

## 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<sup>®</sup>

## DRIVES

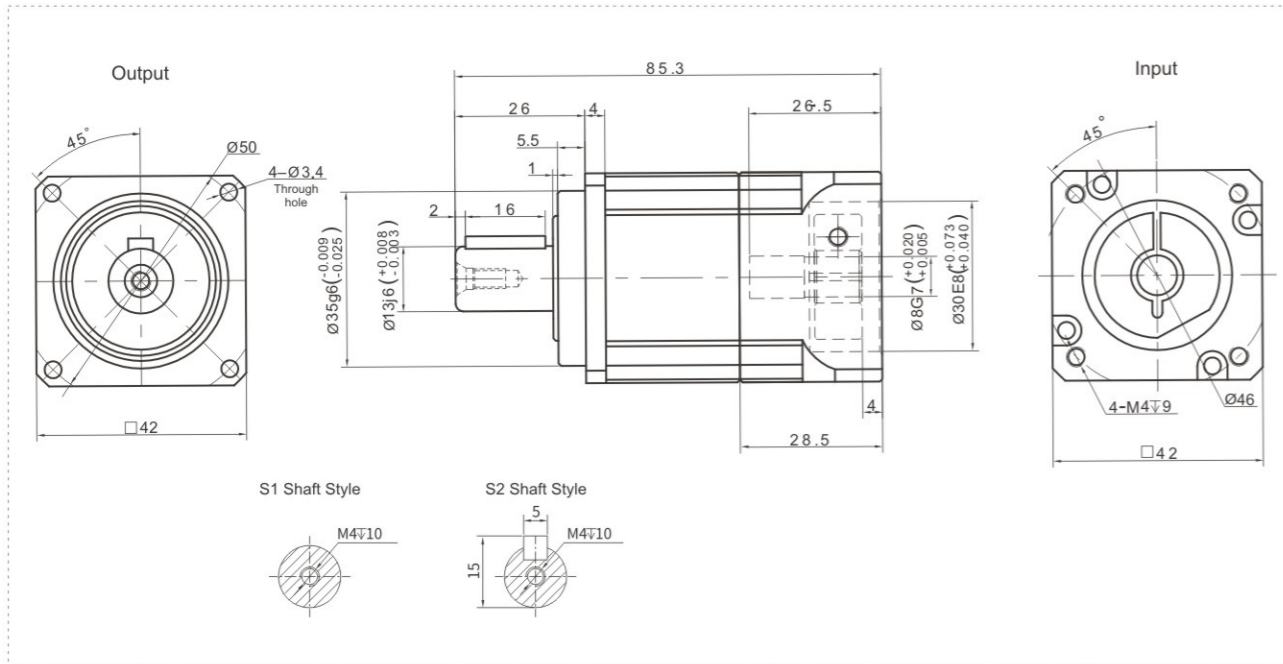
# THE PRECISION



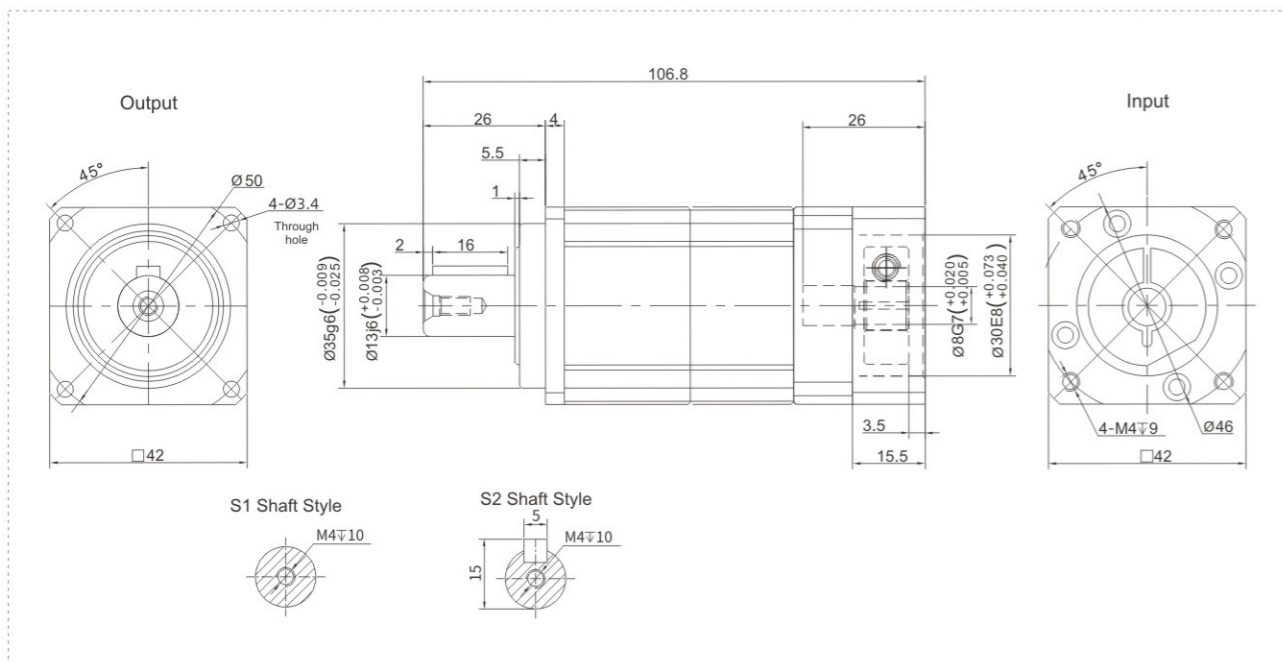
TB

## TB042 Series

### TB042 One Stage



### TB042 Two Stage



## Performance Data

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

TB042	One Stage										Two Stage										
	Speed Ratio	i	-	4	5	6	7	8	9	10	-	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	$T_1$	Nm	-	19	20	19	19	17	-	14	-	19	20	19	19	17	20	19	19	17	14
Emergency Stop Torque	$T_2$	Nm	$T_1 \times 3$																		
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	780																		
Maximum Axial Force	$F_b$	N	390																		
Torsional Rigidity	-	Nm/arcmin	3																		
Efficiency	$\eta$	%	$\geq 97$																		
Service Life	-	h	20000																		
Noise	-	dB	$\leq 55$																		
Weight	-	Kg	0.5																		
Backlash	$P_0$		$\leq 1$																		
	$P_1$	arcmin	$\leq 3$																		
	$P_2$		$\leq 5$																		
Operating Temperature	-	$^{\circ}\text{C}$	$-20-90$																		
Lubrication	-		Synthetic Grease																		
Protection Class	-		IP65																		
Mounting Position	-		Any Direction																		
Moment of Inertia	J	kg.cm <sup>2</sup>	0.03																		

