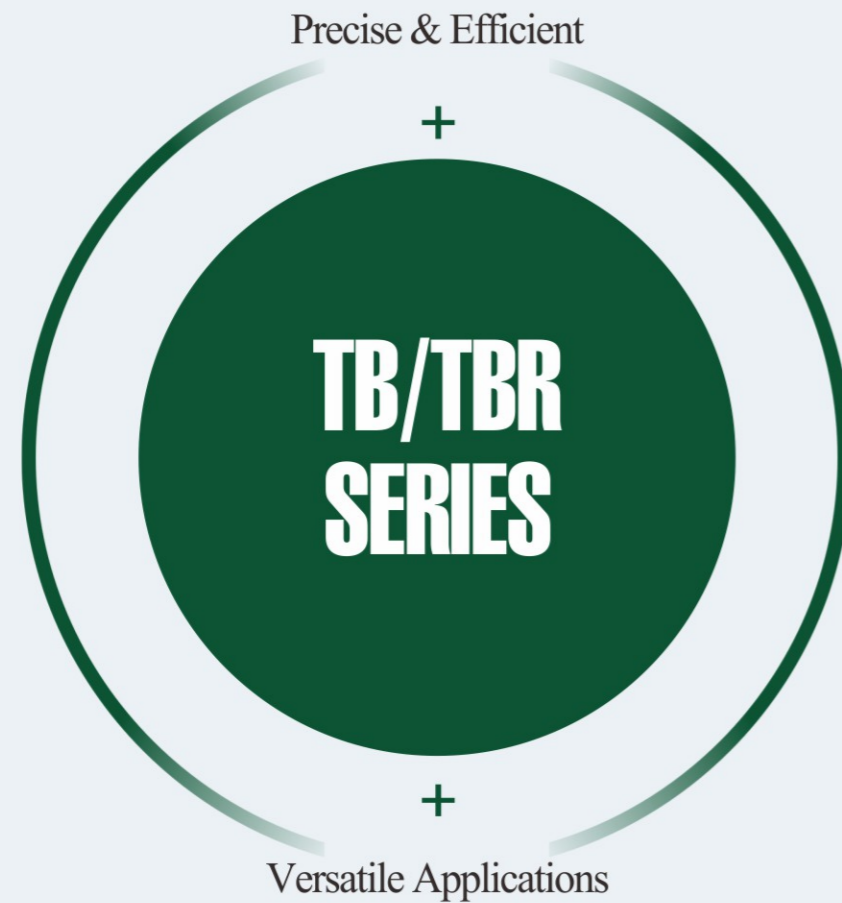


Precision Planetary Reducer

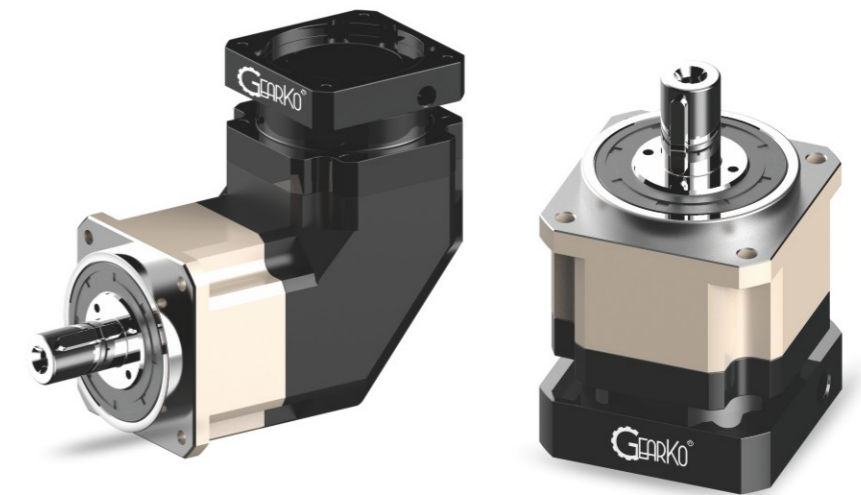


TB/TBR Series planetary reducer achieves maximum efficiency even at the highest speed and load.
Robust structure and low backlash enable it to be applied in almost any shaft-output applications.

GEARKO[®]

