GEARKO®

HIGH-PRECISION PLANETARY GEARBOXES

TB/TBR Series

INLINE AND RIGHT ANGLE

OEM Solutions for the Toughest Industrial Applications — Standard, Modified or Customized

TB/TBR SERIES

Inline and Right Angle

Precise & Efficient Versatile Applications

- Advanced Performance
- Compatible - All Servo/Stepper
- One-piece Ring Gear
- Continuous Operation ≥ 10,000 hours
- All Helical Gearing
- Standard Units
- Cost- $$$
- IP65 Rated
- One-piece Sun Gear & Input Shaft
- Maintenance Free
- Longer Precision Durability
- Modified Versions
- Precision as Low as <1 acrmin
- Mount in any Direction
- One-piece Output Shaft
- Service Life 20,000 Hours
- Drop- in Compatibility- Other Manufacturers
- Customized Versions

Give Us a Try

Request Your Risk-free Test & Evaluation Unit

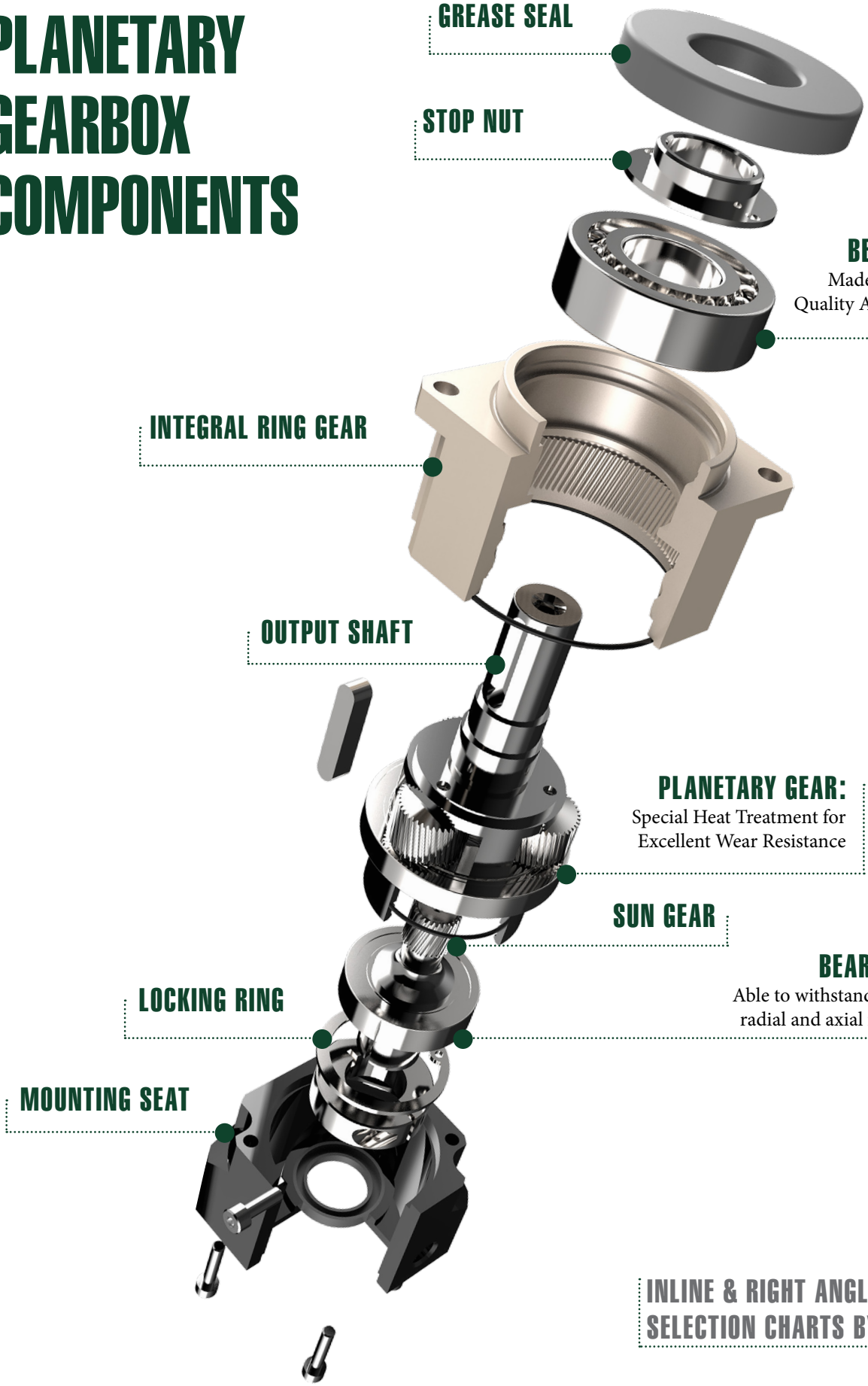
Interested in receiving a Test & Evaluation Unit? Learn more.

At GearKo, we are not only able to provide all standard high precision planetary gearboxes, we also specialize in developing tailored solutions to meet your unique requirements.

The combination of a motor and gearbox is crucial for achieving the highest standards of accuracy, speed, and quality in your designs. To meet these demanding standards, it's essential to select the correct Precision Planetary Gearbox. That's why we offer a Risk-Free Test and Evaluation Unit for companies to serious customer with volume. This offer is available for both new applications and replacements for underperforming gearboxes.

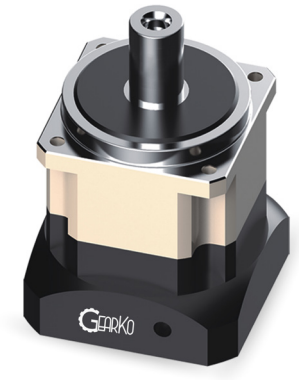
Each product is 100% tested to confirm it meets all specifications prior to shipping.

INLINE PRECISION PLANETARY GEARBOX COMPONENTS



INLINE & RIGHT ANGLE SELECTION CHARTS BY MODEL

TB SERIES
Inline Selection Chart



Inline - TB Series
Shaft Output & Square Mounting Flange

	Output Frame Size	Speed Ratio	Input Speed -rpm		Output Torque - Nm		Max Force - N		Page #
			Nom.	*Max.*	*Nom.*	*Max.*	*Axial*	*Radial*	
TB042 - 1 Stage	042 mm	4 to 8, 10	5,000	10,000	14 to 20	25 to 36	390	780	6
TB060 - 1 Stage	060 mm	3 to 8, 10	5,000	10,000	42 to 58	75 to 104	765	1,530	8
TB090 - 1 Stage	090 mm	3 to 8, 10	4,000	8,000	102 to 160	183 to 88	1,625	3,250	10
TB115 - 1 Stage	115 mm	3 to 8, 10	4,000	8,000	210 to 333	378 to 599	3,350	6,700	12
TB142 - 1 Stage	142 mm	3 to 8, 10	3,000	6,000	340 to 650	612 to 1170	4,700	9,400	14
TB180 - 1 Stage	180 mm	3 to 8, 10	3,000	6,000	590 to 1,200	1,062 to 2,160	7,250	14,500	16
TB220 - 1 Stage	220 mm	3 to 8, 10	2,000	4,000	1,150 to 2,008	2,070 to 3,614	25,000	50,000	18
TB042 - 2 Stage	042 mm	20 to 100	5,000	10,000	14 to 20	25 to 36	390	780	6
TB060 - 2 Stage	060 mm	15 to 100	5,000	10,000	42 to 58	75 to 104	765	1,530	8
TB090 - 2 Stage	090 mm	15 to 100	4,000	8,000	102 to 160	183 to 88	1,625	3,250	10
TB115 - 2 Stage	115 mm	15 to 100	4,000	8,000	210 to 333	378 to 599	3,350	6,700	12
TB142 - 2 Stage	142 mm	15 to 100	3,000	6,000	340 to 650	612 to 1170	4,700	9,400	14
TB180- 2 Stage	180 mm	15 to 100	3,000	6,000	590 to 1,200	1,062 to 2,160	7,250	14,500	16
TB220- 2 Stage	220 mm	15 to 100	2,000	4,000	1,150 to 2,008	2,070 to 3,614	25,000	50,000	18

Output Frame Size
042, 060, 090, 115, 142, 180, 220

Output Shaft Type
S1: Smooth Shaft
S2: Keyed Shaft
S3: As Otherwise Specified

Motor Shaft Bore Diameter

Bolt Circle Diameter

Depth For Motor Shaft

TB 060 – 010 – S2 – P2 – 14 – 50 – 95 – M6 – 34 – 5

Series
TB-Inline

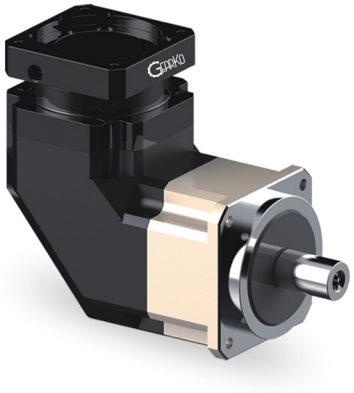
Ratio
3, 4, 5, 6, 7, 8, 10, 15, 20, 25, 30, 35, 40, 50, 60, 70, 80, 100

Precision Level
P0: Micro Backlash
P1: Reduced Backlash
P2: Standard Backlash

Pilot Circle Diameter

Mounting Bolt Thread

Depth For Pilot Circles



TBR SERIES
Right Angle Selection Chart

Right Angle -TBR Series Right Angle
Shaft Output & Square Mounting Flange

	Output Frame Size	Speed Ratio	Input Speed -rpm		Output Torque - Nm		Max Force - N		Page #
			Nom.	*Max.*	*Nom.*	*Max.*	*Axial*	*Radial*	
TBR042 - 1 Stage	042 mm	3 to 8,10	5,000	10,000	14 to 19	25 to 34	390	780	20
TBR060 - 1 Stage	060 mm	3 to 8, 10 to 20	5,000	10,000	42 to 58	75 to 104	765	1,530	22
TBR090 - 1 Stage	090 mm	3 to 8, 10 to 20	4,000	8,000	102 to 150	183 to 270	1,625	3,250	24
TBR115 - 1 Stage	115 mm	3 to 8, 10 to 20	4,000	8,000	210 to 330	378 to 594	3,350	6,700	26
TBR142 - 1 Stage	142 mm	3 to 8, 10 to 20	3,000	6,000	340 to 650	612 to 1,170	4,700	9,400	28
TBR180 - 1 Stage	180 mm	3 to 8, 10 to 20	3,000	6,000	590 to 1,200	1,062 to 2,160	7,250	14,500	30
TBR042 - 2 Stage	042 mm	14,15,17,18,19	5,000	10,000	14 to 19	25 to 34	390	780	20
TBR060 - 2 Stage	060 mm	25 to 200	5,000	10,000	42 to 58	75 to 104	765	1,530	22
TBR090 - 2 Stage	090 mm	25 to 200	4,000	8,000	102 to 150	183 to 270	1,625	3,250	24
TBR115 - 2 Stage	115 mm	25 to 200	4,000	8,000	210 to 330	378 to 594	3,350	6,700	26
TBR142 - 2 Stage	142 mm	25 to 200	3,000	6,000	340 to 650	612 to 1,170	4,700	9,400	28
TBR180- 2 Stage	180 mm	25 to 200	3,000	6,000	590 to 1,200	1,062 to 2,160	7,250	14,500	30