### 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,  $i=10$ .

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

TBR

TD

TDR

TE

TER

TF

TCB

TCBR

TCE

TM

TB

TBR

TD

TDR

TE

TER

TF

TCB

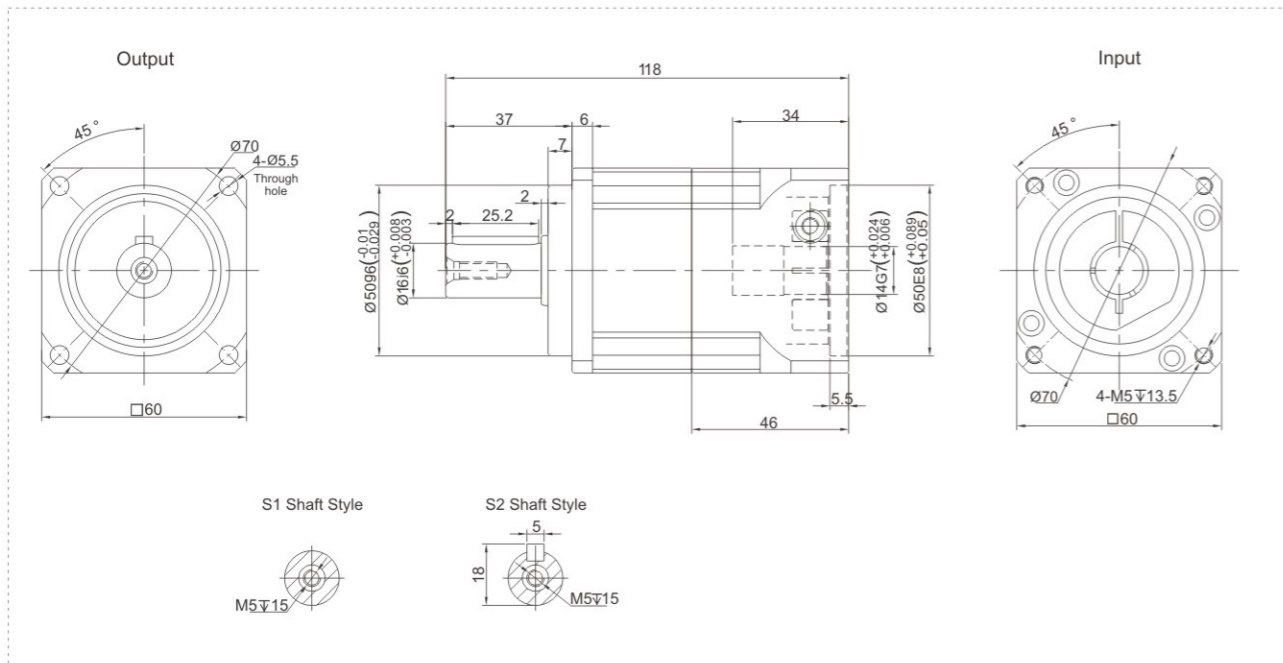
TCBR

TCE

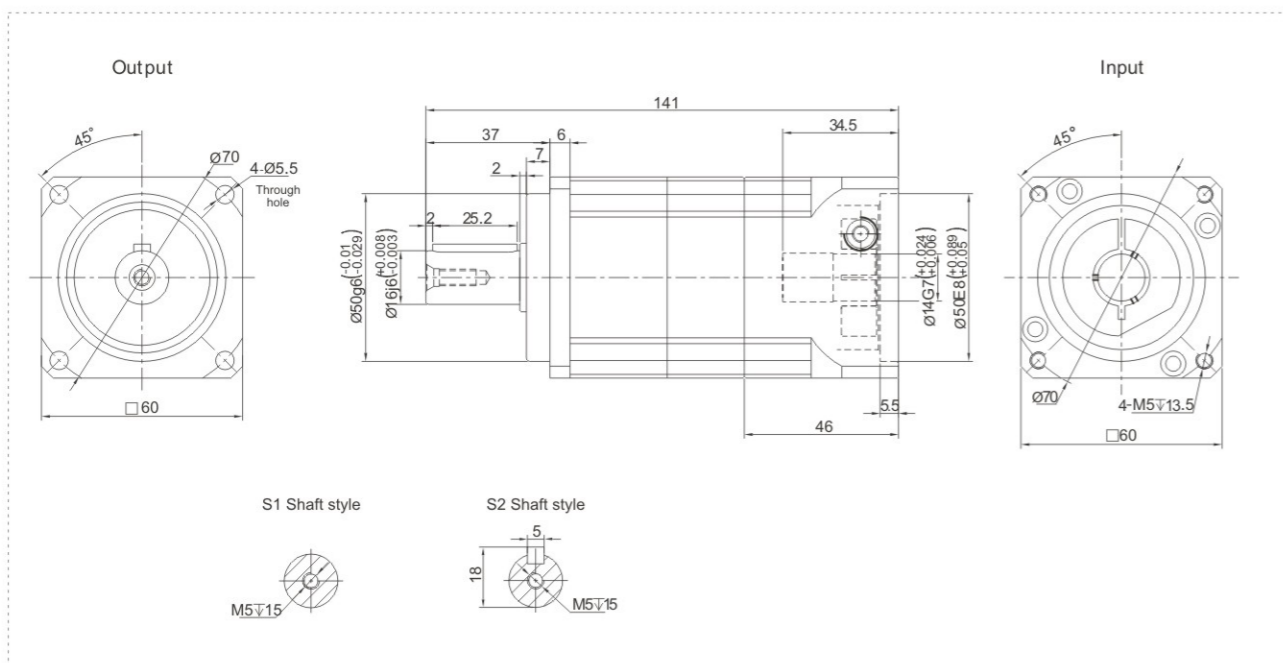
TM

## 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	$T_1 \times 3$										$T_1 \times 3$									
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	$\eta$ %	$\geq 97$										$\geq 94$									
Service Life	- h	20000										20000									
Noise	- dB	$\leq 58$										$\leq 60$									
Weight	- Kg	1.3										1.9									
Backlash	P0	$\leq 1$										$\leq 3$									
	P1	$\leq 3$										$\leq 5$									
	P2	$\leq 5$										$\leq 7$									
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 <sup>2</sup>	0.16	0.14	0.13						0.13											

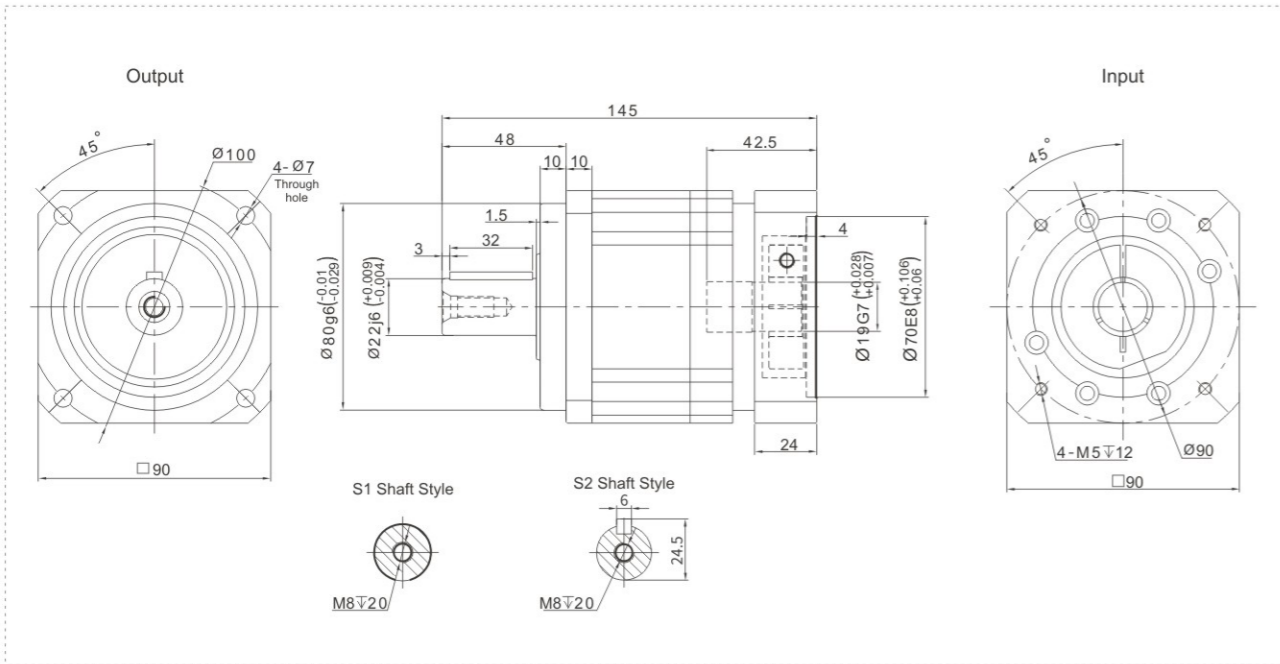
### Notes:

- 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,  $i=10$ .

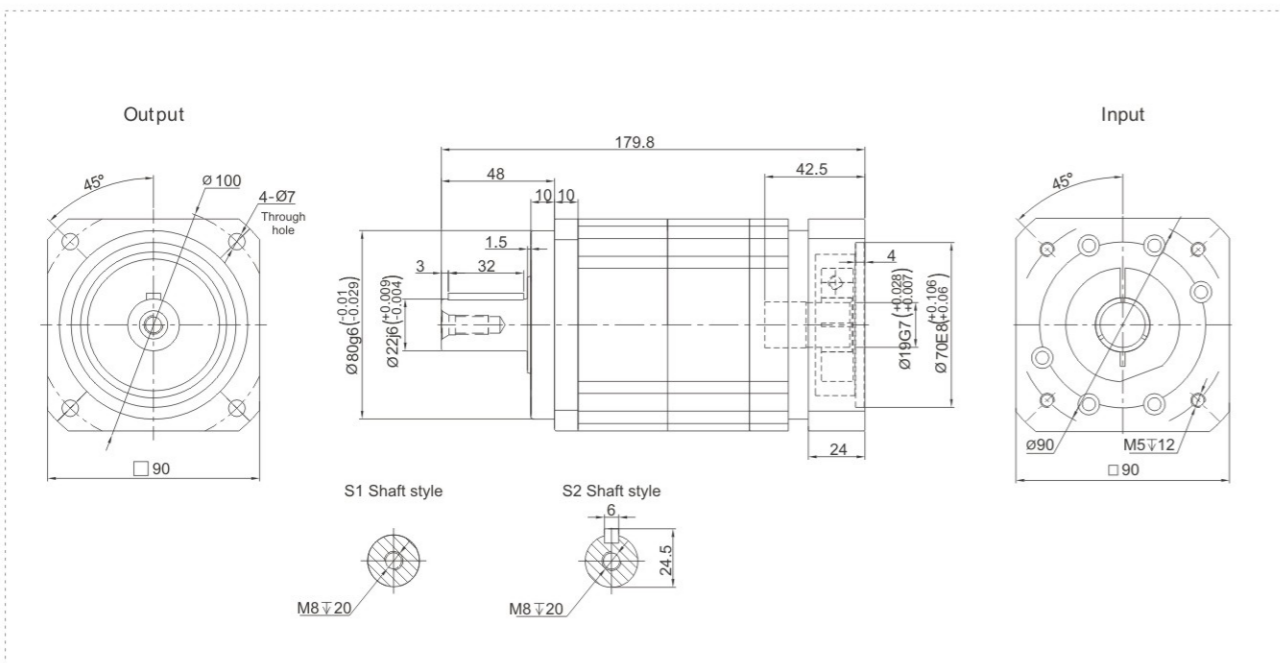
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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 <sub>1</sub>	Nm	130	140	160	148	140	123	-	102	130	140	160	148	140	123	160	148	140	123	102	
Emergency Stop Torque	T <sub>2</sub>	Nm	T <sub>1</sub> × 3										T <sub>1</sub> × 3									
Nominal Input Speed	S <sub>1</sub>	rpm	4000										4000									
Maximum Input Speed	S <sub>2</sub>	rpm	8000										8000									
Maximum Output Torque	T <sub>4</sub>	Nm	T <sub>1</sub> × 3 × 60%										T <sub>1</sub> × 3 × 60%									
Maximum Radial Force	F <sub>a</sub>	N	3250										3250									
Maximum Axial Force	F <sub>b</sub>	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 <sup>2</sup>	0.61	0.48	0.47	0.45	0.44					0.47									0.44	