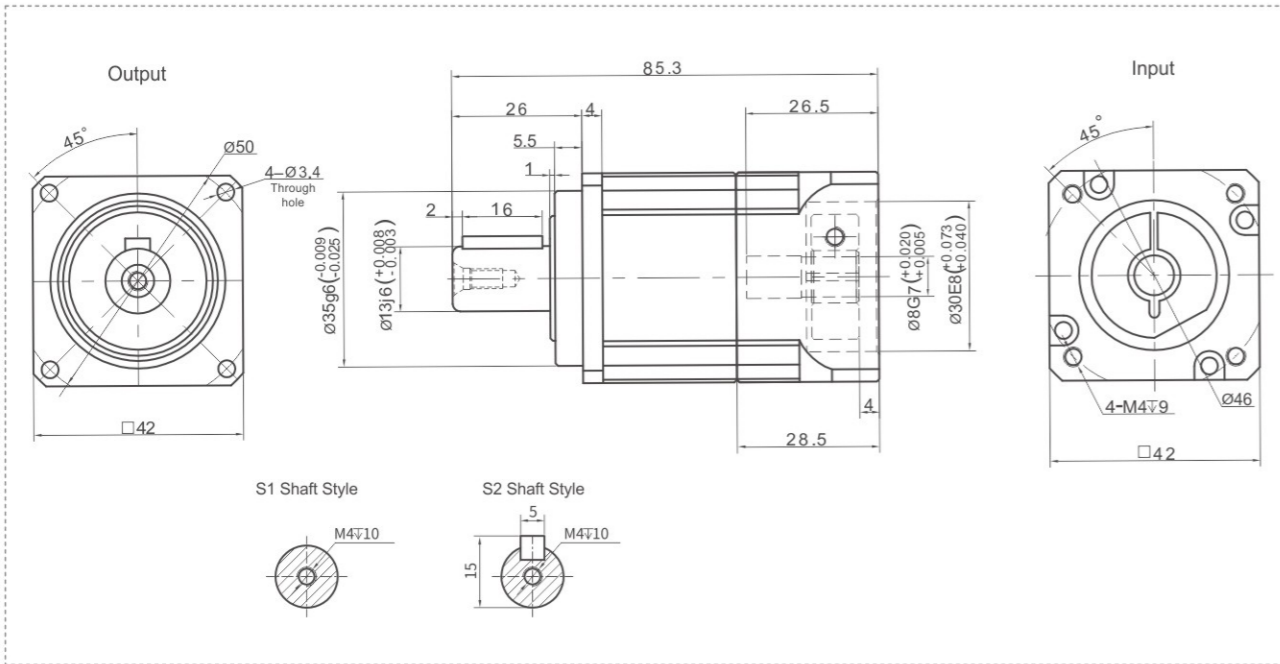
DRIVES

THE PRECISION

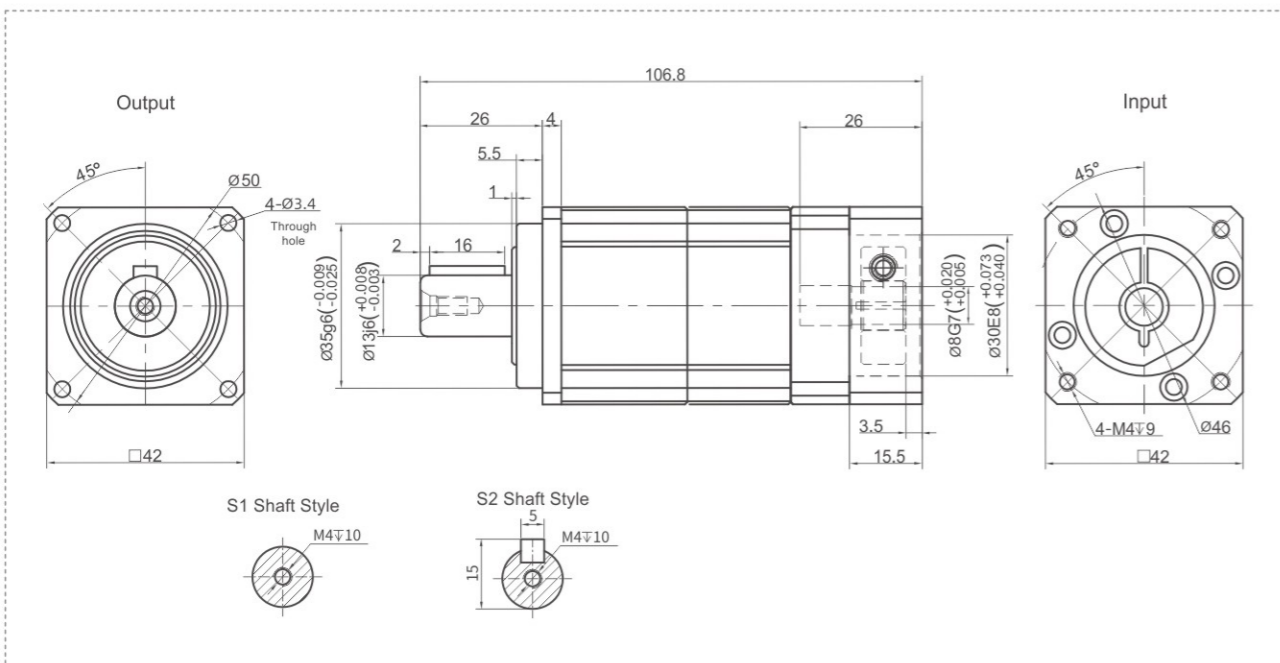


TB042 Series

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	-	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	-	19	20	19	19	17	20	19	19	17	14
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$										$T_1 \times 3$																			
Nominal Input Speed	S_1	rpm	5000										5000																			
Maximum Input Speed	S_2	rpm	10000										10000																			
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$										$T_1 \times 3 \times 60\%$																			
Maximum Radial Force	F_a	N	780										780																			
Maximum Axial Force	F_b	N	390										390																			
Torsional Rigidity	-	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	-	$^{\circ}\text{C}$	-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	0.03										0.03																			

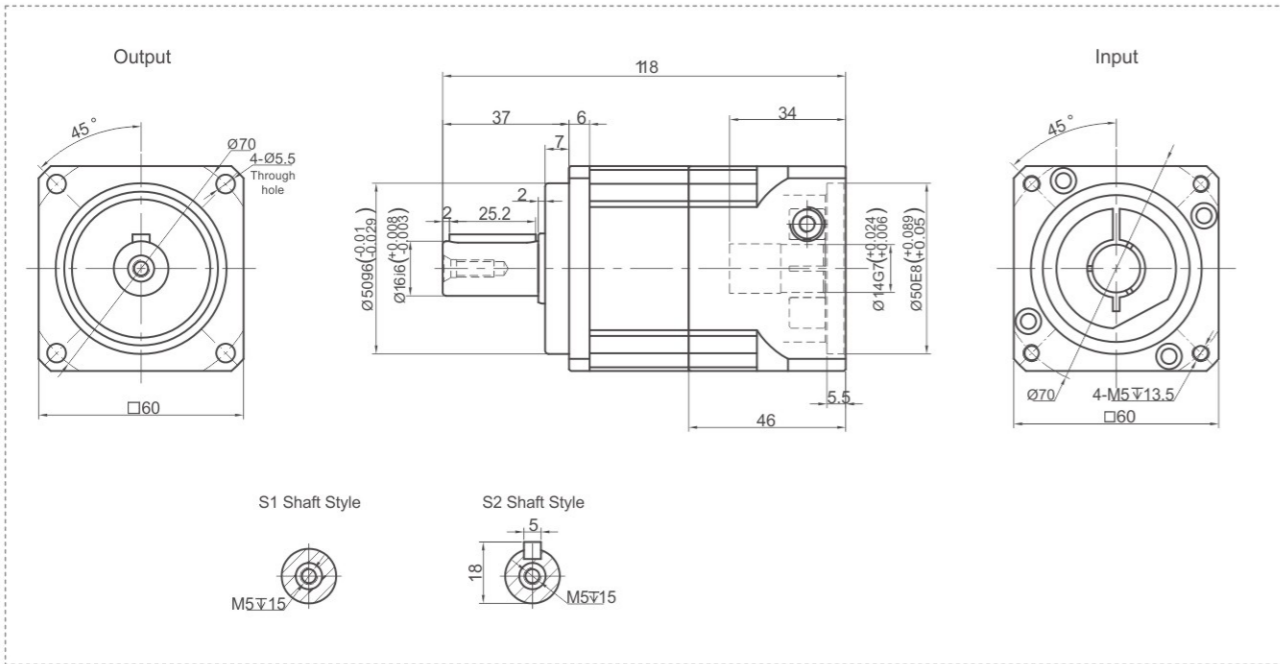
Notes:

- ① Speed ratio ($i = \text{Sin}/\text{Sout}$)
- 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, $i=10$.

