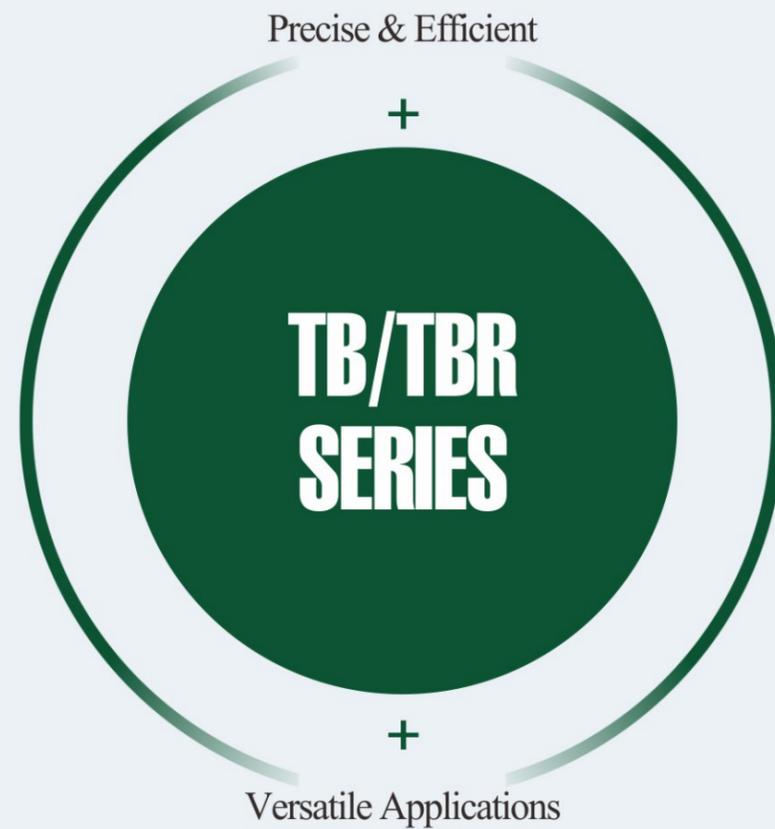


Precision Planetary Reducer

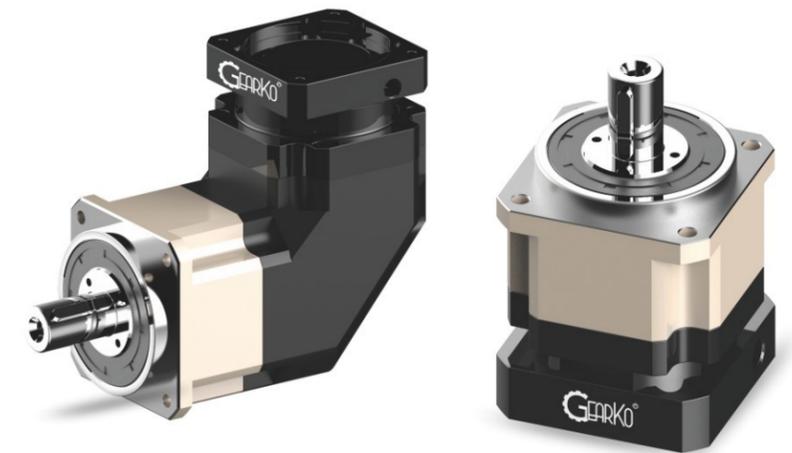


TB/TBR Series planetary reducer achieves maximum efficiency even at the highest speed and load. Robust structure and low backlash enable it to be applied in almost any shaft-output applications.

GEARKO[®]