Output Frame Size
042, 060, 090, 115, 142, 180, 220

Output Shaft Type
S1: Smooth Shaft
S2: Keyed Shaft
S3: As Otherwise Specified

Motor Shaft Bore Diameter

Bolt Circle Diameter

Depth For Motor Shaft

TBR 060 – 010 – S2 – P2 – 14 – 50 – 95 – M6 – 34 – 5

Series
TBR-Right Angle

Ratio
3 to 8, 10-20, 25-200

Precision Level
P0: Micro Backlash
P1: Reduced Backlash
P2: Standard Backlash

Pilot Circle Diameter

Mounting Bolt Thread

Depth For Pilot Circles

TB042 INLINE - High Speed and Precision

Performance Data

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

TB042			One Stage								Two Stage										
Speed Ratio	i		–	4	5	6	7	8	9	10	–	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	–	19	20	19	19	17	-	14	–	19	20	19	19	17	20	19	19	17	14
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	5000								5000										
Maximum Input Speed	S_2	rpm	10000								10000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	780								780										
Maximum Axial Force	F_b	N	390								390										
Torsional Rigidity	-	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	arcmin	⩽1								⩽3										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	0.03								0.03										

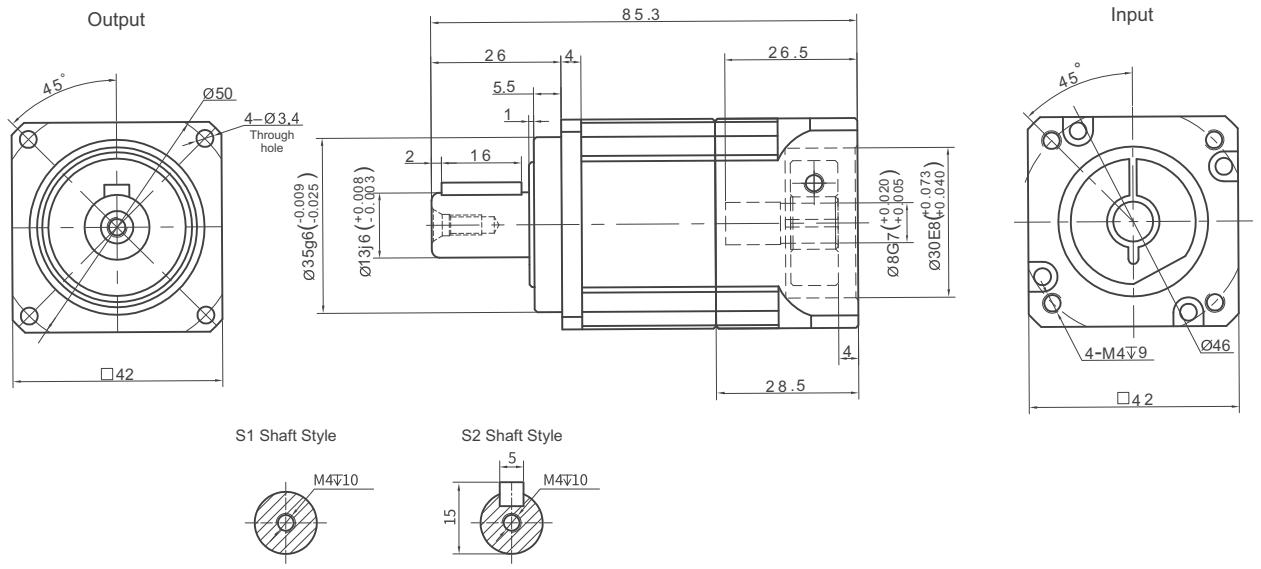
Notes:

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

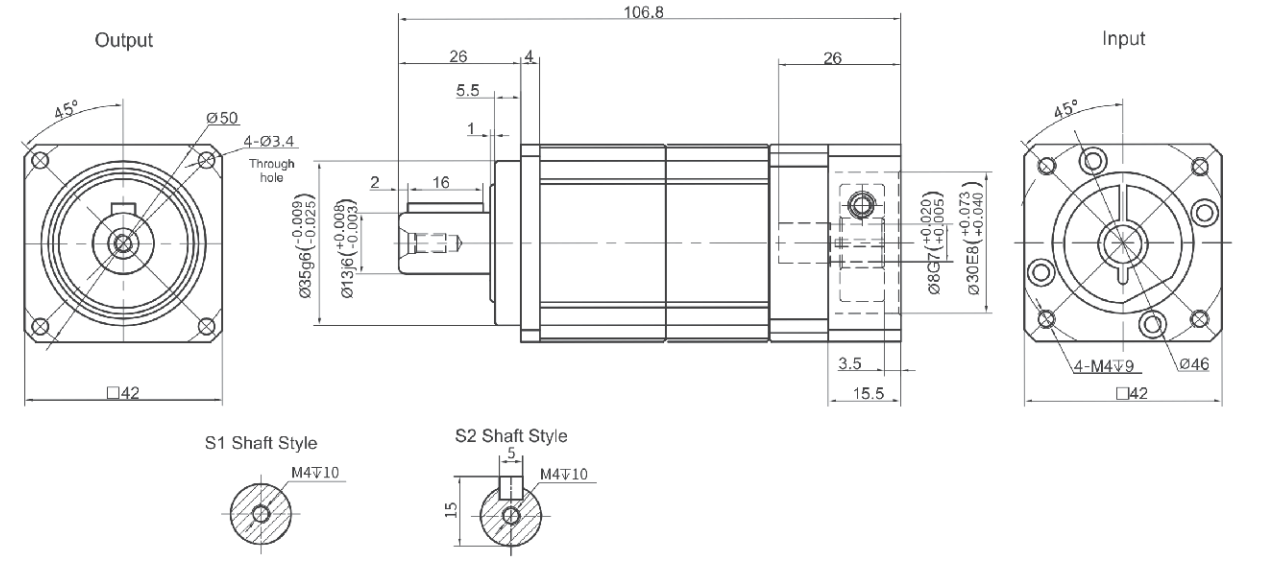
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TB042 Series

TB042 One Stage



TB042 Two Stage



TB060 INLINE - High Speed and Precision

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	$T_1 \times 3$								$T_1 \times 3$									
Nominal Input Speed	S_1	rpm	5000								5000									
Maximum Input Speed	S_2	rpm	10000								10000									
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$									
Maximum Radial Force	F_a	N	1530								1530									
Maximum Axial Force	F_b	N	765								765									
Torsional Rigidity	-	Nm/arcmin	7								7									
Efficiency	η	%	⩾97								⩾94									
Service Life	–	h	20000								20000									
Noise	–	dB	⩽58								⩽60									
Weight	–	Kg	1.3								1.9									
Backlash	P0	arcmin	⩽1								⩽3									
	P1		⩽3								⩽5									
	P2		⩽5								⩽7									
Operating Temperature	–	℃	-20~90								-20~90									
Lubrication	–		Synthetic Grease								Synthetic Grease									
Protection Class	–		IP65								IP65									
Mounting Position	–		Any Direction								Any Direction									
Moment of Inertia	J	$kg.cm^2$	0.16	0.14	0.13						0.13									

Notes:

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

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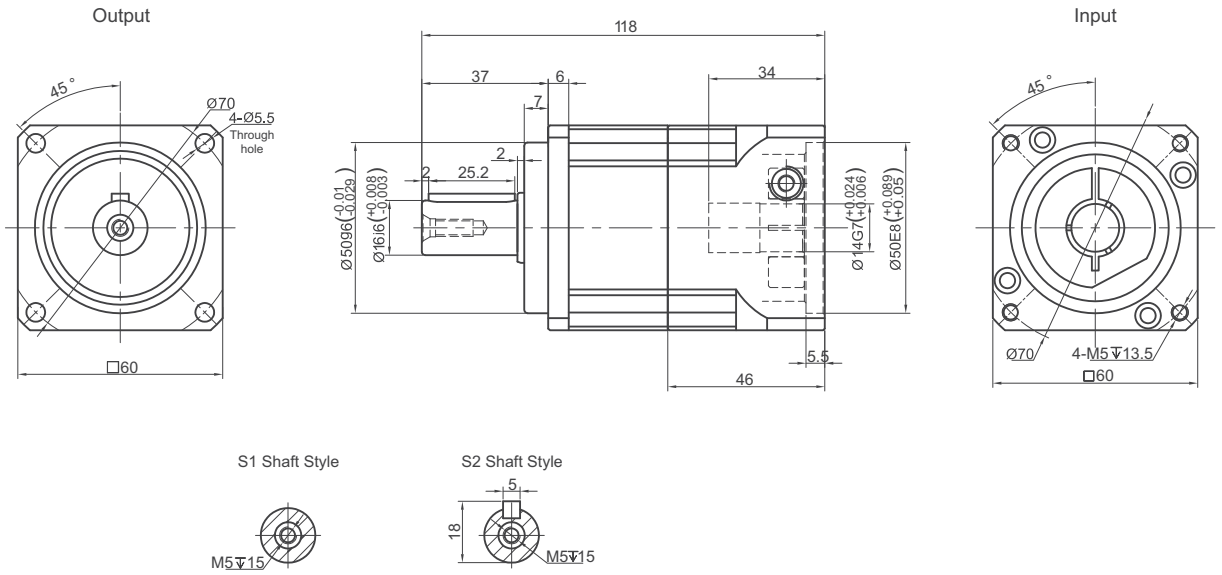
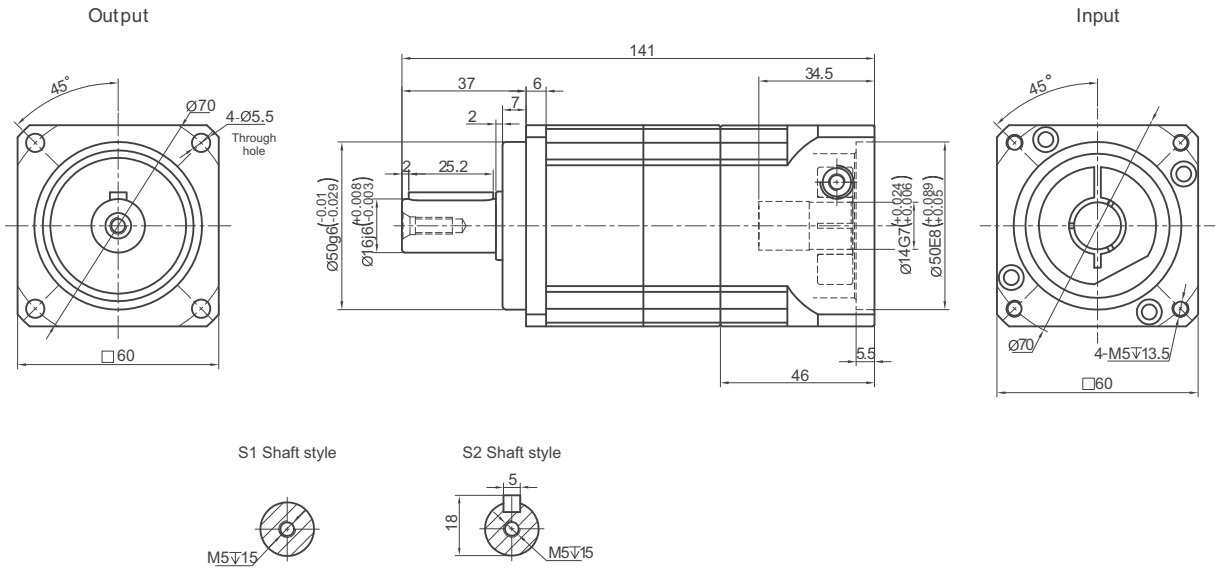
TB060 Series