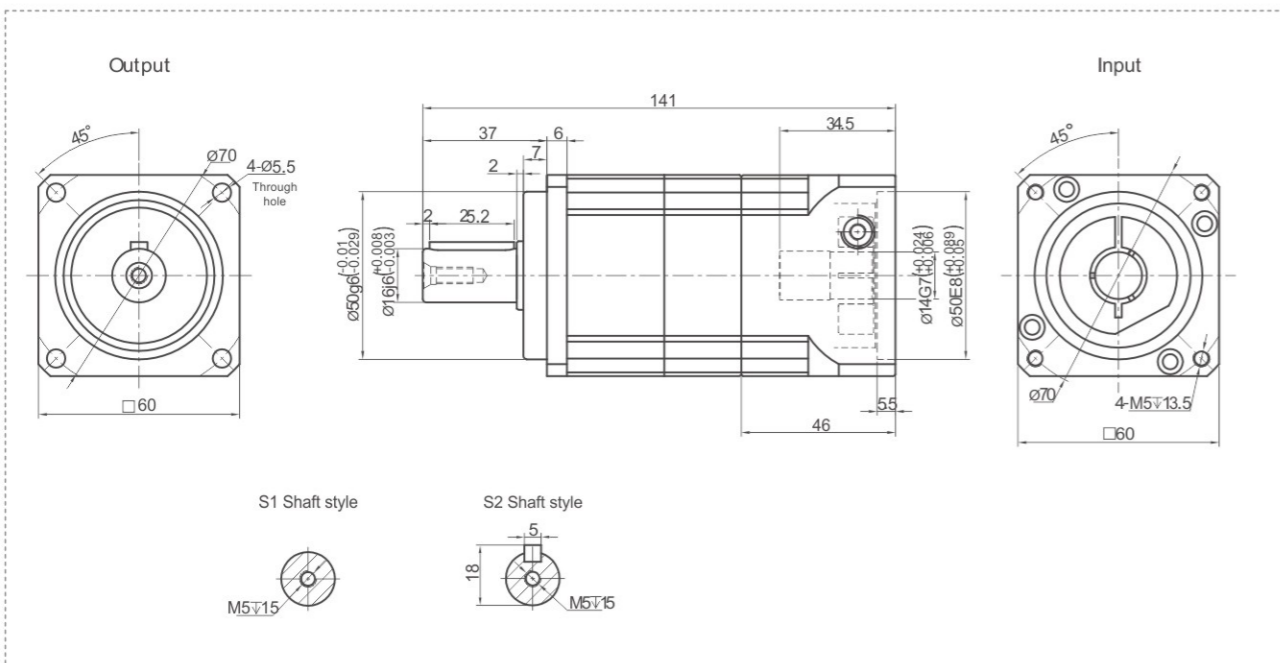
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TB060 Series

TB060 One Stage



TB060 Two Stage



Performance Data

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

TB060		One Stage										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	≤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											

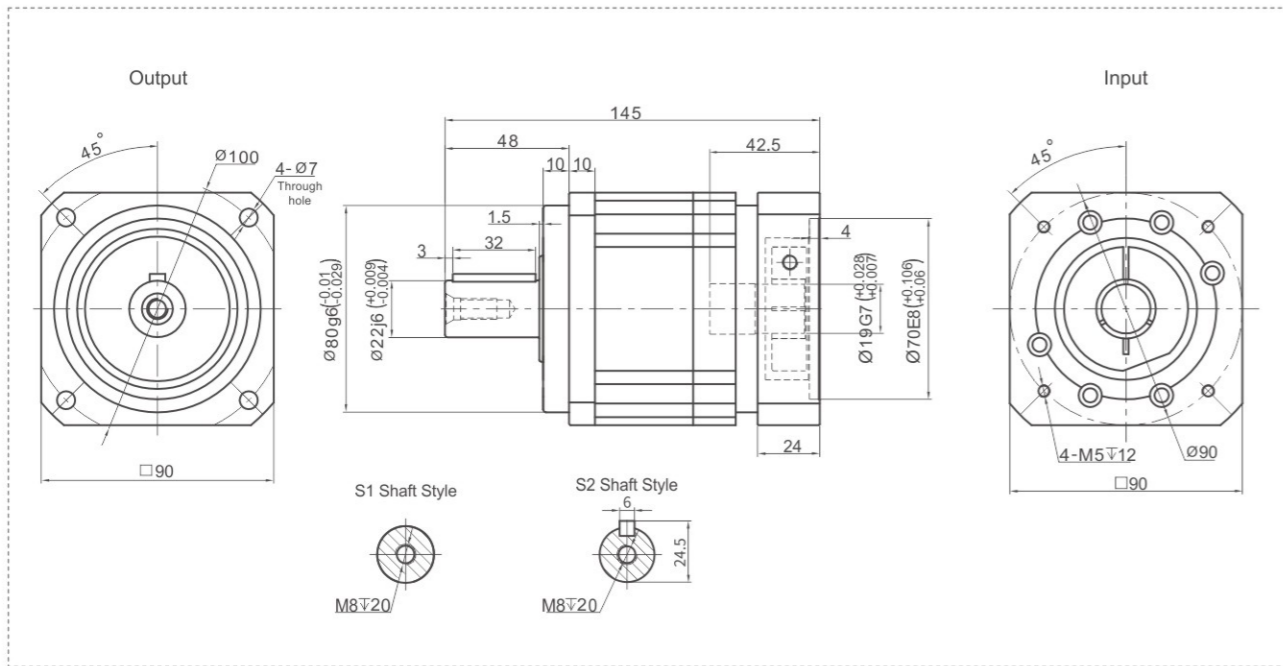
Notes:

- 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.

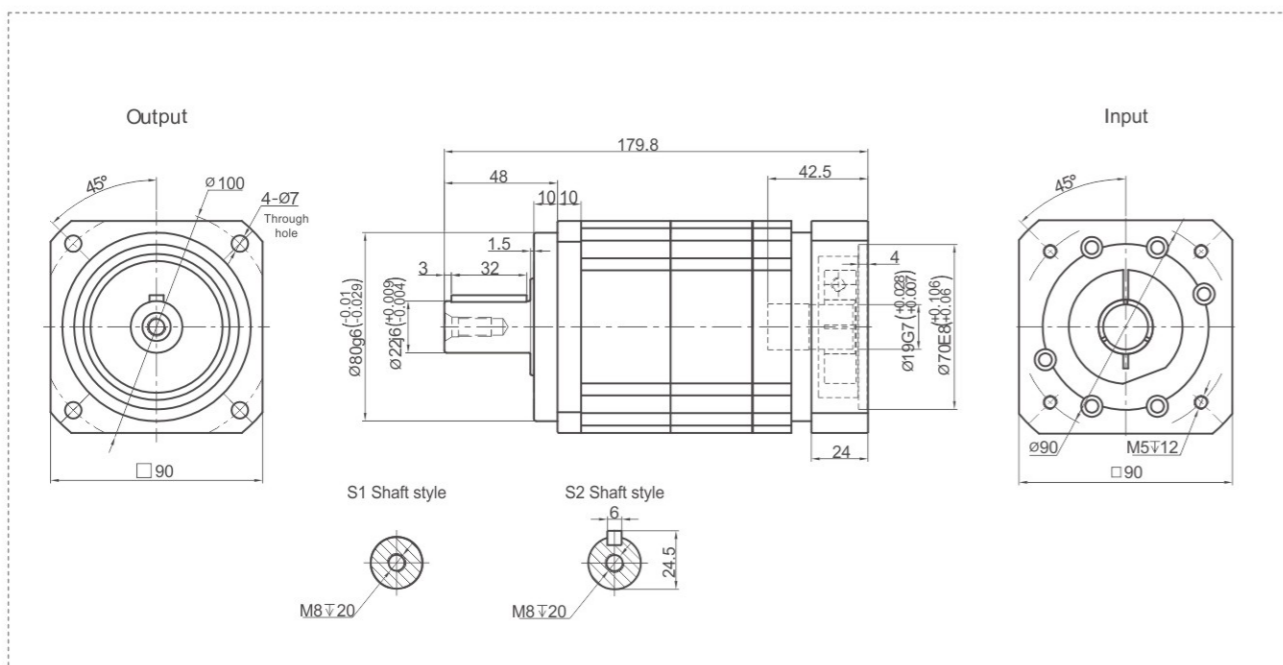
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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 × 3										T ₁ × 3									
Nominal Input Speed	S ₁	rpm	4000										4000									
Maximum Input Speed	S ₂	rpm	8000										8000									
Maximum Output Torque	T ₄	Nm	T ₁ × 3 × 60%										T ₁ × 3 × 60%									
Maximum Radial Force	F _a	N	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	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	0.61	0.48	0.47	0.45	0.44				0.47									0.44		

