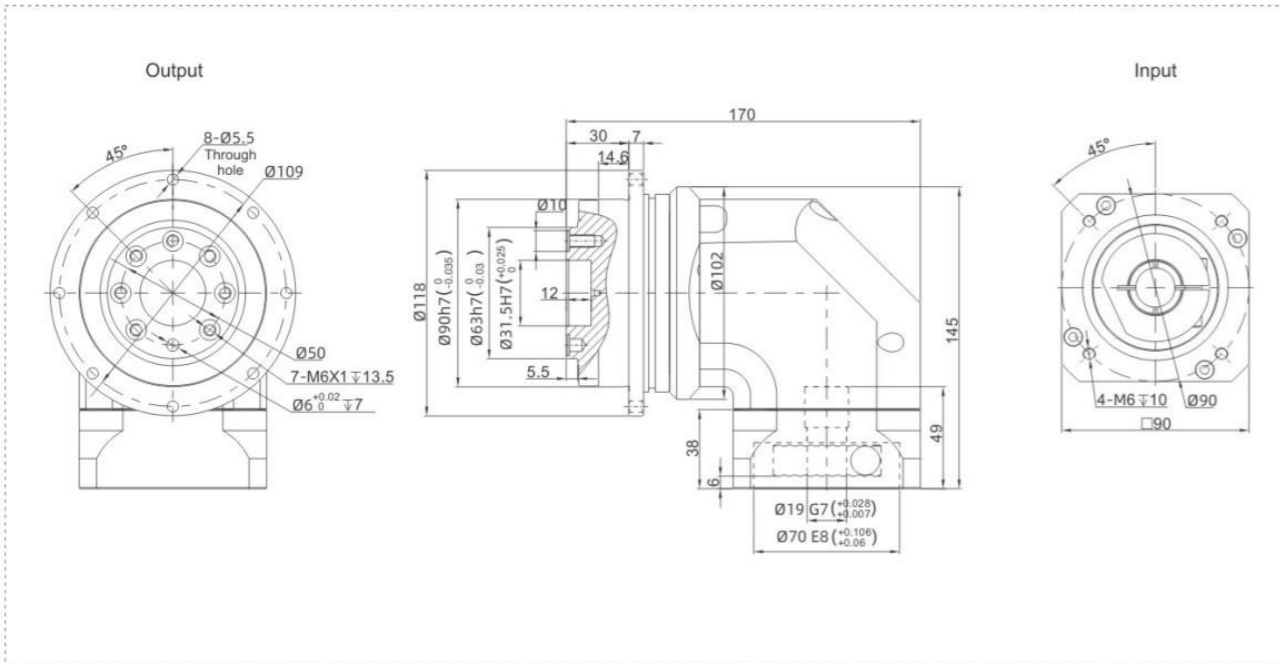
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

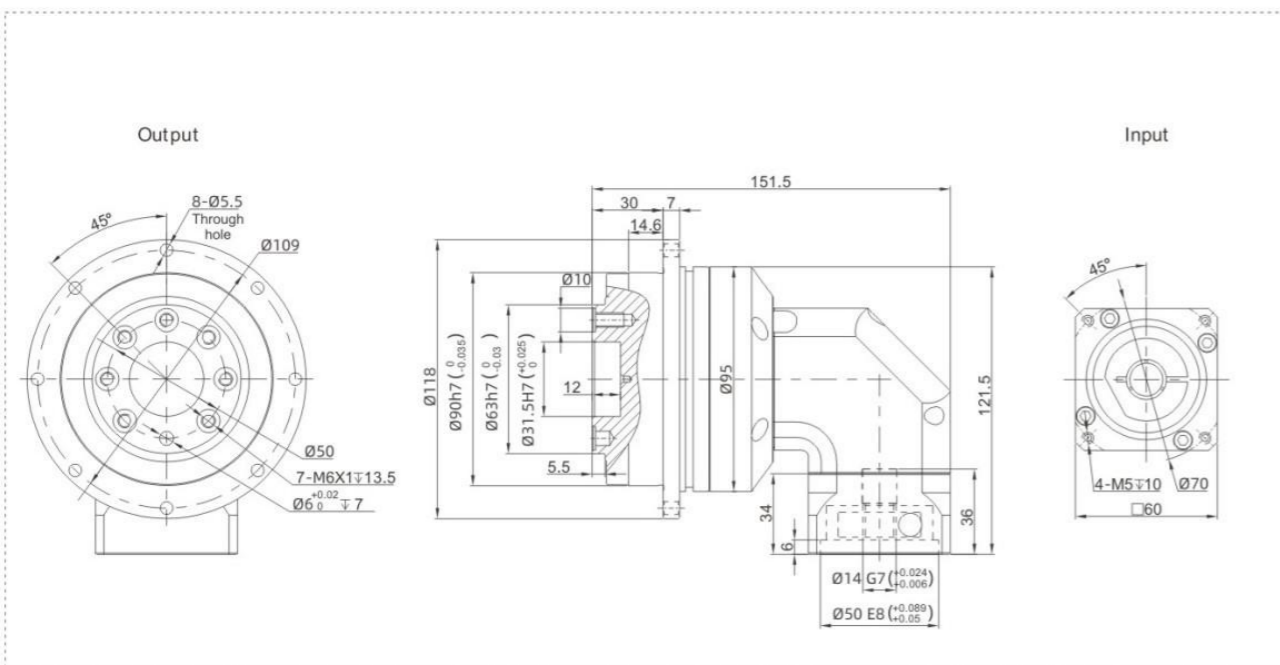
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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_b Nm	235										235			
Maximum Axial Force	F_b 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	≤ 2										≤ 4			
	P1	≤ 4										≤ 7			
	P2	≤ 6										≤ 9			
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	2.25					1.87					0.35		0.31	

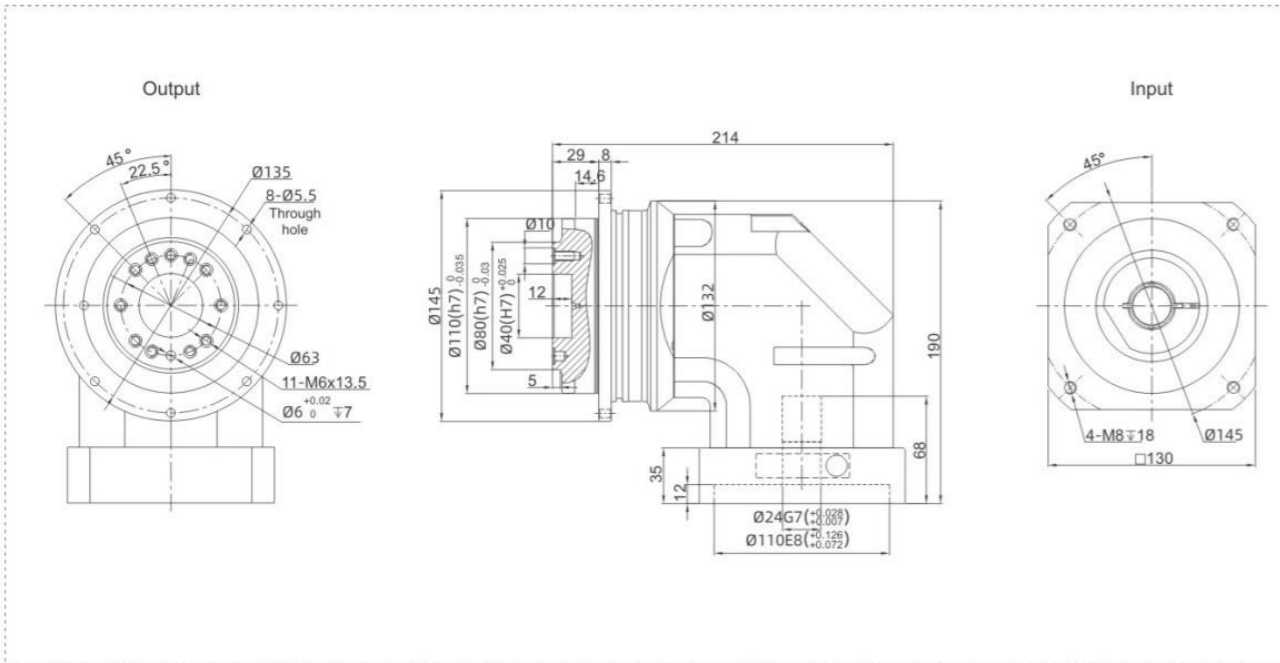
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

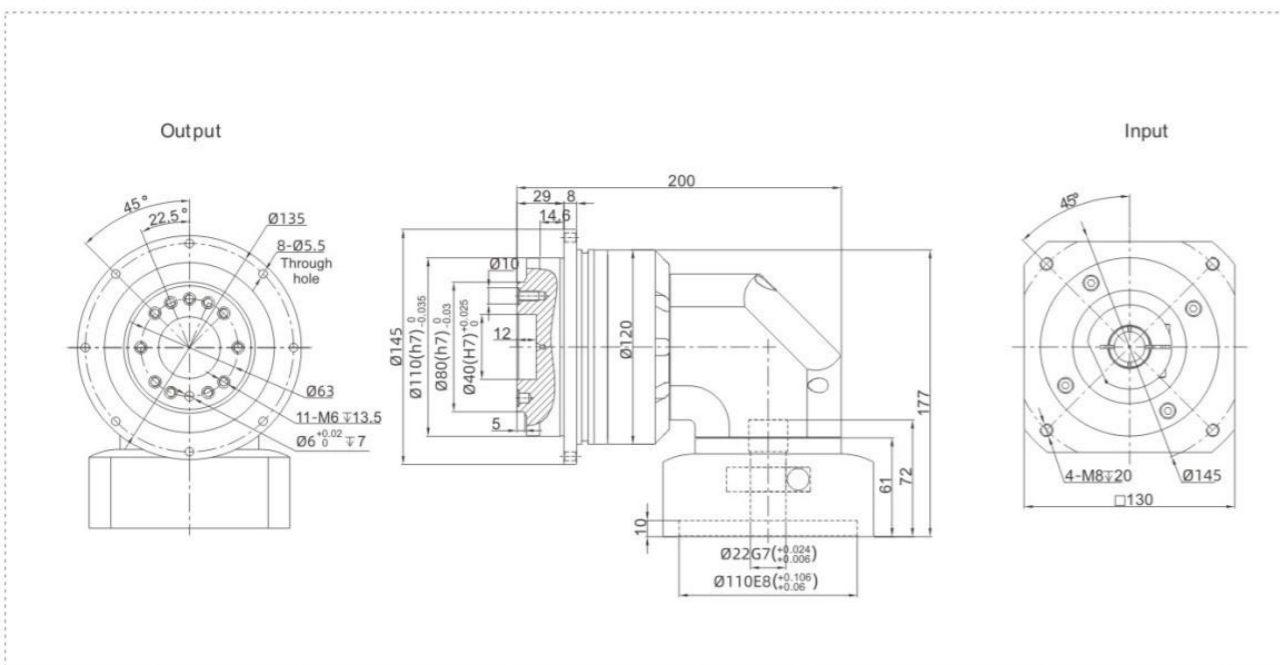
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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_b Nm	430					430									
Maximum Axial Force	F_b 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	≤ 2					≤ 4									
	P1	≤ 4					≤ 7									
	P2	≤ 6					≤ 9									
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	6.84				6.25					2.25				1.87	

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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



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

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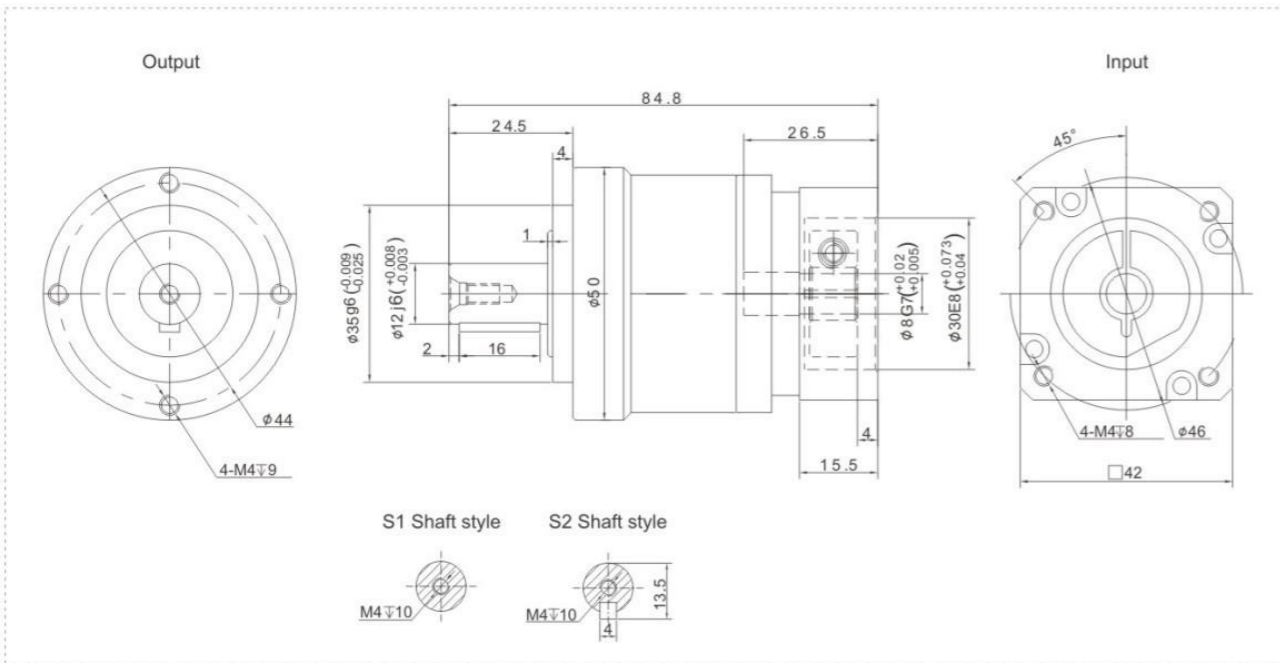


TE Series - High Precision Planetary Reducer

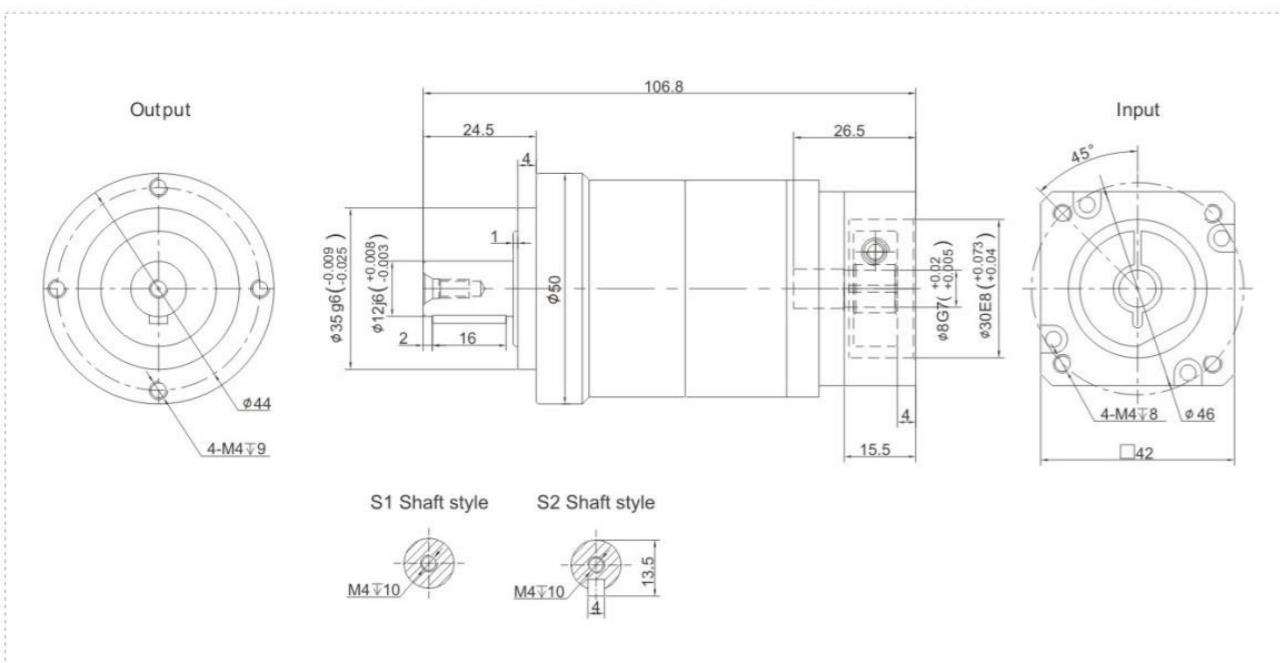


TE050 Series

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 × 3										T ₁ × 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 × 3 × 60%										T ₁ × 3 × 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		-										-									
	P1	arcmin	≤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.cm ²	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.

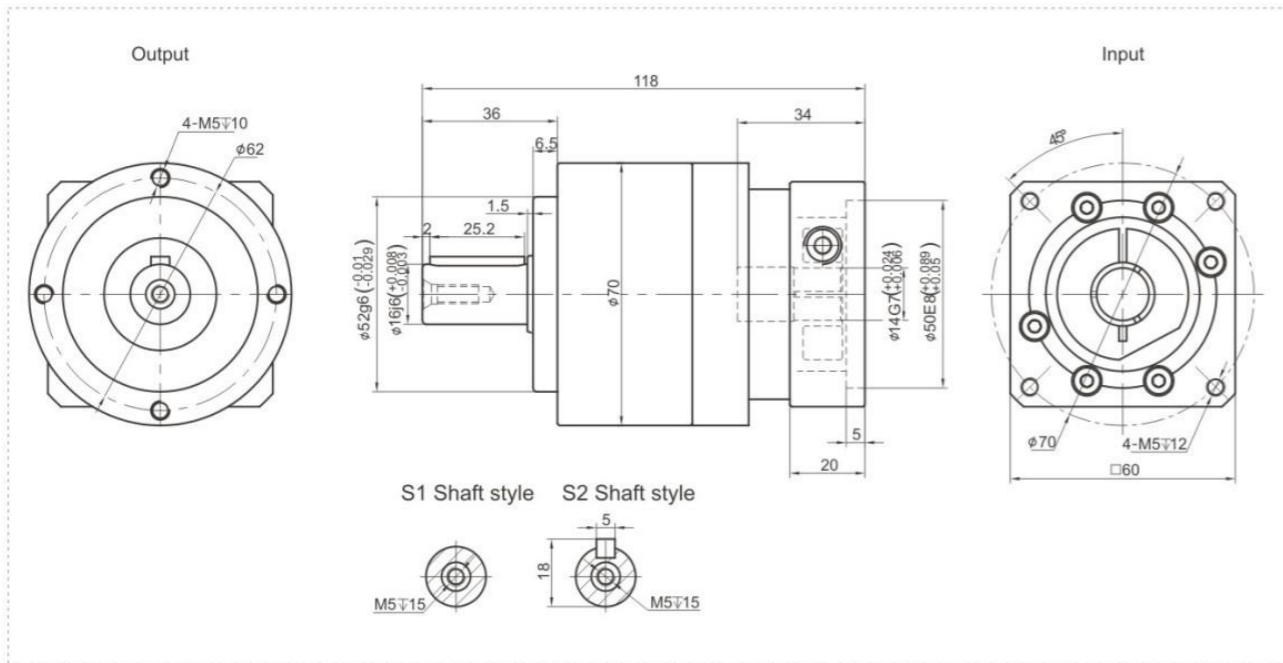
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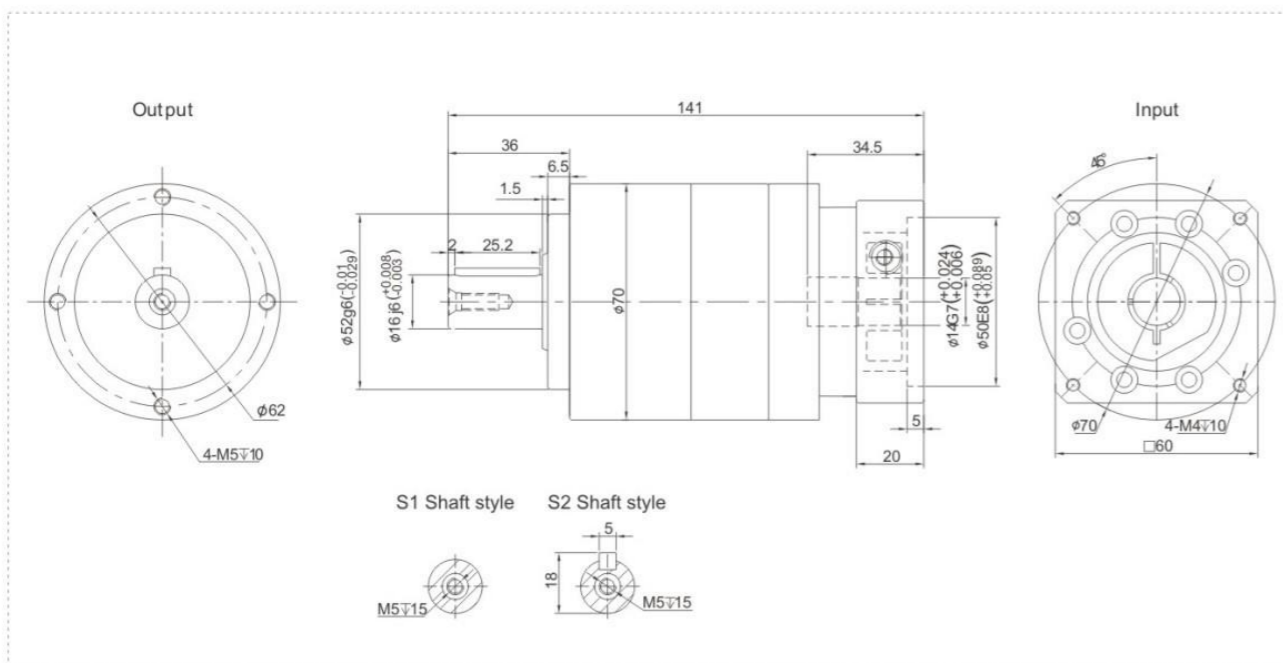


TE070 Series

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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	0.16	0.14	0.13						0.13											

Notes:

- Speed ratio ($i = \text{Sin}/\text{Sout}$)
- 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, $i=10$.