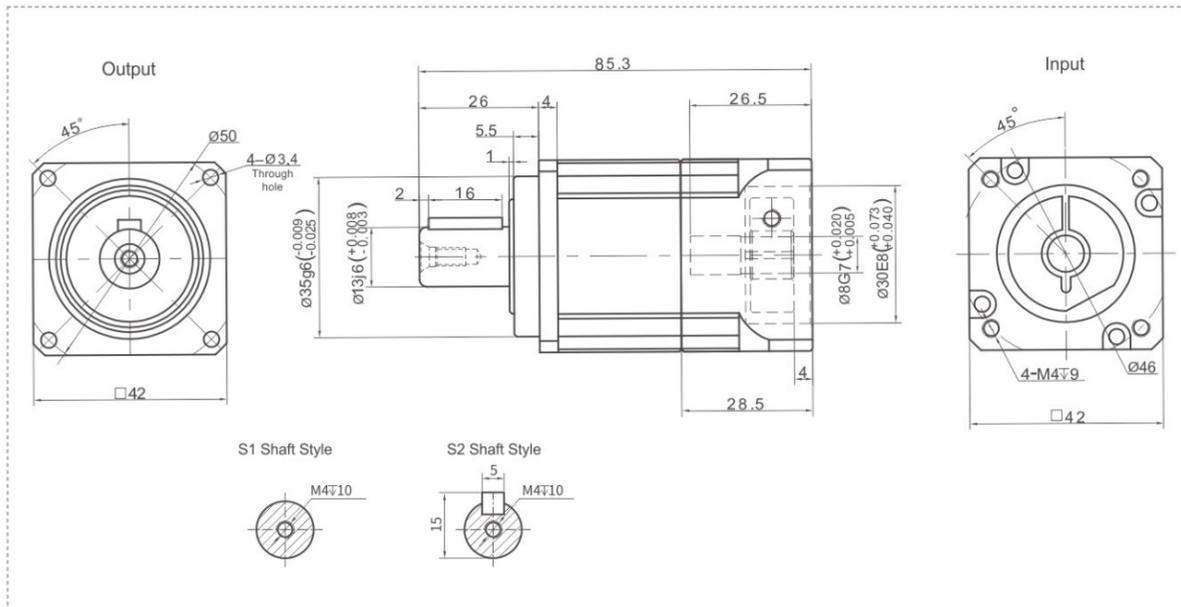
DRIVES

THE PRECISION

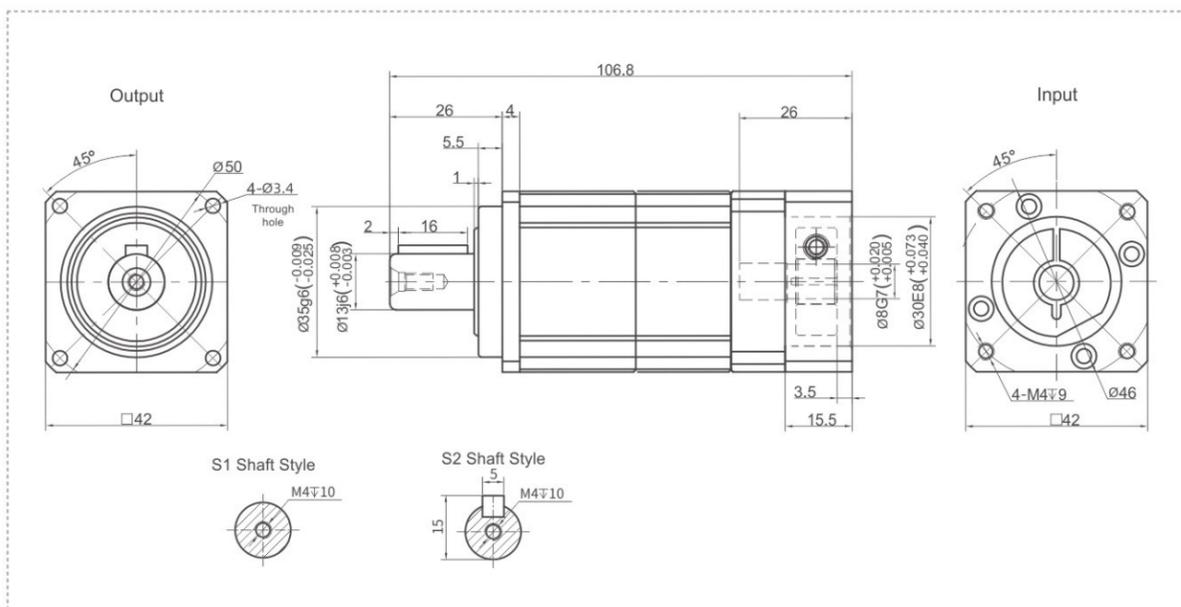


TB042 Series

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																		
Nominal Input Speed	S ₁	rpm	5000																		
Maximum Input Speed	S ₂	rpm	10000																		
Maximum Output Torque	T ₄	Nm	T ₁ ×3×60%																		
Maximum Radial Force	F _a	N	780																		
Maximum Axial Force	F _b	N	390																		
Torsional Rigidity	-	Nm/arcmin	3																		
Efficiency	η	%	≥97																		
Service Life	-	h	20000																		
Noise	-	dB	≤55																		
Weight	-	Kg	0.5																		
Backlash	P0		≤1																		
	P1	arcmin	≤3																		
	P2		≤5																		
Operating Temperature	-	°C	-20~90																		
Lubrication	-		Synthetic Grease																		
Protection Class	-		IP65																		
Mounting Position	-		Any Direction																		
Moment of Inertia	J	kg.cm ²	0.03																		

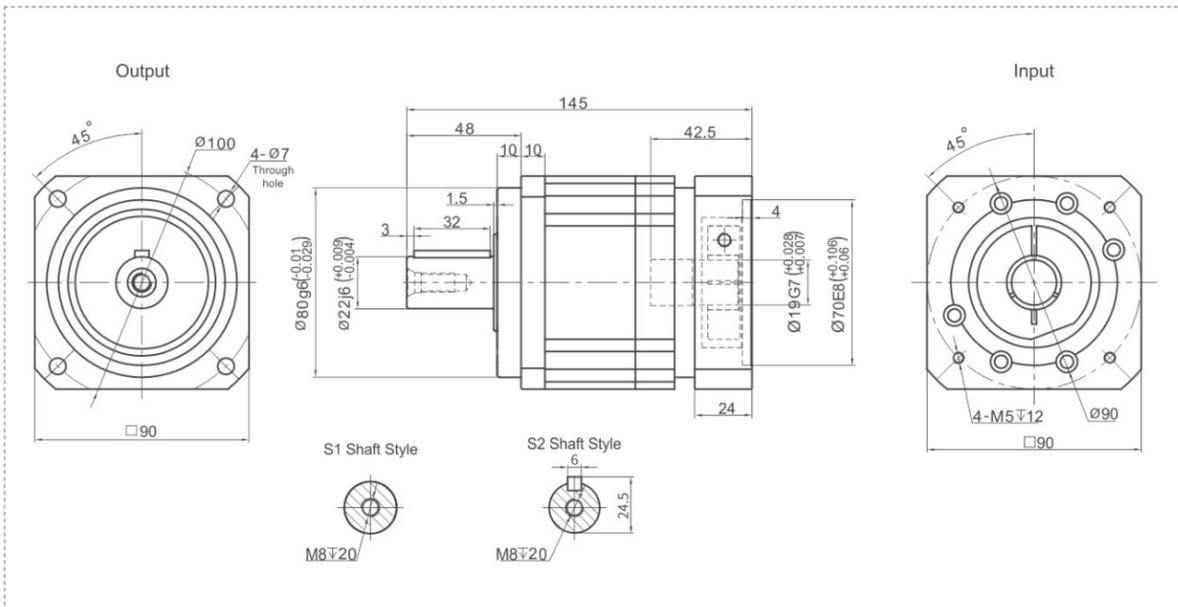
Notes:

- 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.