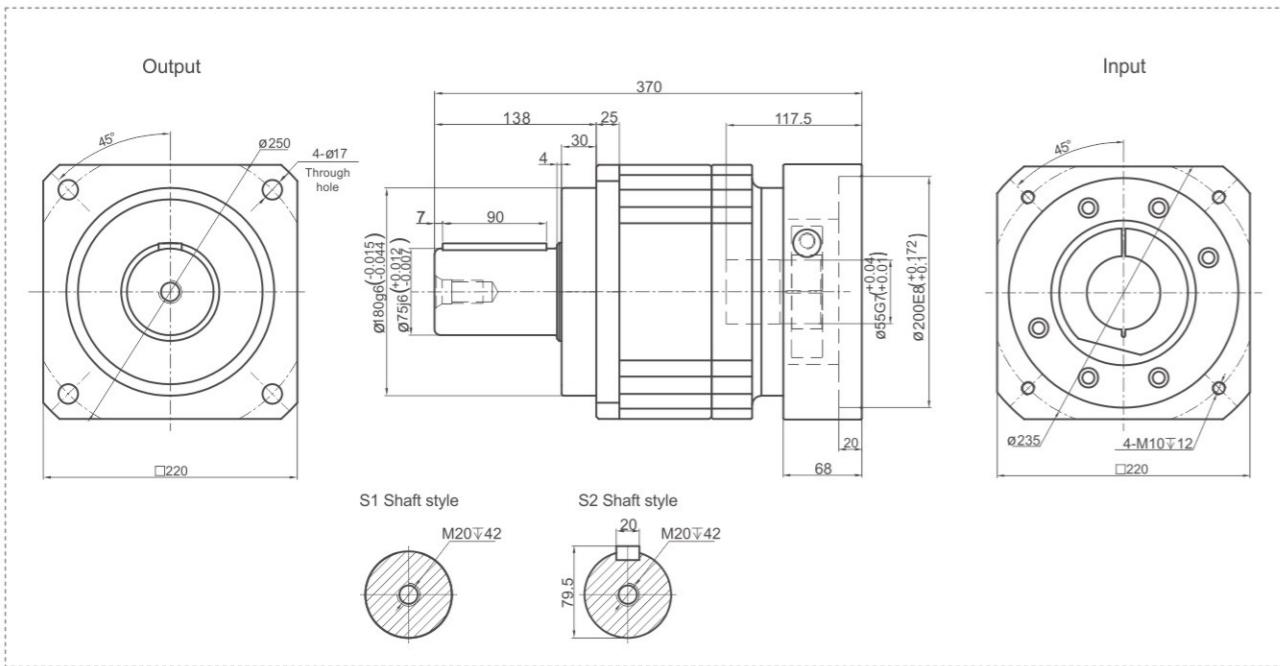
Notes:

- 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.

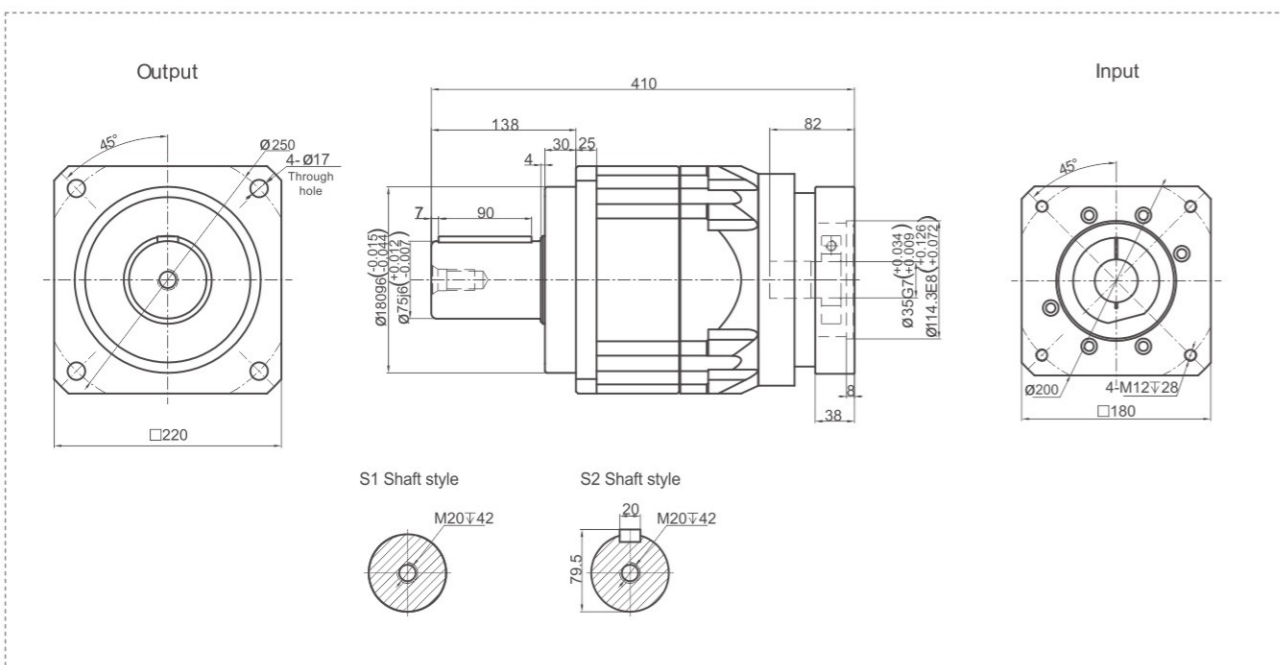
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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	75.3	275.1	72.5	0.9	750.8	4	50.56	23.29					22.51					