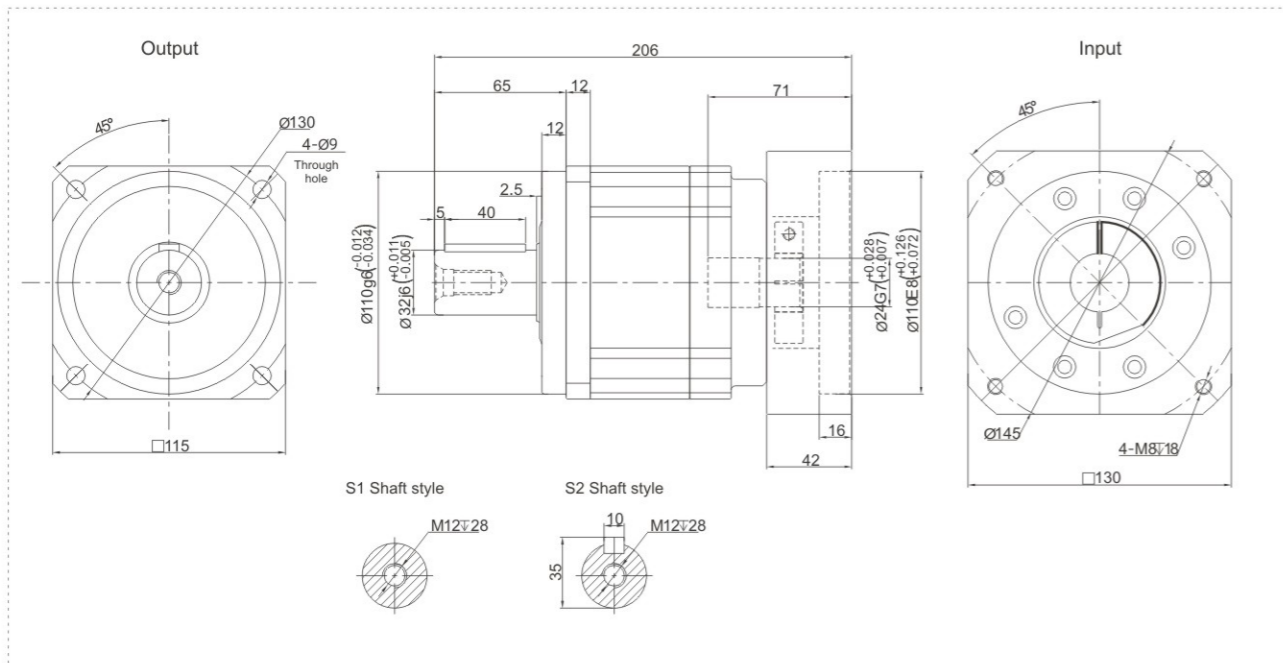
### Notes:

- Speed ratio (i=S<sub>in</sub>/S<sub>out</sub>)
- 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.

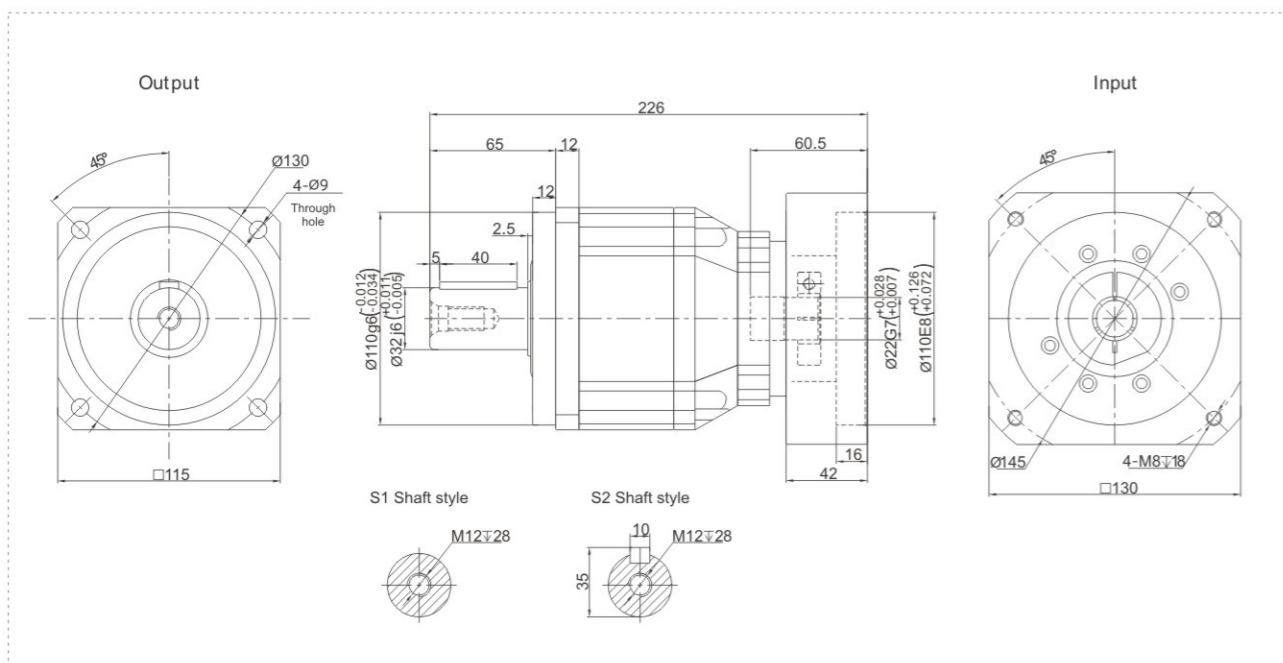
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$\eta$	%	$\geq 97$										$\geq 94$									
Service Life	-	h	20000										20000									
Noise	-	dB	$\leq 63$										$\leq 63$									
Weight	-	Kg	8.5										9.5									
Backlash	P0		$\leq 1$										$\leq 3$									
	P1	arcmin	$\leq 3$										$\leq 5$									
	P2		$\leq 5$										$\leq 7$									
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 <sup>2</sup>	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57						0.47					0.44	

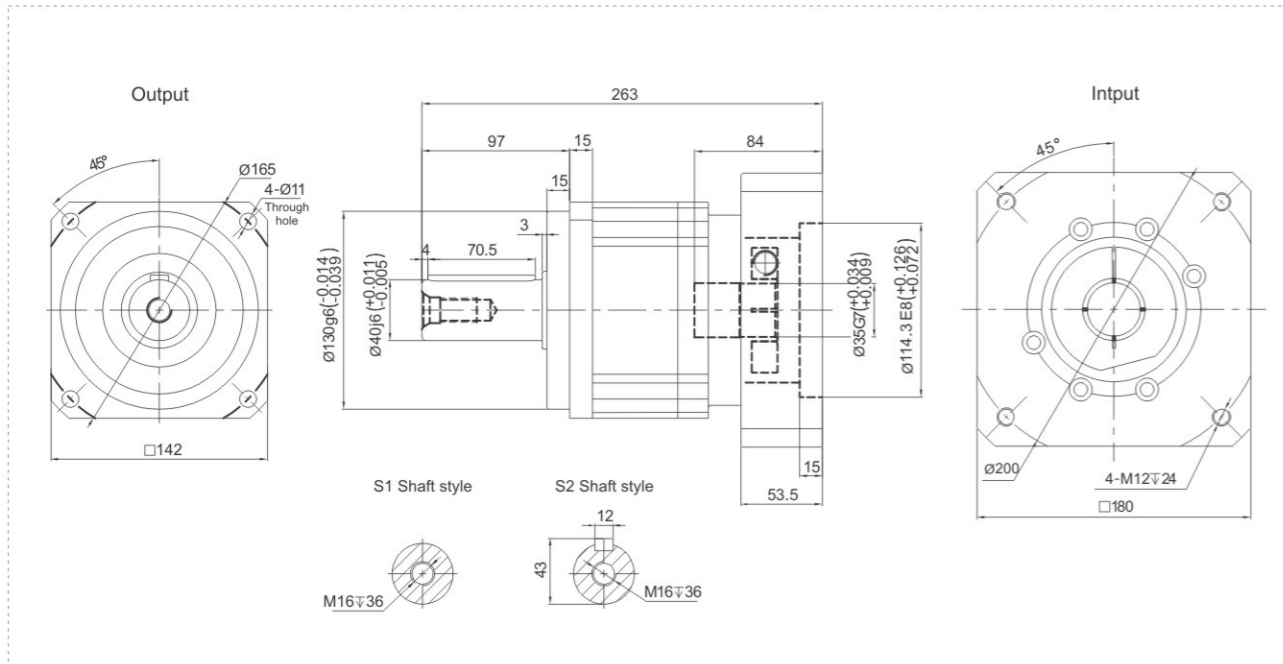
### Notes:

- 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,  $i=10$ .