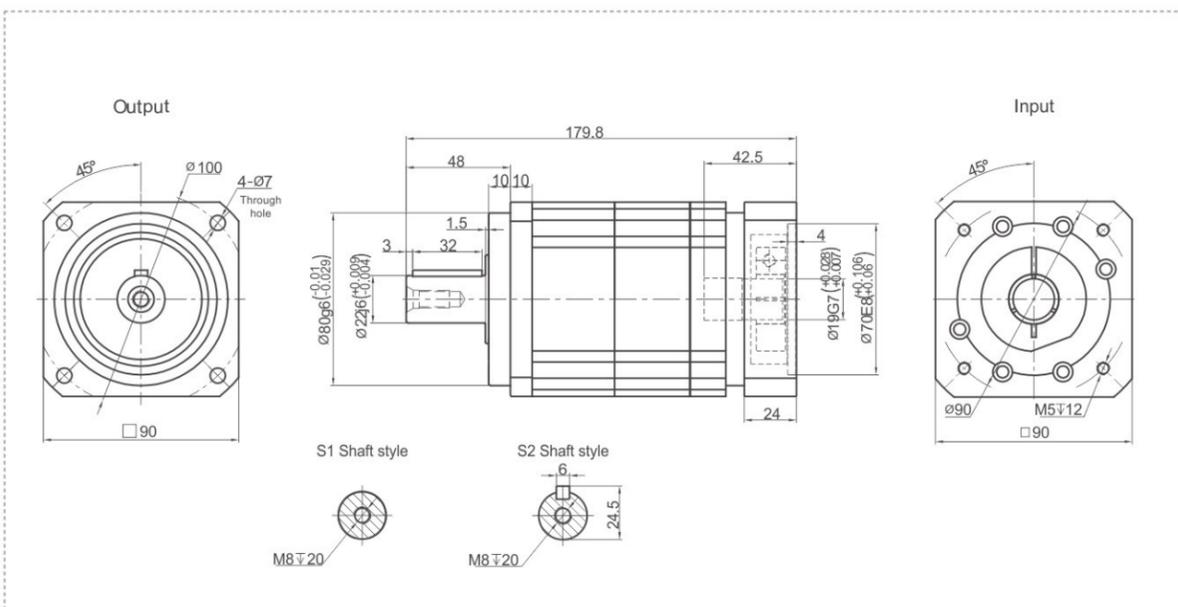
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TB090 Series

TB090 One Stage



TB090 Two Stage



Performance Data

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

TB090		One Stage										Two Stage										
Speed Ratio	i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100		
Nominal Output Torque	T_1	Nm	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102	
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$										$T_1 \times 3$									
Nominal Input Speed	S_1	rpm	4000										4000									
Maximum Input Speed	S_2	rpm	8000										8000									
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$										$T_1 \times 3 \times 60\%$									
Maximum Radial Force	F_a	N	3250										3250									
Maximum Axial Force	F_b	N	1625										1625									
Torsional Rigidity	-	Nm/arcmin	14										14									
Efficiency	η	%	≥ 97										≥ 94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤ 60										≤ 63									
Weight	-	Kg	3.6										4.5									
Backlash	P_0		≤ 1										≤ 3									
	P_1	arcmin	≤ 3										≤ 5									
	P_2		≤ 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	

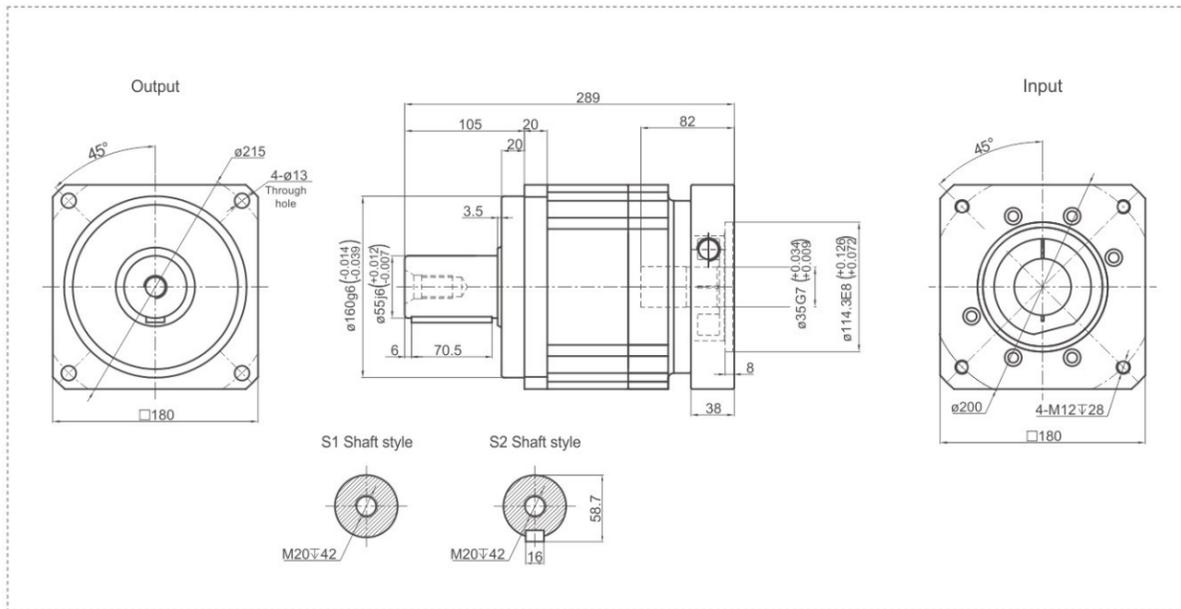
Notes:

- 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, $i=10$.

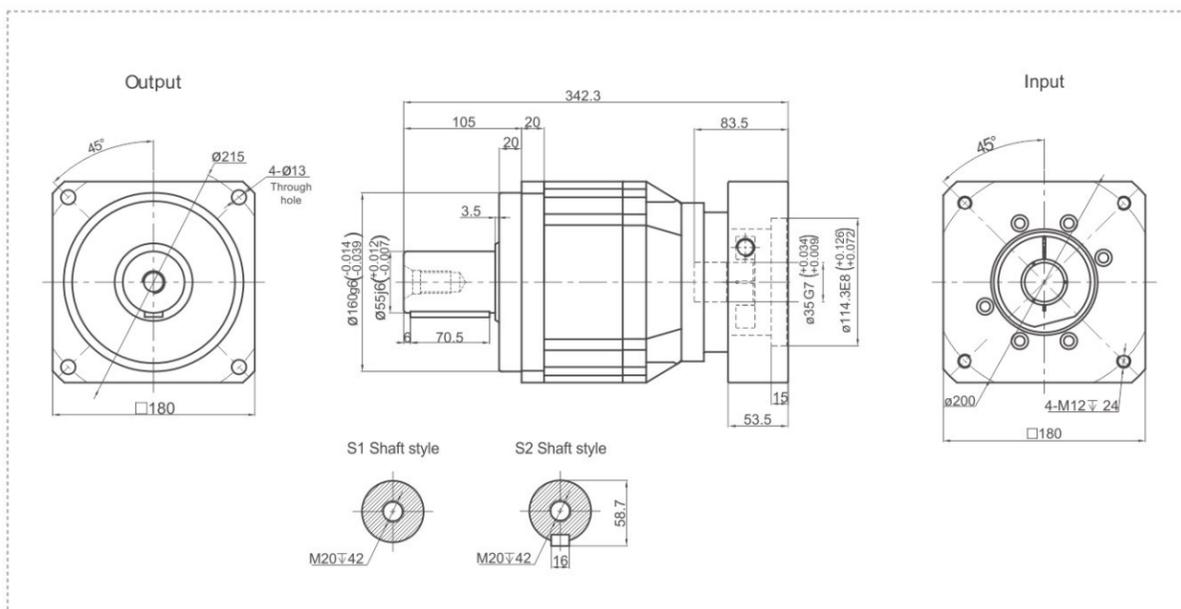
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TB180 Series