TB060 One Stage



TB060 Two Stage



TB090 INLINE - High Speed and Precision

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	P0	arcmin	⩽1								⩽3										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	0.61	0.48	0.47	0.45		0.44			0.47					0.44					

Notes:

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

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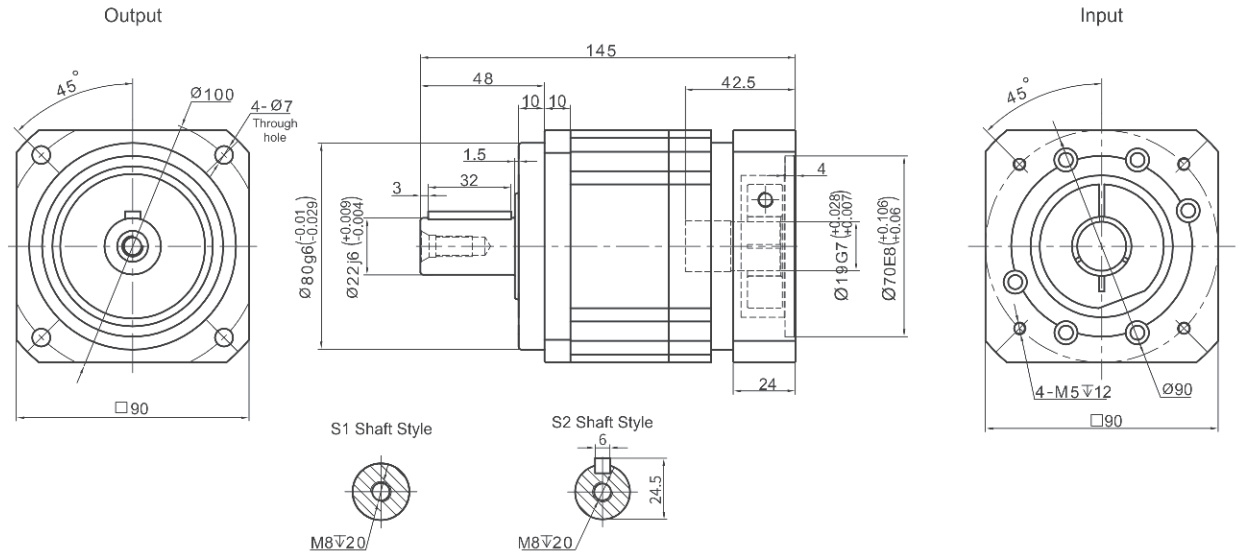
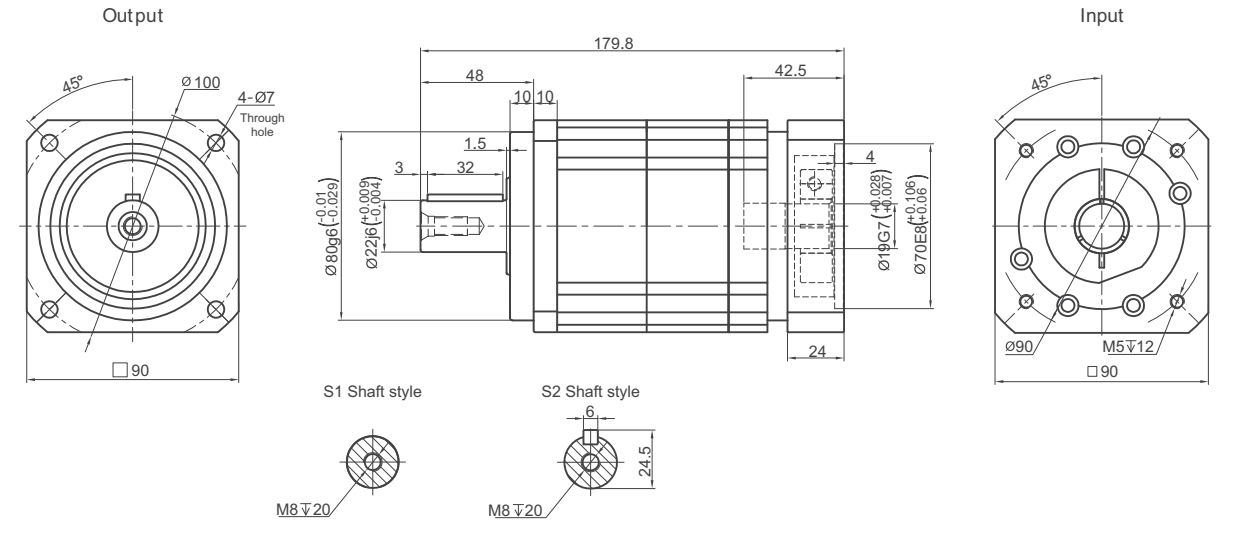
TB090 Series

TB090 One Stage



TB090 Two Stage



TB115 INLINE - High Speed and Precision

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	arcmin	⩽1								⩽3										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	3.25	2.74	2.71	2.65	2.62	2.58	–	2.57	0.47					0.44					

Notes:

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

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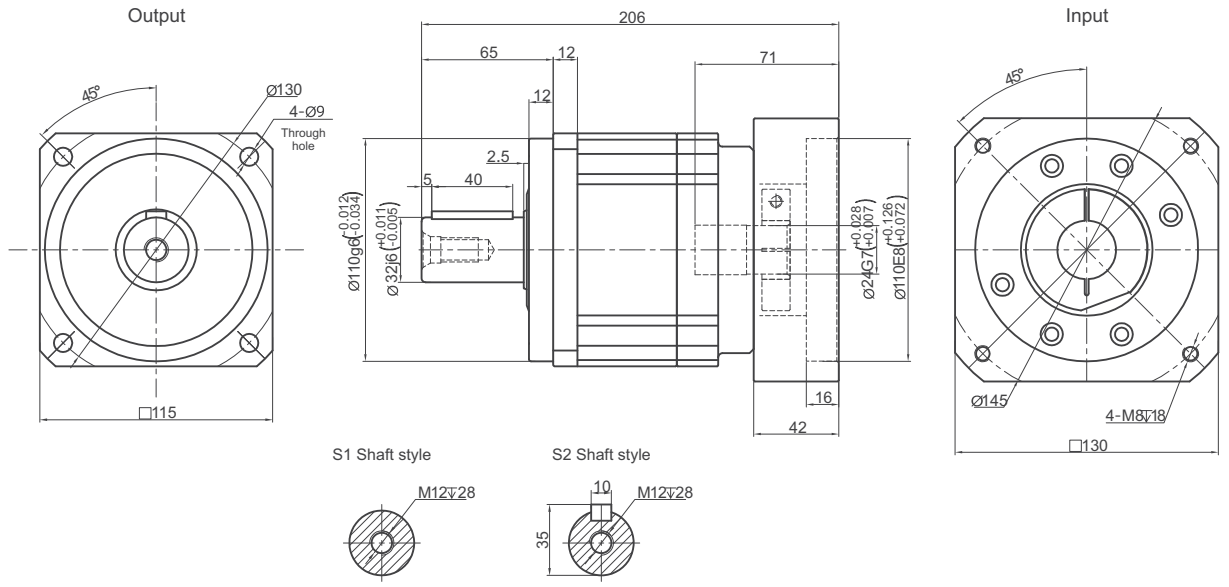
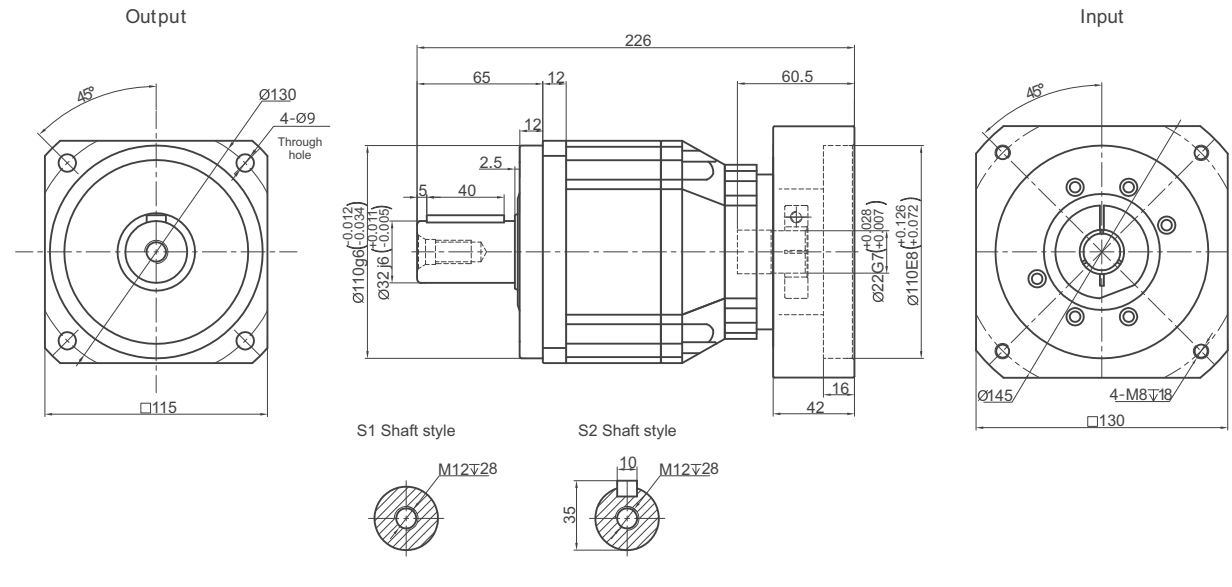
TB115 One Stage



TB115 Two Stage



TB142 INLINE - High Speed and Precision

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.