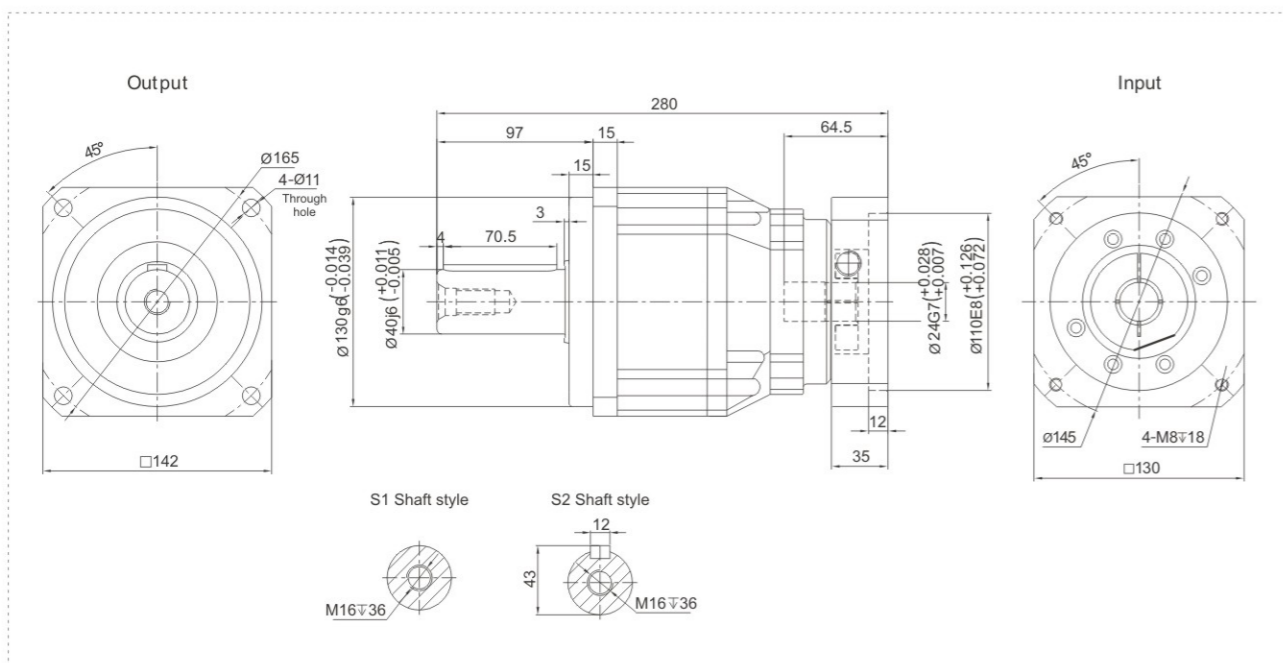
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$\eta$	%	$\geq 97$										$\geq 94$									
Service Life	-	h	20000										20000									
Noise	-	dB	$\leq 65$										$\leq 65$									
Weight	-	Kg	16.5										16.4									
Backlash	$P_0$	arcmin	$\leq 1$										$\leq 3$									
	$P_1$	arcmin	$\leq 3$										$\leq 5$									
	$P_2$	arcmin	$\leq 5$										$\leq 10$									
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 <sup>2</sup>	9.21	7.54	7.42	7.25	7.14	7.07	-	7.03						2.71						2.57

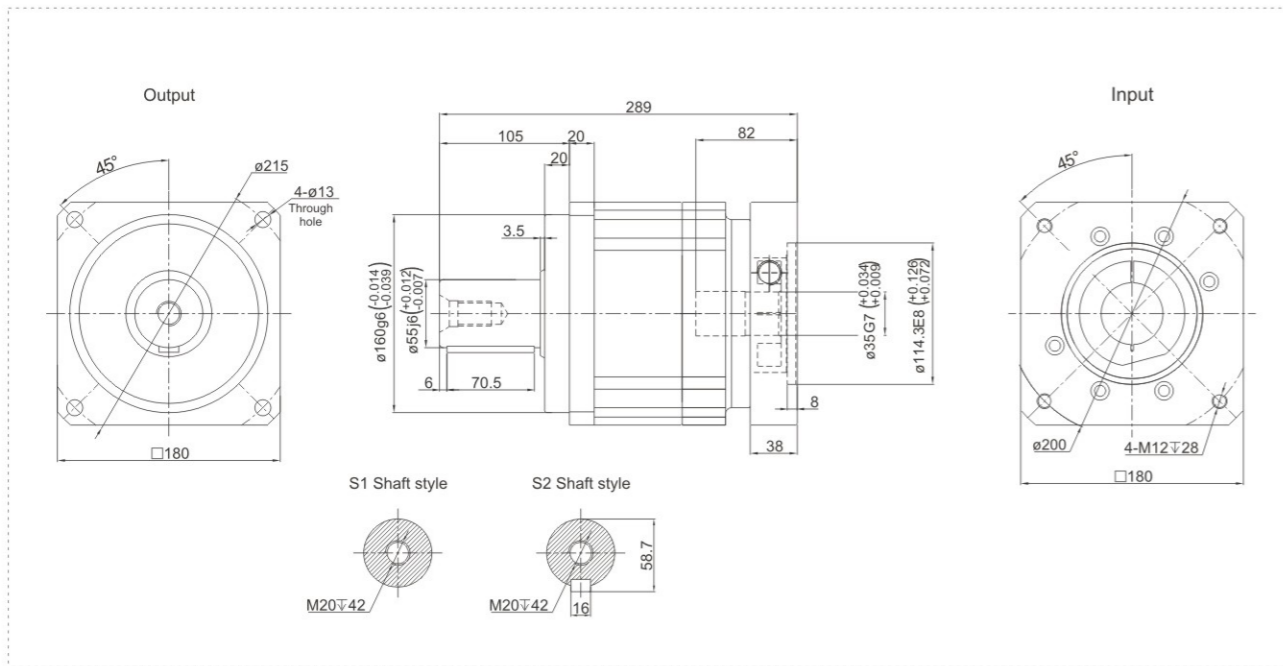
### Notes:

- 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,  $i=10$ .

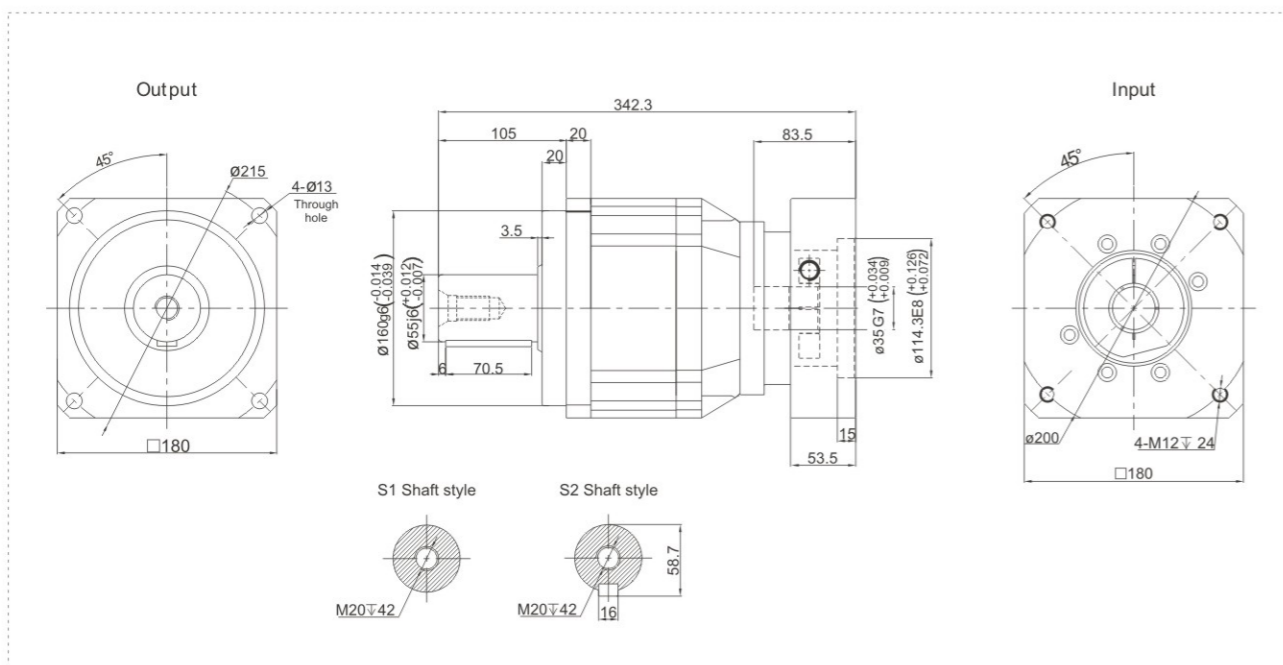
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$\eta$	%	$\geq 97$										$\geq 94$									
Service Life	-	h	20000										20000									
Noise	-	dB	$\leq 66$										$\leq 66$									
Weight	-	Kg	27										34									
Backlash	$P_0$		$\leq 1$										$\leq 3$									
	$P_1$	arcmin	$\leq 3$										$\leq 5$									
	$P_2$		$\leq 5$										$\leq 7$									
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 <sup>2</sup>	28.98	23.67	23.29	22.75	22.48	22.59	-	22.51						7.42					7.03	