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	P_0	arcmin	≤ 1										≤ 3									
	P_1	arcmin	≤ 3										≤ 5									
	P_2	arcmin	≤ 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	

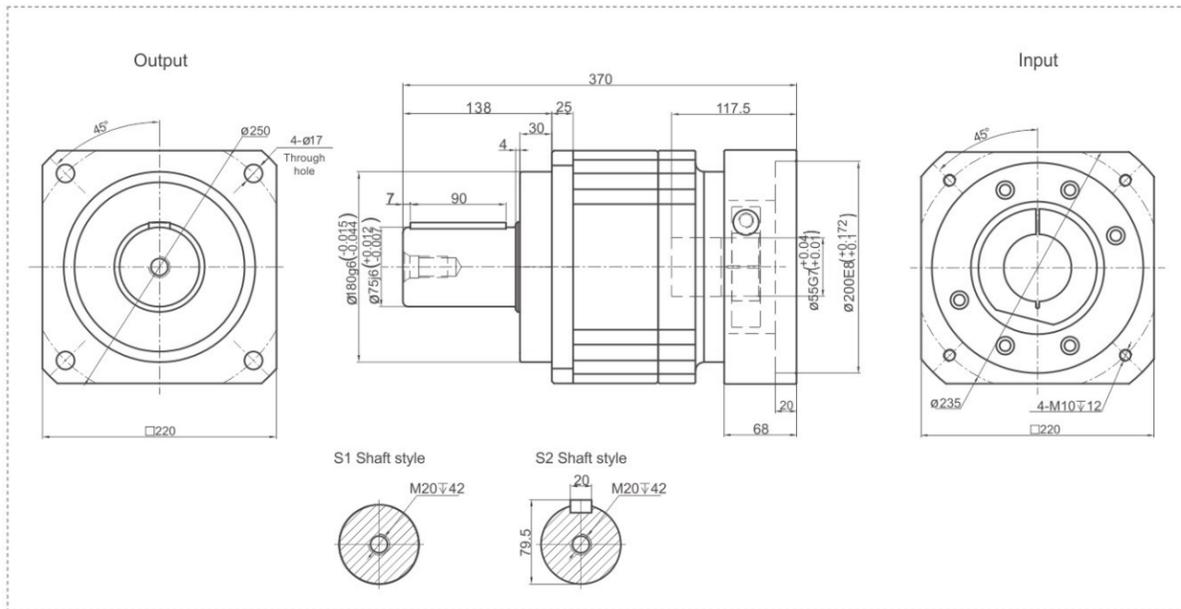
Notes:

- 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, $i=10$.

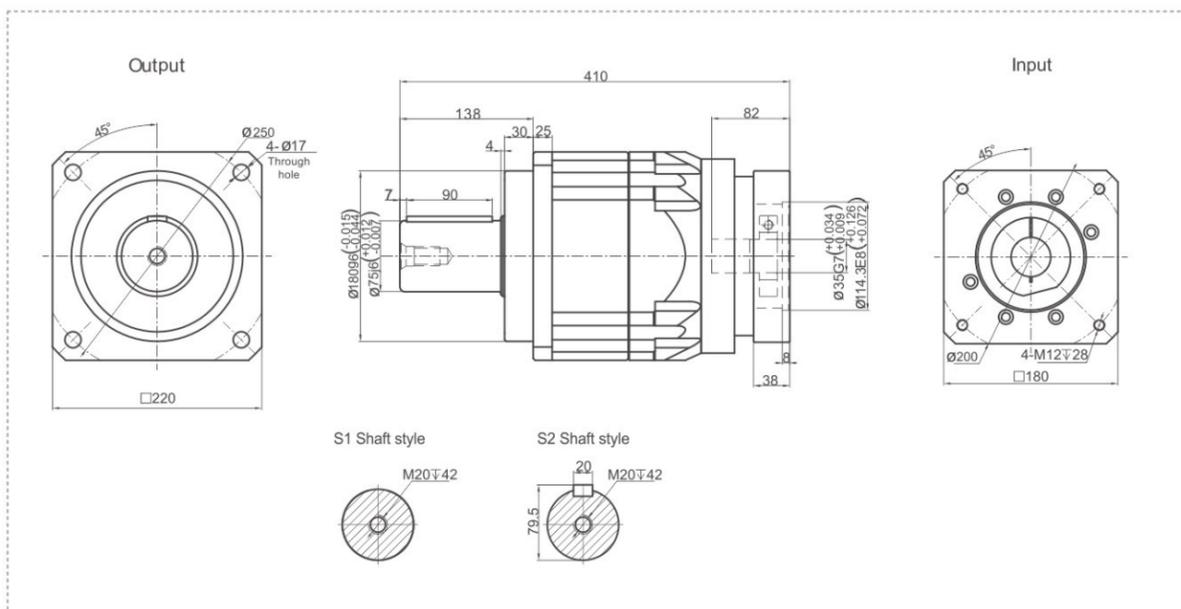
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TB220 Series

TB220 One Stage



TB220 Two Stage



Performance Data

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

TB220		One Stage										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 × 3										T ₁ × 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 × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _a	N	50000										50000									
Maximum Axial Force	F _b	N	25000										25000									
Torsional Rigidity	-	Nm/arcmin	225										225									
Efficiency	η	%	≥ 97										≥ 94									
Service Life	-	h	20000										20000									
Noise	-	dB	≤ 70										≤ 70									
Weight	-	Kg	51.5										63.5									
Backlash	P0		≤ 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	69.6	154.3	753.2	751.7	250.9	750.84	-	50.56	23.29					22.51						