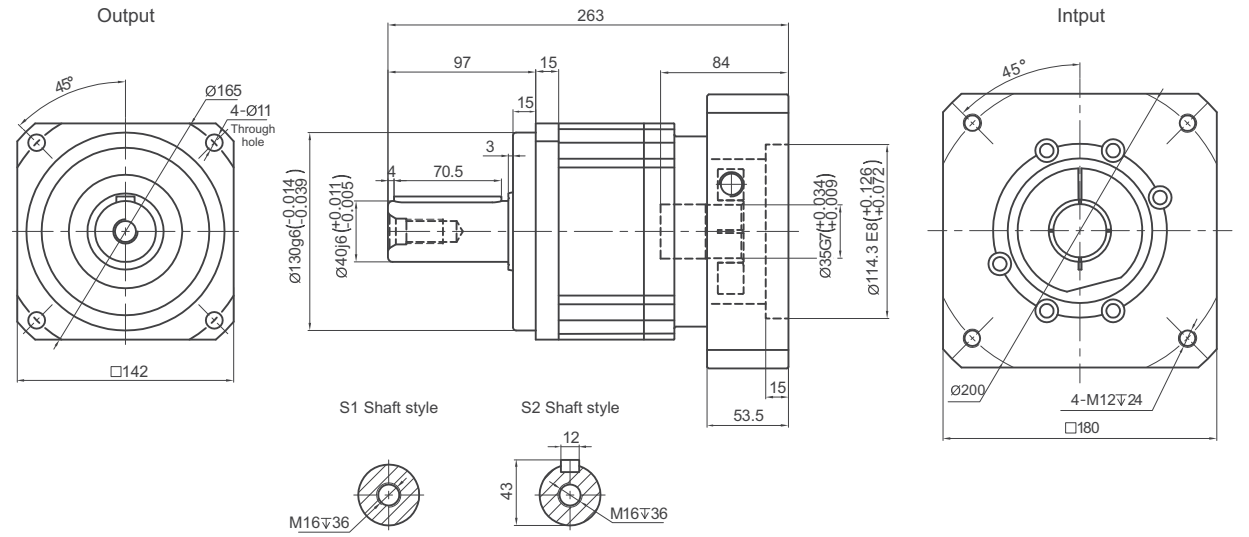
TB142			One Stage								Two Stage									
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	340	545	650	600	555	500	-	460	340	545	650	600	555	500	650	600	555	500	460
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$									
Nominal Input 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	arcmin	⩽1								⩽3									
	P1		⩽3								⩽5									
	P2		⩽5								⩽10									
Operating Temperature	–	℃	-20~90								-20~90									
Lubrication	–		Synthetic Grease								Synthetic Grease									
Protection Class	–		IP65								IP65									
Mounting Position	–		Any Direction								Any Direction									
Moment of Inertia	J	$kg.cm^2$	9.21	7.54	7.42	7.25	7.14	7.07	–	7.03	2.71						2.57			

Notes:

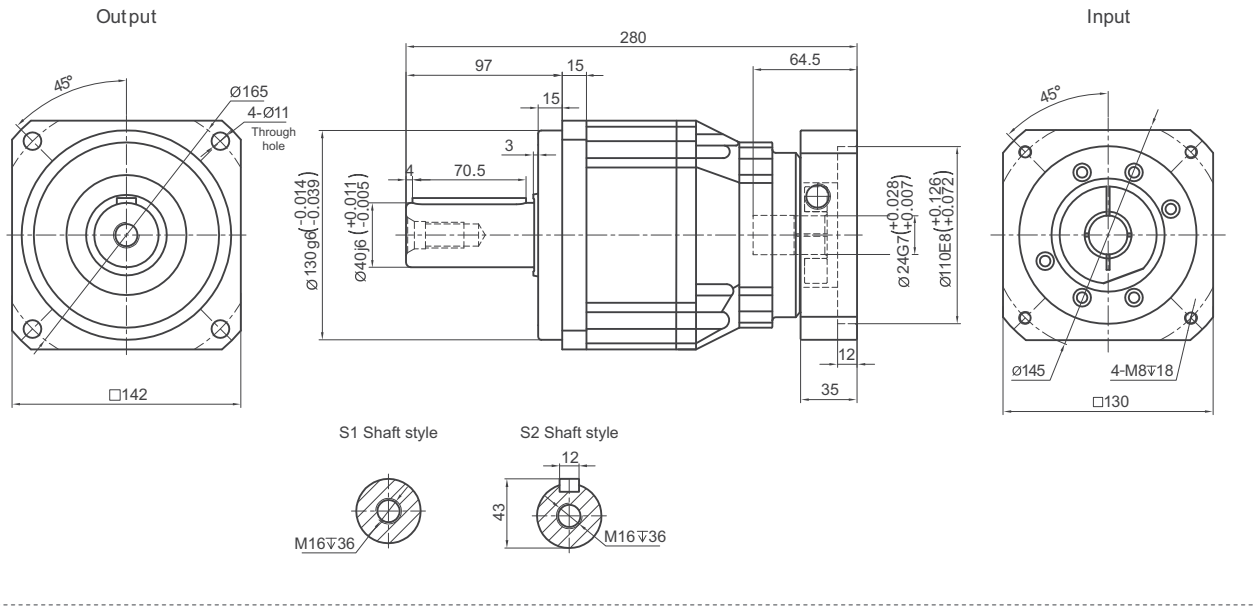
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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

TB142 One Stage



TB142 Two Stage



TB180 INLINE - High Speed and Precision

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.

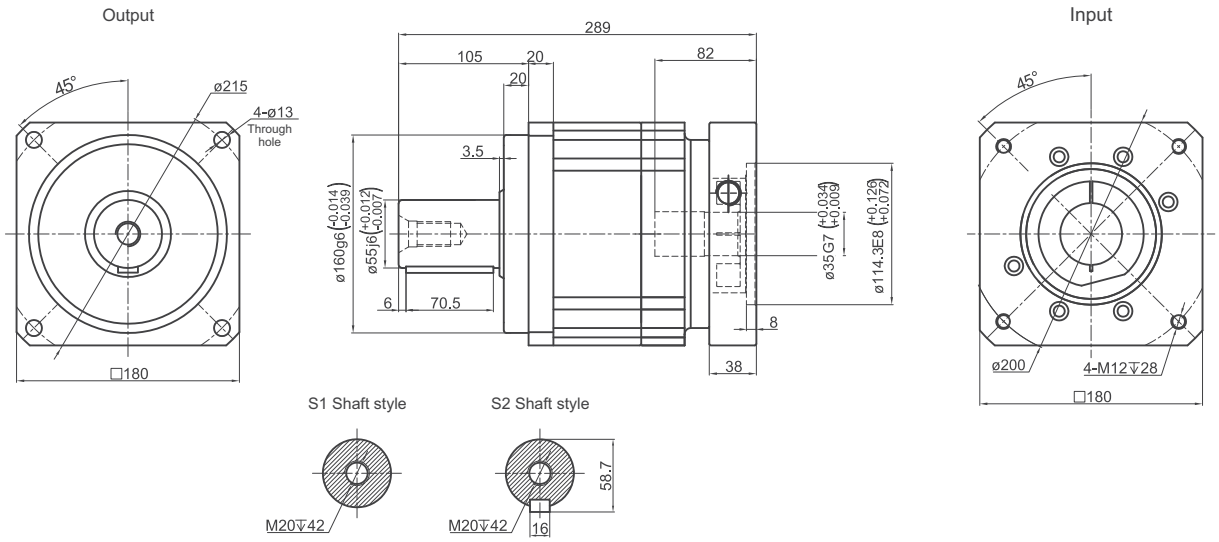
TB180			One Stage								Two Stage										
Speed Ratio		i	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	590	1050	1200	1108	1100	1000	-	910	590	1050	1200	1108	1100	1000	1200	1108	1100	1000	910
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$										
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	arcmin	⩽1								⩽3										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	28.98	23.67	23.29	22.75	22.48	22.59	–	22.51	7.42						7.03				

Notes:

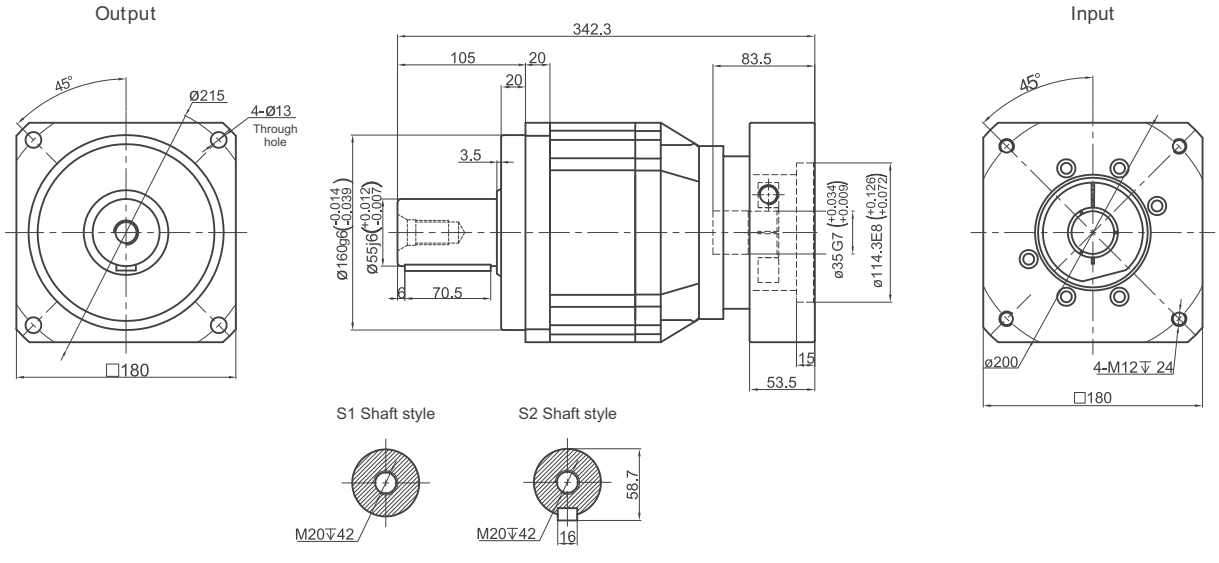
- Speed ratio (i=Sin/Sout)
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm, i=10.