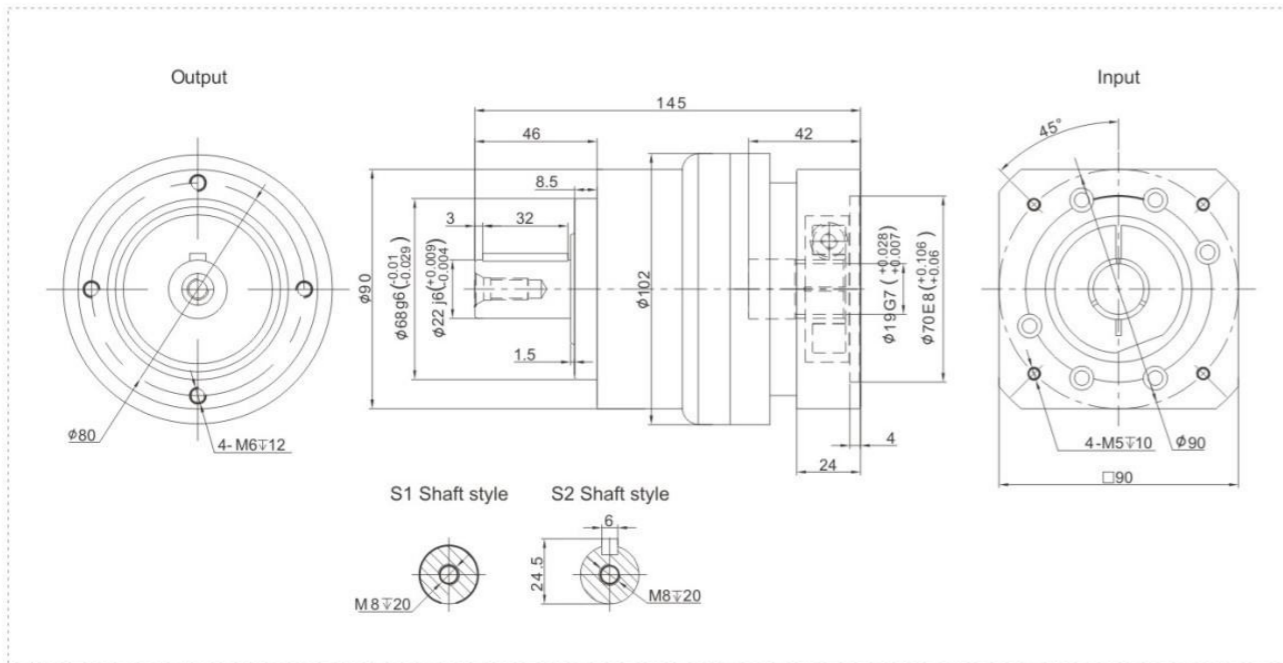
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TE Series - High Precision Planetary Reducer

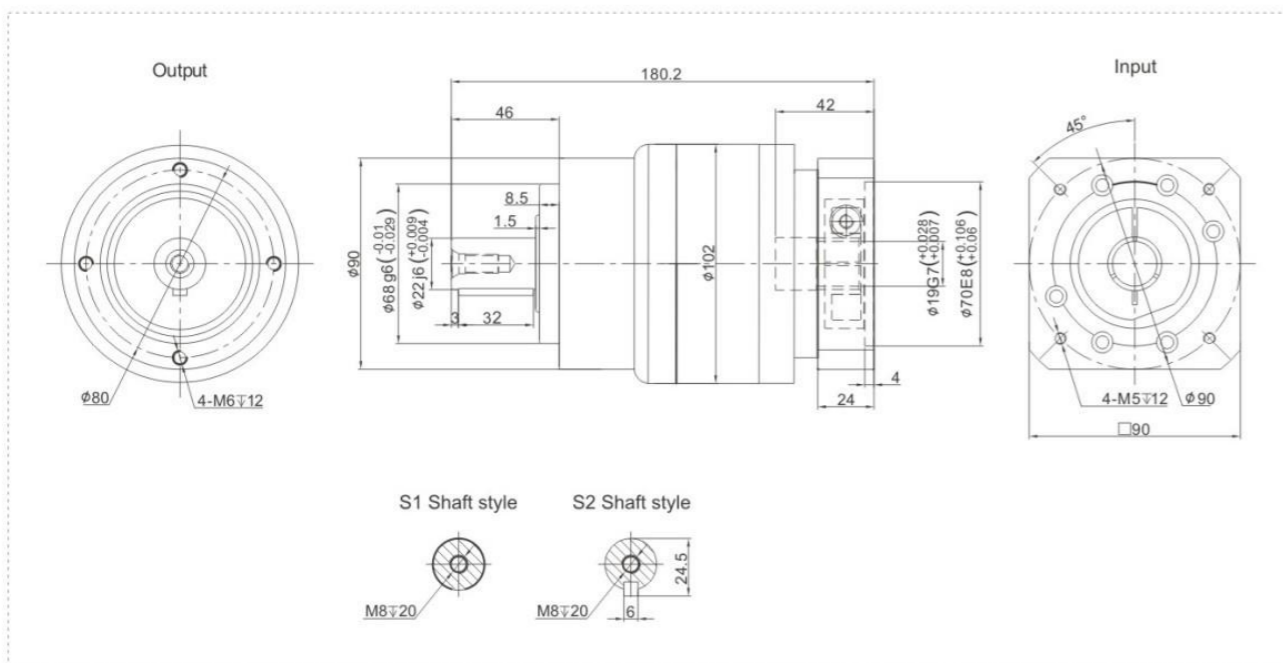


TE090 Series

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										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	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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	0.61	0.48	0.47	0.45	0.44					0.47									0.44	

Notes:

- Speed ratio ($i = \text{Sin}/\text{Sout}$)
- 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



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										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	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	6100										6100									
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	7.5										8.5									
Backlash	P0		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57	0.47	0.44										

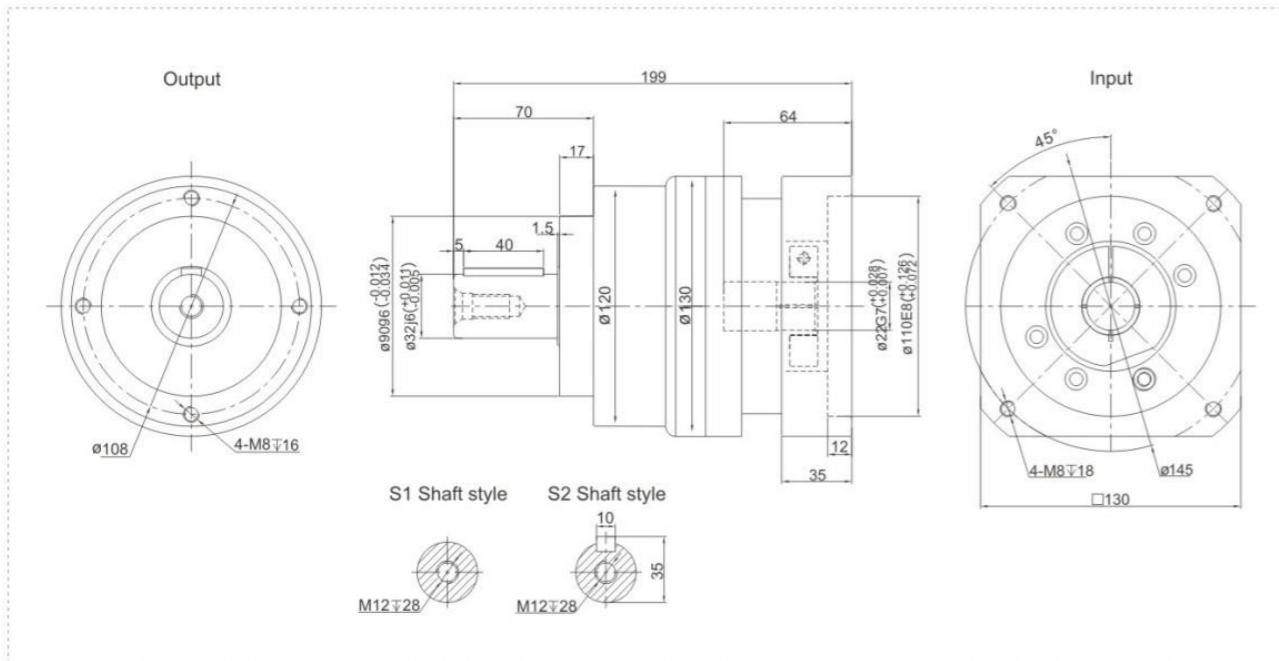
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

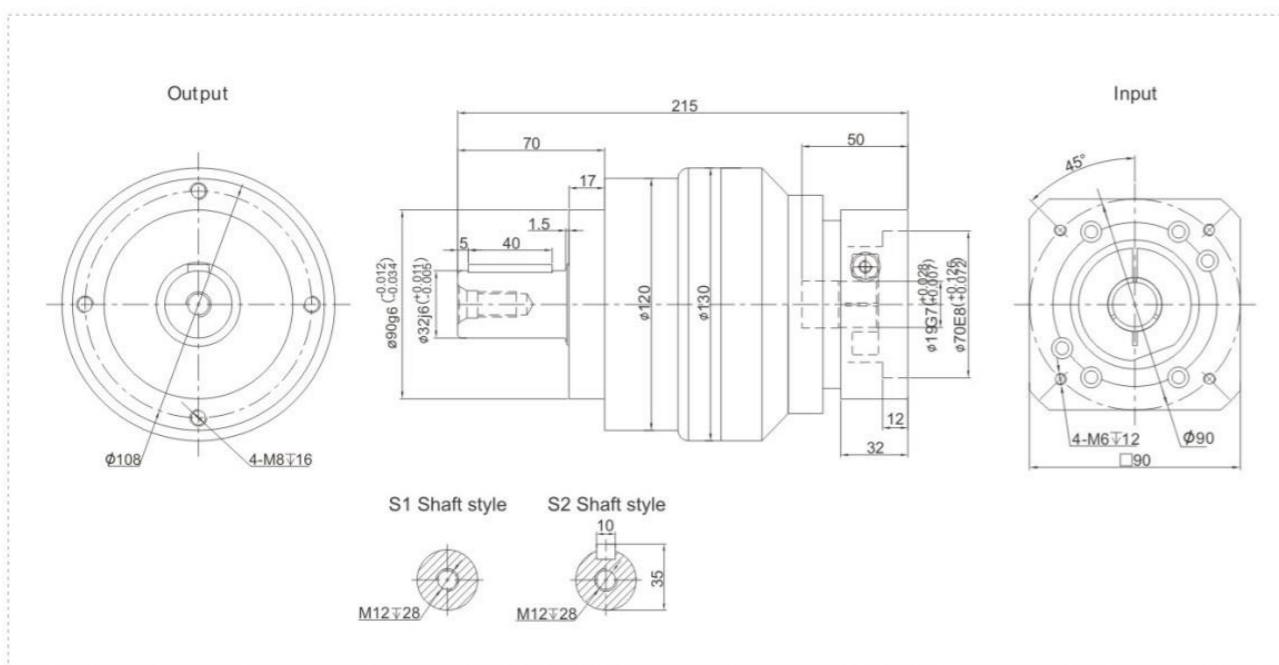
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TE120 Series

TE120 One Stage



TE120 Two Stage

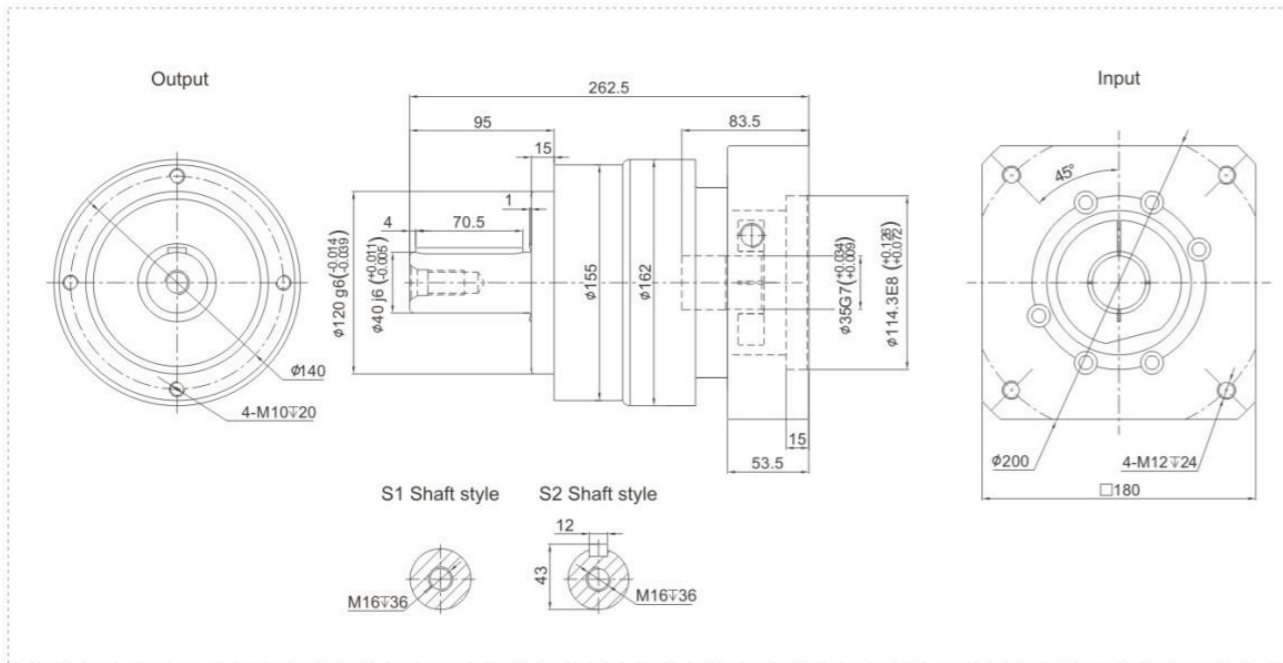


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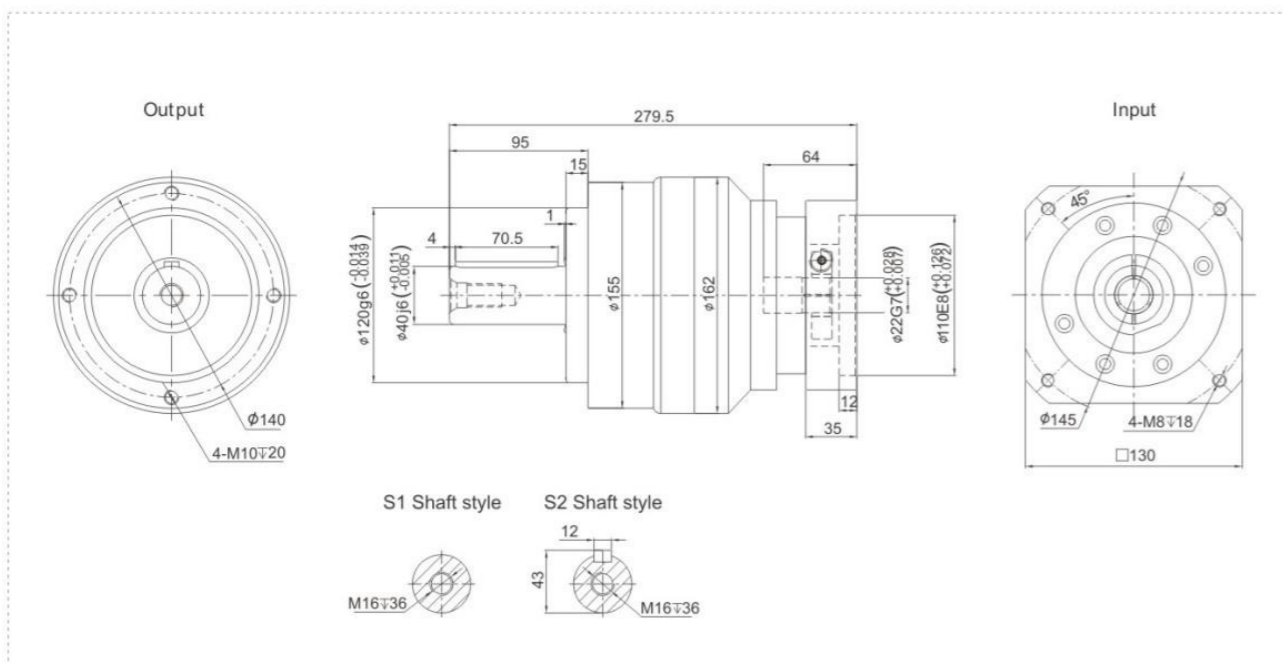


TE155 Series

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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	2.71										2.57	

Notes:

- Speed ratio ($i = \text{Sin}/\text{Sout}$)
- 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



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										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	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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51	7.42											7.03

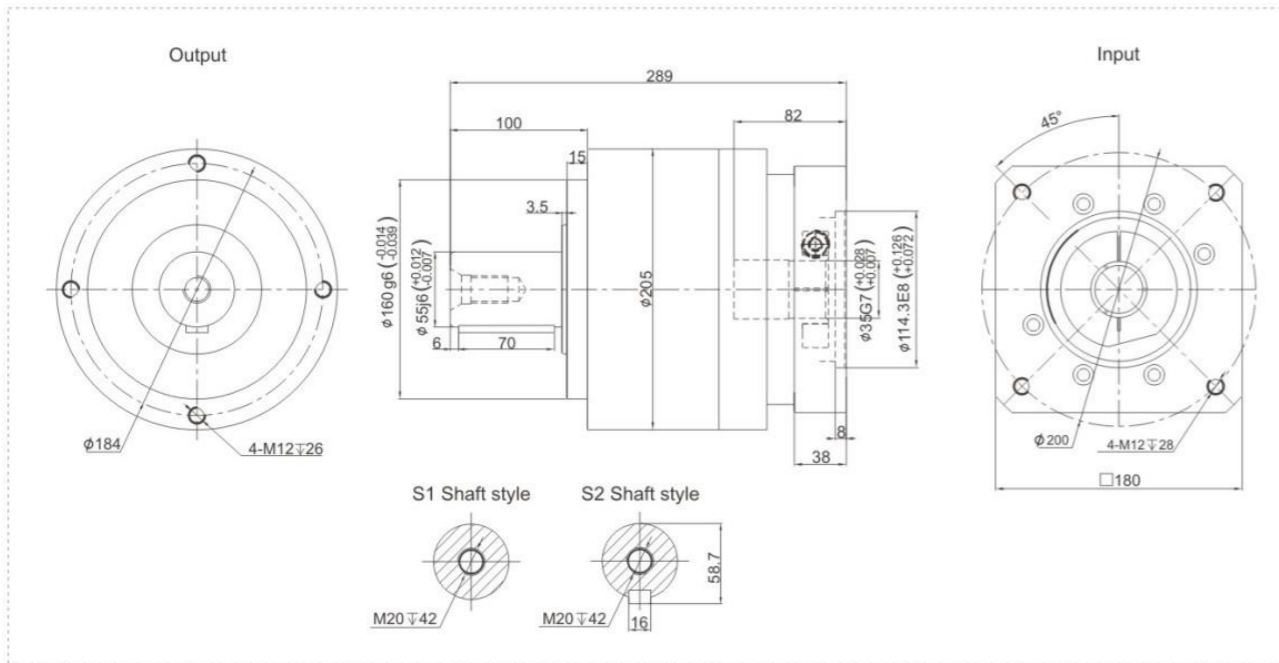
Notes:

- Speed ratio ($i = \text{Sin}/\text{Sout}$)
- 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, $i=10$.

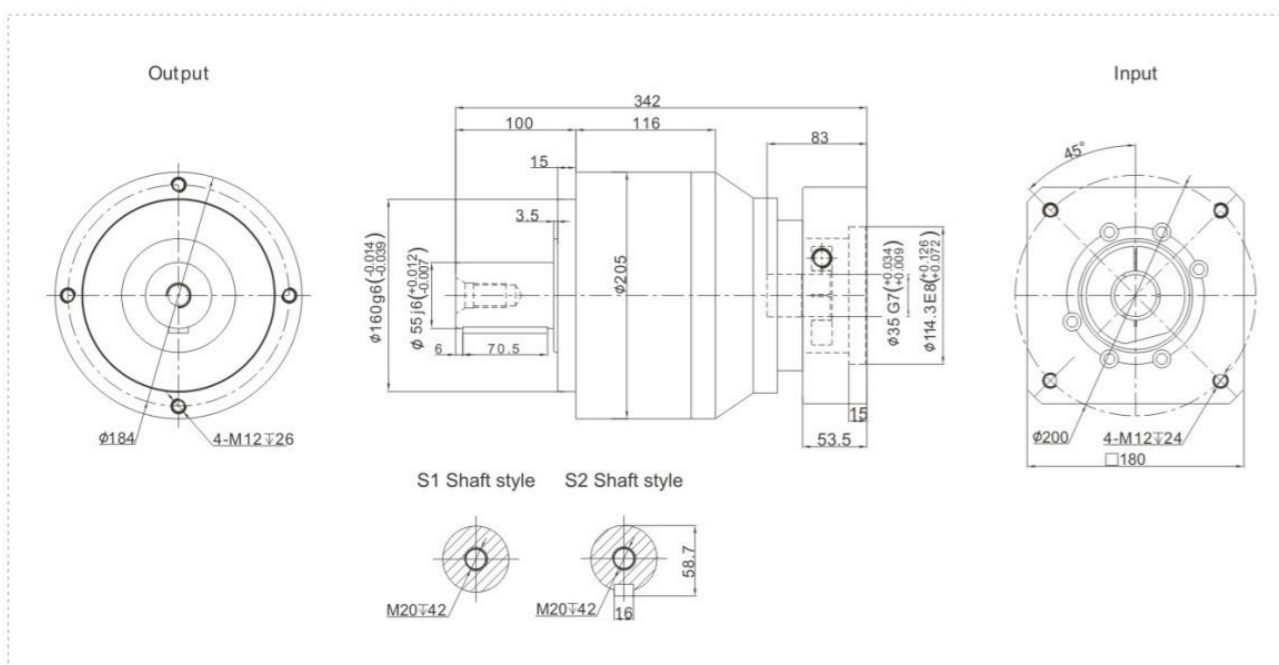
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TE205 Series

TE205 One Stage



TE205 Two Stage



TE Series - High Precision Planetary Reducer



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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	69.61	54.37	53.27	51.72	50.97	50.84	-	50.56	23.29										22.51	