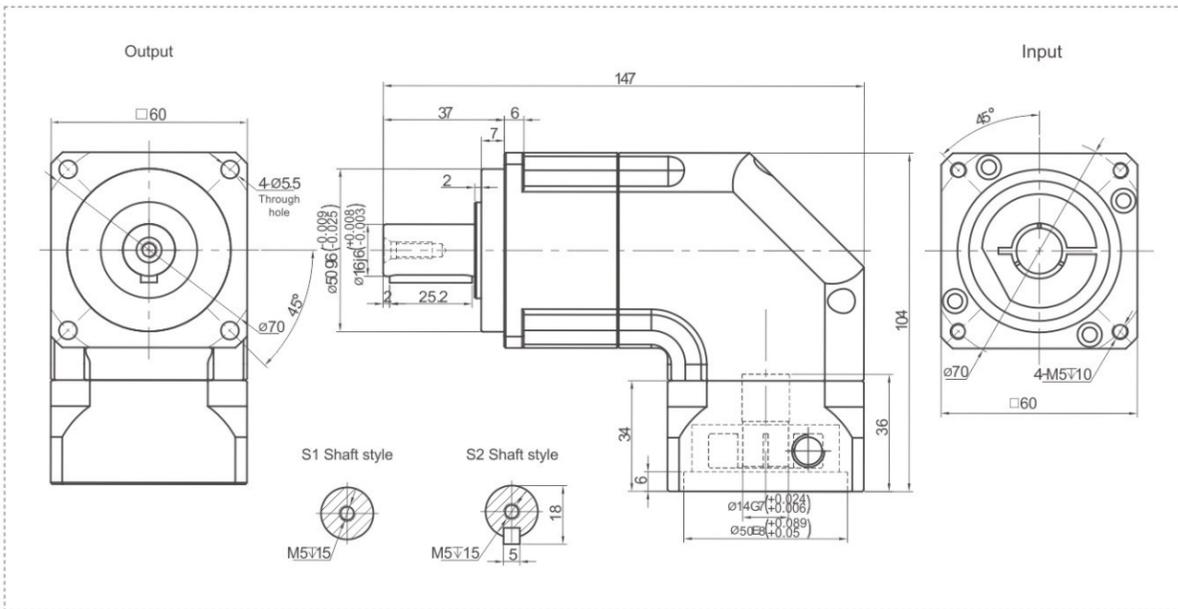
Notes:

- 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.

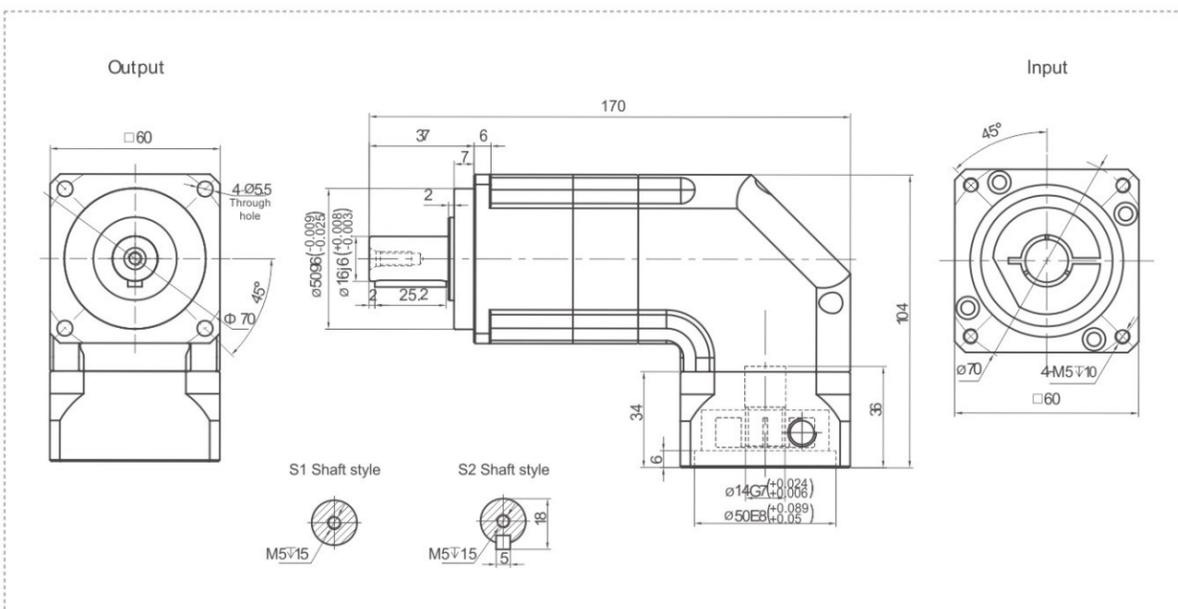
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TBR060 Series

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	58	55	50	45	58	55	50	45	-	42
Emergency Stop Torque	T_2	Nm															$T_1 \times 3$															
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	-	$^{\circ}\text{C}$	-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	0.35							0.07							0.09															

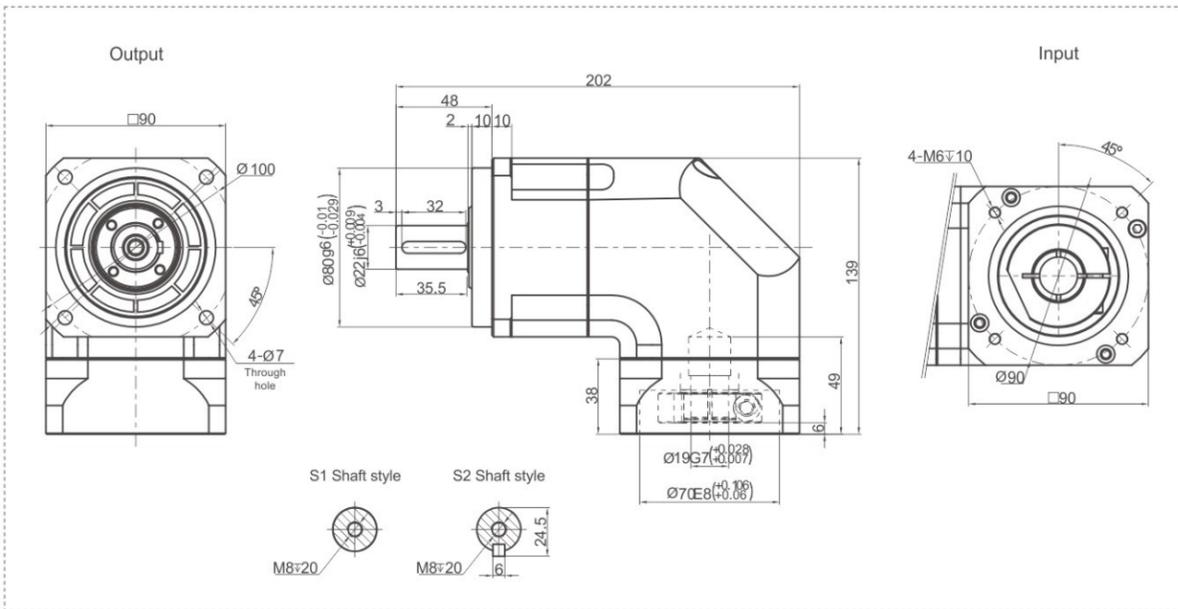
Notes:

- 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, $i=10$.

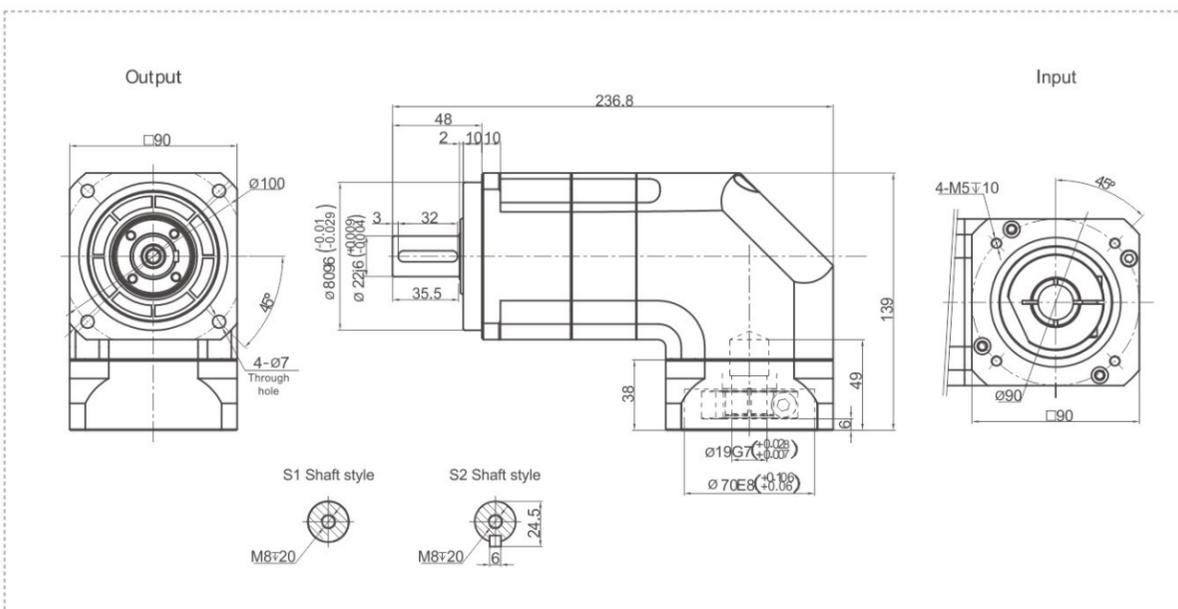
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TBR090 Series

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_1 Nm	100	120	150	148	140	123	-	102	148	140	123	102	150	148	140	120	150	148	140	123	102	148	140	123	-	102		
Emergency Stop Torque	T_2 Nm	$T_1 \times 3$														$T_1 \times 3$													
Nominal Input Speed	S_1 rpm	4000														4000													
Maximum Input Speed	S_2 rpm	8000														8000													
Maximum Output Torque	T_4 Nm	$T_1 \times 3 \times 60\%$														$T_1 \times 3 \times 60\%$													
Maximum Radial Force	F_a N	3250														3250													
Maximum Axial Force	F_b N	1625														1625													
Torsional Rigidity	- Nm/arcmin	14														14													
Efficiency	η %	≥ 95														≥ 92													
Service Life	- h	20000														20000													
Noise	- dB	≤ 65														≤ 65													
Weight	- Kg	6														6.3													
Backlash	P_0	≤ 2														≤ 4													
	P_1	≤ 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						

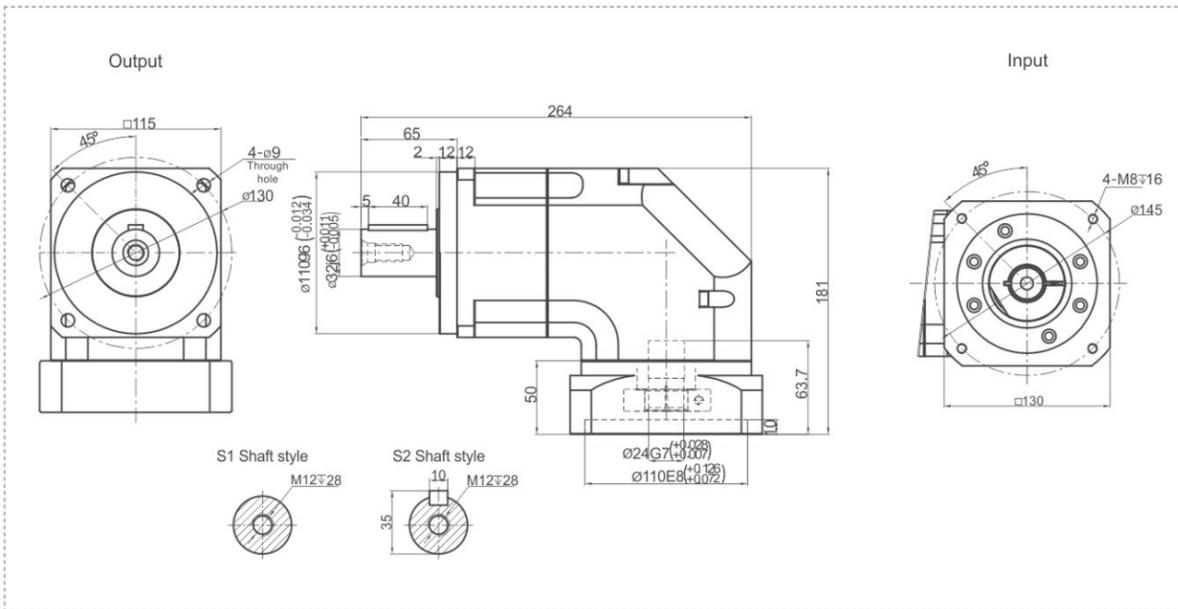
Notes:

- 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, $i=10$.