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

TB180 One Stage



TB180 Two Stage



TB220 INLINE - High Speed and Precision

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	$T_1 \times 3$								$T_1 \times 3$										
Nominal Input Speed	S_1	rpm	2000								2000										
Maximum Input Speed	S_2	rpm	4000								4000										
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$										
Maximum Radial Force	F_a	N	50000								50000										
Maximum Axial Force	F_b	N	25000								25000										
Torsional Rigidity	–	Nm/arcmin	225								225										
Efficiency	η	%	⩾97								⩾94										
Service Life	–	h	20000								20000										
Noise	–	dB	⩽70								⩽70										
Weight	–	Kg	51.5								63.5										
Backlash	P0	arcmin	⩽1								⩽3										
	P1		⩽3								⩽5										
	P2		⩽5								⩽7										
Operating Temperature	–	℃	-20~90								-20~90										
Lubrication	–		Synthetic Grease								Synthetic Grease										
Protection Class	–		IP65								IP65										
Mounting Position	–		Any Direction								Any Direction										
Moment of Inertia	J	$kg.cm^2$	69.61	54.37	53.27	51.72	50.97	50.84	–	50.56	23.29						22.51				

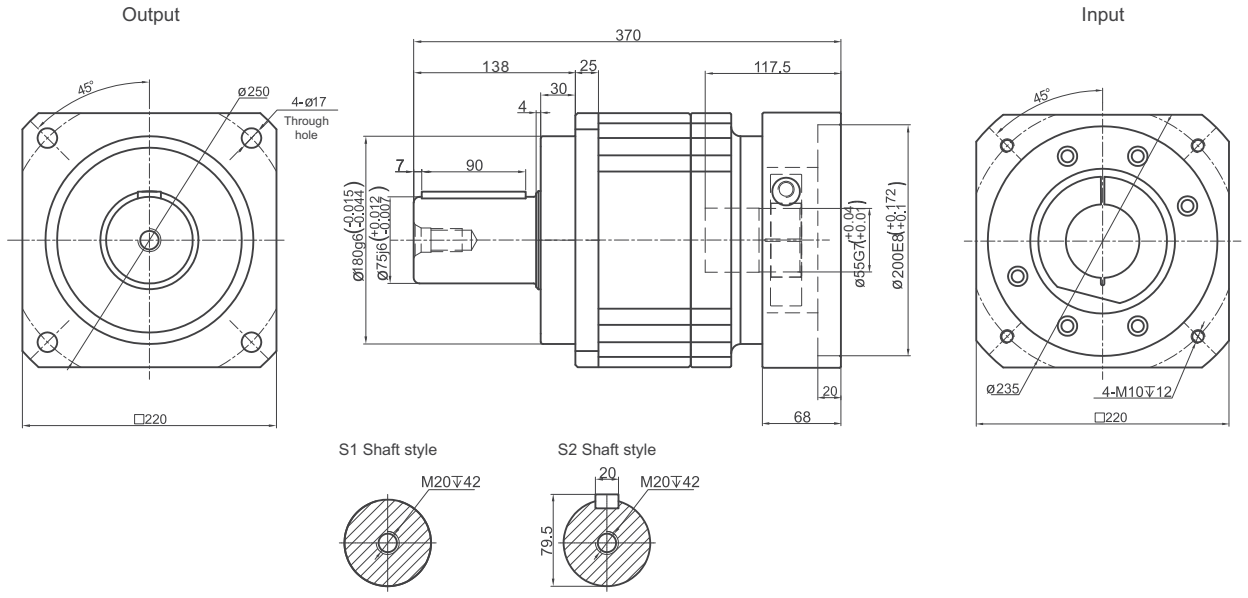
Notes:

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

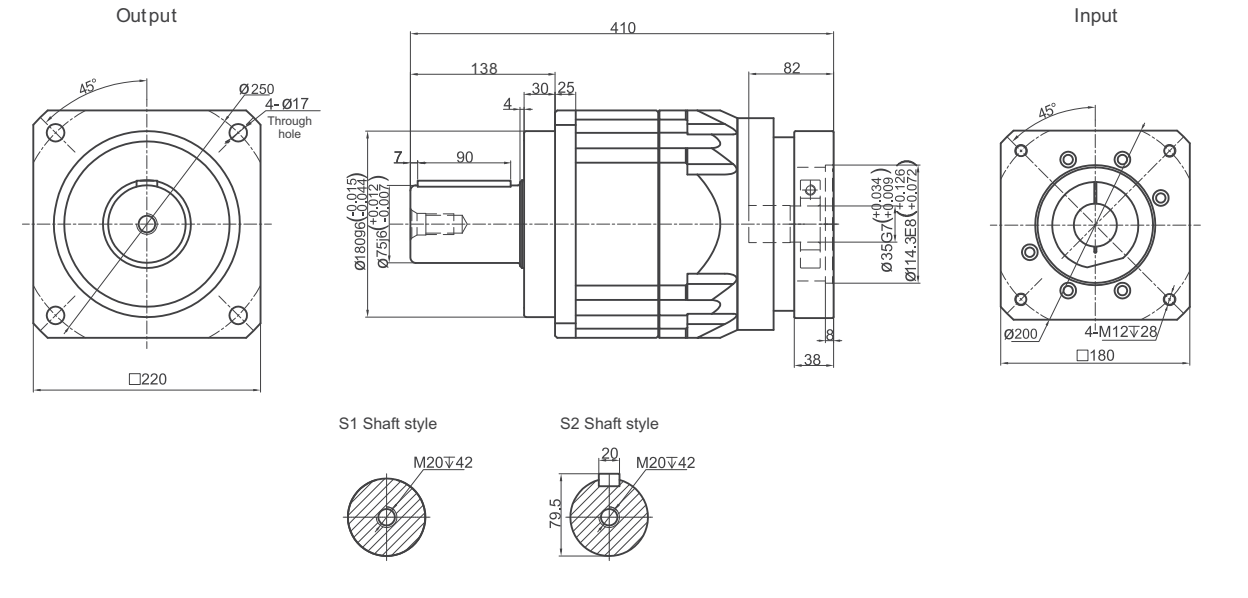
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TB220 Series

TB220 One Stage



TB220 Two Stage



TBR042 RIGHT ANGLE - High Speed and Precision

Performance Data

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

TBR042			One Stage								Two Stage									
Speed Ratio		i	–	4	5	6	7	8	9	10	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T_1	Nm	–	15	18	18	19	17	–	14	15	18	18	19	17	18	18	19	17	14
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$								$T_1 \times 3$									
Nominal Input Speed	S_1	rpm	5000								5000									
Maximum Input Speed	S_2	rpm	10000								10000									
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$								$T_1 \times 3 \times 60\%$									
Maximum Radial Force	F_a	N	780								780									
Maximum Axial Force	F_b	N	390								390									
Torsional Rigidity	–	Nm/arcmin	3								3									
Efficiency	η	%	⩾95								⩾92									
Service Life	–	h	20000								20000									
Noise	–	dB	⩽61								⩽61									
Weight	–	Kg	0.7								0.9									
Backlash	P0	arcmin	–								–									
	P1		⩽4								⩽7									
	P2		⩽6								⩽9									
Operating Temperature	–	℃	-20~90								-20~90									
Lubrication	–		Synthetic Grease								Synthetic Grease									
Protection Class	–		IP65								IP65									
Mounting Position	–		Any Direction								Any Direction									
Moment of Inertia	J	$kg.cm^2$	0.09								0.09									

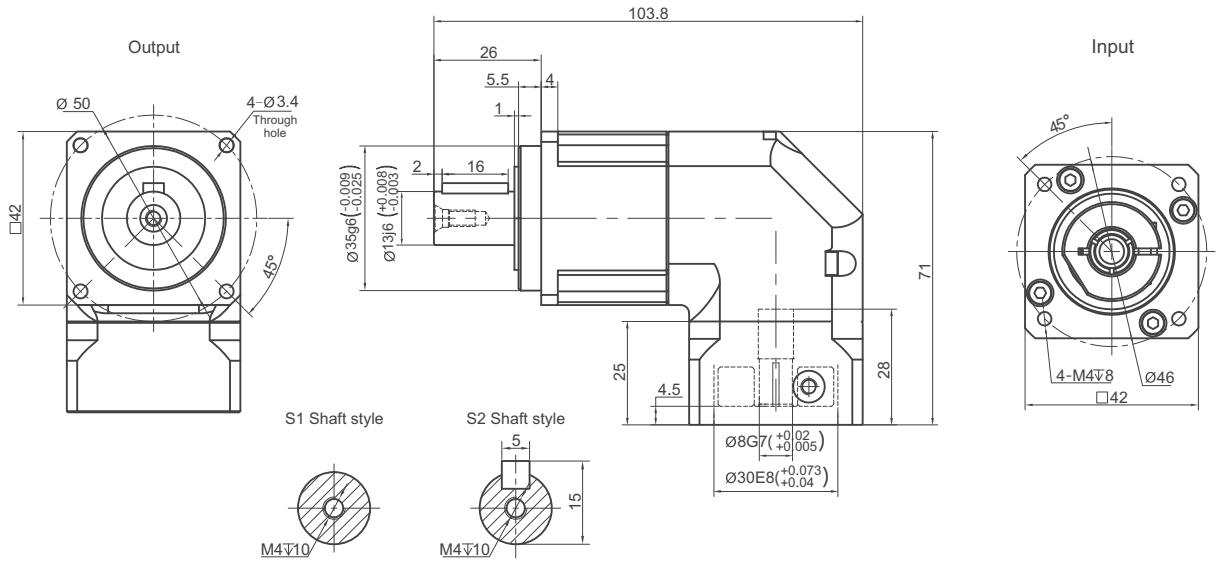
Notes:

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

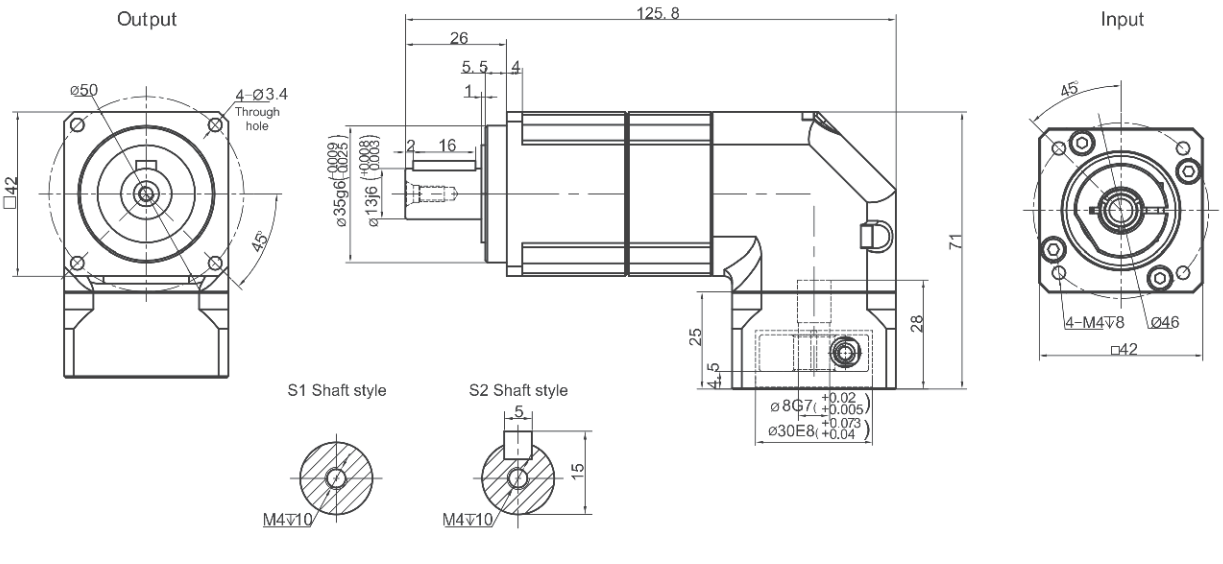
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR042 Series

TBR042 One Stage



TBR042 Two Stage



TBR060 RIGHT ANGLE - High Speed and Precision

Performance Data

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

TBR060			One Stage													Two Stage																
Speed Ratio	i		3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200					
Nominal Output Torque	T_1	Nm	50	48	58	55	50	45	-	42	55	42	45	42	58	55	50	45	58	55	50	45	42	55	50	45	-	42					
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$												$T_1 \times 3$																	
Nominal Input Speed	S_1	rpm	5000												5000																	
Maximum Input Speed	S_2	rpm	10000												10000																	
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$												$T_1 \times 3 \times 60\%$																	
Maximum Radial Force	F_a	N	1530												1530																	
Maximum Axial Force	F_b	N	765												765																	
Torsional Rigidity	–	Nm/arcmin	7												7																	
Efficiency	η	%	⩾95												⩾92																	
Service Life	–	h	20000												20000																	
Noise	–	dB	⩽63												⩽63																	
Weight	–	Kg	2												2.5																	
Backlash	P0	arcmin	-												-																	
	P1		⩽4												⩽7																	
	P2		⩽6												⩽9																	
Operating Temperature	–	℃	-20~90												-20~90																	
Lubrication	–		Synthetic Grease												Synthetic Grease																	
Protection Class	–		IP65												IP65																	
Mounting Position	–		Any Direction												Any Direction																	
Moment of Inertia	J	$kg.cm^2$	0.35							0.07					0.09																	

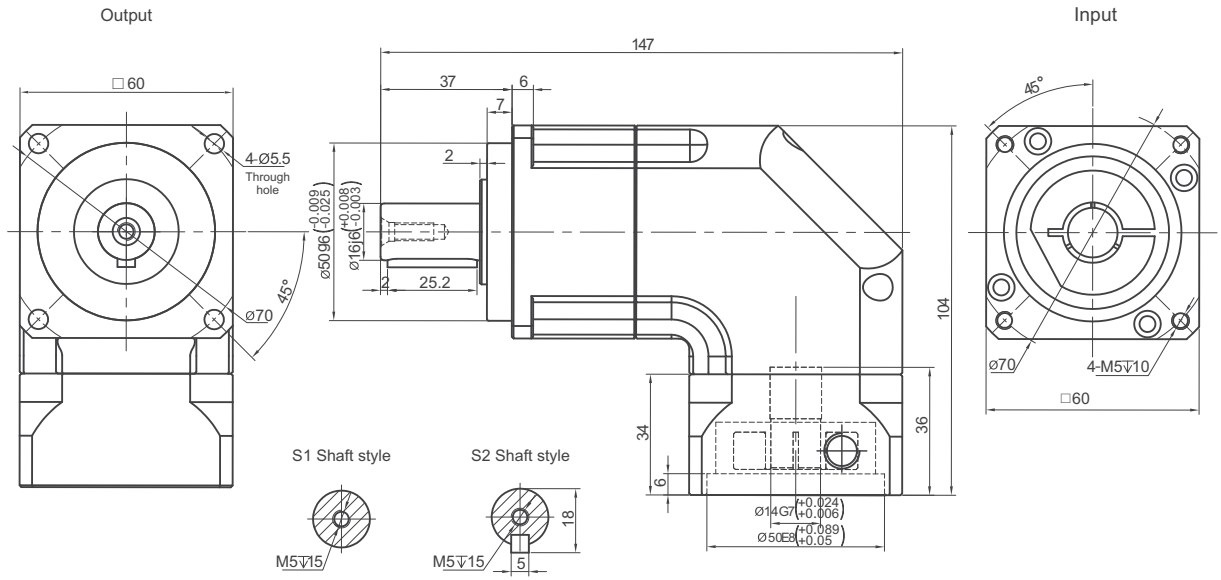
Notes:

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

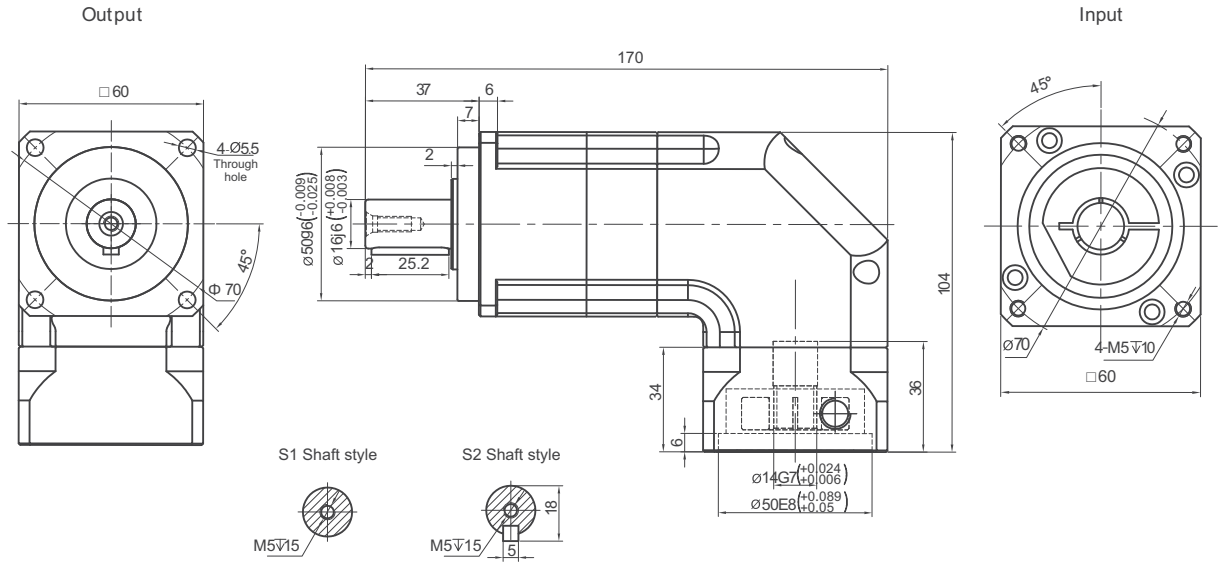
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR060 Series

TBR060 One Stage



TBR060 Two Stage



TBR090 RIGHT ANGLE - High Speed and Precision

Performance Data

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

TBR090			One Stage												Two Stage																
Speed Ratio	i		3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200				
Nominal Output Torque	T_1	Nm	100	120	150	148	140	123	-	102	148	140	123	102	150	148	140	120	150	148	140	123	102	148	140	123	-	102				
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$												$T_1 \times 3$																
Nominal Input Speed	S_1	rpm	4000												4000																
Maximum Input Speed	S_2	rpm	8000												8000																
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$												$T_1 \times 3 \times 60\%$																
Maximum Radial Force	F_a	N	3250												3250																
Maximum Axial Force	F_b	N	1625												1625																
Torsional Rigidity	–	Nm/arcmin	14												14																
Efficiency	η	%	⩾95												⩾92																
Service Life	–	h	20000												20000																
Noise	–	dB	⩽65												⩽65																
Weight	–	Kg	6												6.3																
Backlash	P0	arcmin	⩽2												⩽4																
	P1		⩽4												⩽7																
	P2		⩽6												⩽9																
Operating Temperature	–	℃	-20~90												-20~90																
Lubrication	–		Synthetic Grease												Synthetic Grease																
Protection Class	–		IP65												IP65																
Mounting Position	–		Any Direction												Any Direction																
Moment of Inertia	J	$kg.cm^2$	2.25										1.87		2.25														1.87		

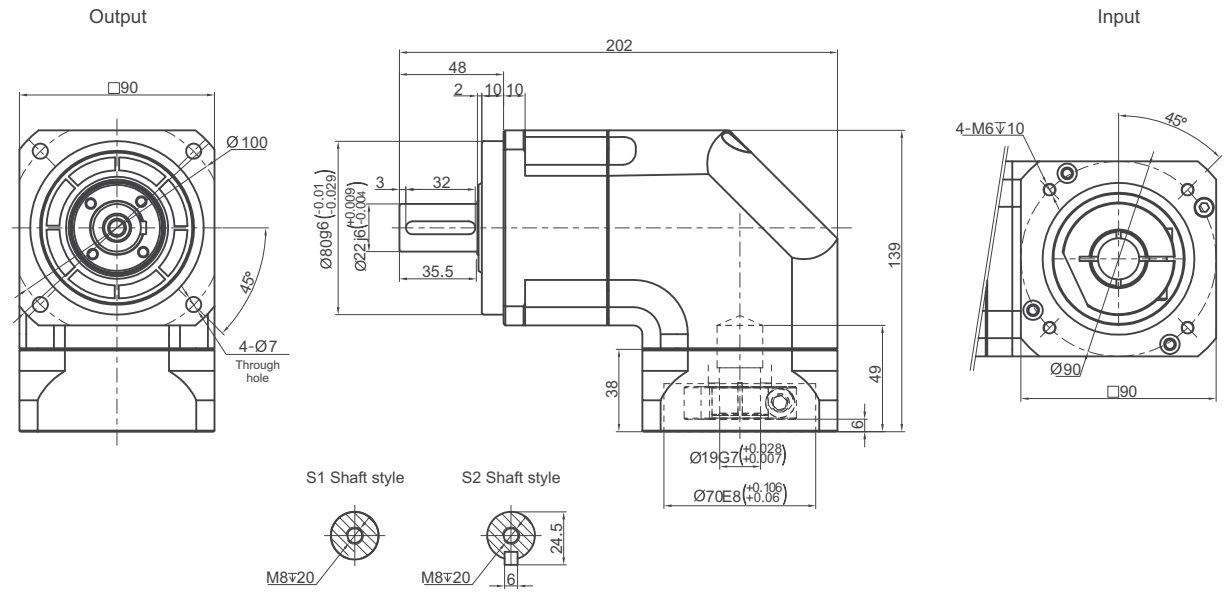
Notes:

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

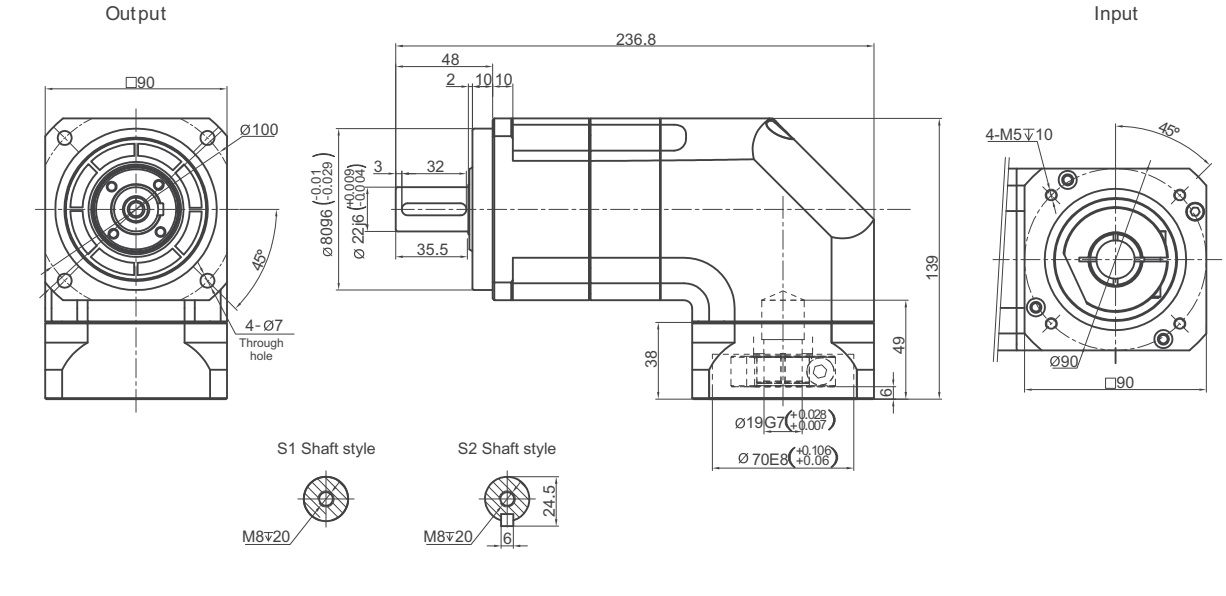
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR090 Series

TBR090 One Stage



TBR090 Two Stage



TBR115 RIGHT ANGLE - High Speed and Precision

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	$T_1 \times 3$												$T_1 \times 3$													
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	%	⩾95												⩾92													
Service Life	–	h	20000												20000													
Noise	–	dB	⩽68												⩽68													
Weight	–	Kg	13												12.5													
Backlash	P0	arcmin	⩽2												⩽4													
	P1		⩽4												⩽7													
	P2		⩽6												⩽9													
Operating Temperature	–	℃	-20~90												-20~90													
Lubrication	–		Synthetic Grease												Synthetic Grease													
Protection Class	–		IP65												IP65													
Mounting Position	–		Any Direction												Any Direction													
Moment of Inertia	J	$kg.cm^2$	6.84						6.25						2.25						1.87							

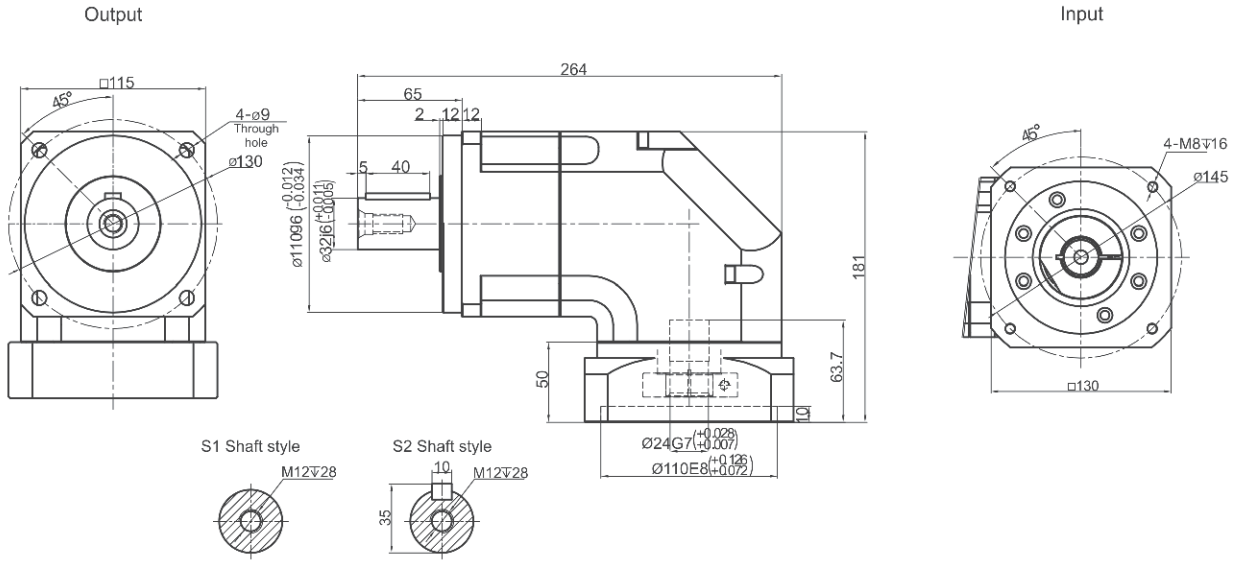
Notes:

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

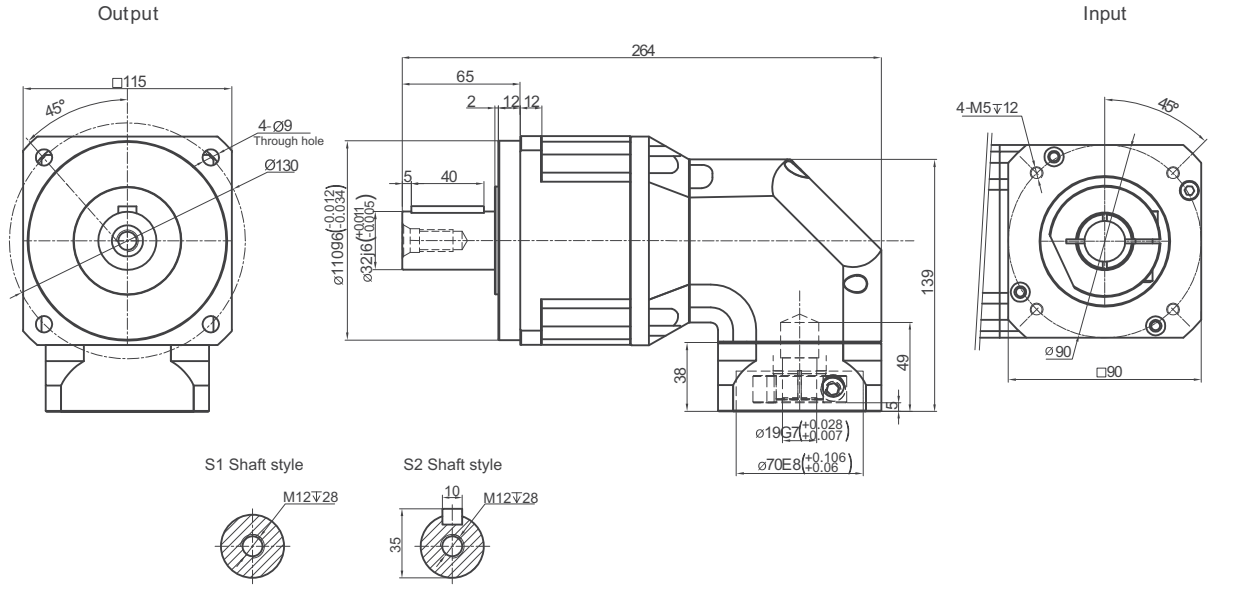
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR115 Series

TBR115 One Stage



TBR115 Two Stage



TBR142 RIGHT ANGLE - High Speed and Precision

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																											
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	$T_1 \times 3$												$T_1 \times 3$															
Nominal Input Speed	S_1	rpm	3000												3000															
Maximum Input Speed	S_2	rpm	6000												6000															
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$												$T_1 \times 3 \times 60\%$															
Maximum Radial Force	F_a	N	9400												9400															
Maximum Axial Force	F_b	N	4700												4700															
Torsional Rigidity	–	Nm/arcmin	50												50															
Efficiency	η	%	⩾95												⩾92															
Service Life	–	h	20000												20000															
Noise	–	dB	⩽70												⩽70															
Weight	–	Kg	25.2												21.4															
Backlash	P0	arcmin	⩽2												⩽4															
	P1		⩽4												⩽7															
	P2		⩽6												⩽9															
Operating Temperature	–	℃	-20~90												-20~90															
Lubrication	–		Synthetic Grease												Synthetic Grease															
Protection Class	–		IP65												IP65															
Mounting Position	–		Any Direction												Any Direction															
Moment of Inertia	J	$kg.cm^2$	23.4						21.8						6.84								6.25							