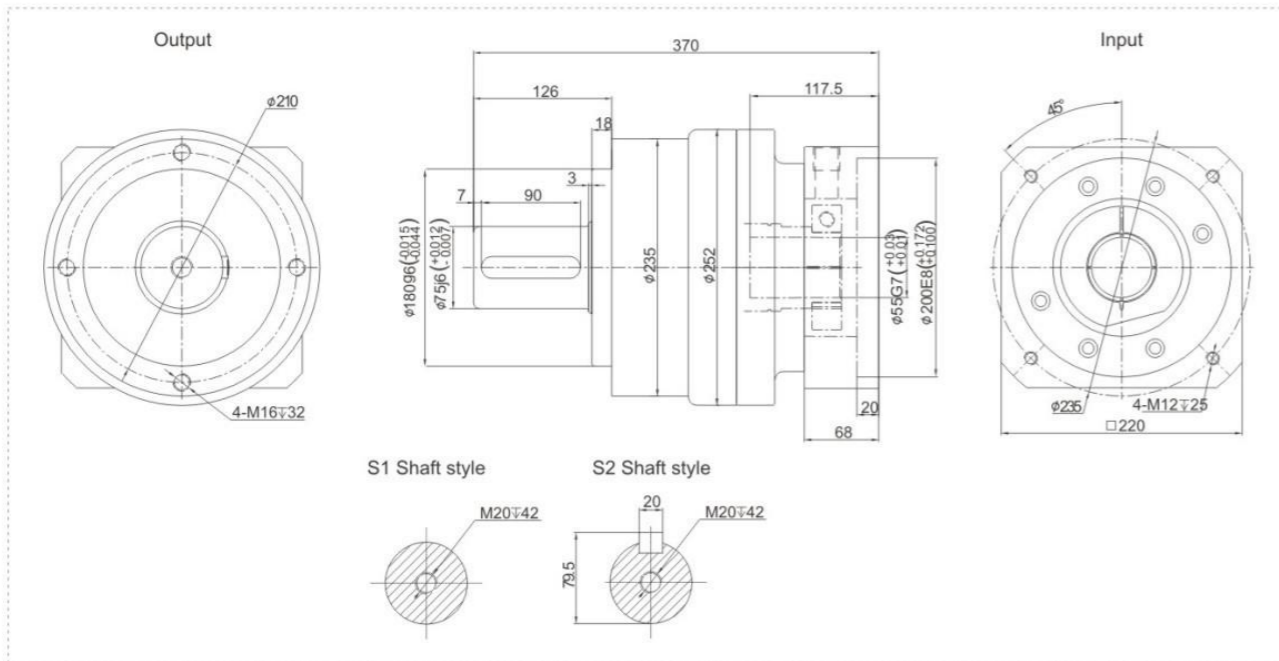
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

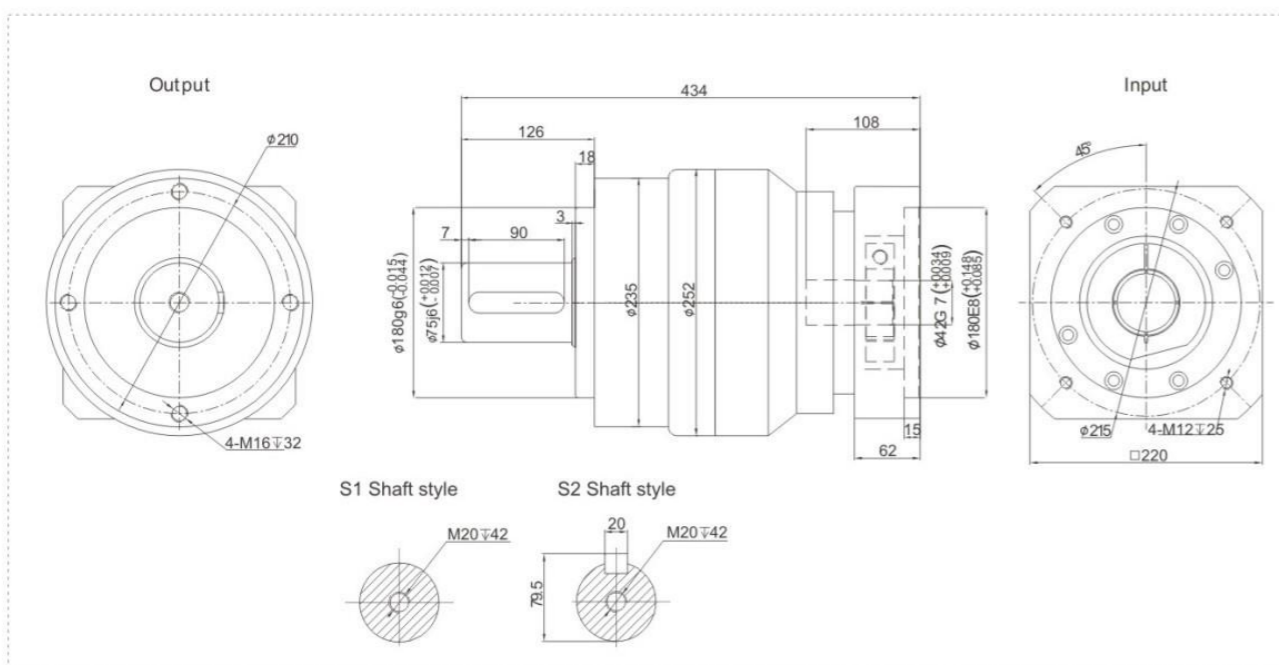
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TE235 Series

TE235 One Stage



TE235 Two Stage

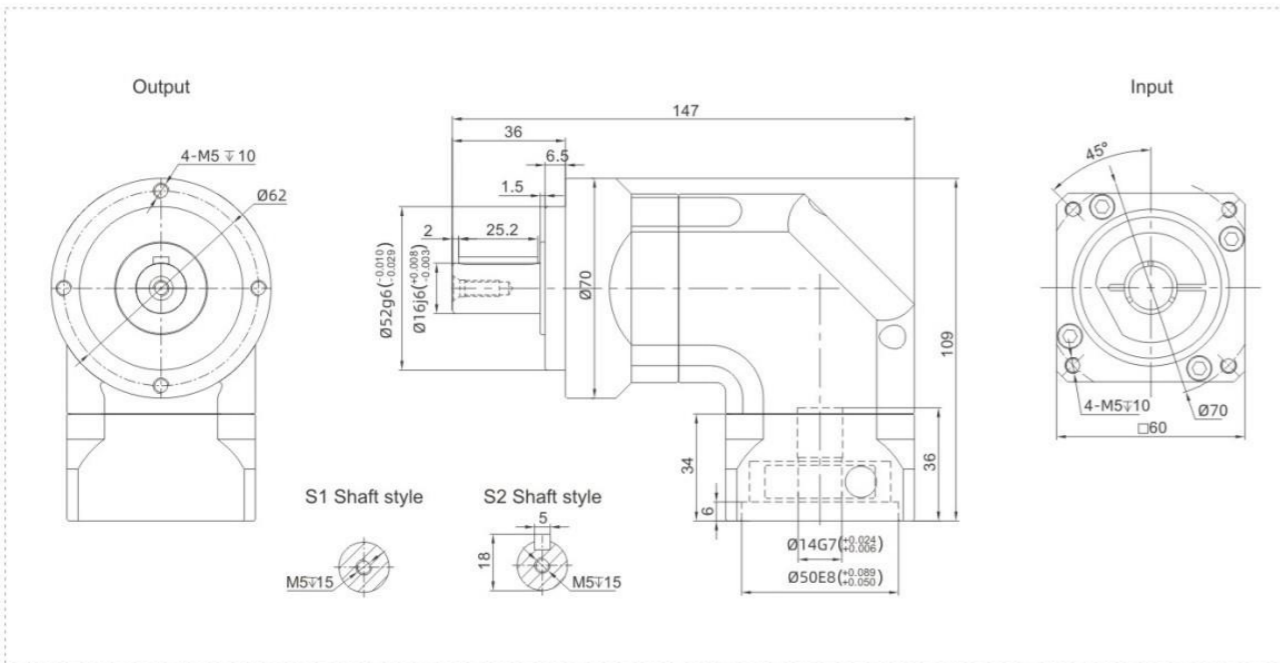


TER Series - High Precision Planetary Reducer

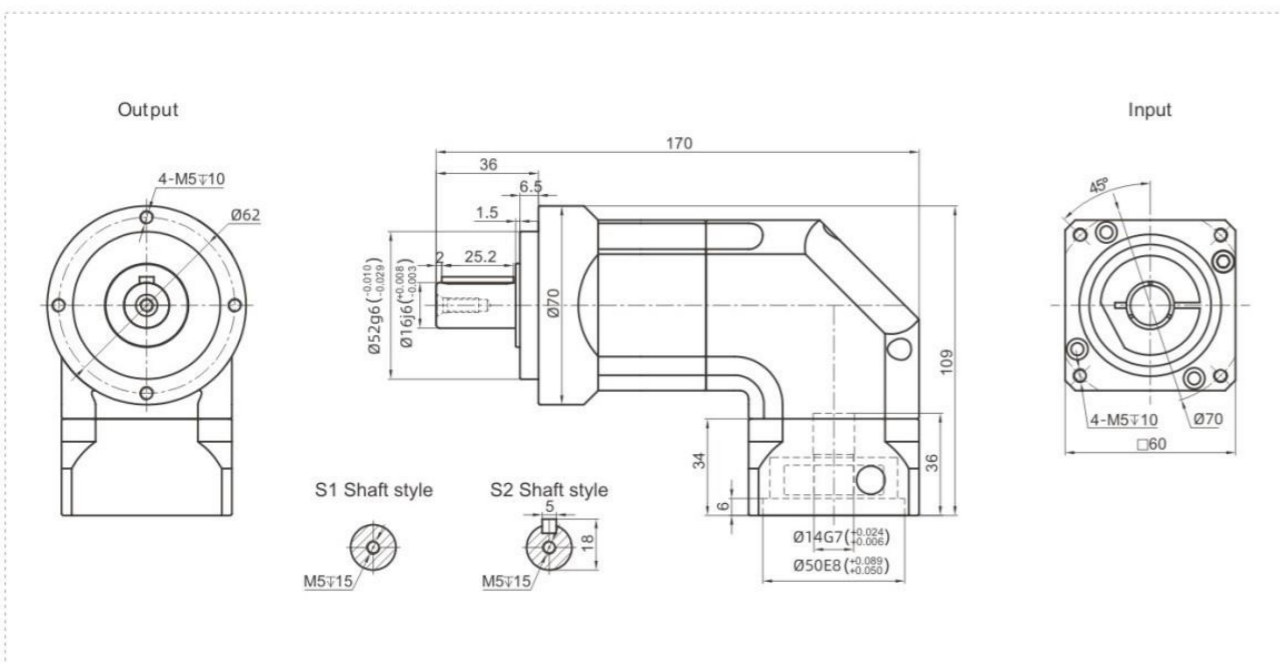


TER070 Series

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:	-																-							
	P1 arcmin:	≤ 4																≤ 7							
	P2:	≤ 6																≤ 9							
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								0.09							

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

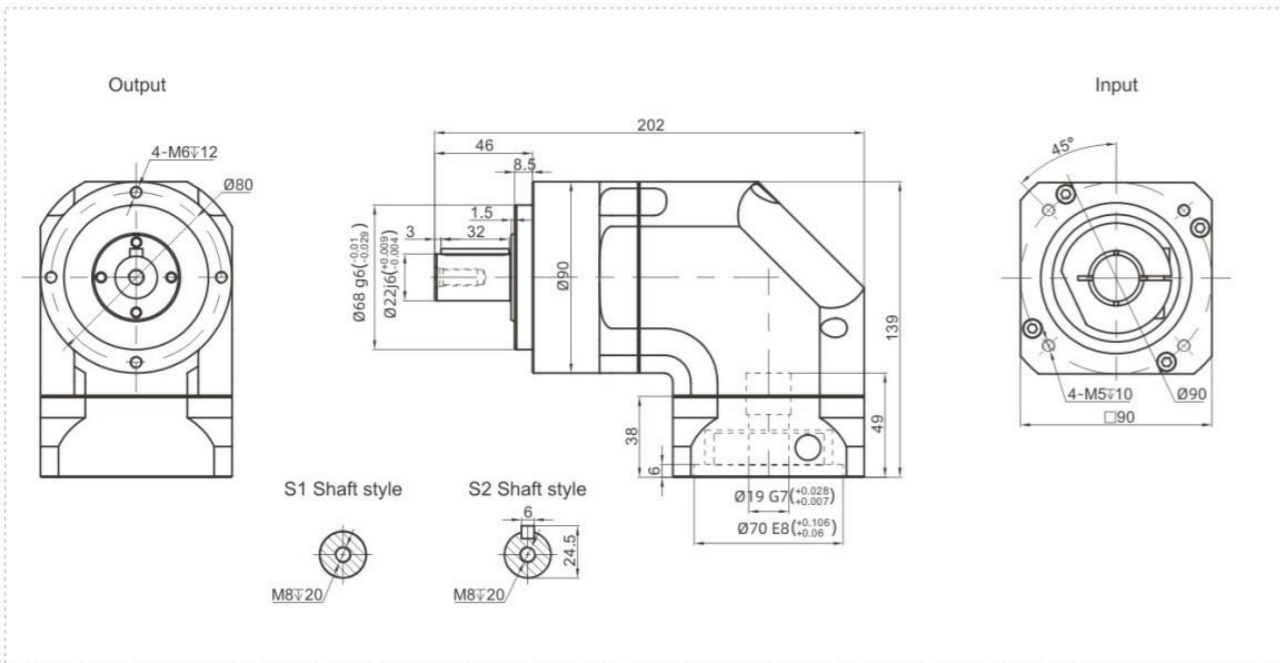
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TER Series - High Precision Planetary Reducer

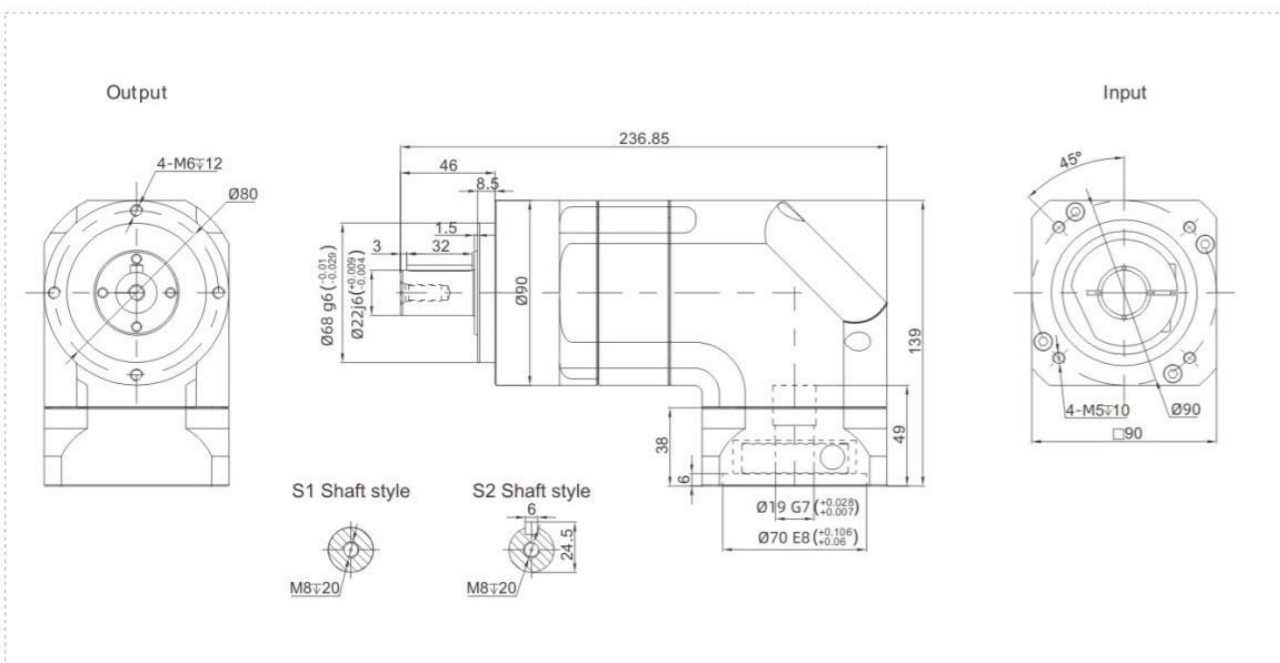


TER090 Series

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	$T_1 \times 3$														$T_1 \times 3$									
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	%	≥ 95														≥ 92									
Service Life	-	h	20000														20000									
Noise	-	dB	≤ 65														≤ 65									
Weight	-	Kg	5														6.4									
Backlash	P_0		-														-									
	P_1	arcmin	≤ 4														≤ 7									
	P_2		≤ 6														≤ 9									
Operating Temperature	-	$^{\circ}\text{C}$	-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	2.25							1.87							2.25					1.87				

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

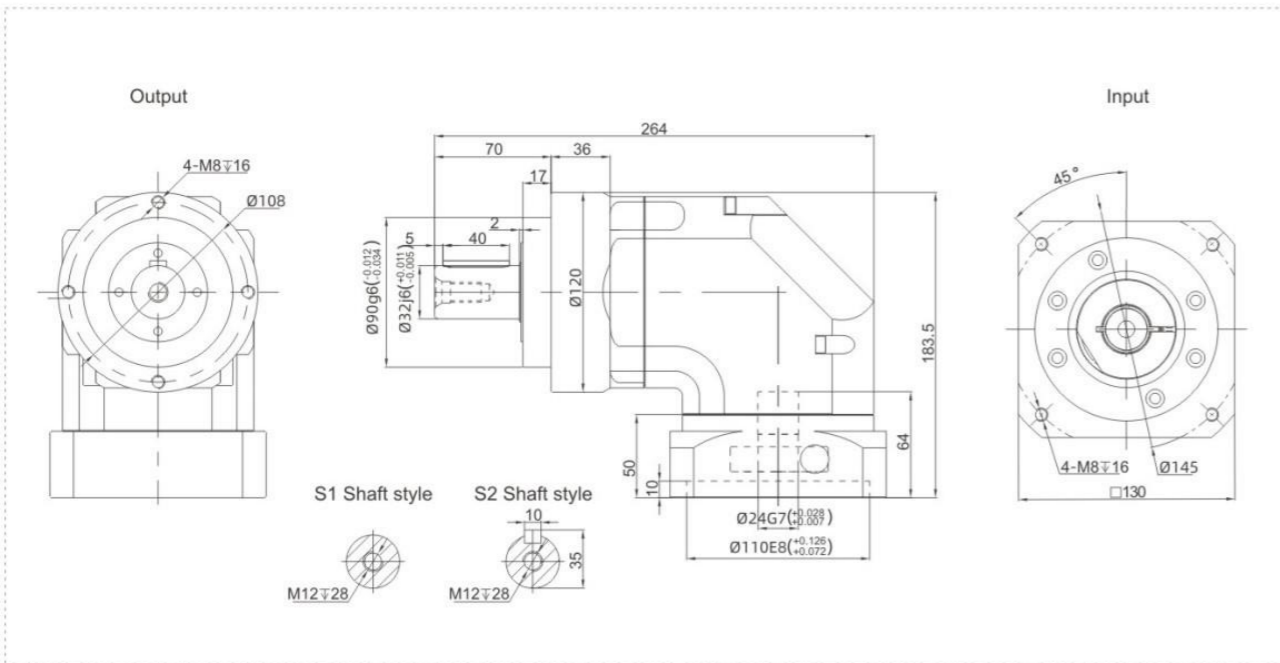
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TER Series - High Precision Planetary Reducer

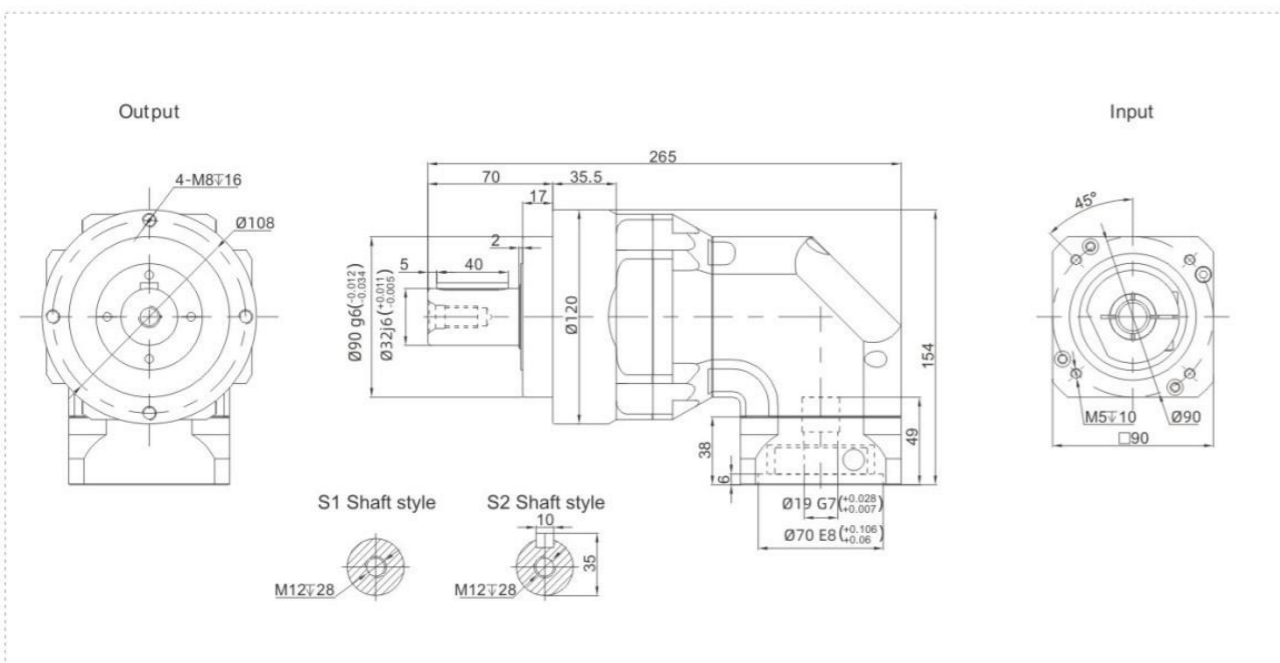


TER120 Series

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	-														-									
	P1	≤ 4														≤ 7									
	P2	≤ 6														≤ 9									
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	6.84							6.25							2.25					1.87				

Notes:

- Speed ratio ($i = \text{Sin/Sout}$)
- 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, $i=10$.