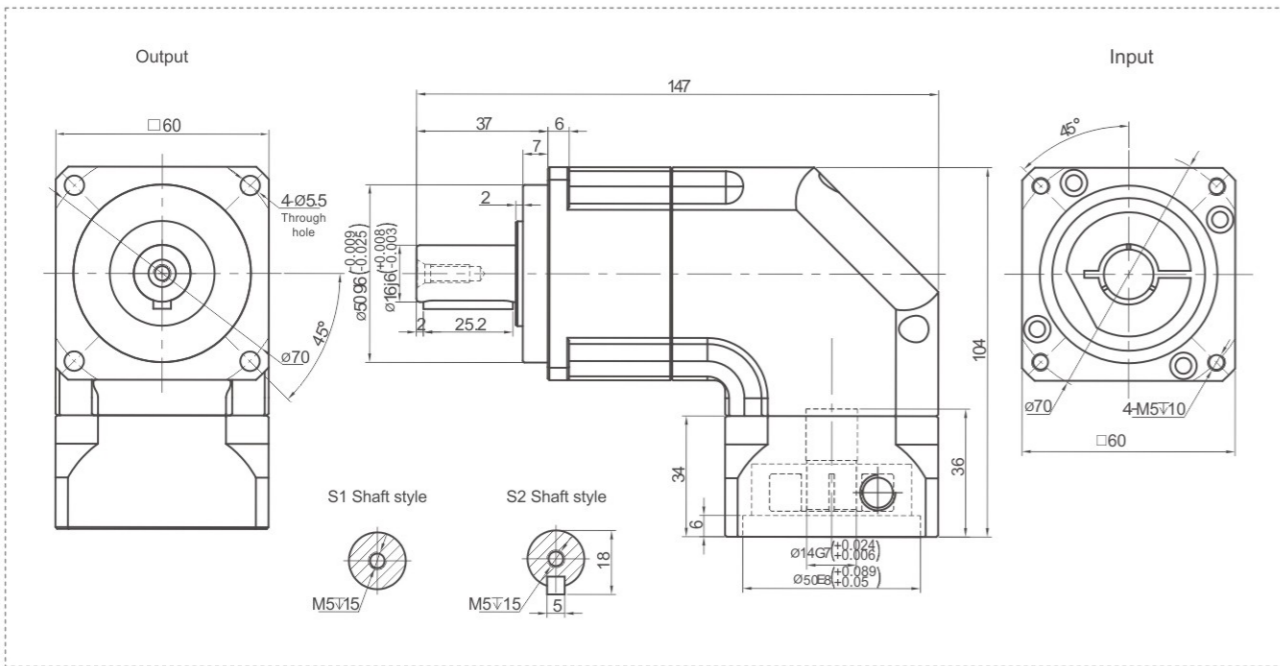
Notes:

- 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.

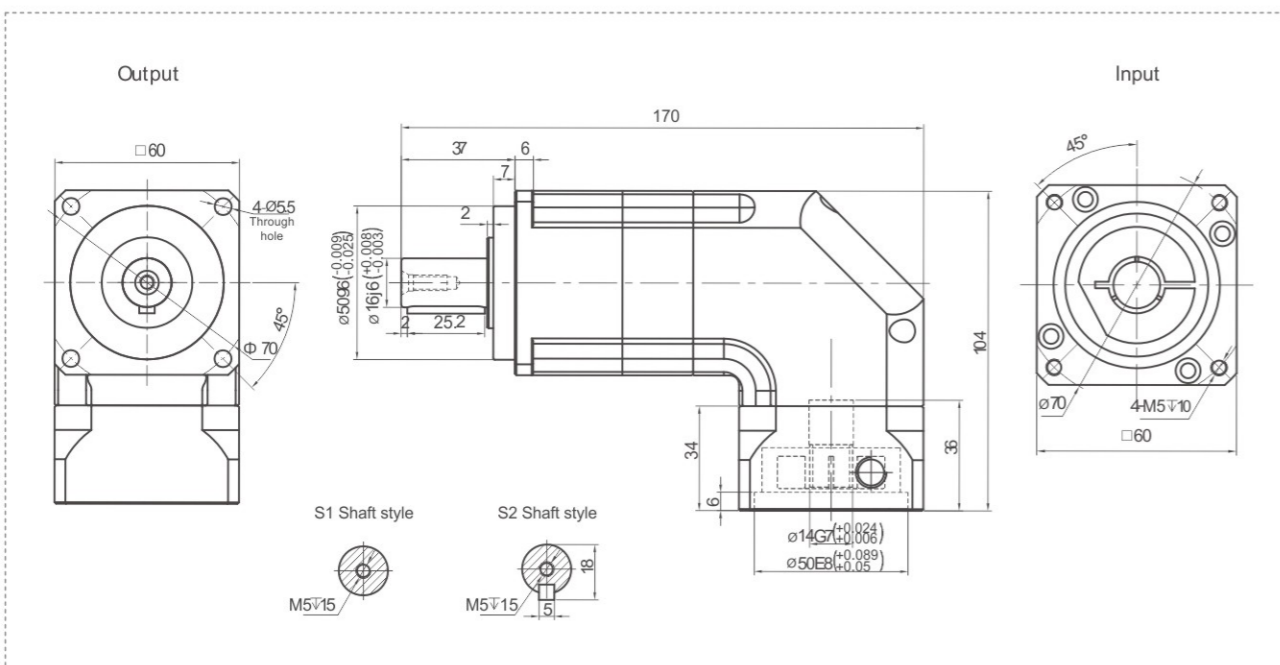
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TBR060 Series

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	42	55	50	45	-	42
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$																									
Nominal Input Speed	S_1	rpm	5000																									
Maximum Input Speed	S_2	rpm	10000																									
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$																									
Maximum Radial Force	F_a	N	1530																									
Maximum Axial Force	F_b	N	765																									
Torsional Rigidity	-	Nm/arcmin	7																									
Efficiency	η	%	≥ 95																									
Service Life	-	h	20000																									
Noise	-	dB	≤ 63																									
Weight	-	Kg	2																									
Backlash	P_0	-	-																									
	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	0.35							0.07							0.09											

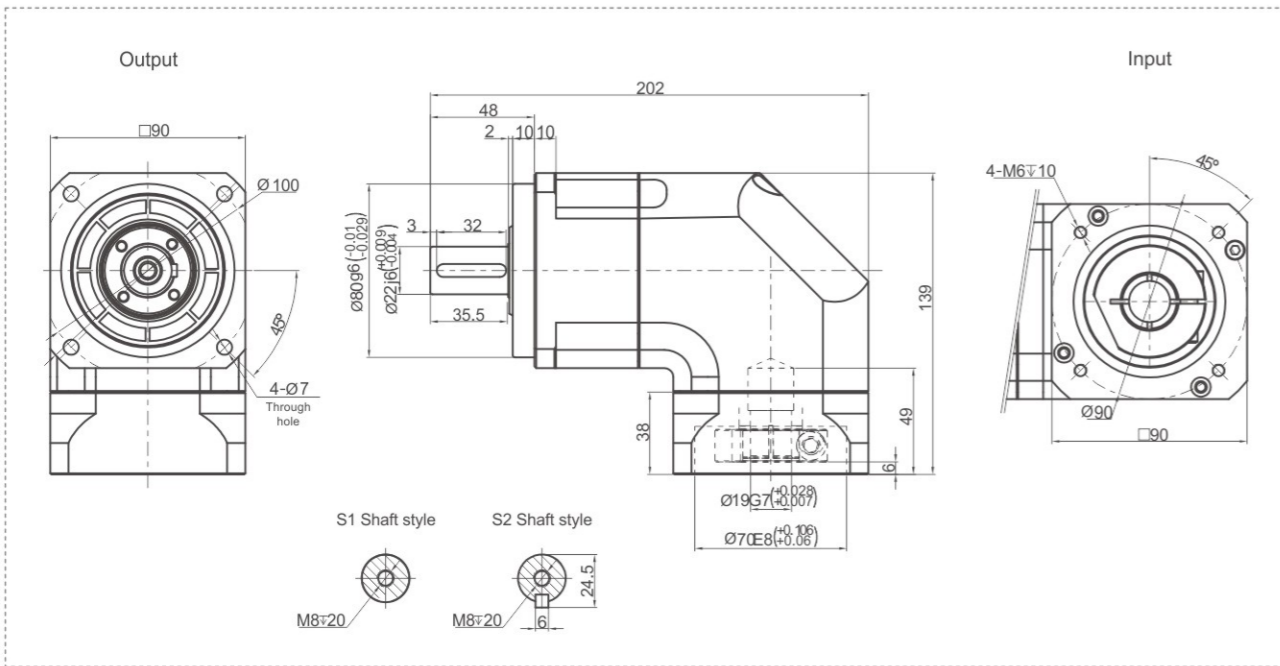
Notes:

- 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, $i=10$.

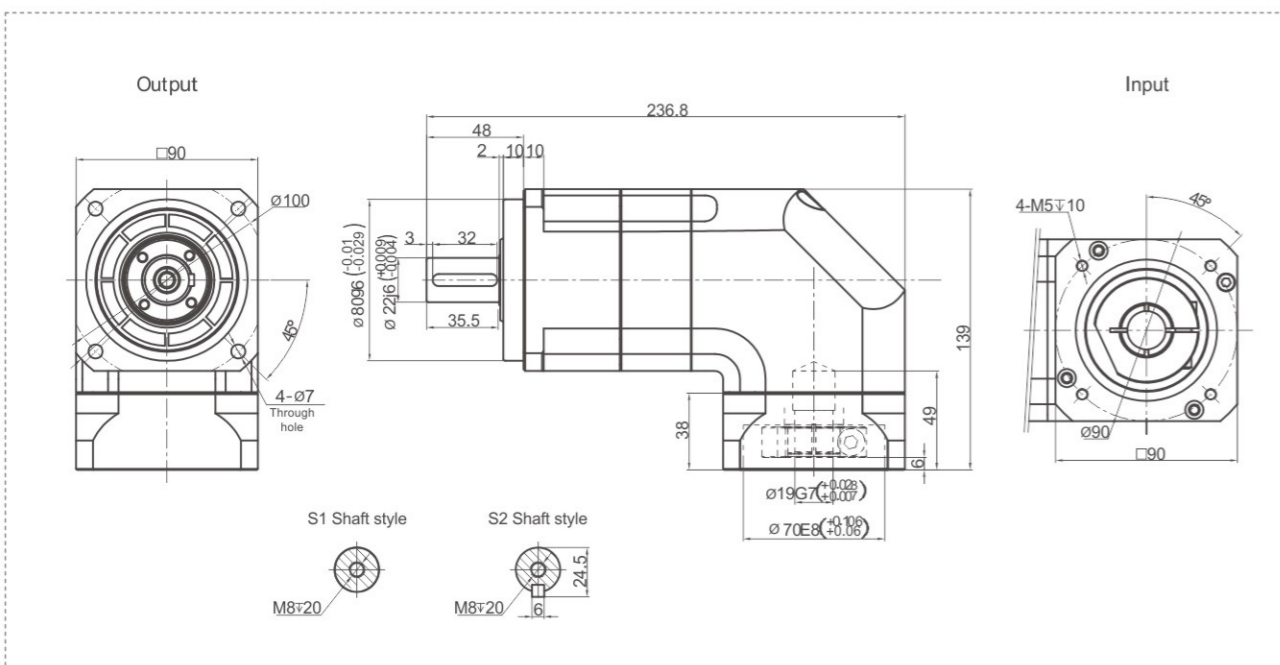
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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	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						

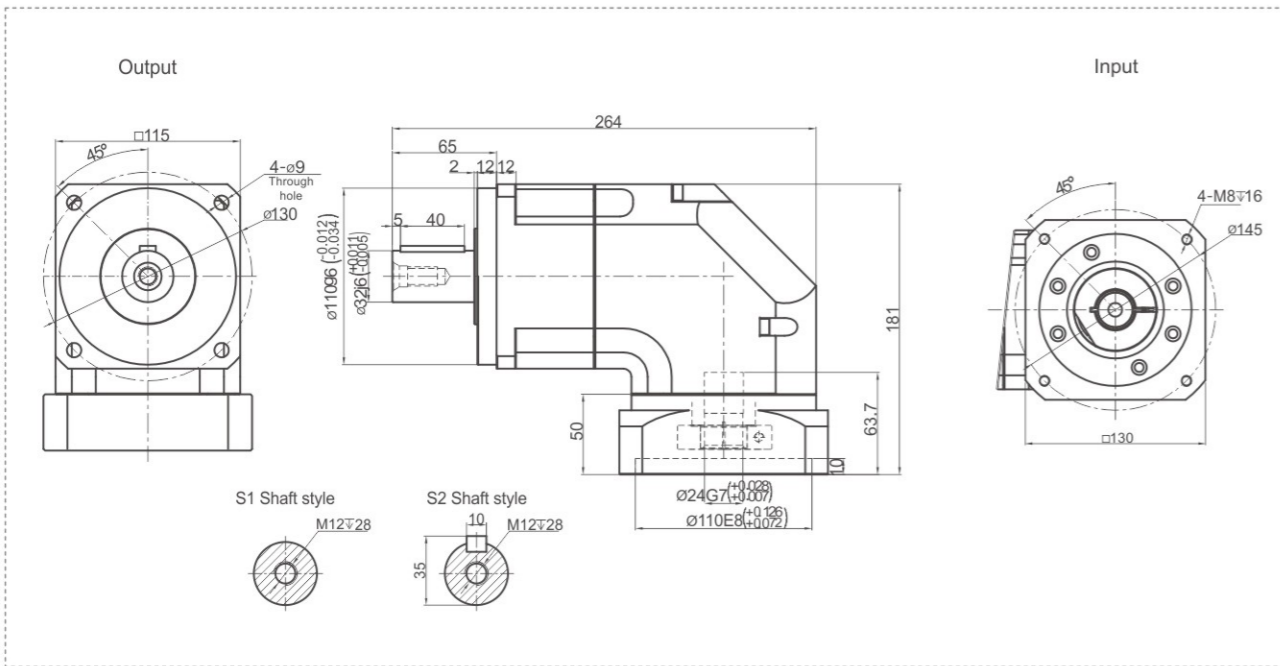
Notes:

- 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, $i=10$.