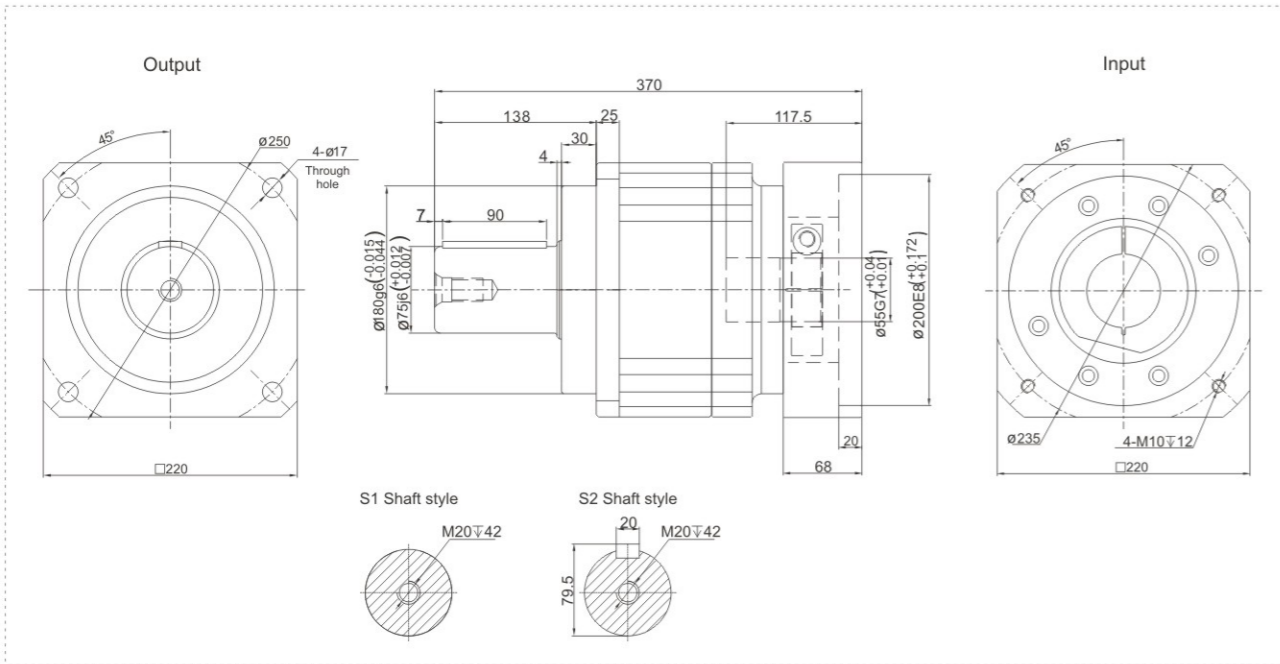
### Notes:

- 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,  $i=10$ .

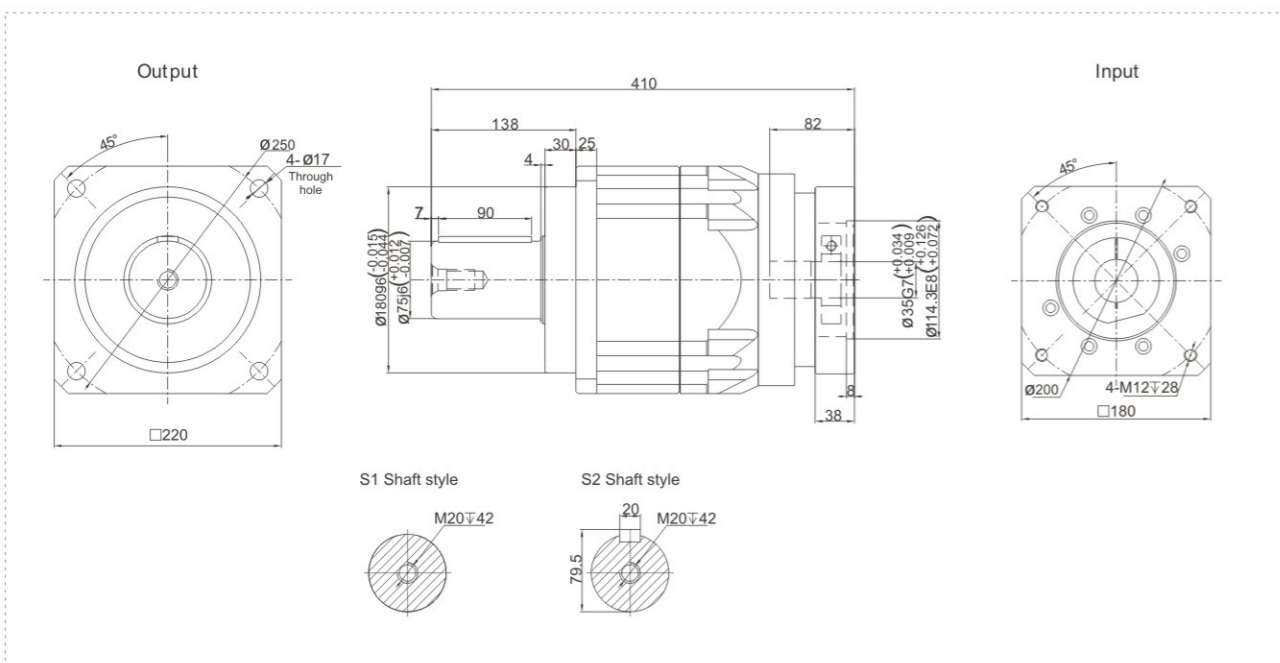
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$T_1 \times 3$										$T_1 \times 3$									
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	$\eta$	%	$\geq 97$										$\geq 94$									
Service Life	-	h	20000										20000									
Noise	-	dB	$\leq 70$										$\leq 70$									
Weight	-	Kg	51.5										63.5									
Backlash	P0		$\leq 1$										$\leq 3$									
	P1	arcmin	$\leq 3$										$\leq 5$									
	P2		$\leq 5$										$\leq 7$									
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 <sup>2</sup>	69.61	54.37	53.27	51.72	50.97	50.84	-	50.56	23.29					22.51						

### Notes:

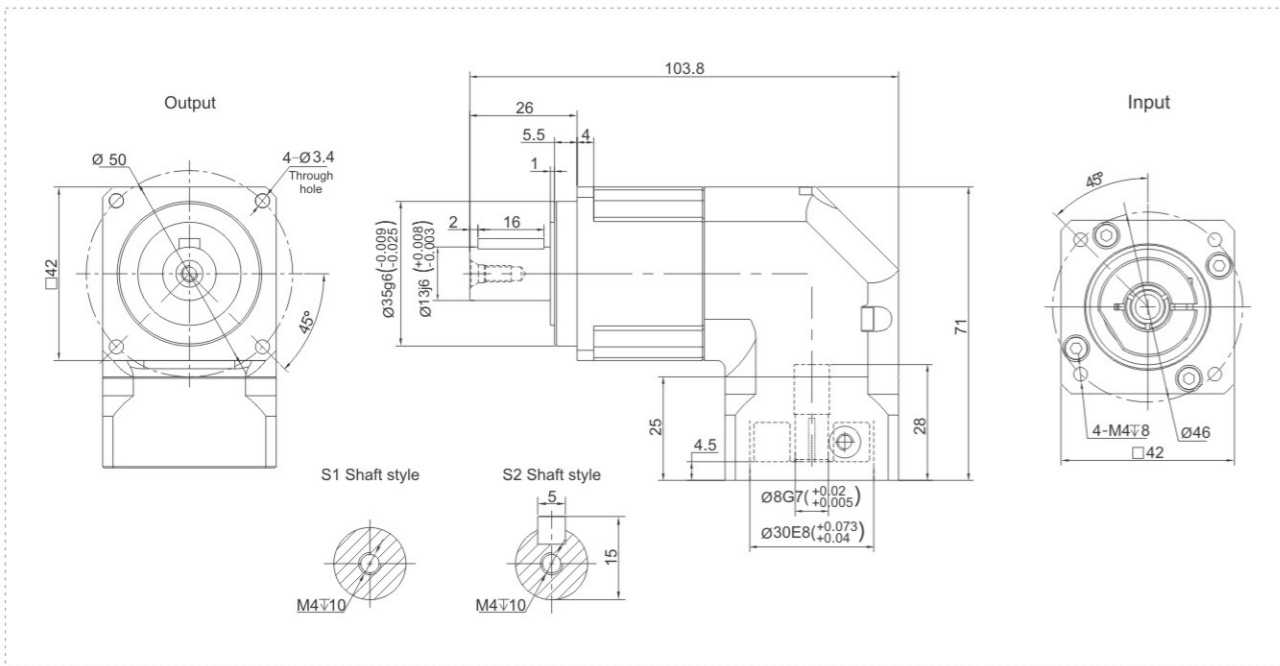
- Speed ratio ( $i = S_{in}/S_{out}$ )
- When the output speed is 100 rpm, it acts on the center of the output shaft.
- For Continuous operation, the service life is no less than 10,000 hours.
- The noise value was measured based on the input rotational speed of 3000 rpm,  $i=10$ .