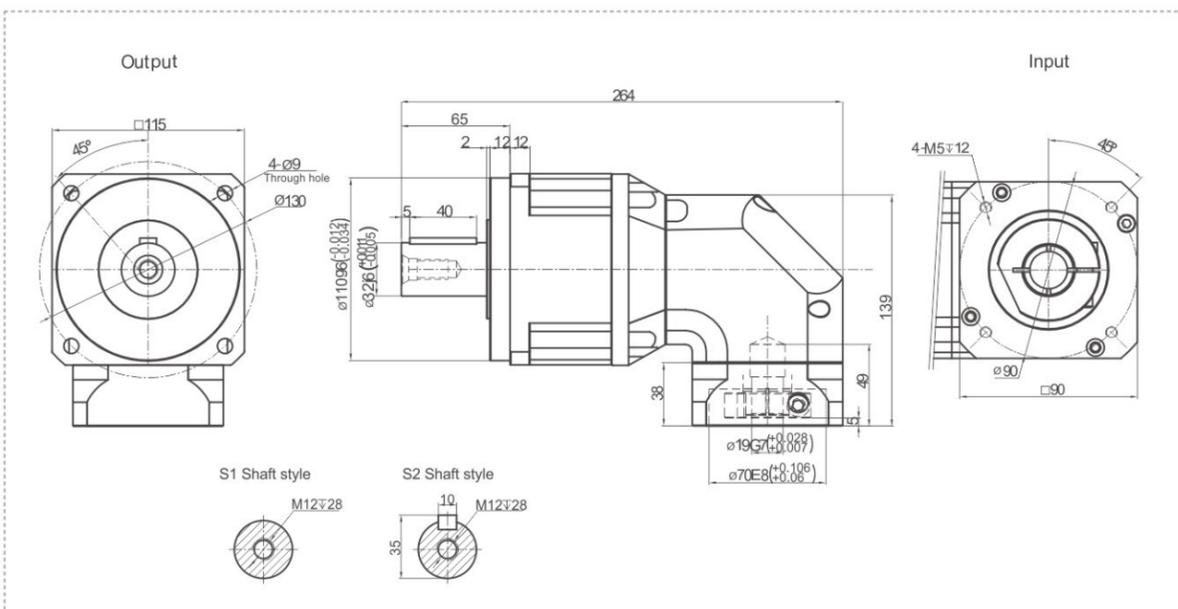
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TBR115 Series

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_r	N															6700													
Maximum Axial Force	F_a	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											

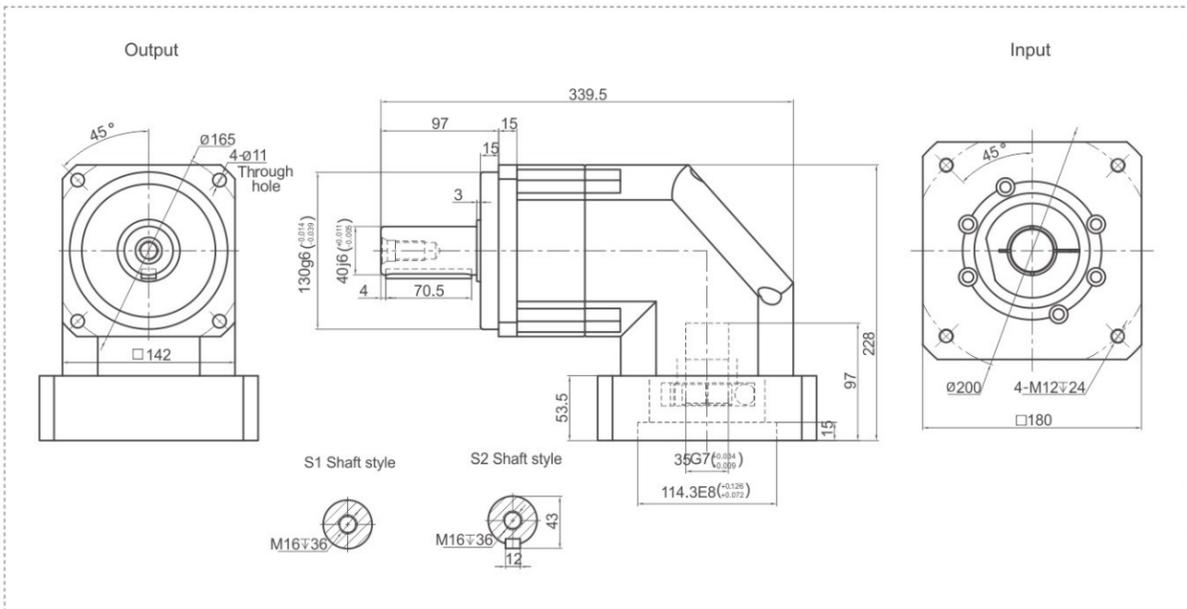
Notes:

- ① Speed ratio ($i = S_{in}/S_{out}$)
- 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, $i=10$.