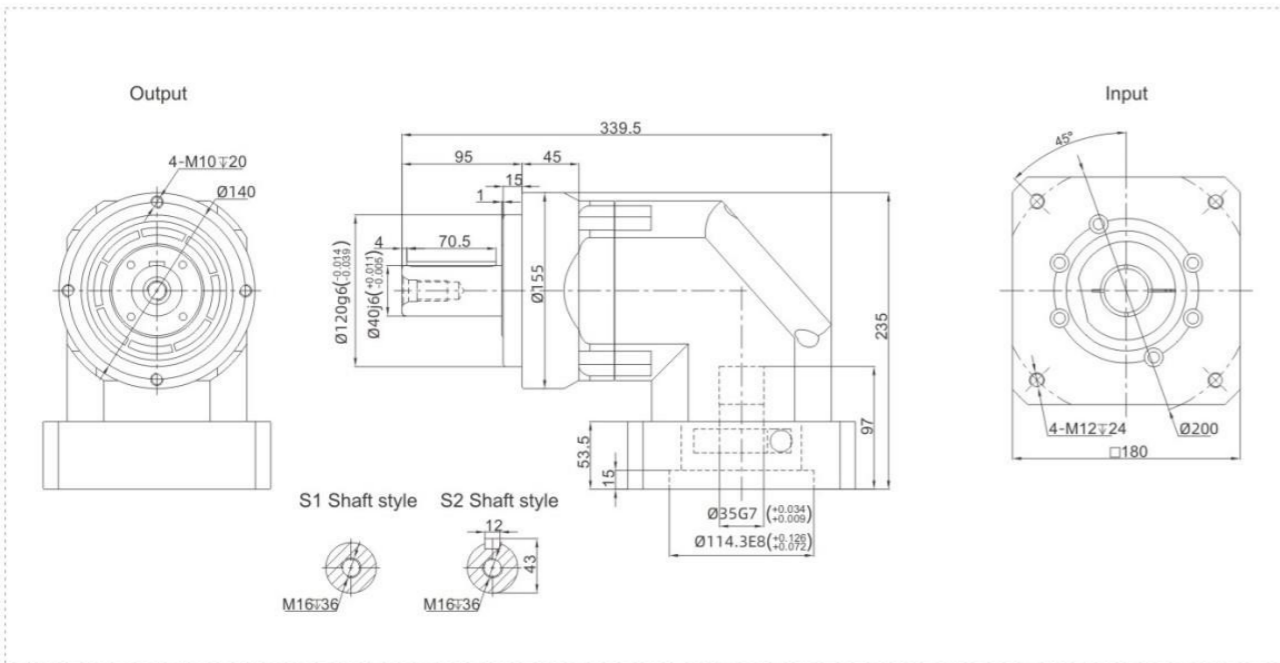
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TER Series - High Precision Planetary Reducer

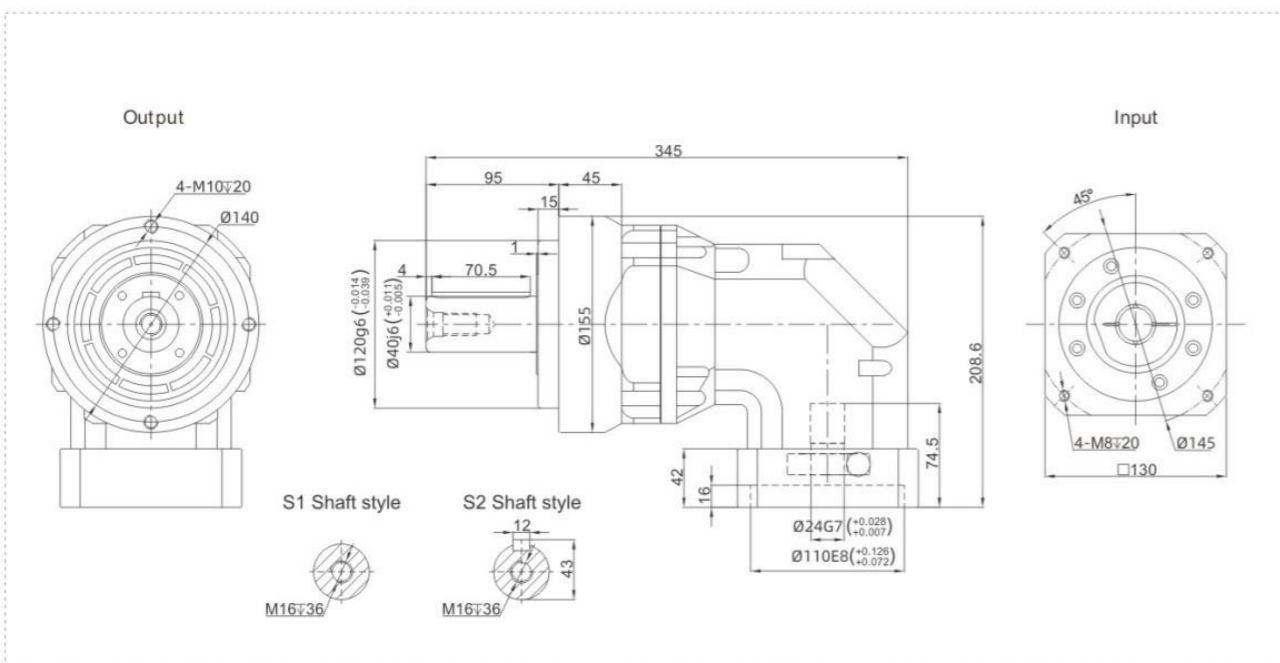


TER155 Series

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	-														-									
	P1	≤ 4														≤ 7									
	P2	≤ 6														≤ 9									
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	23.4							21.8							6.84					6.25				

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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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Precision Planetary Reducer



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.

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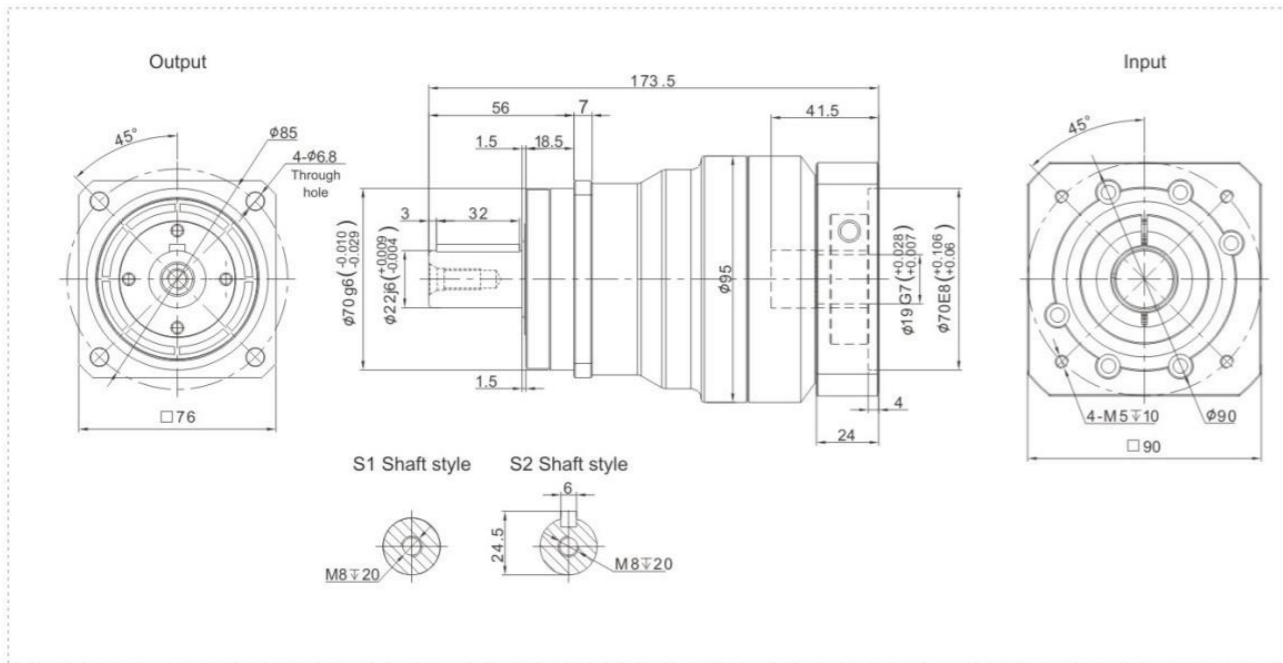


TF Series - High-end Design and Premium Performance

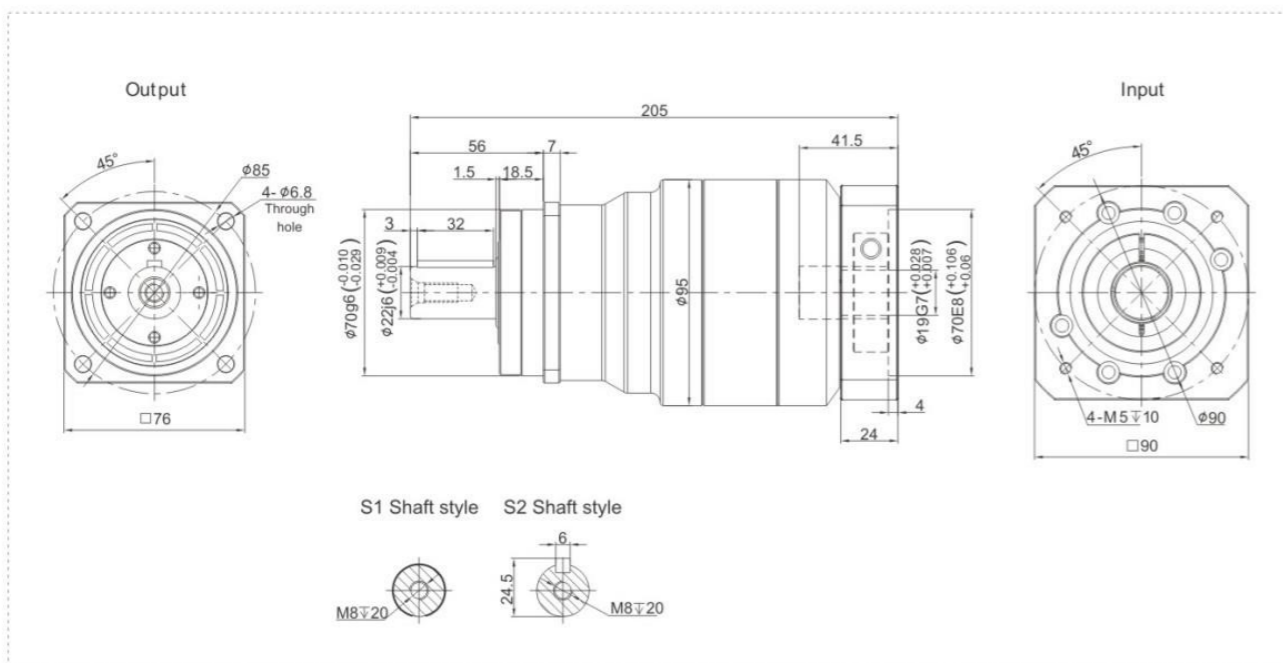


TF075 Series

TF075 One Stage



TF075 Two Stage



Performance Data

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

TF075		One Stage										Two Stage										
Speed Ratio	i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100		
Nominal Output Torque	T_1	Nm	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102	
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$										$T_1 \times 3$									
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	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		≤ 1										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	0.61	0.48	0.47	0.45	0.44				0.47										0.44	

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

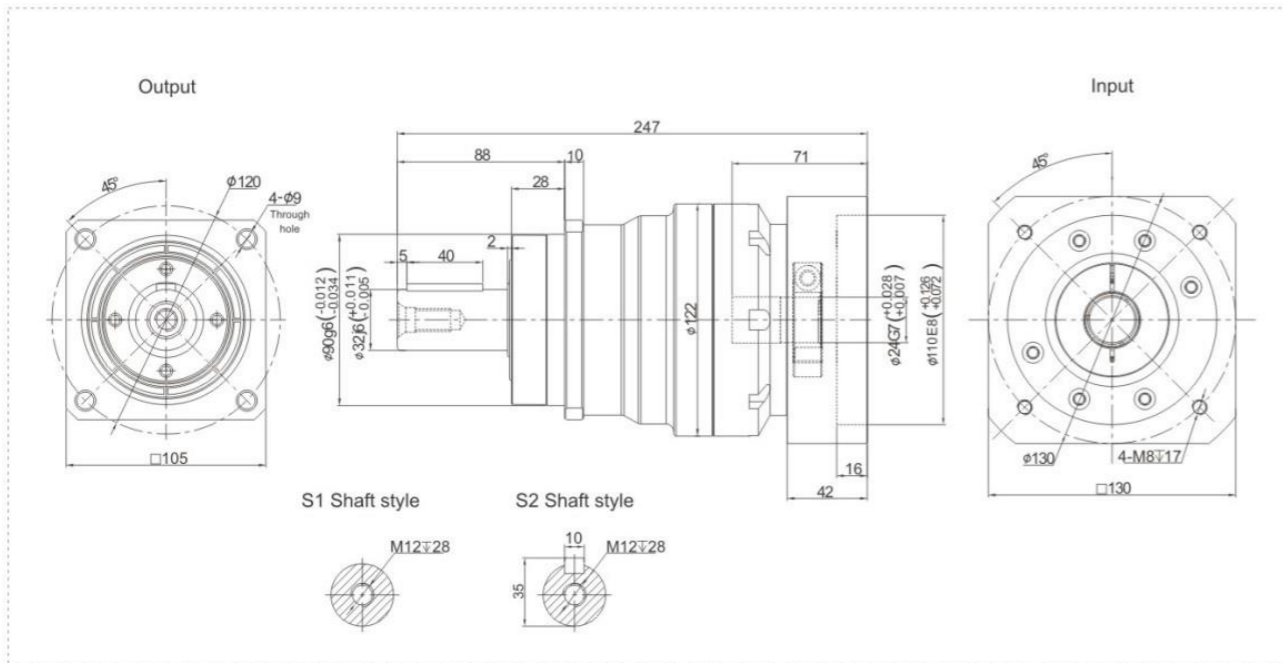
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TF Series - High-end Design and Premium Performance

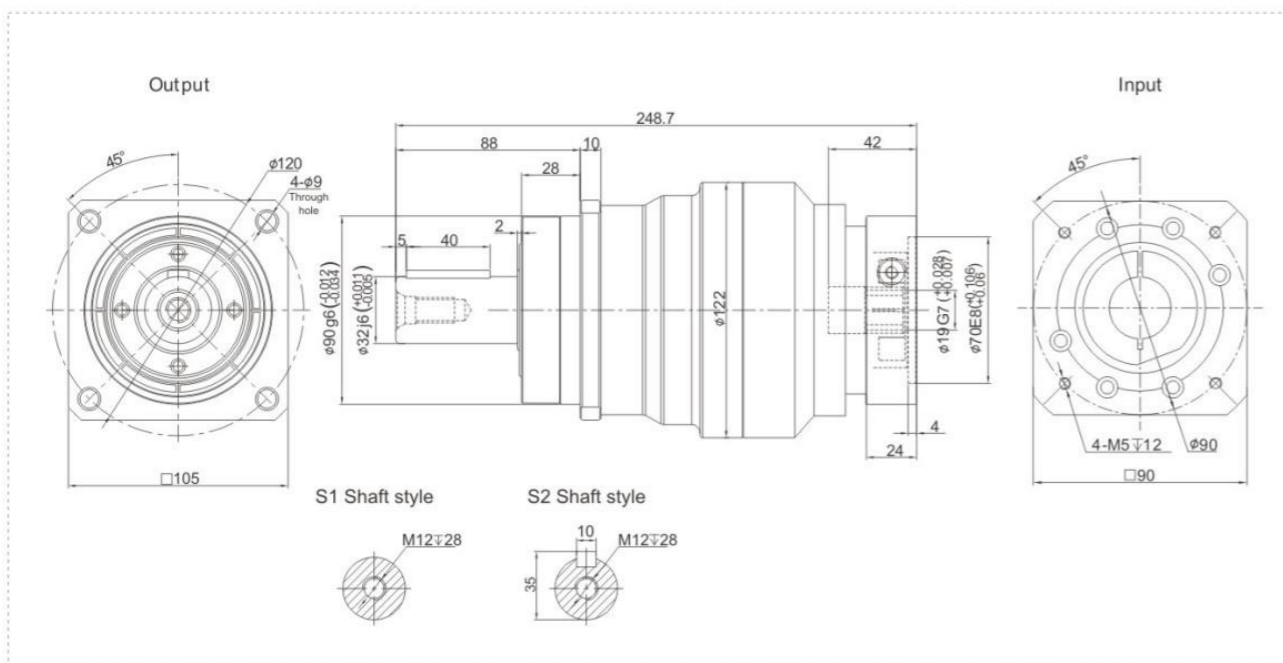


TF100 Series

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										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	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		≤ 1										≤ 3									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57	0.47										0.44	

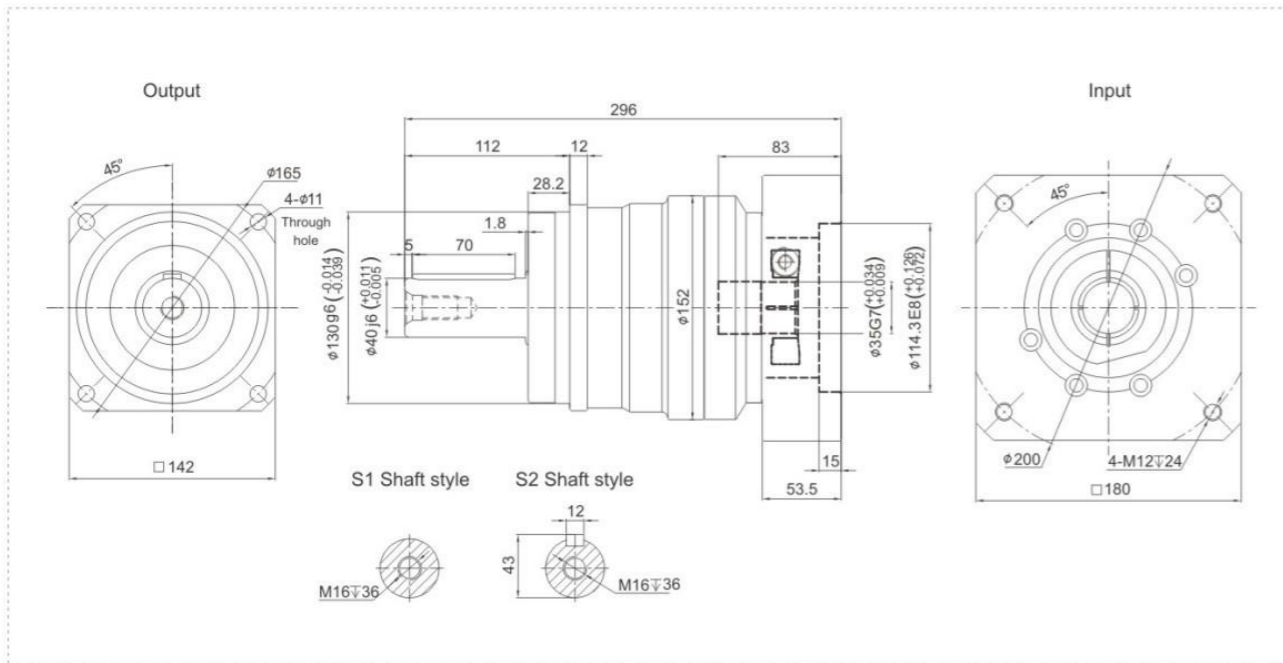
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

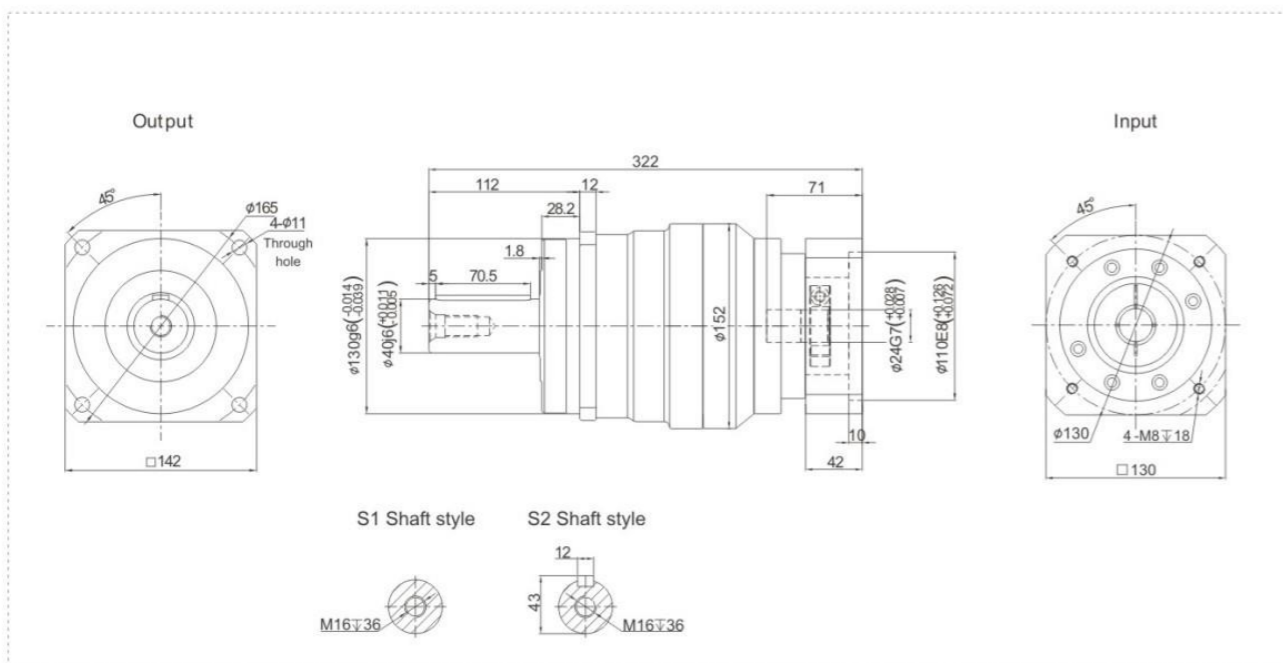
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TF140 Series

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		≤ 1										≤ 3									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	9.2	7.5	7.4	7.2	7.1	7.0	-	7.0	2.71									2.57		

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

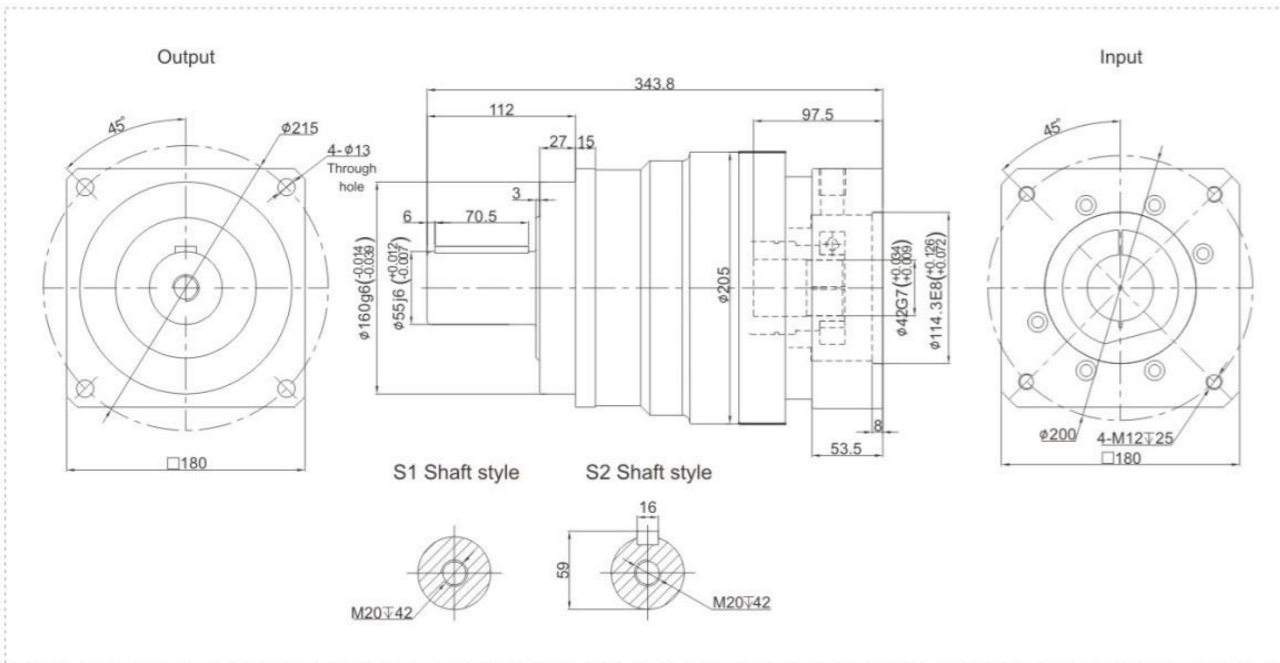
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TF Series - High-end Design and Premium Performance