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

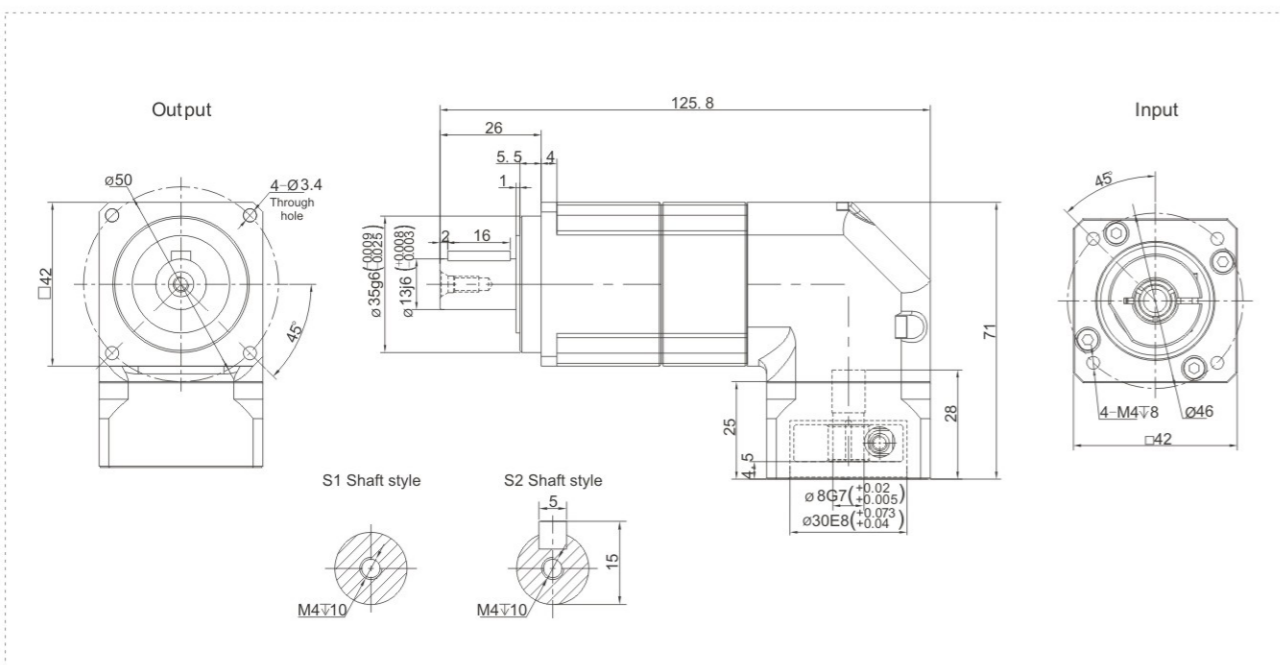


## TBR042 Series

### TBR042 One Stage



### TBR042 Two Stage



## 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	$\eta$	%	$\geq 95$										$\geq 92$									
Service Life	-	h	20000										20000									
Noise	-	dB	$\leq 61$										$\leq 61$									
Weight	-	Kg	0.7										0.9									
Backlash	P0	-	-										-									
	P1	arcmin	$\leq 4$										$\leq 7$									
	P2	-	$\leq 6$										$\leq 9$									
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 <sup>2</sup>	0.09										0.09									

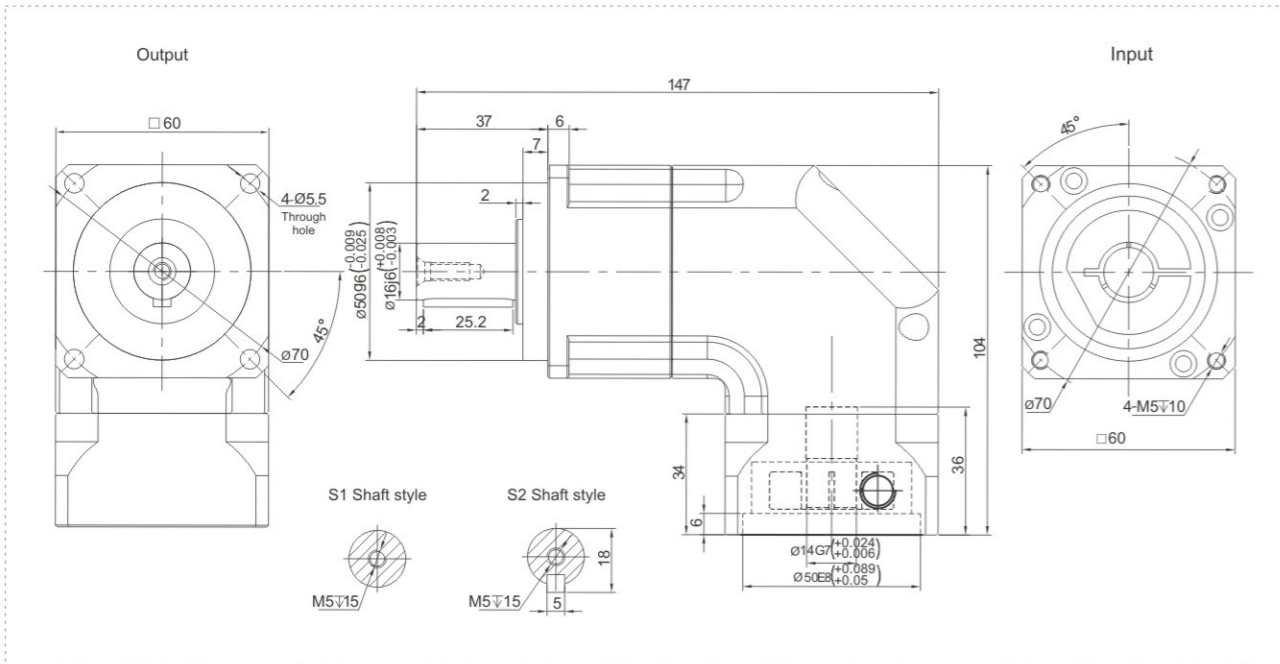
### Notes:

- 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,  $i=10$ .

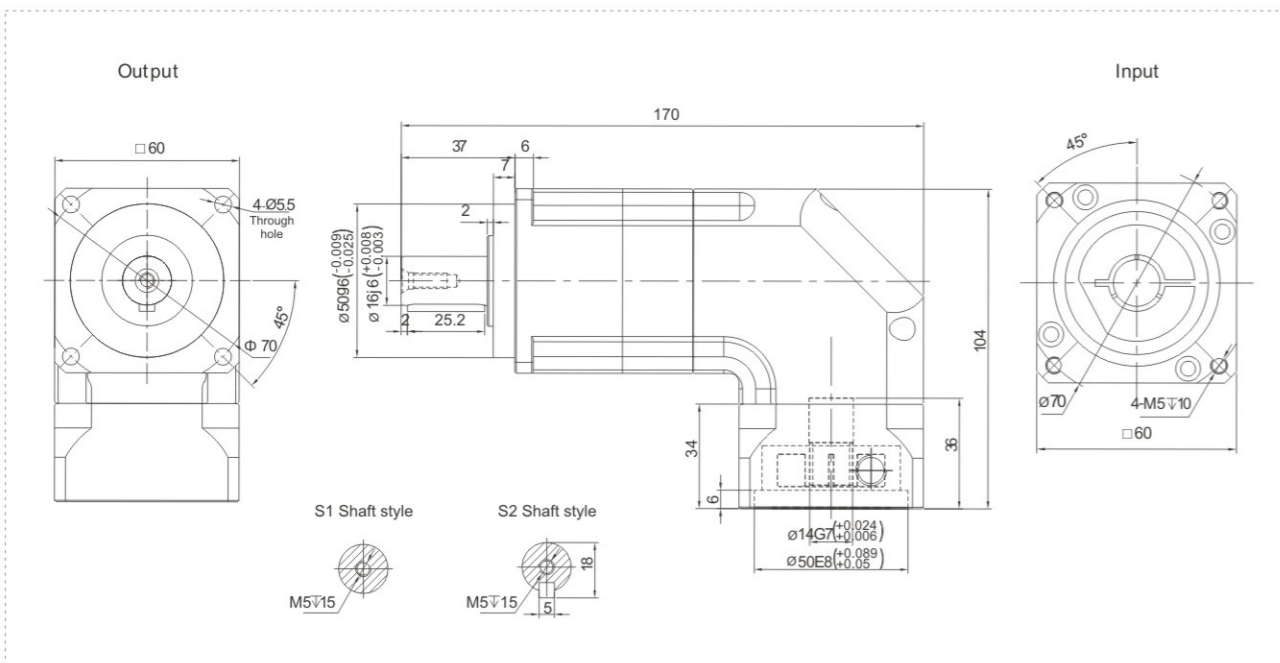
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$T_1 \times 3$																									
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	$\eta$	%	$\geq 95$																									
Service Life	-	h	20000																									
Noise	-	dB	$\leq 63$																									
Weight	-	Kg	2																									
Backlash	P0	-	-																									
	P1	arcmin	$\leq 4$																									
	P2	-	$\leq 6$																									
Operating Temperature	-	$^{\circ}\text{C}$	-20-90																									
Lubrication	-	-	Synthetic Grease																									
Protection Class	-	-	IP65																									
Mounting Position	-	-	Any Direction																									
Moment of Inertia	J	kg.cm <sup>2</sup>	0.35							0.07							0.09											