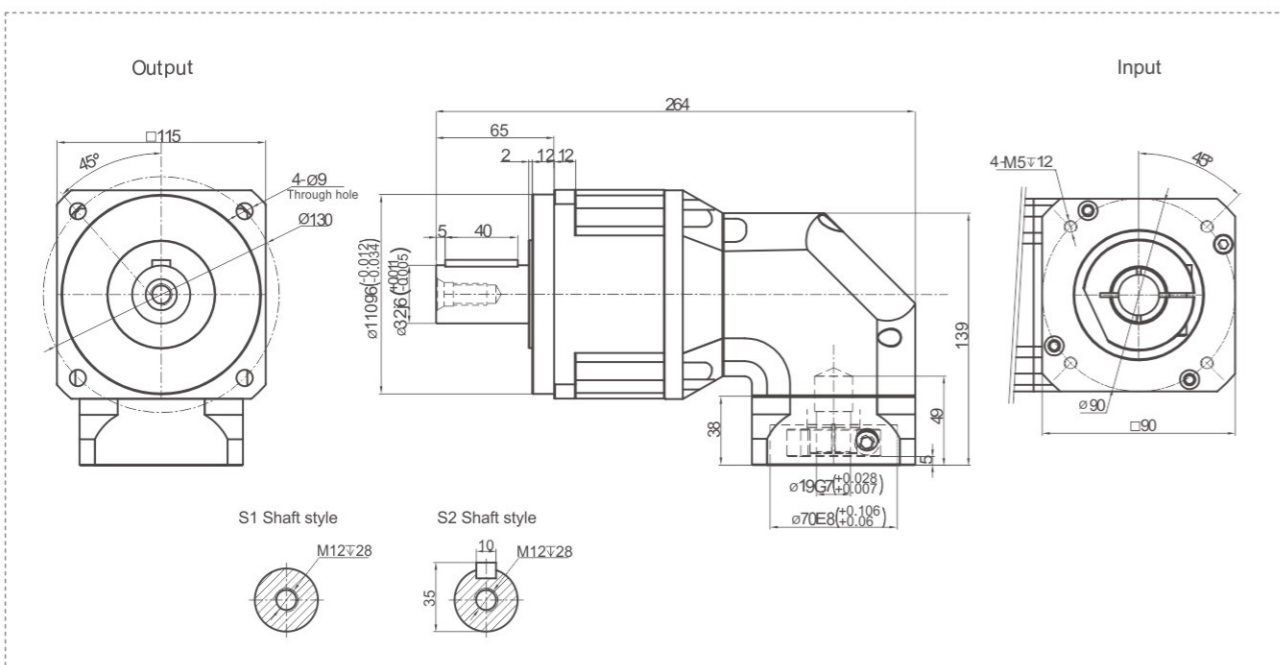
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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	$\text{kg}\cdot\text{cm}^2$				6.84			6.25			2.25			1.87															

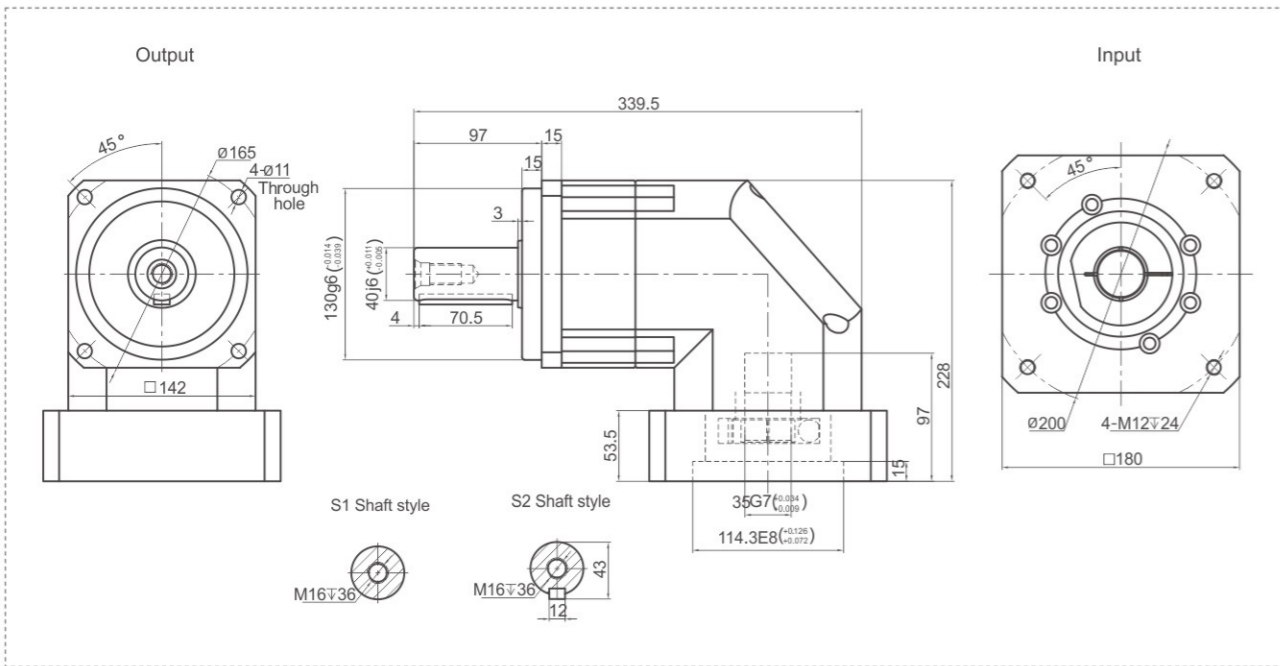
Notes:

- 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, $i=10$.

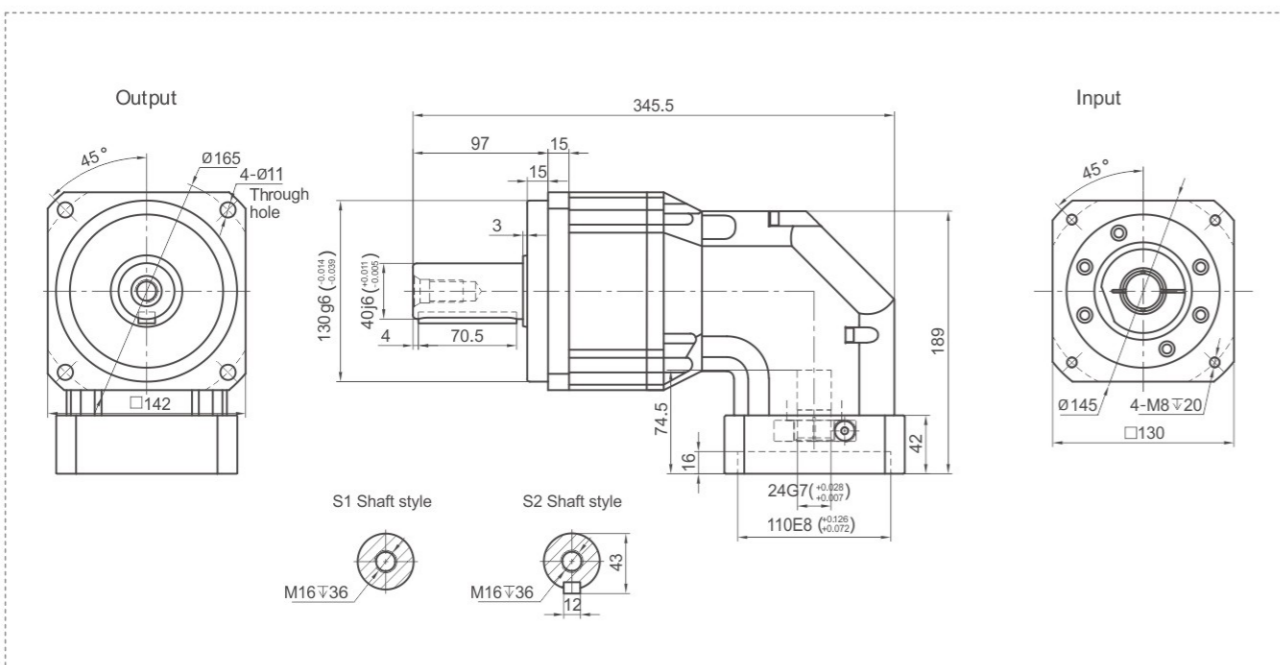
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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		
Emergency Stop Torque	T_2	Nm															$T_1 \times 3$													
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	-	$^{\circ}\text{C}$	-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	23.4							21.8							6.84							6.25						