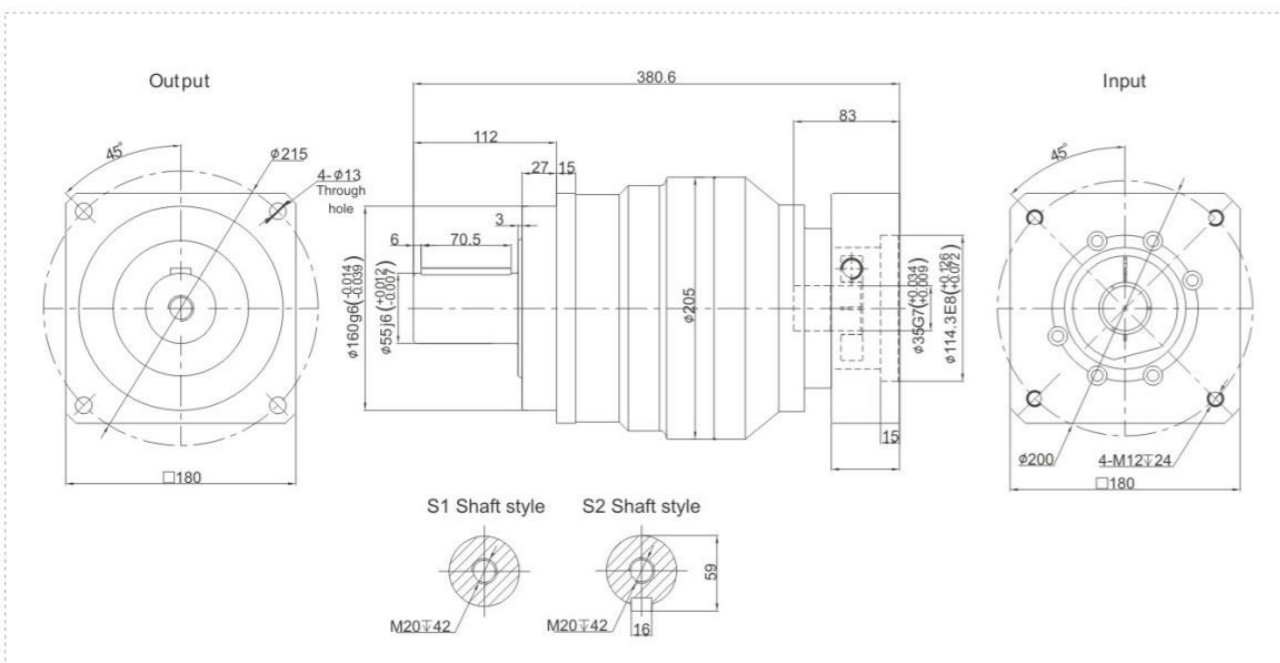


TF180 Series

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	≤ 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.cm ²	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.42	7.03

Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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



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.

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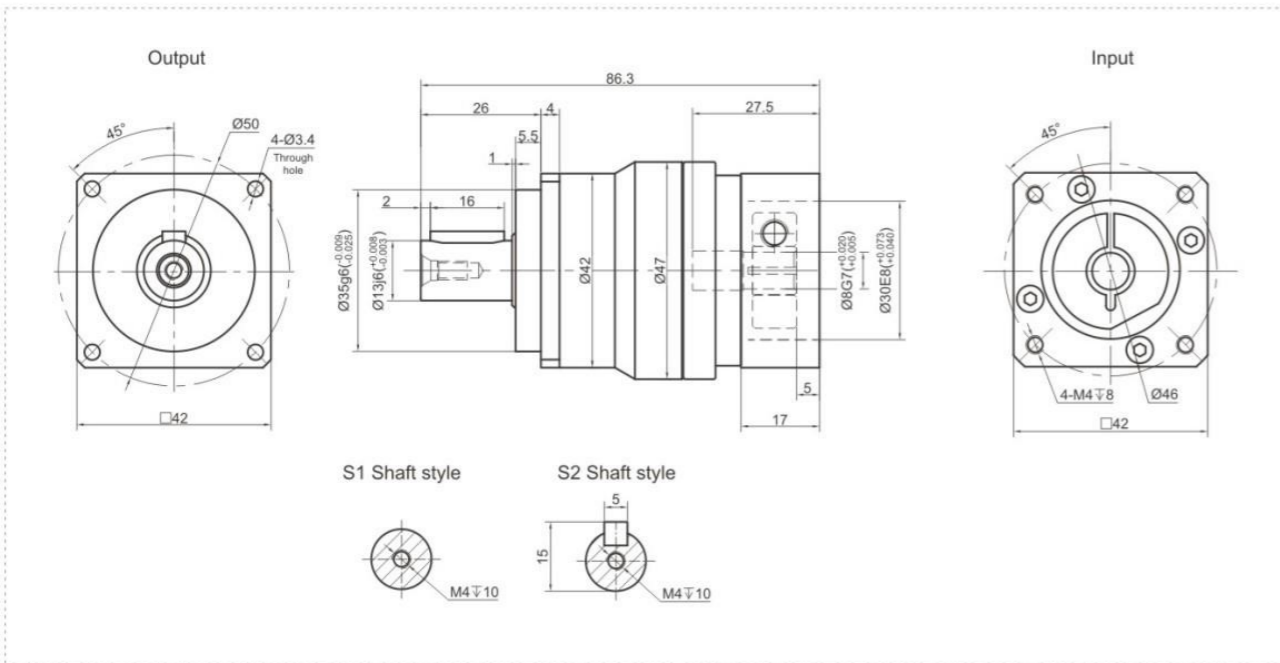
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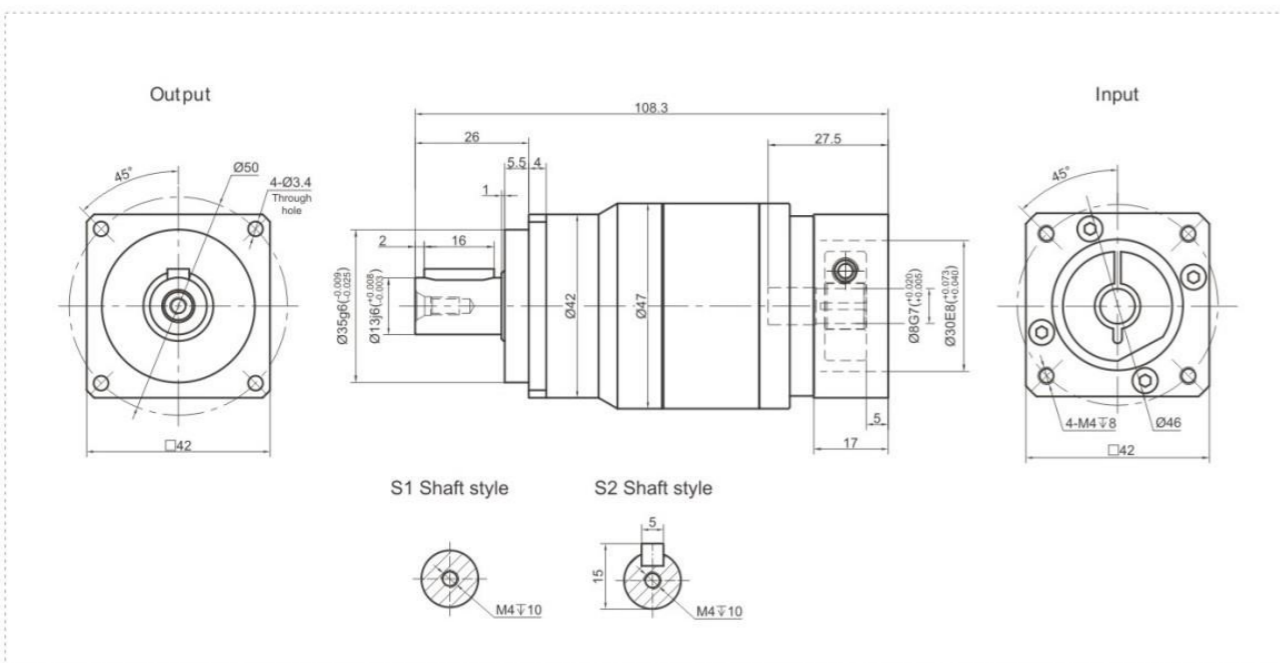


TCB042 Series

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 × 3										T ₁ × 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 × 3 × 60%										T ₁ × 3 × 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	-	-										-									
	P1	arcmin	≤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.cm ²	0.03										0.03									

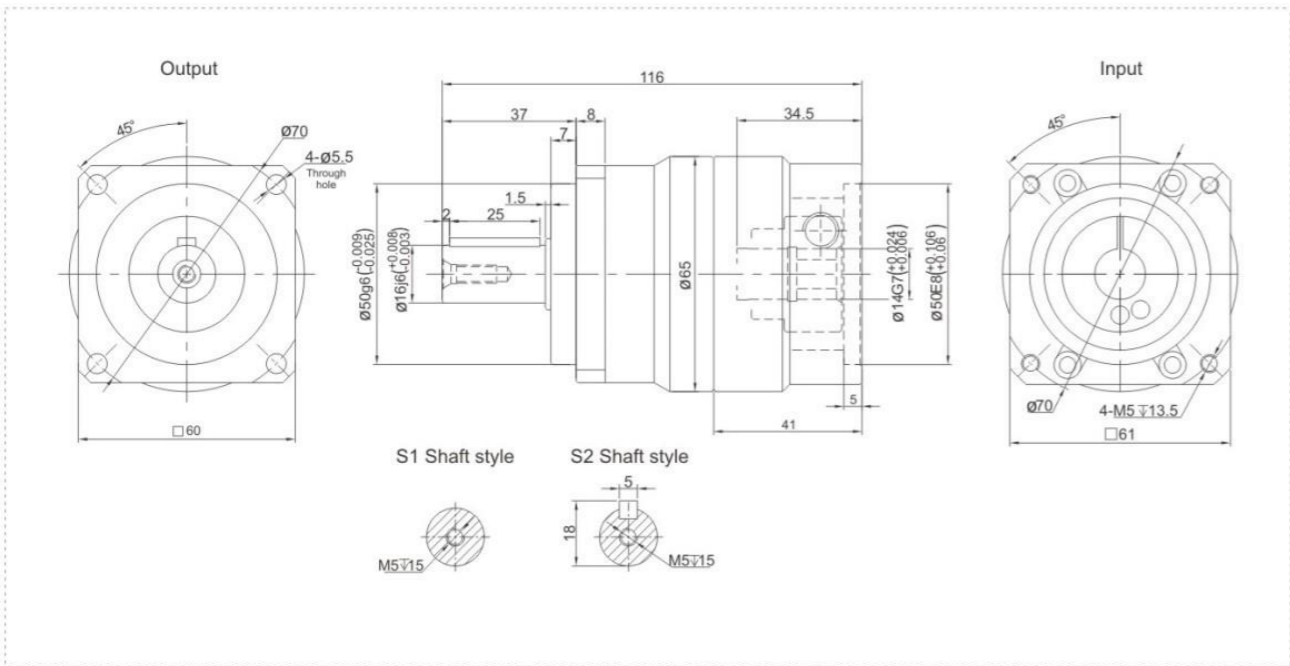
Notes:

- ① Speed ratio (i=Sin/Sout)
- ② When the output speed is 100 rpm, it acts on the center of the output shaft.
- ③ For continuous operation, the service life is no less than 10,000 hours.
- ④ The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

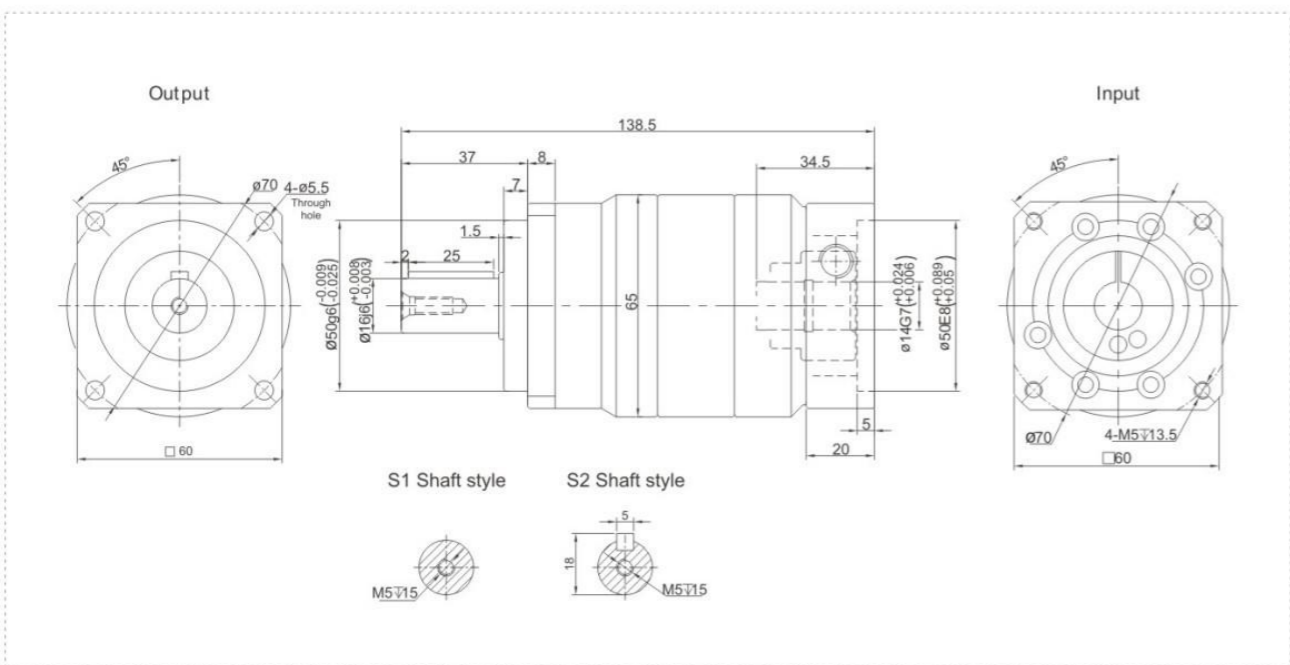
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TCB060 Series

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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	$-20 \sim 90$										$-20 \sim 90$									
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				

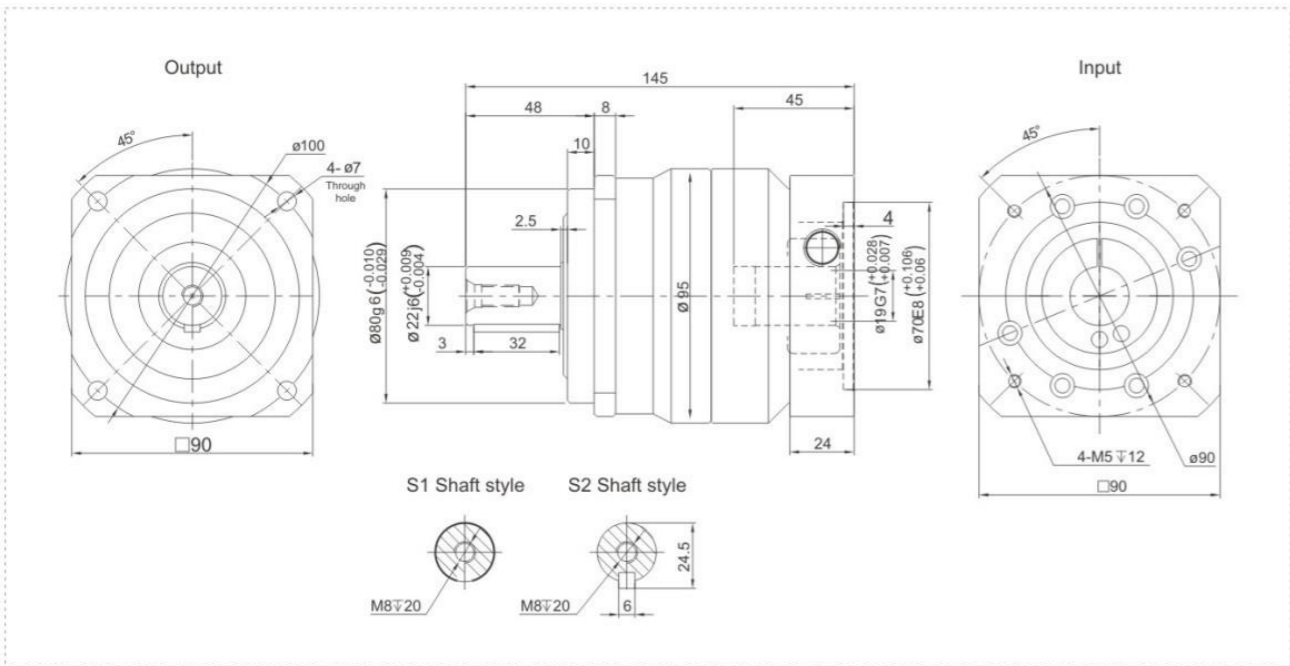
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

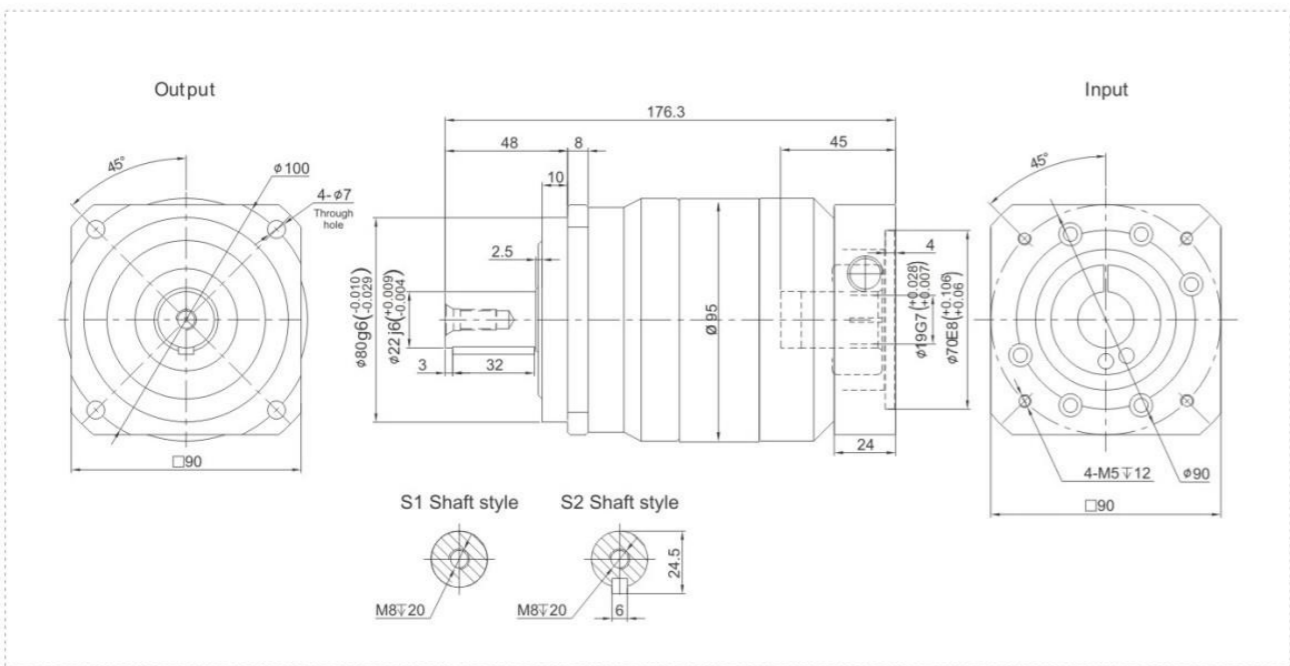
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TCB090 Series

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	-										-									
	P1 arcmin	≤ 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.cm ²	0.61	0.48	0.47	0.45	0.45	0.44	-	0.44	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.44	

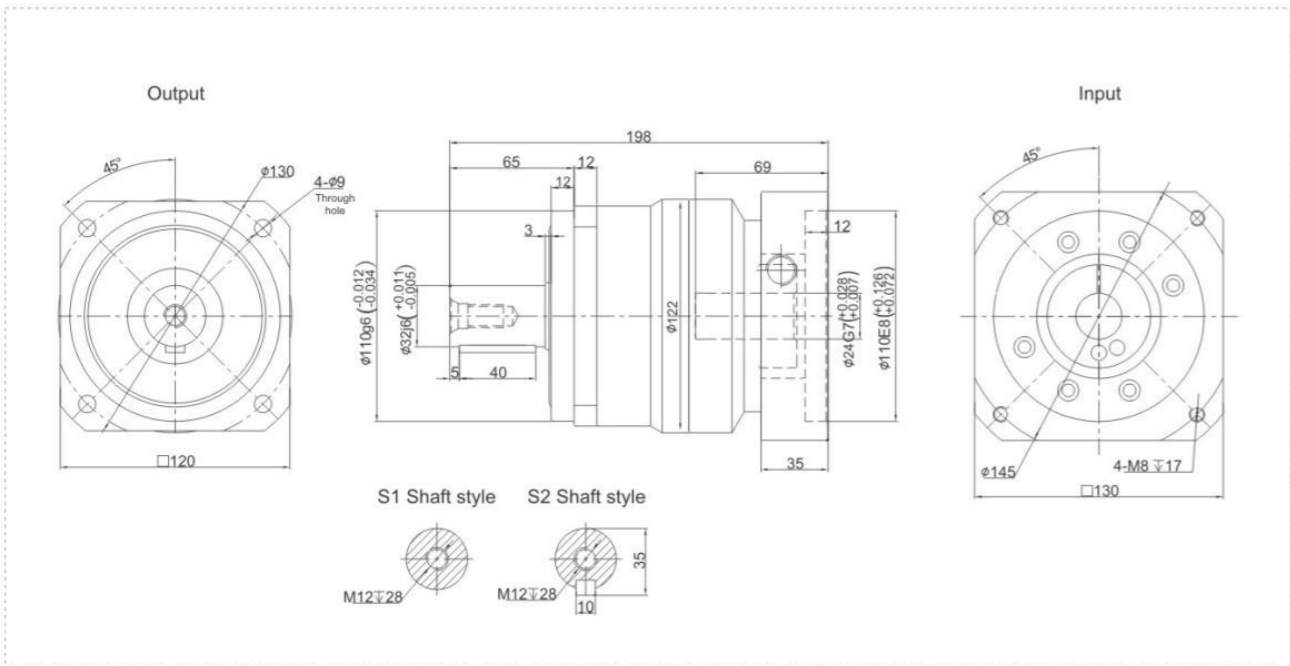
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