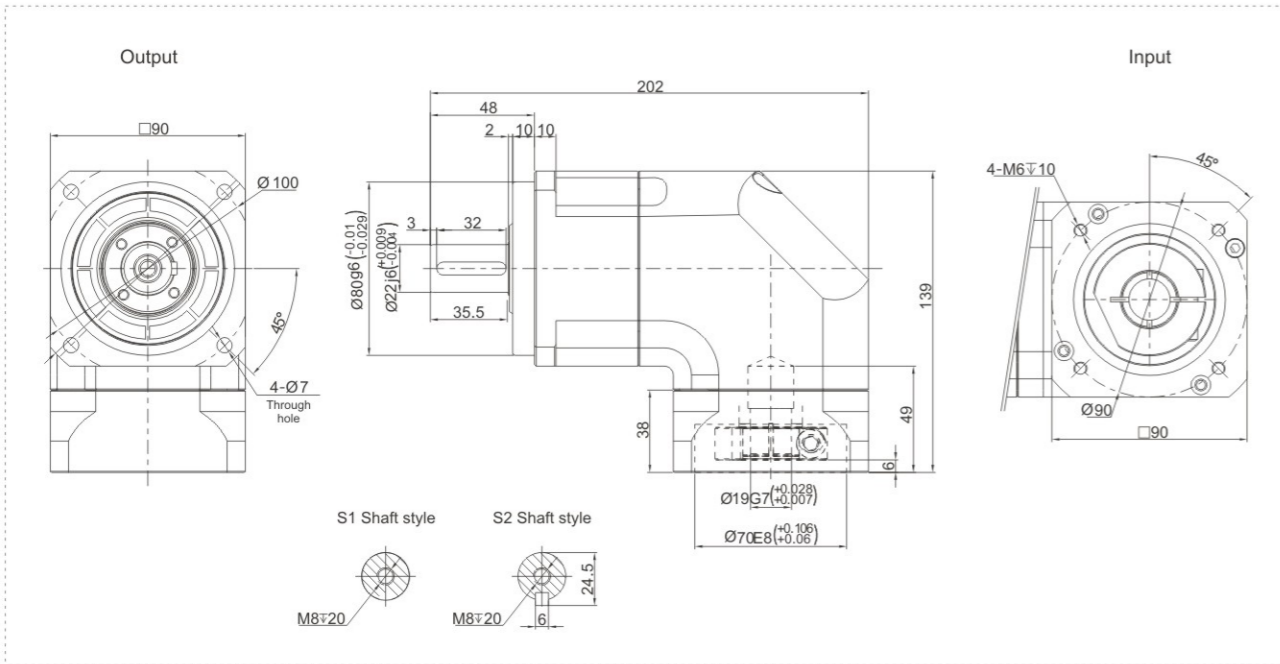
### Notes:

- 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,  $i=10$ .

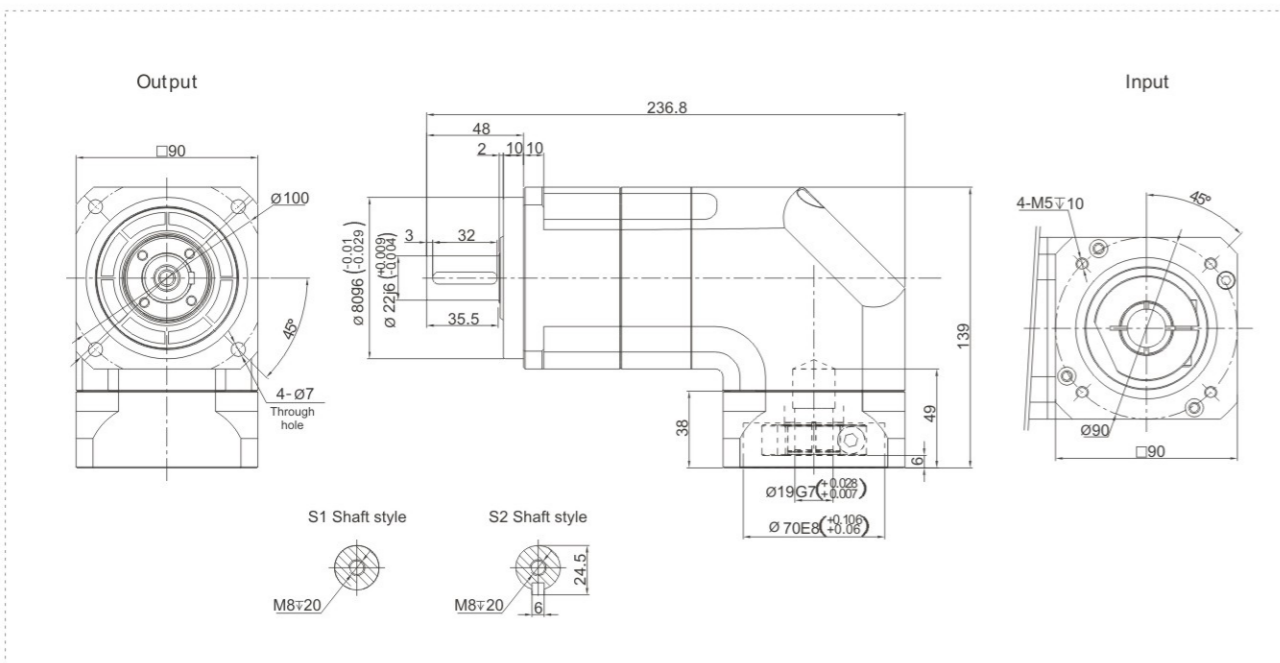
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$T_2$	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	$F_a$	N	1625														1625													
Torsional Rigidity	-	Nm/arcmin	14														14													
Efficiency	$\eta$	%	$\geq 95$														$\geq 92$													
Service Life	-	h	20000														20000													
Noise	-	dB	$\leq 65$														$\leq 65$													
Weight	-	Kg	6														6.3													
Backlash	$P_0$		$\leq 2$														$\leq 4$													
	$P_1$	arcmin	$\leq 4$														$\leq 7$													
	$P_2$		$\leq 6$														$\leq 9$													
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 <sup>2</sup>	2.25							1.87							2.25							1.87						

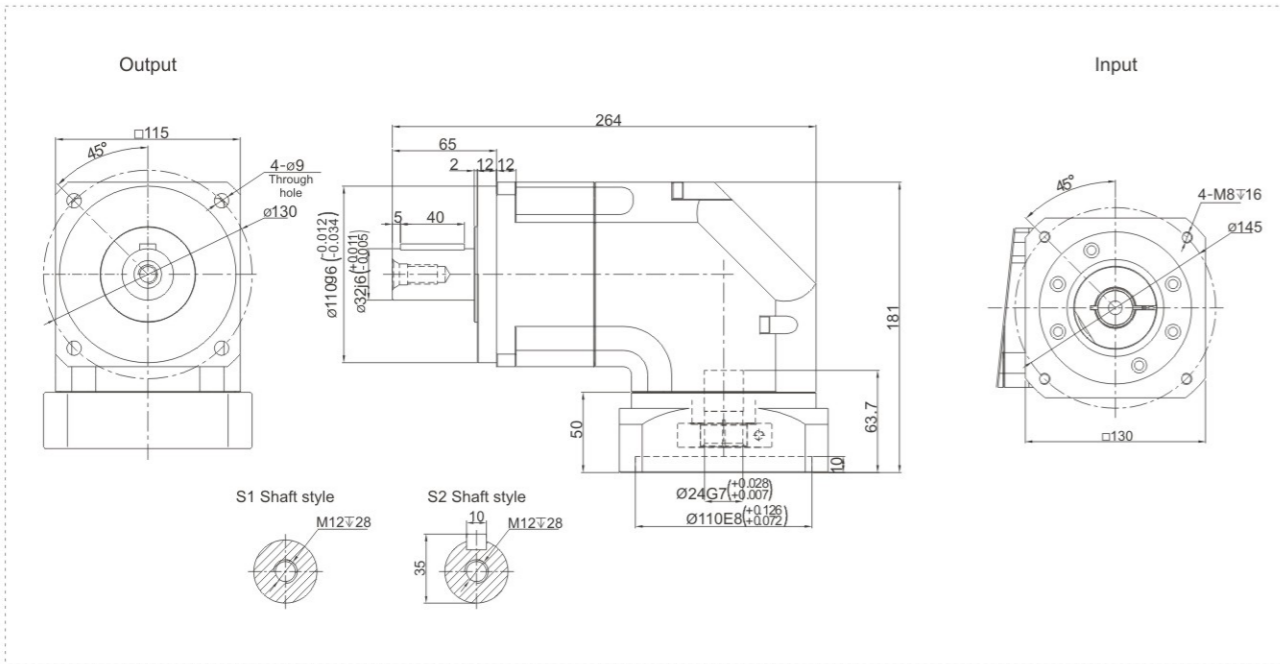
### Notes:

- 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,  $i=10$ .