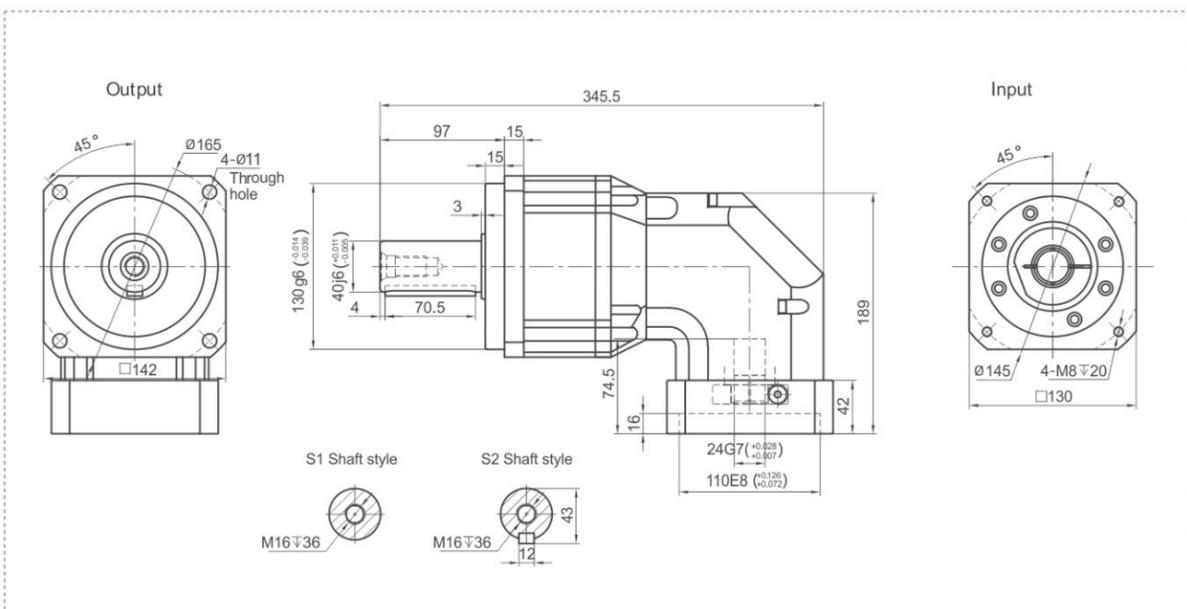
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TBR142 Series

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

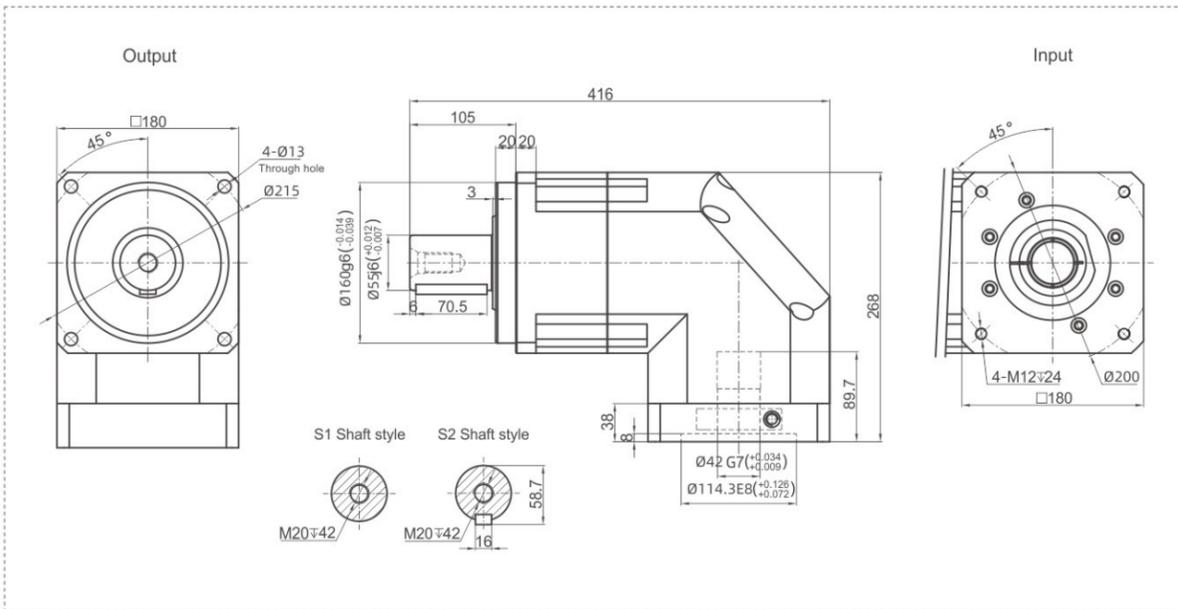
Notes:

- 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, $i=10$.

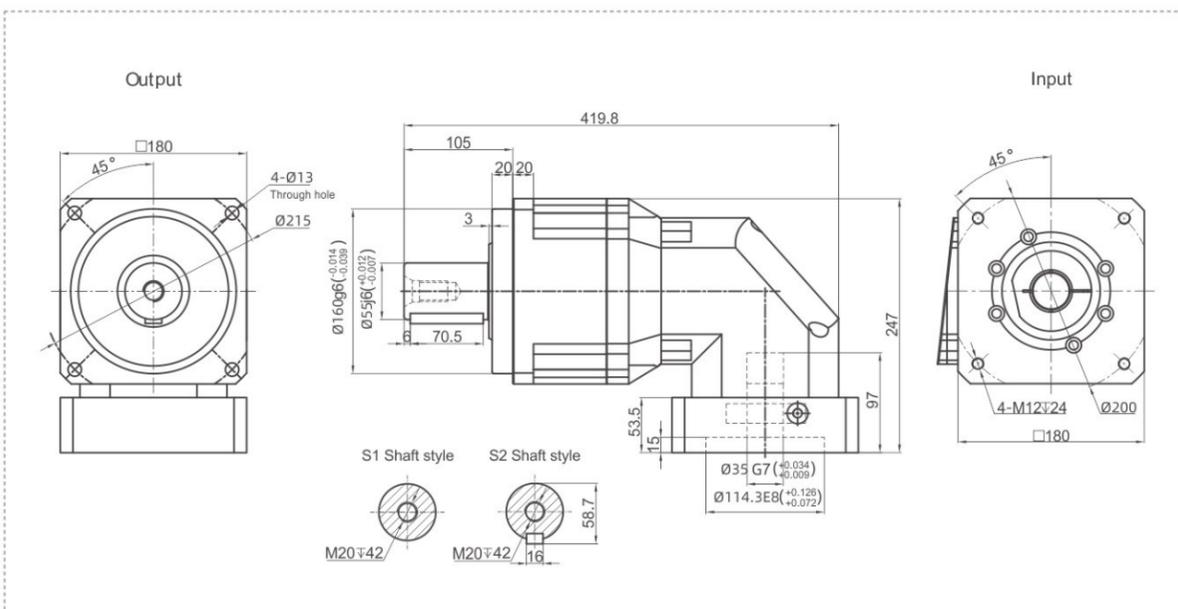
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TBR180 Series

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	arcmin	≤ 2												≤ 4													
	P_1	arcmin	≤ 4												≤ 7													
	P_2	arcmin	≤ 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.