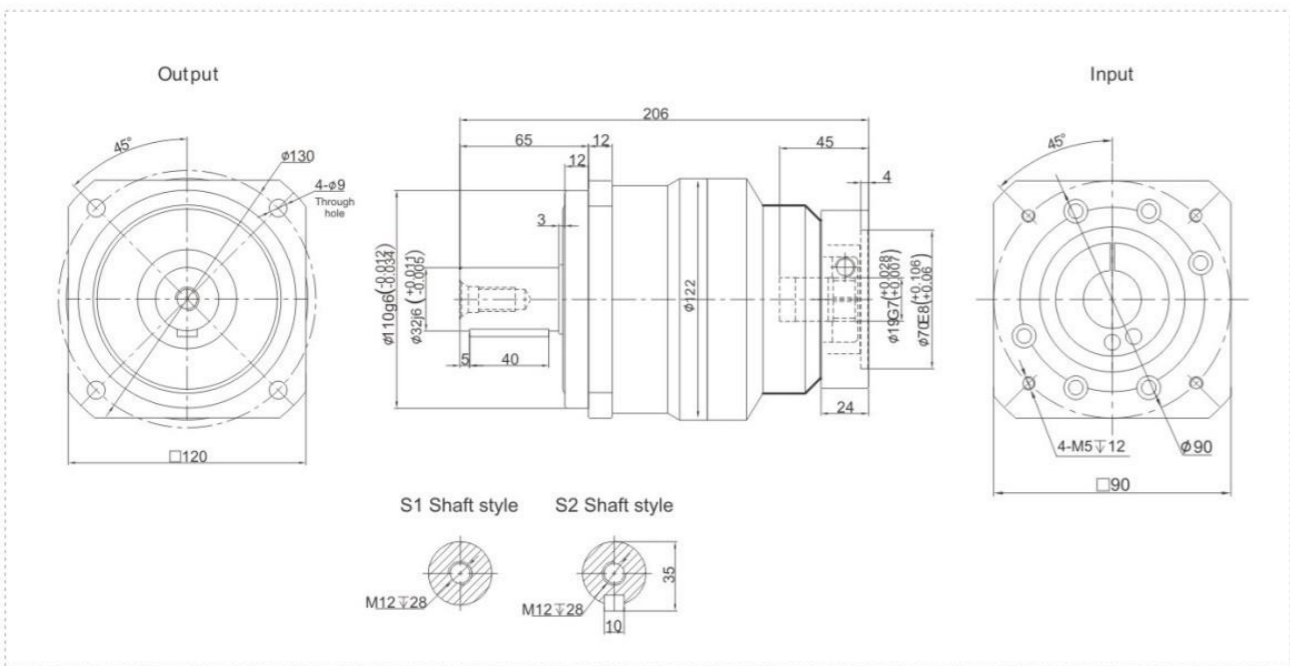
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TCB120 Series

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_r N	6700														6700									
Maximum Axial Force	F_a 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	-														-									
	P1	arcmin														≤ 3									
	P2	arcmin														≤ 5									
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	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57	0.47	0.44													

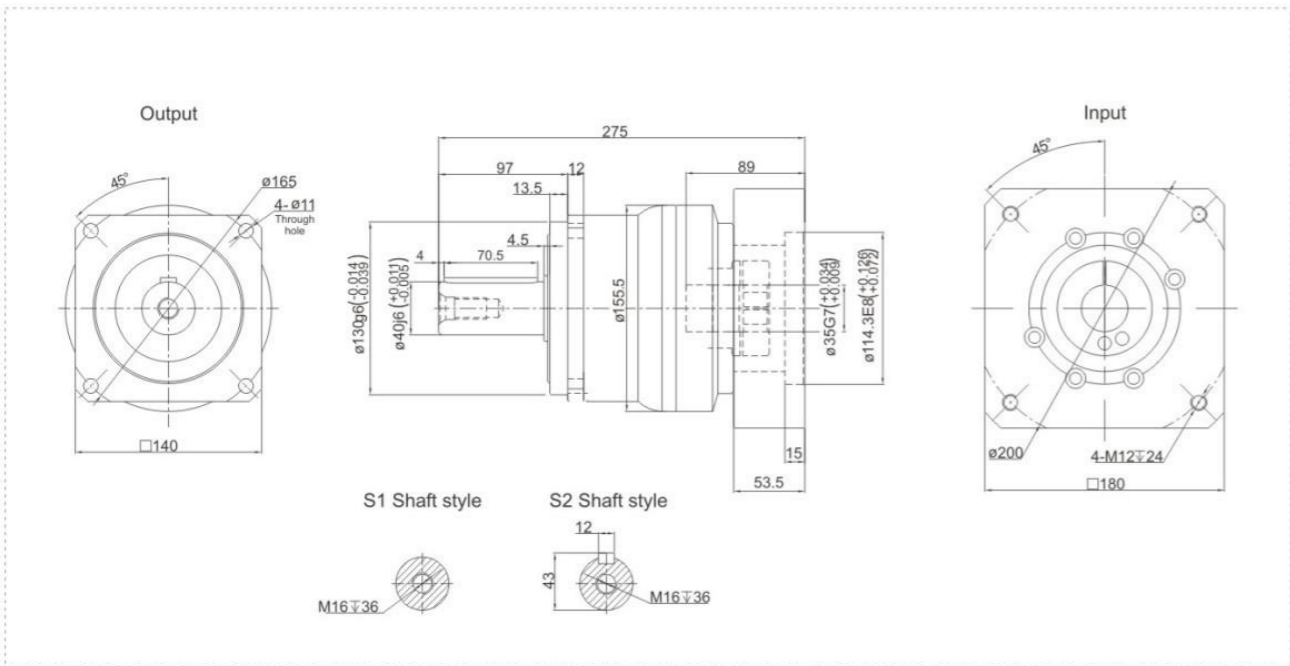
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

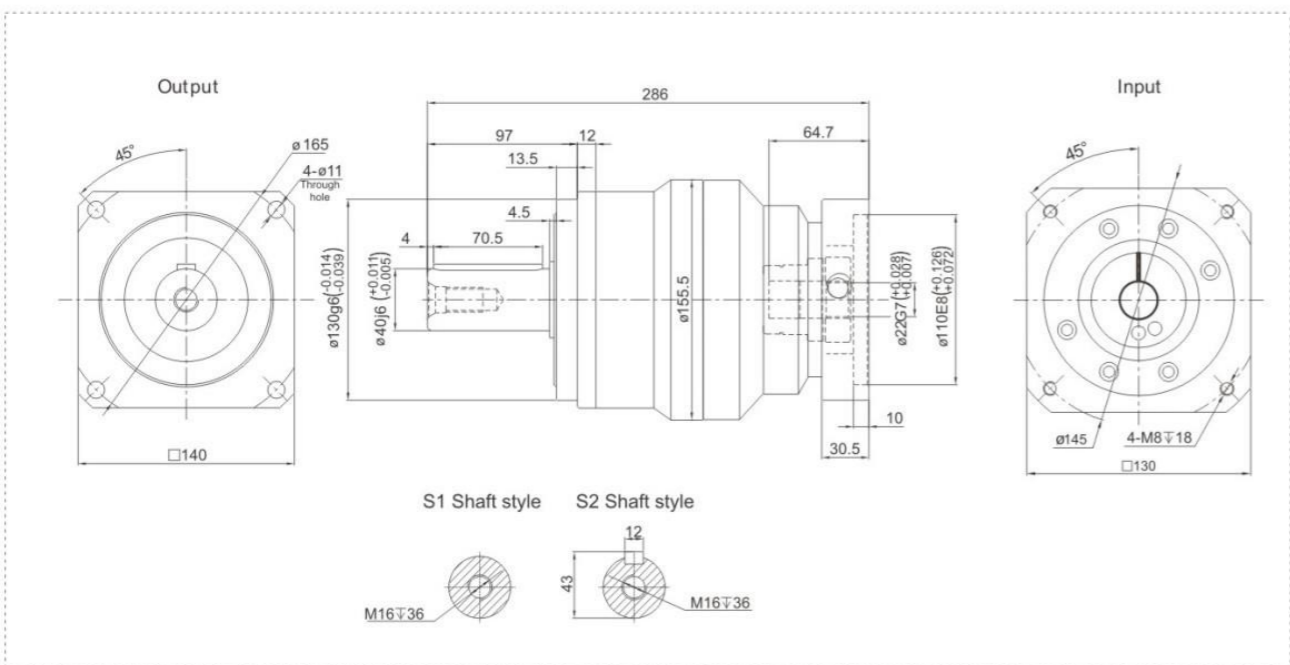
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TCB140 Series

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	-	-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2	-	≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	$-20 \sim 90$										$-20 \sim 90$									
Lubrication	-	-	Synthetic Grease										Synthetic grease									
Protection Class	-	-	IP65										IP65									
Mounting Position	-	-	Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.71	2.57

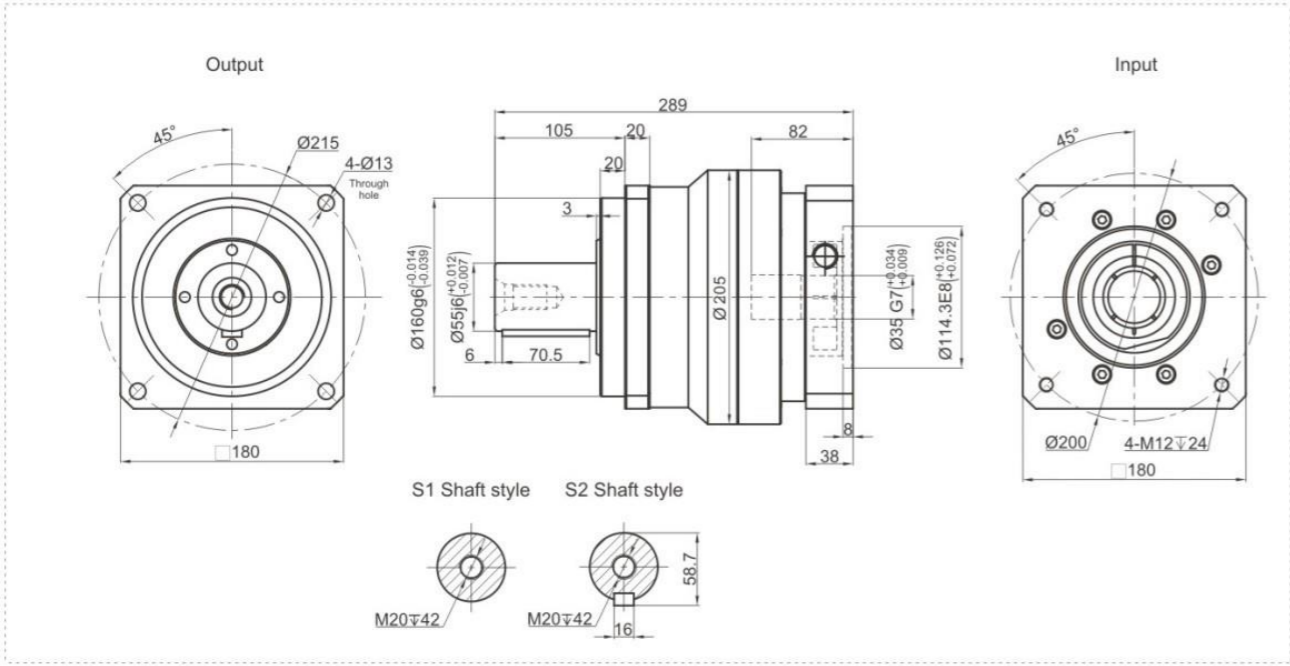
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

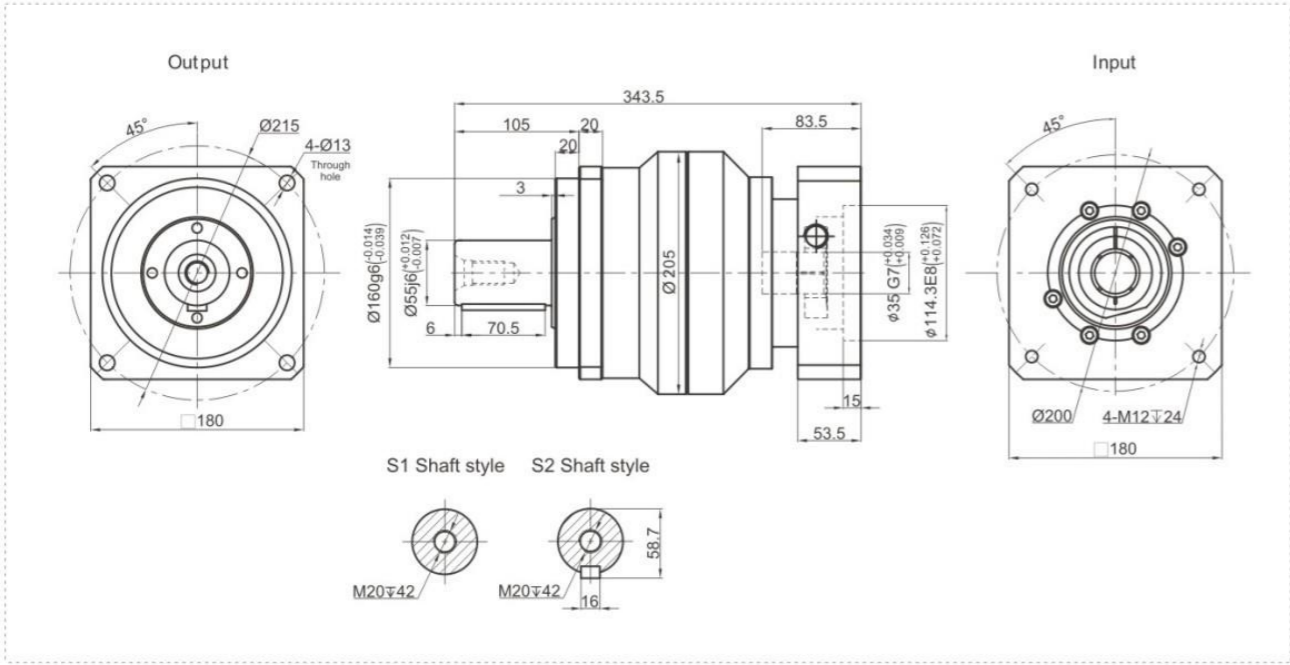
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TCB180 Series

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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	-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	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51	7.42					7.03						

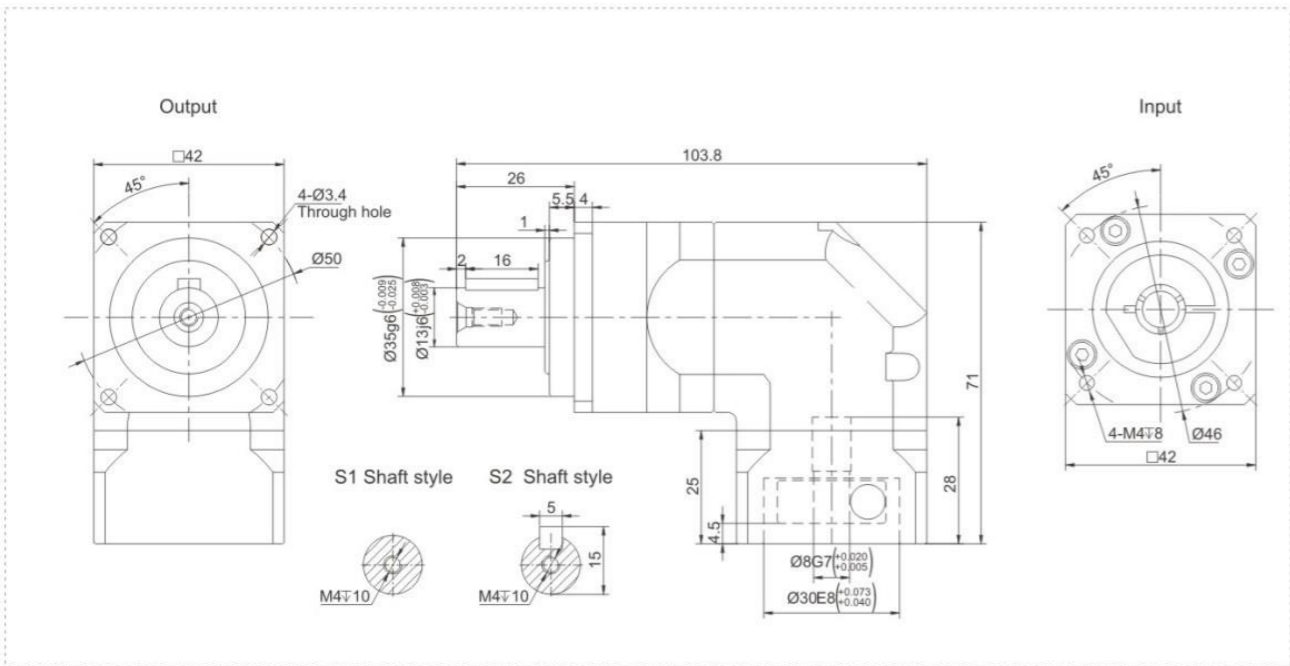
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

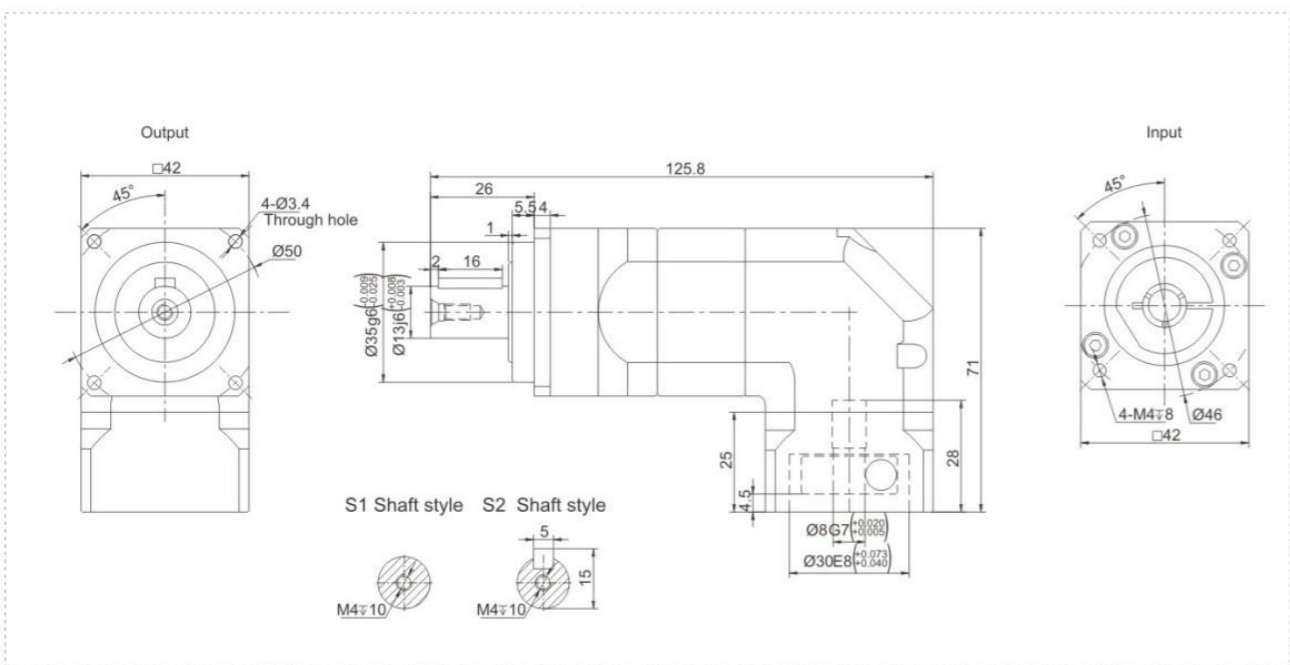
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TCBR042 Series

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	P_0	-	-										-							
	P_1 arcmin	-	≤ 6										≤ 9							
	P_2	-	≤ 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	-	0.09										0.09							

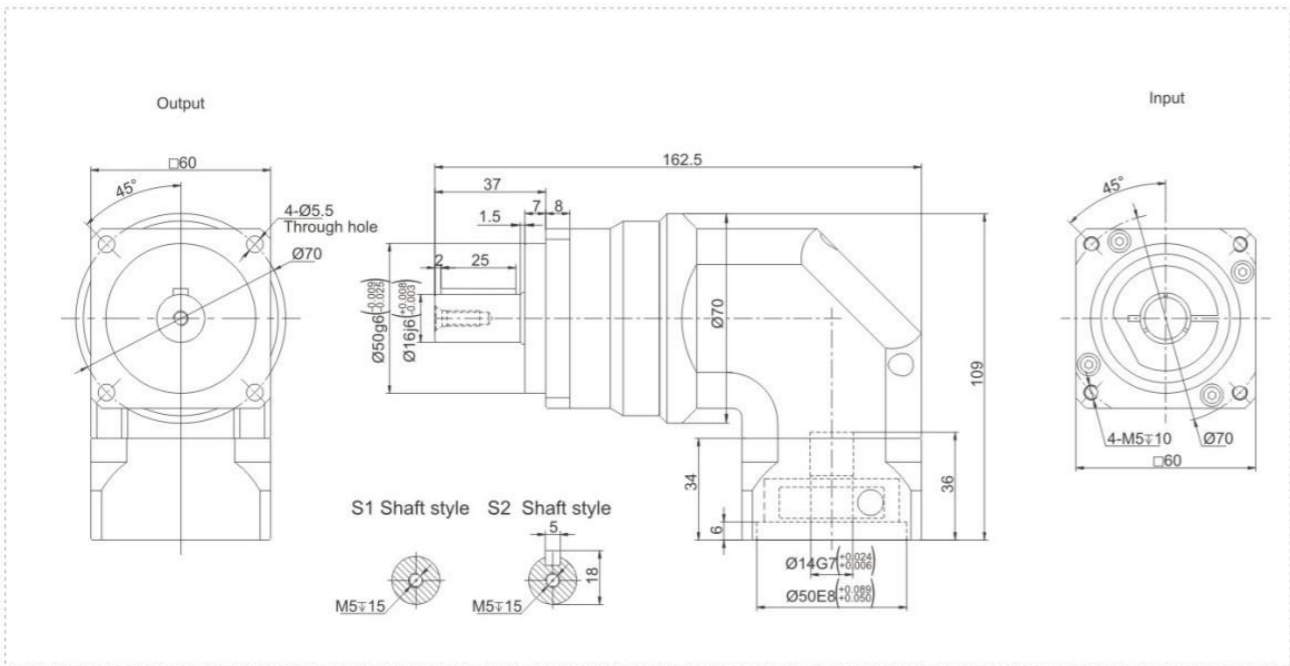
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