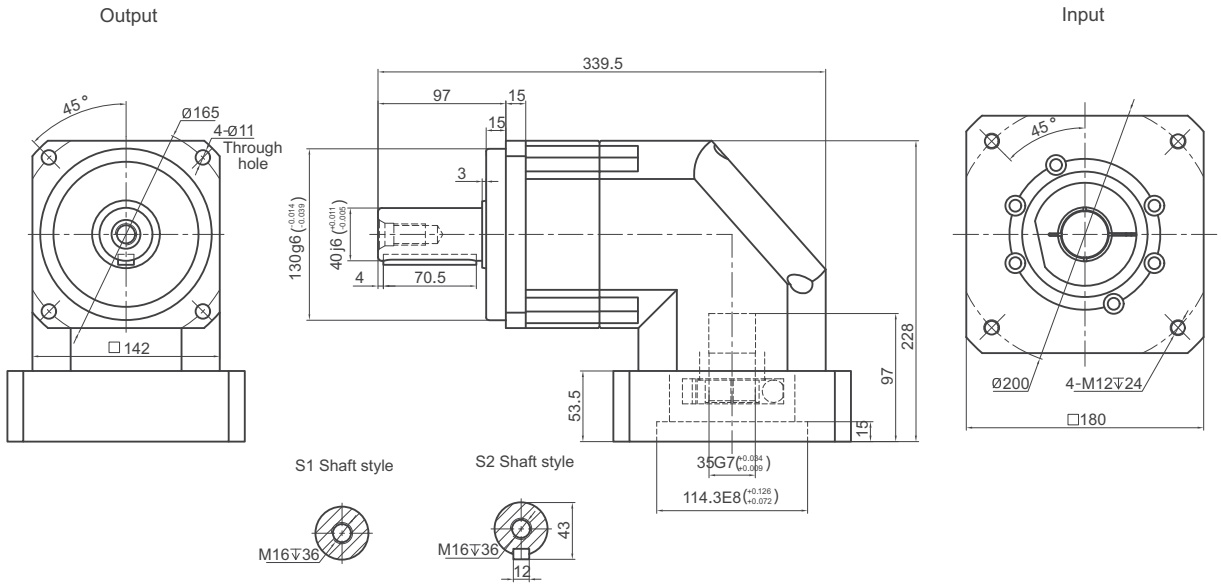
Notes:

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

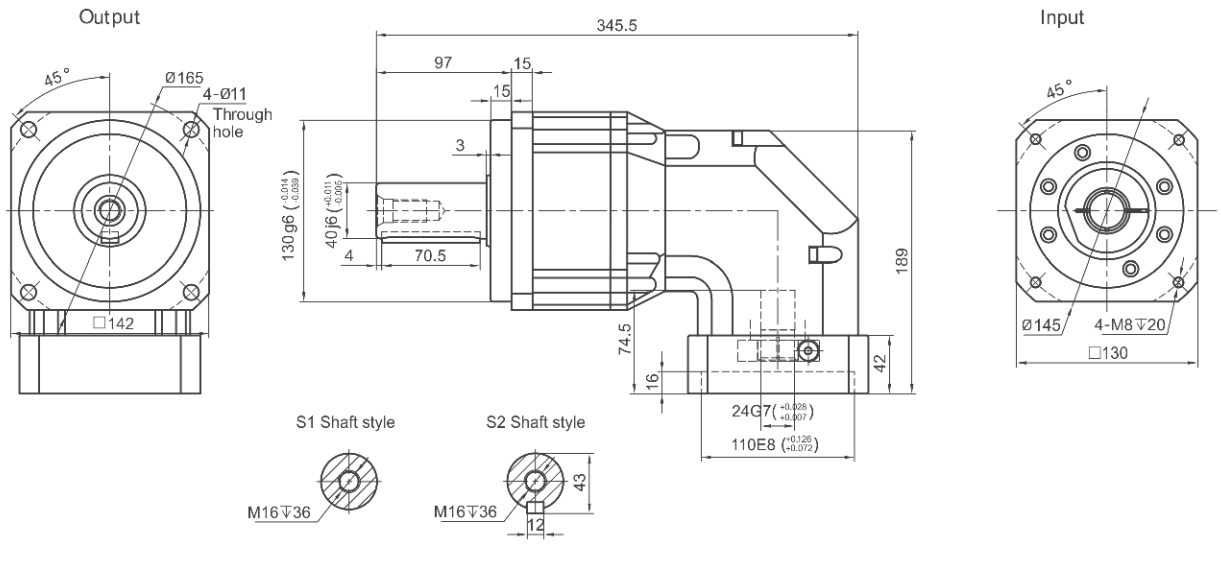
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR142 Series

TBR142 One Stage



TBR142 Two Stage



TBR180 RIGHT ANGLE - High Speed and Precision

Performance Data

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

TBR180			One Stage												Two Stage															
Speed Ratio	i		3	4	5	6	7	8	9	10	12	14	16	20	25	30	35	40	50	60	70	80	100	120	140	160	180	200		
Nominal Output Torque	T_1	Nm	590	1040	1200	1108	1100	1000	-	910	1108	1100	1000	910	1200	1108	1100	1000	1200	1108	1100	1000	910	1108	1100	1000	-	910		
Emergency Stop Torque	T_2	Nm	$T_1 \times 3$												$T_1 \times 3$															
Nominal Input Speed	S_1	rpm	3000												3000															
Maximum Input Speed	S_2	rpm	6000												6000															
Maximum Output Torque	T_4	Nm	$T_1 \times 3 \times 60\%$												$T_1 \times 3 \times 60\%$															
Maximum Radial Force	F_a	N	14500												14500															
Maximum Axial Force	F_b	N	7250												7250															
Torsional Rigidity	–	Nm/arcmin	145												145															
Efficiency	η	%	⩾95												⩾92															
Service Life	–	h	20000												20000															
Noise	–	dB	⩽72												⩽72															
Weight	–	Kg	46.5												43															
Backlash	P0	arcmin	⩽2												⩽4															
	P1		⩽4												⩽7															
	P2		⩽6												⩽9															
Operating Temperature	–	℃	-20~90												-20~90															
Lubrication	–		Synthetic Grease												Synthetic Grease															
Protection Class	–		IP65												IP65															
Mounting Position	–		Any Direction												Any Direction															
Moment of Inertia	J	$kg.cm^2$	68.9						65.6						23.4								21.8							

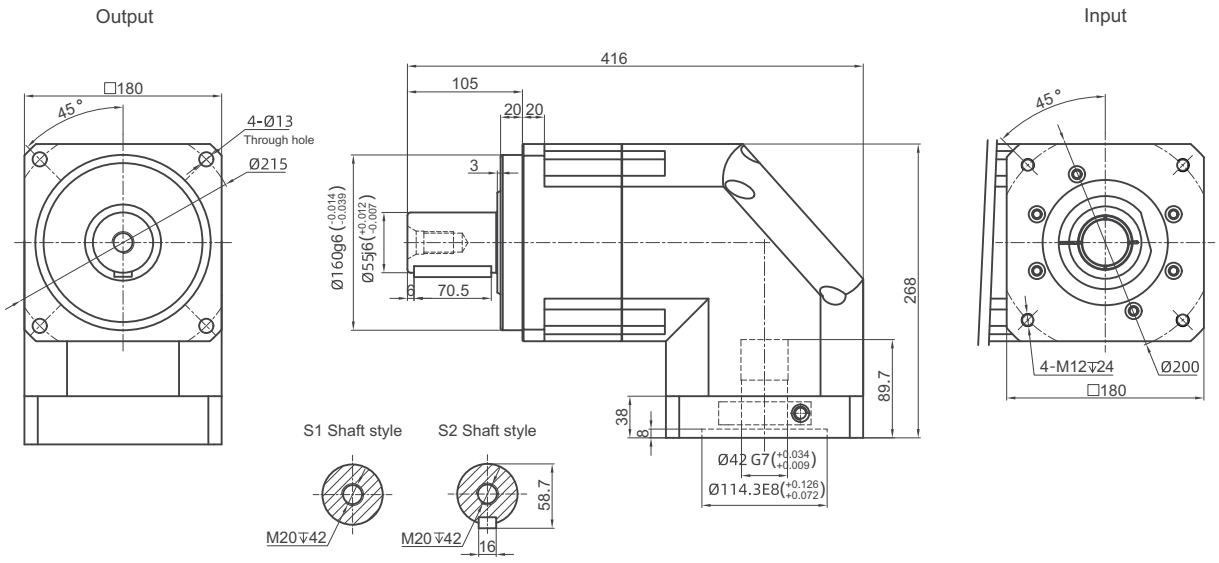
Notes:

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

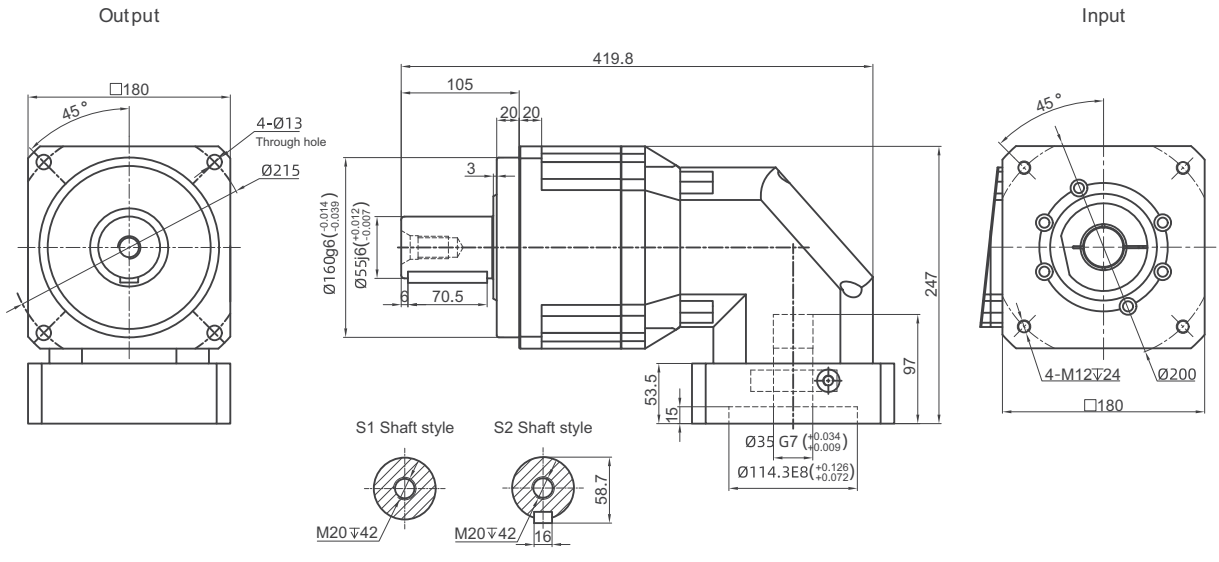
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

TBR180 Series

TBR180 One Stage



TBR180 Two Stage



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