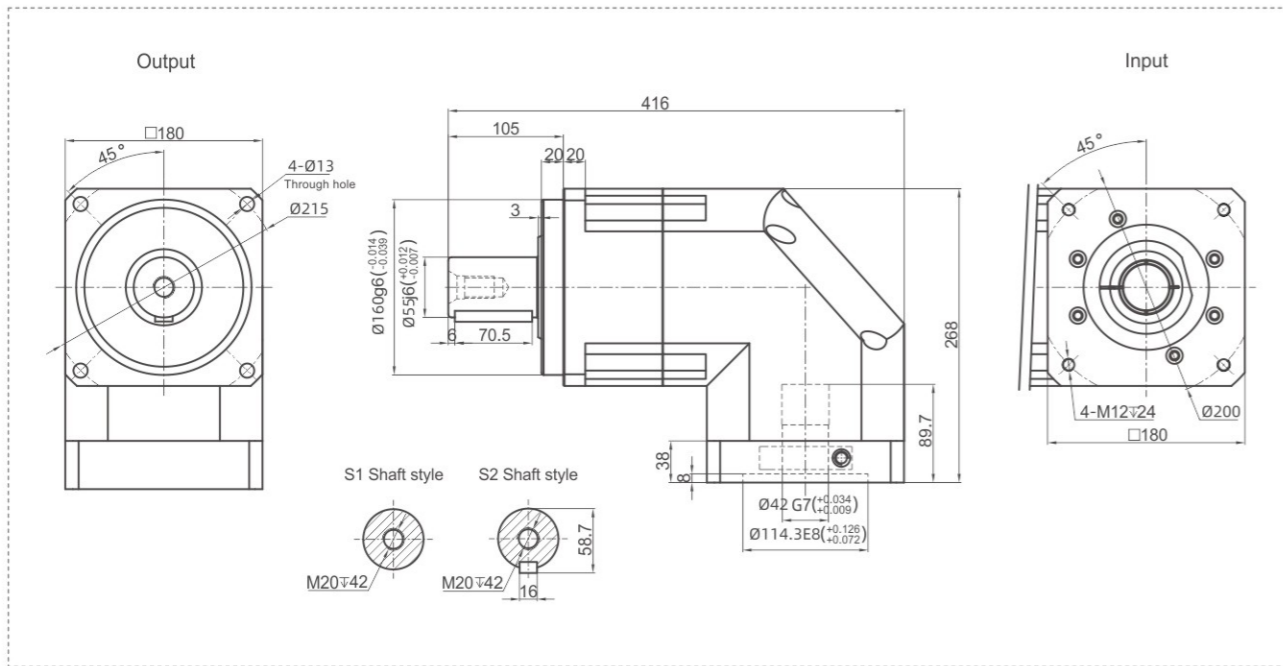
Notes:

- 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, $i=10$.

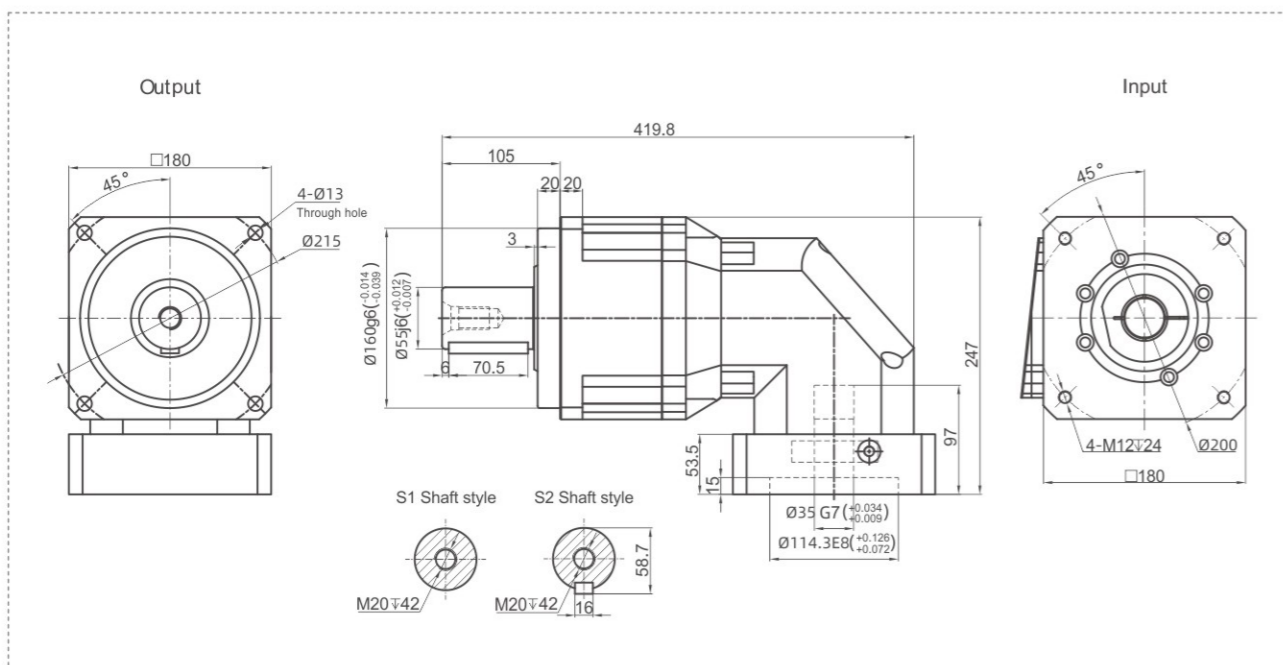
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

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	P0:		≤ 2												≤ 4													
	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	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.