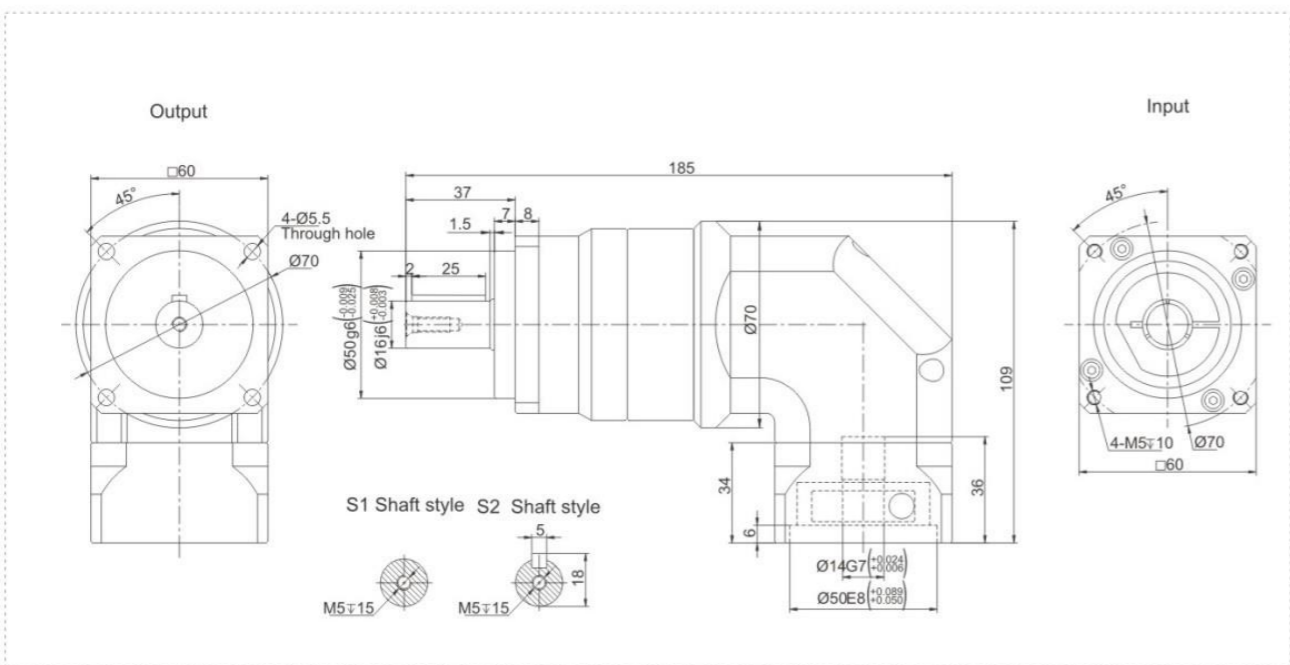
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TCBR060 Series

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	-														-																							
	P1 arcmin	≤ 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	0.35							0.07							0.09																							
	kg·cm ²	0.35							0.07							0.09																							

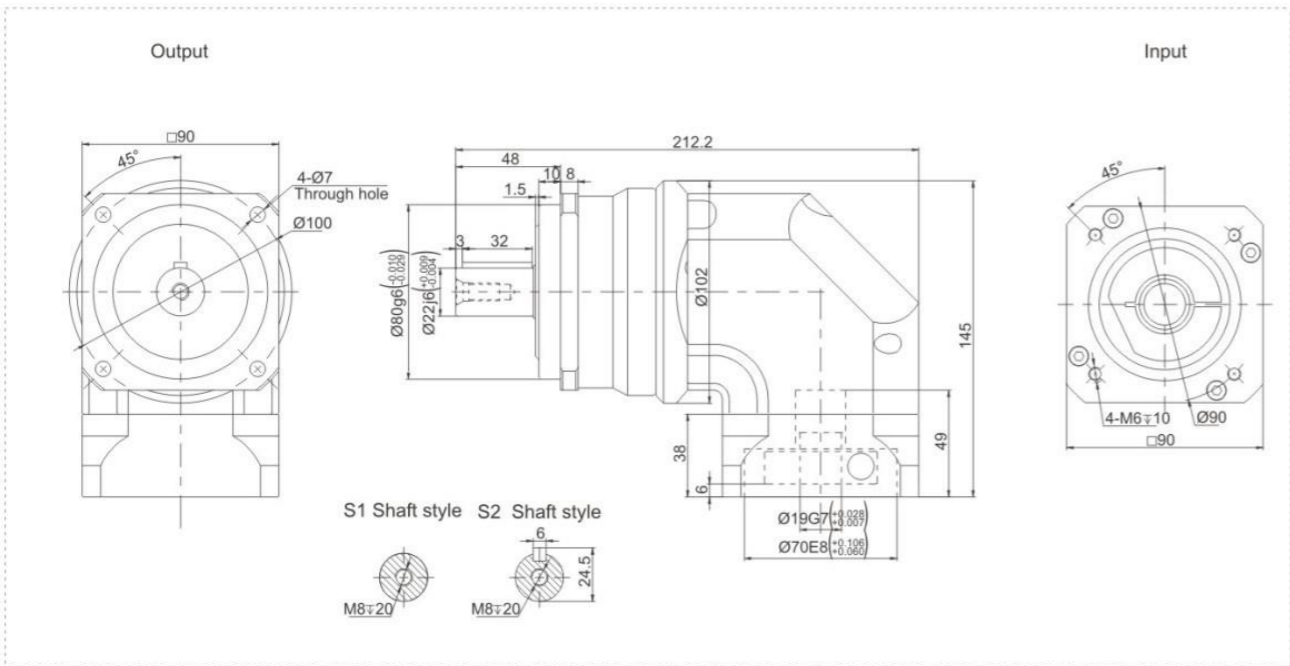
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

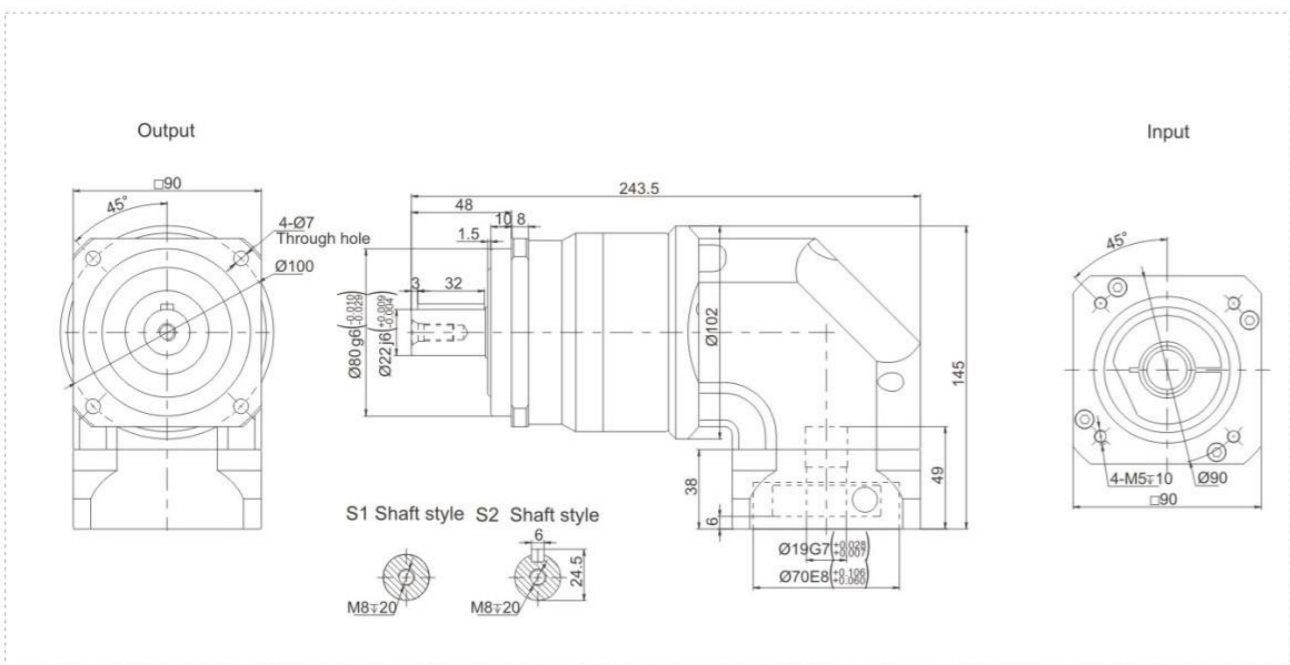
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TCBR090 Series

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	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	P_0	≤ 4														≤ 7													
	P_1	≤ 6														≤ 9													
	P_2	≤ 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	2.25							1.87							0.35							0.31						

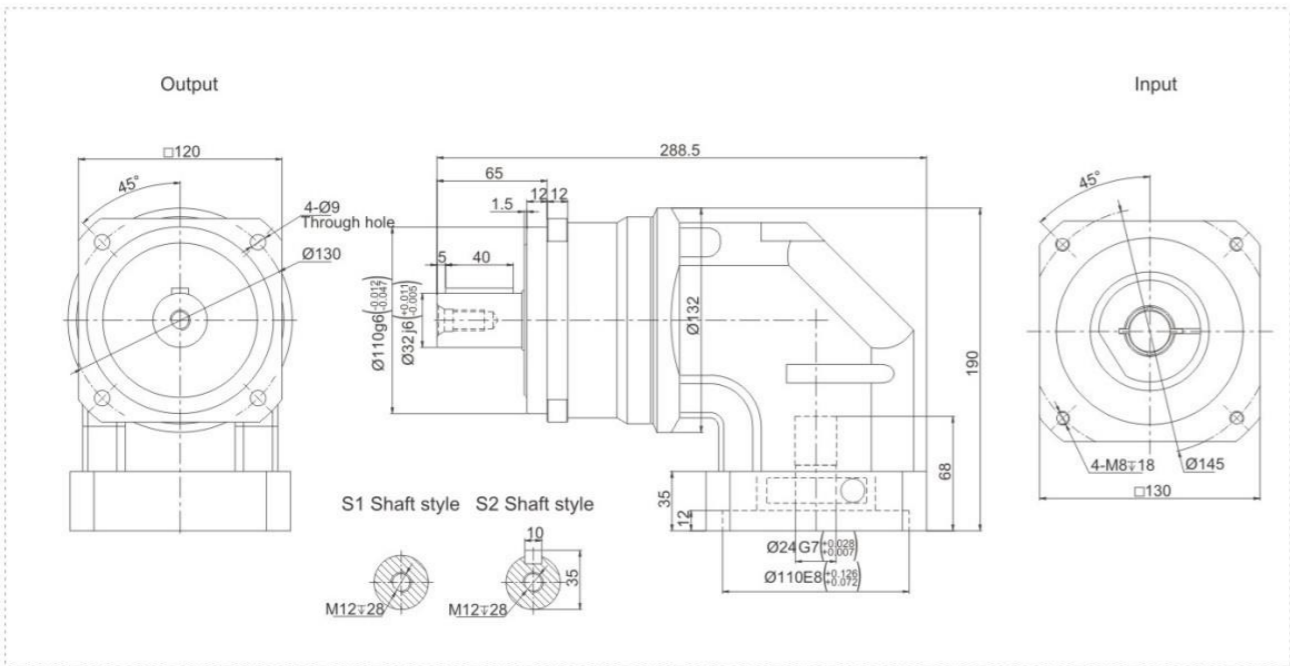
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

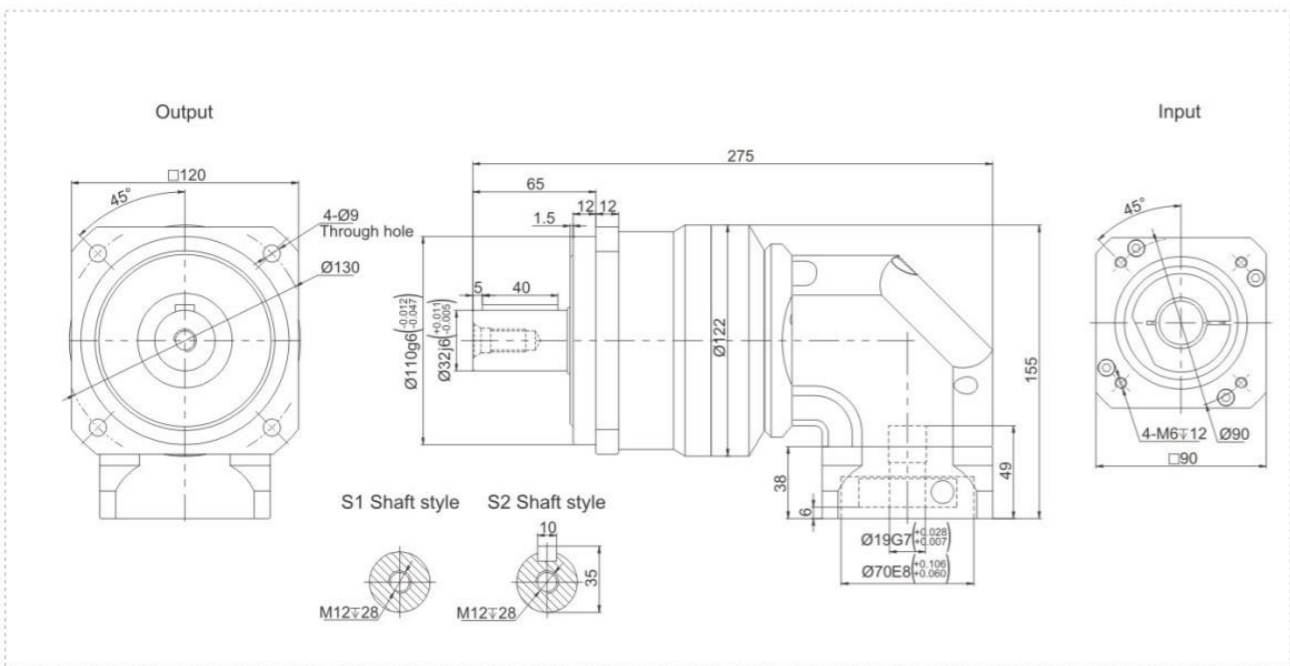
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TCBR120 Series

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	≤ 4														≤ 7									
	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 kgcm ²	6.84							6.25							2.25			1.87						

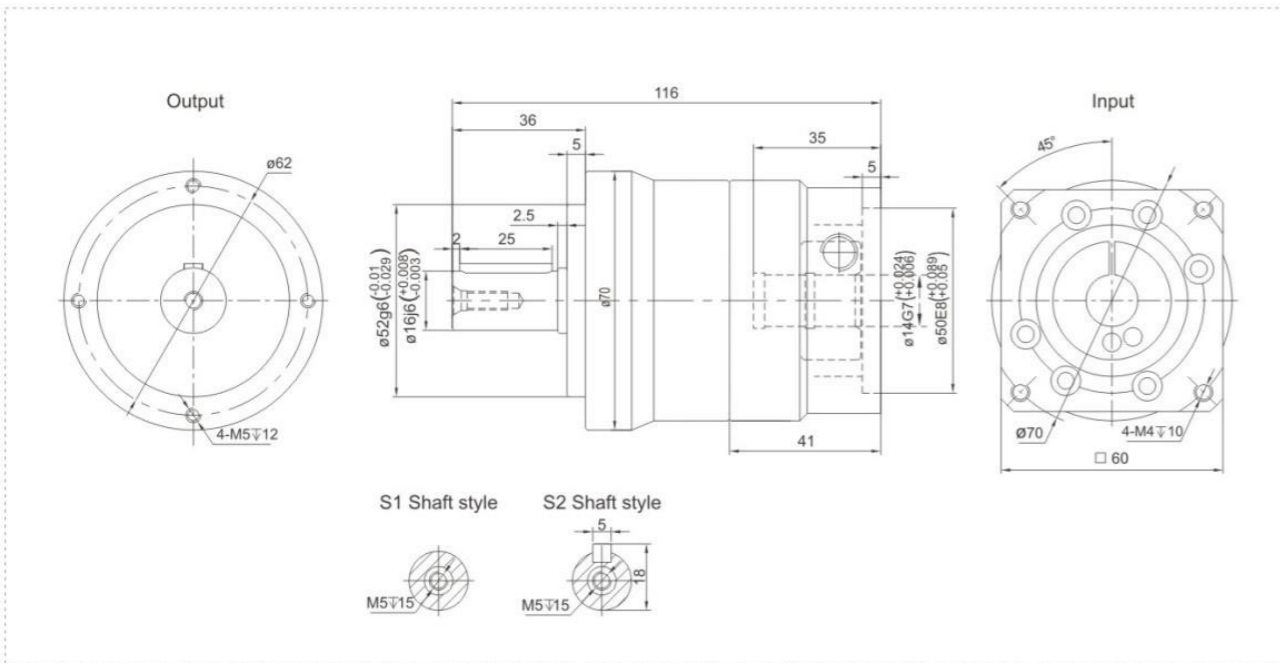
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

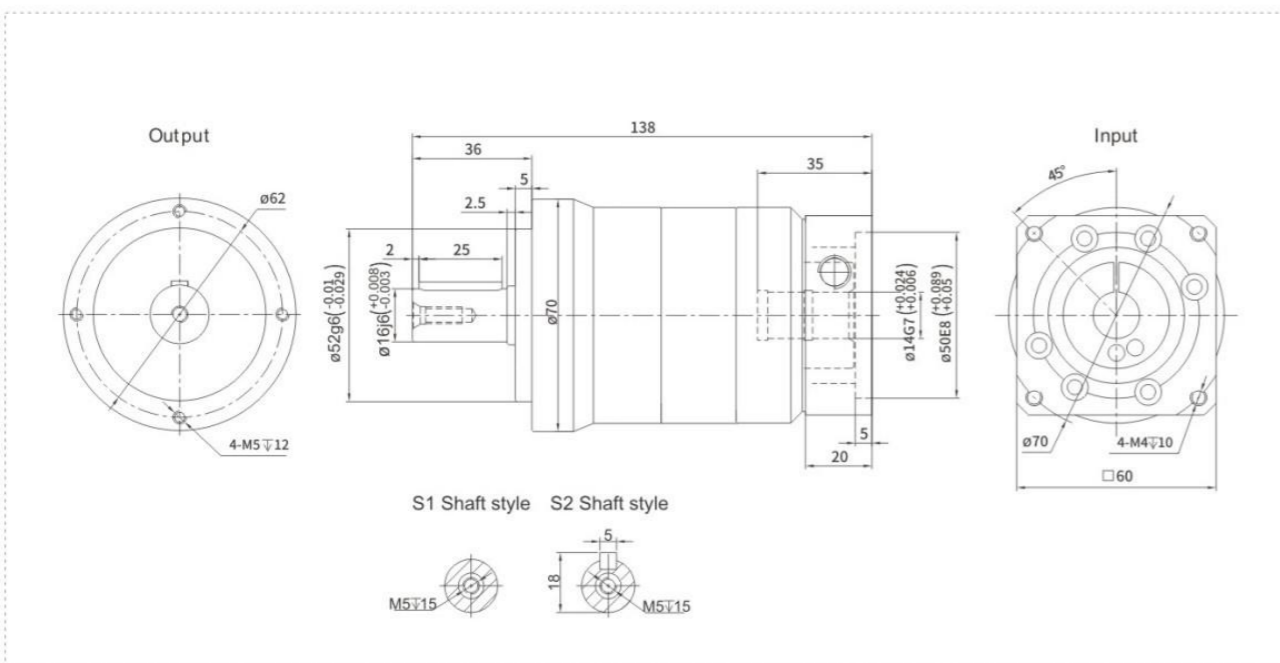
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TCE070 Series

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	-										-									
	P1	≤ 3										≤ 5									
	P2	≤ 5										≤ 7									
Operating Temperature	- °C	$-20 \sim 90$										$-20 \sim 90$									
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	

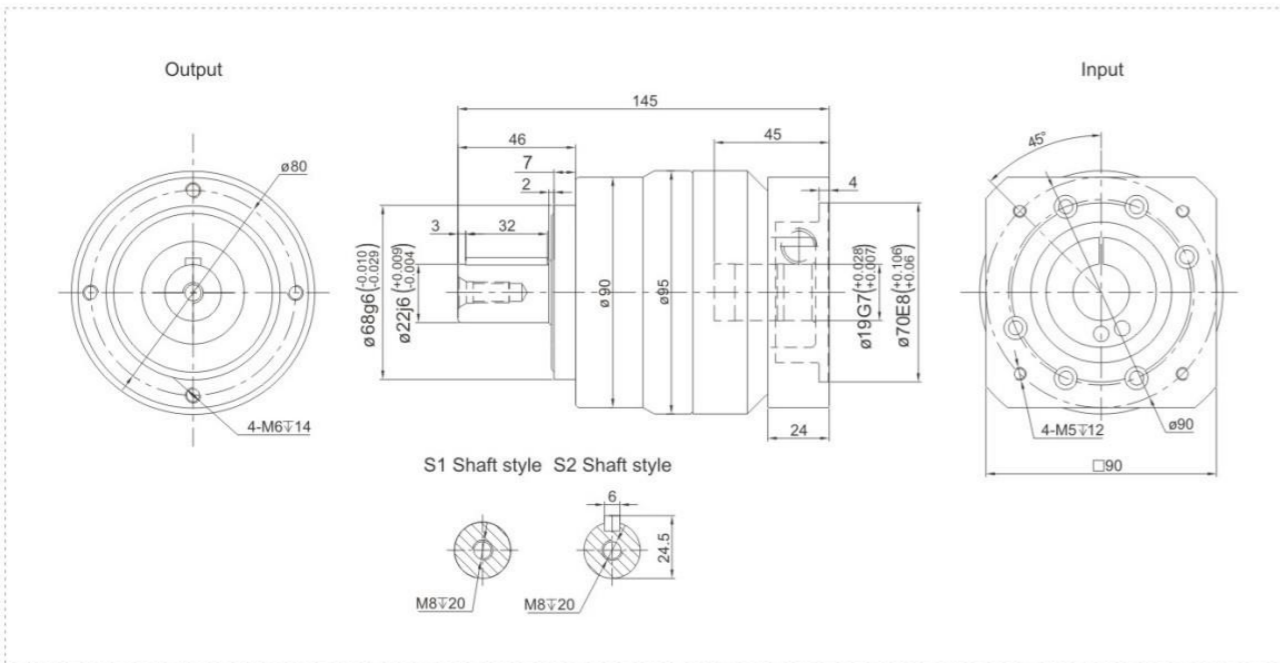
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

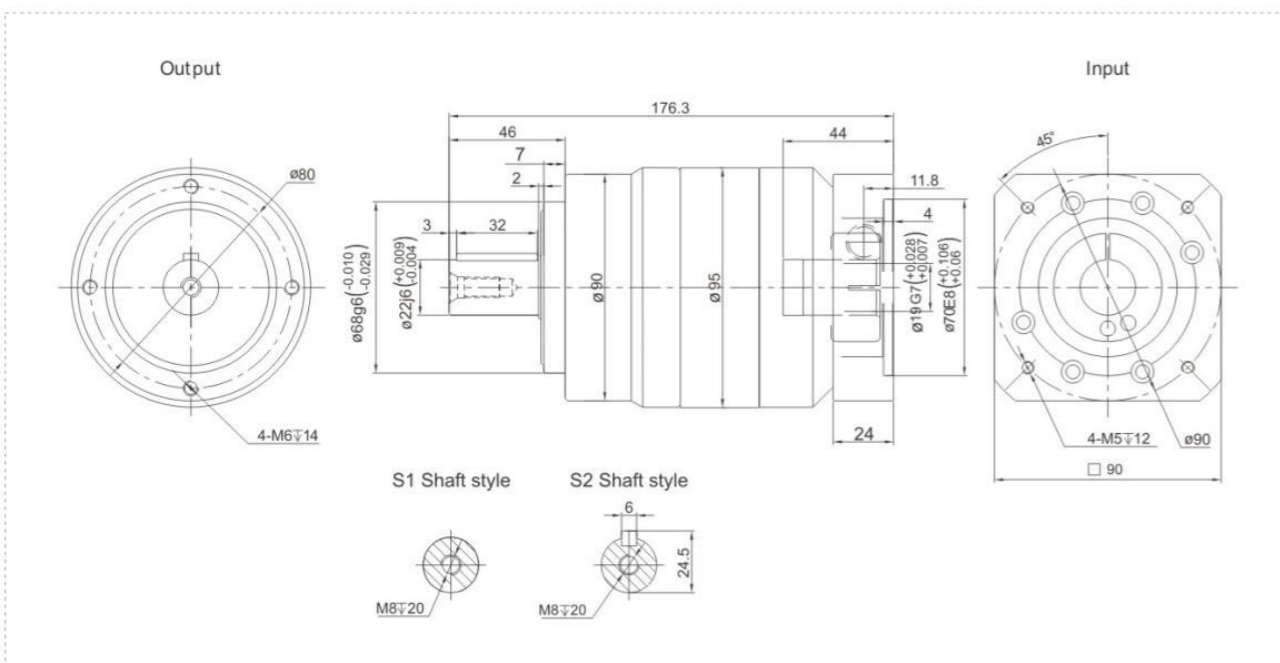
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TCE090 Series

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	-										-									
	P1 arcmin	≤ 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	0.61	0.48	0.47	0.45	0.45	0.44	-	0.44	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.47	0.44	

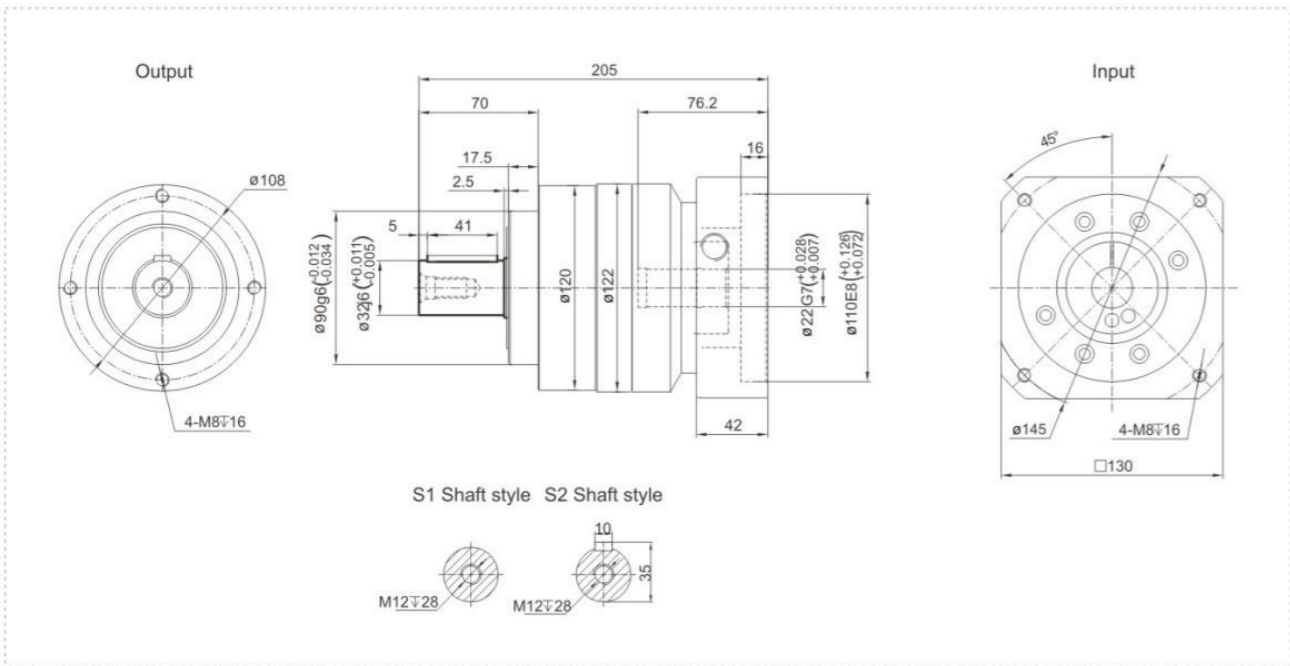
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

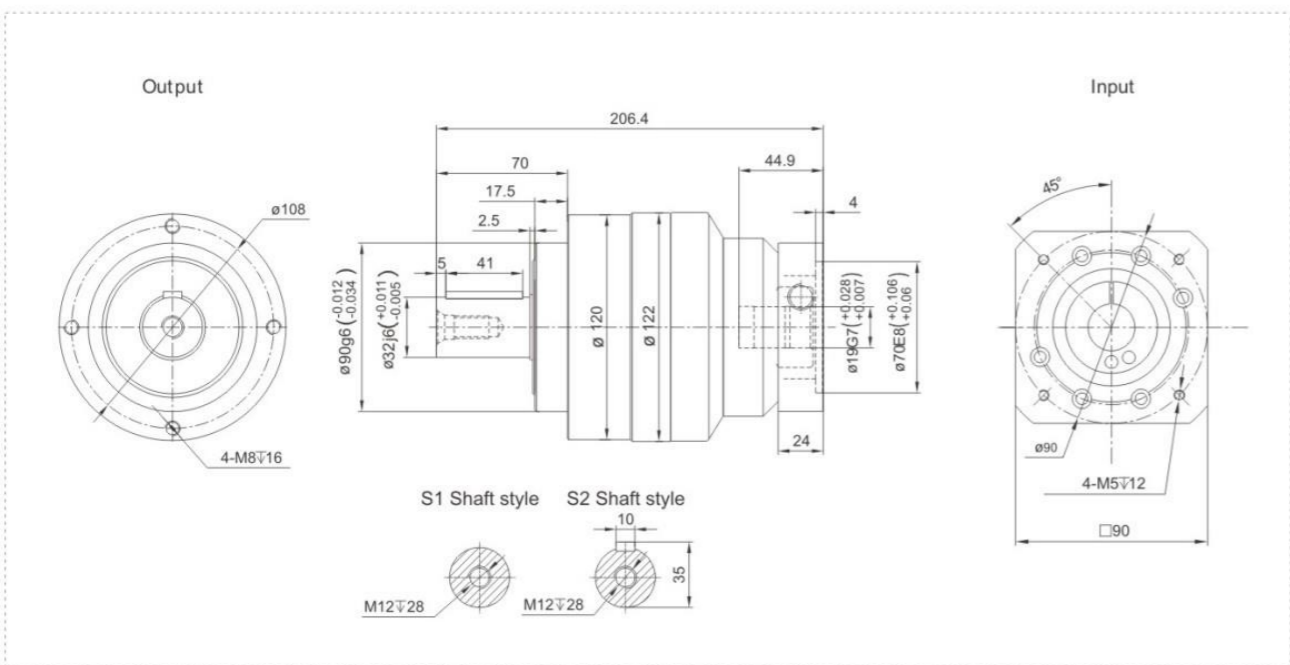
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TCE120 Series

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	-														-									
	P1 arcmin	≤ 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.cm ²	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57	0.47	0.44														

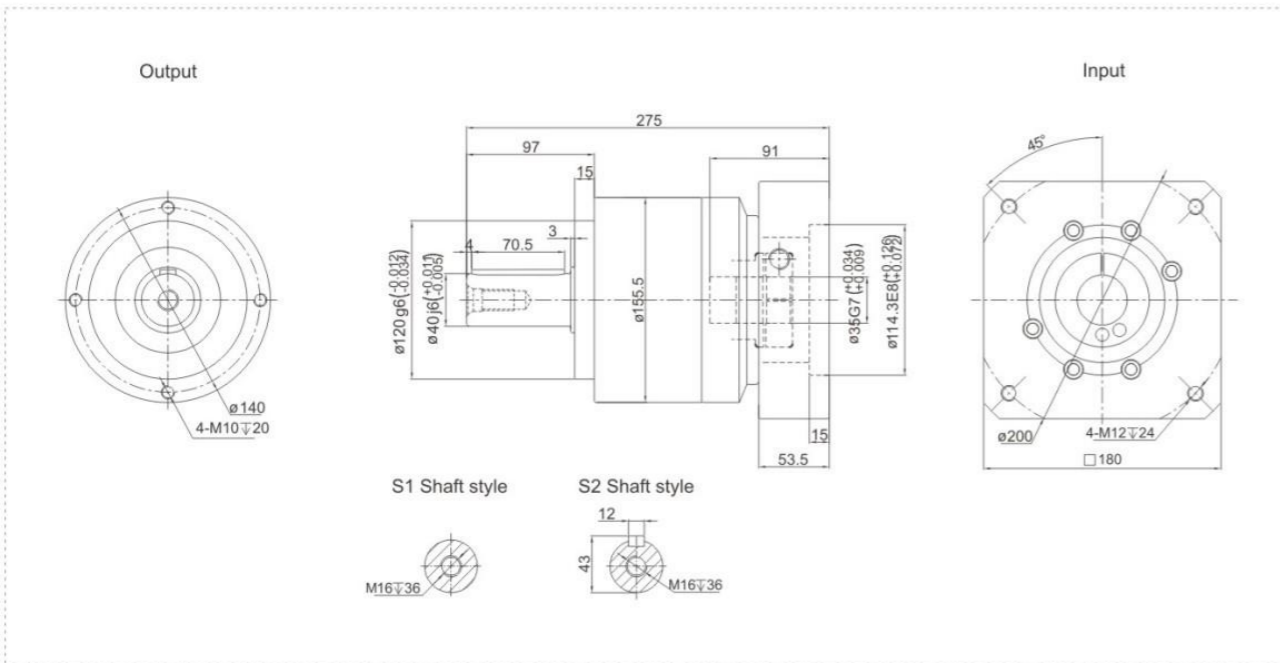
Notes:

- Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

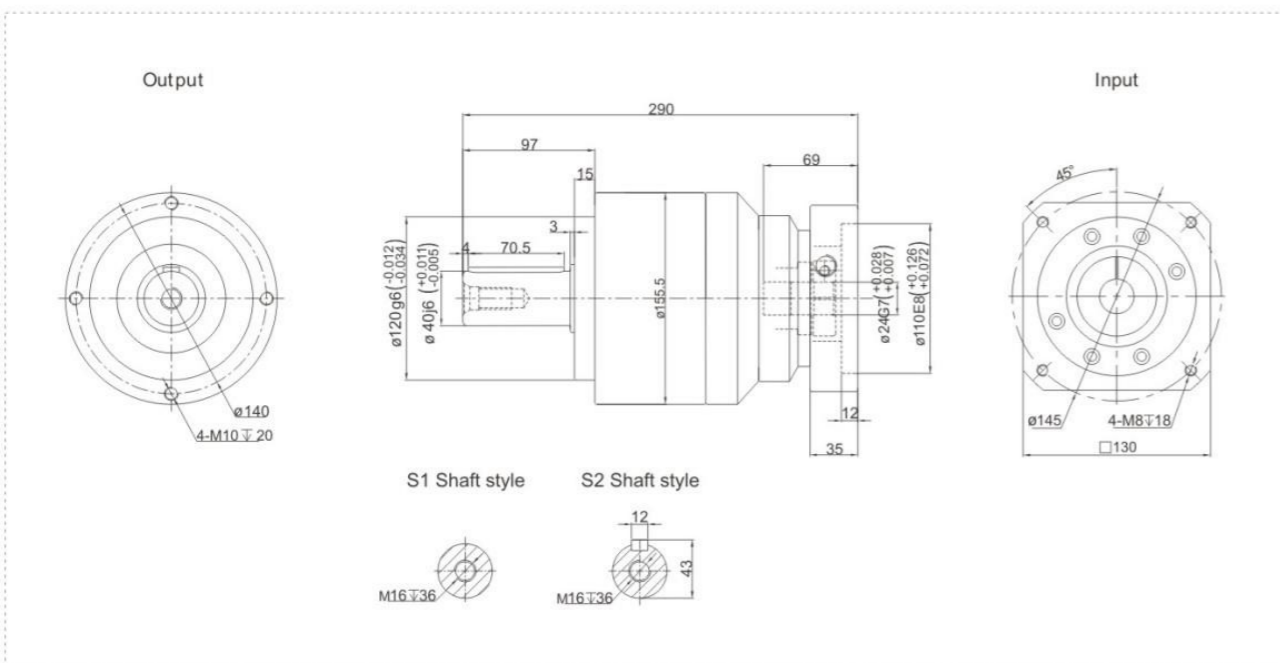
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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		-										-									
	P1	arcmin	≤ 3										≤ 5									
	P2		≤ 5										≤ 7									
Operating Temperature	-	$^{\circ}\text{C}$	$-20 \sim 90$										$-20 \sim 90$									
Lubrication	-		Synthetic Grease										Synthetic grease									
Protection Class	-		IP65										IP65									
Mounting Position	-		Any Direction										Any Direction									
Moment of Inertia	J	kg.cm ²	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03	2.71										2.57	

Notes:

- Speed ratio ($i = \text{Sin}/\text{Sout}$)
- 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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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.

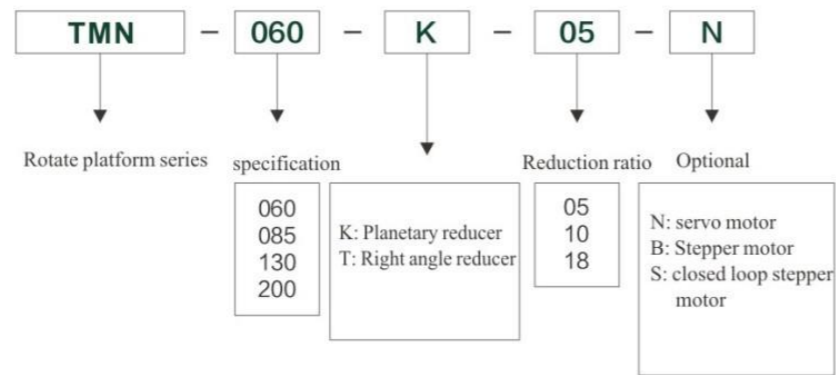
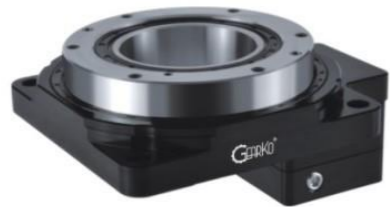
GEARKO[®]

DRIVES

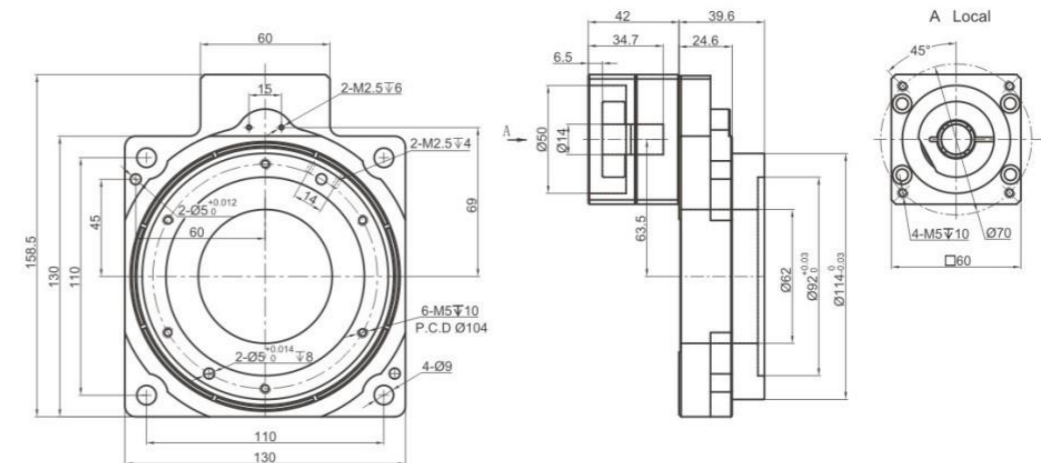
THE PRECISION



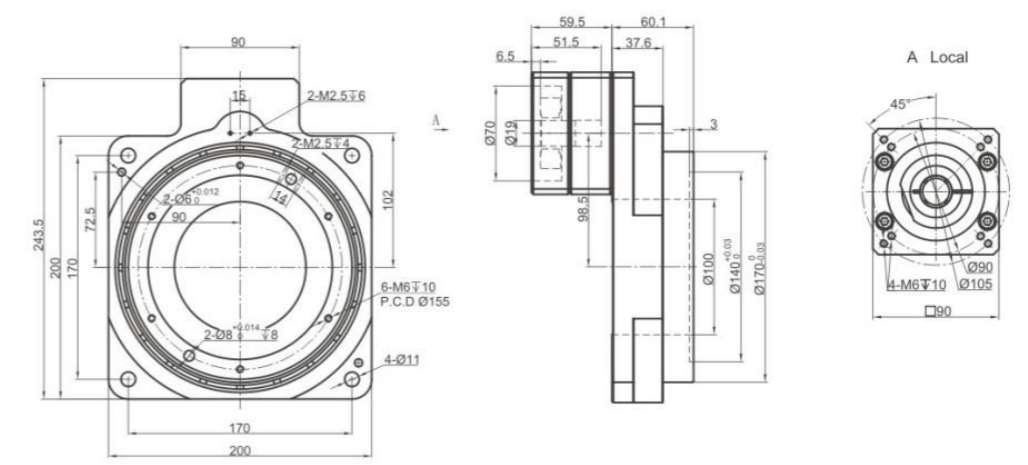
TMN Series



TMN130



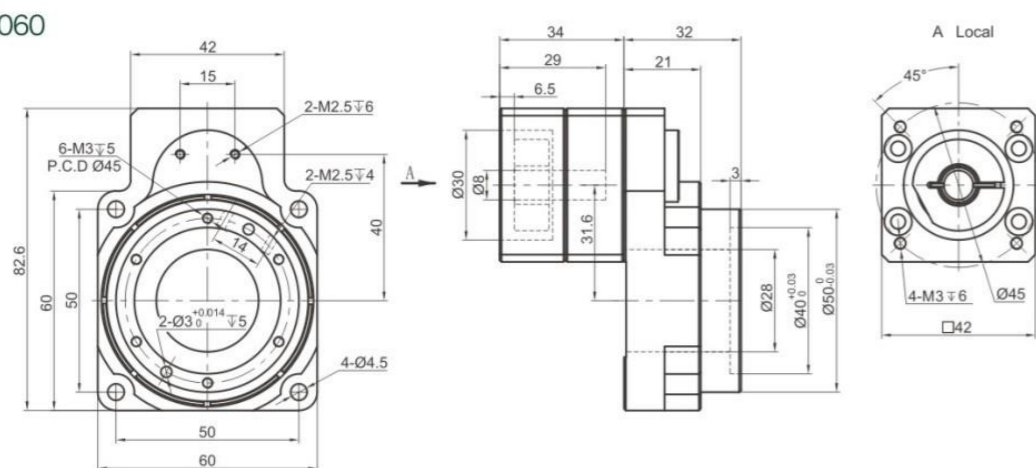
TMN200



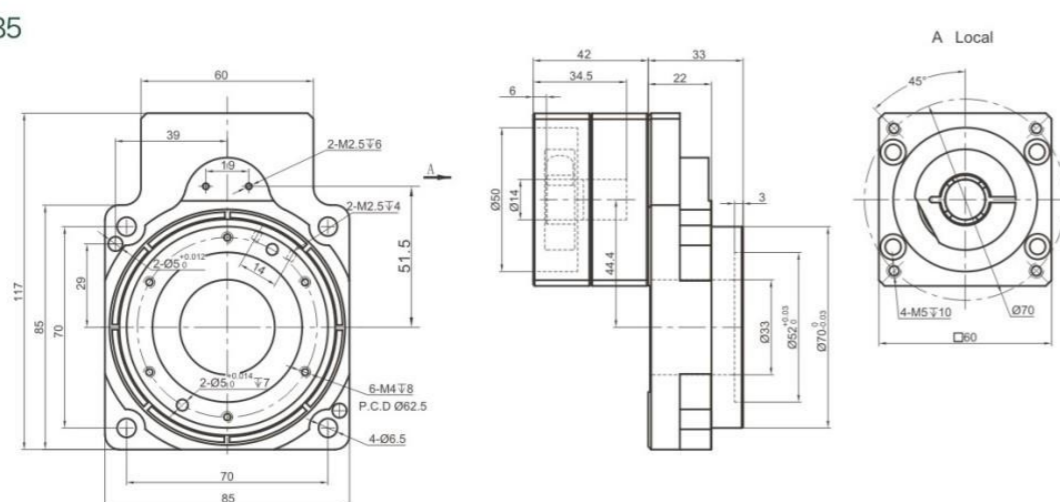
	TMN60	TMN85	TMN130	TMN200
Speed Ratio	5 10	5 10	10 18	10 18
Matching servo motor	W	50~100	200~400	750
Bearing Type	Crossed roller bearing			
Allowable torque	N.m	53	20 16	32 20 65 50
Allowable disk output speed	rpm	200	300 250	250 150 250
Allowable axial load	N	250	500	2000 4000
Repeat positioning accuracy	arcsec	±10	±10	±10 ±10
Communication accuracy	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
Service life	h	20000	20000	20000 20000
Noise	dB	≤65	≤65	≤65 ≤65
Backlash	arcmin	≤1	≤1	≤1 ≤1
Protection Class	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

TMN060



TMN085



PASSION FOR PRECISION TRANSMISSION



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