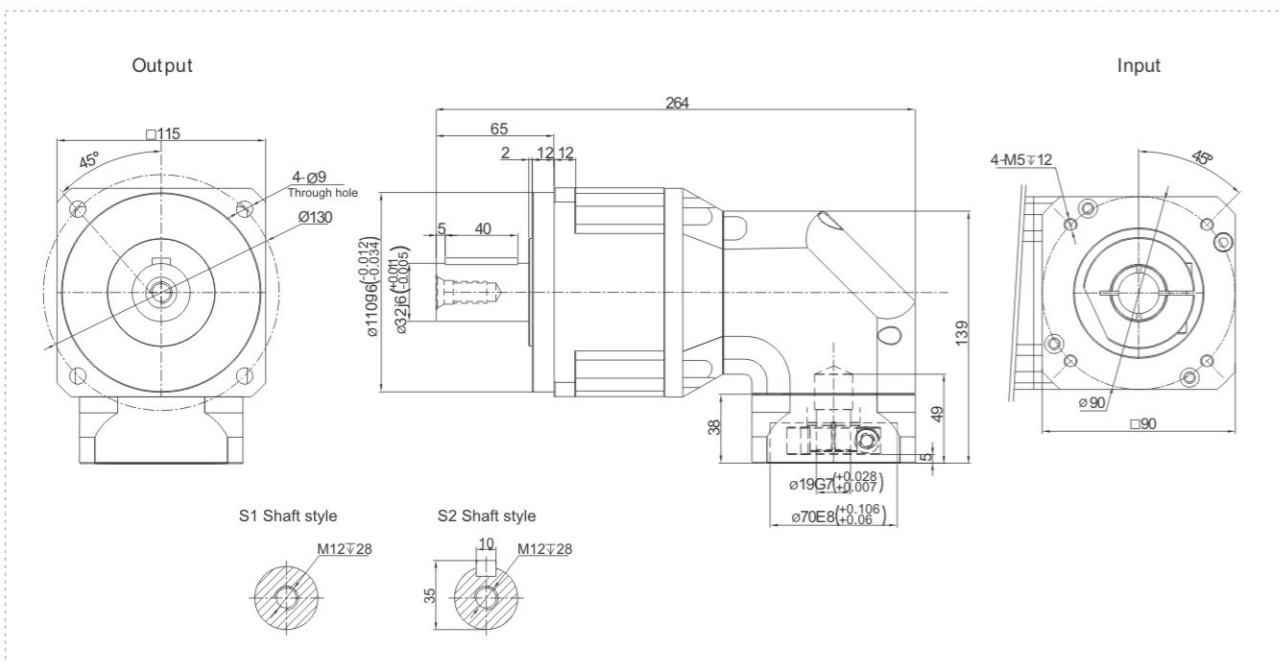
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$F_a$	N															6700											
Maximum Axial Force	$F_b$	N															3350											
Torsional Rigidity	-	Nm/arcmin															25											
Efficiency	$\eta$	%															$\geq 95$											
Service Life	-	h															20000											
Noise	-	dB															$\leq 68$											
Weight	-	Kg															13											
Backlash	$P_0$																$\leq 2$											
	$P_1$	arcmin															$\leq 4$											
	$P_2$																$\leq 6$											
Operating Temperature	-	$^{\circ}\text{C}$															-20-90											
Lubrication	-																Synthetic Grease											
Protection Class	-																IP65											
Mounting Position	-																Any Direction											
Moment of Inertia	J	kg.cm <sup>2</sup>			6.84				6.25				2.25				1.87											

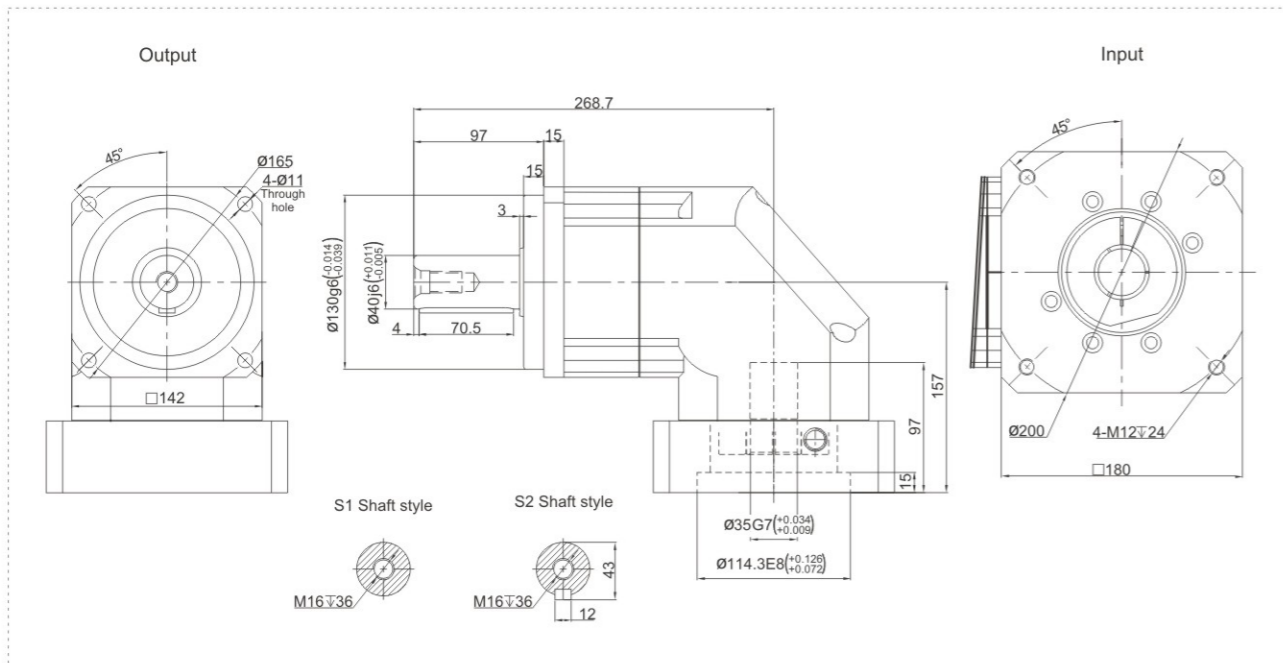
### Notes:

- 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,  $i=10$ .

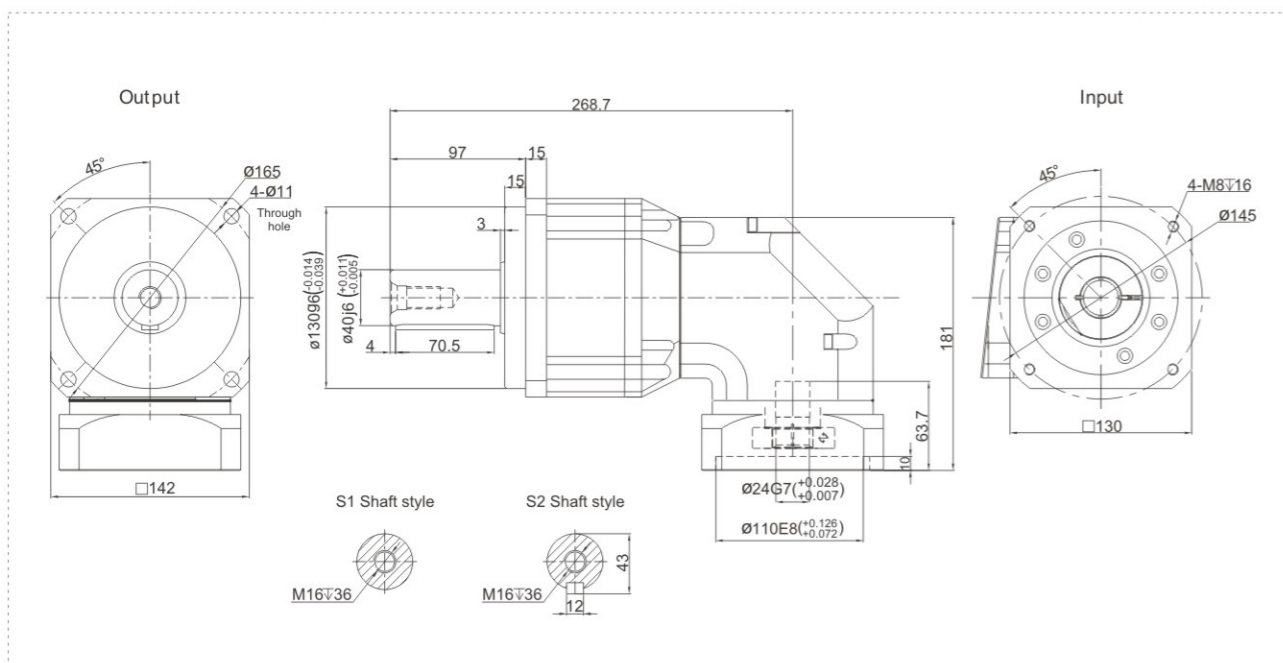
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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		
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	$\eta$	%	$\geq 95$														$\geq 92$													
Service Life	-	h	20000														20000													
Noise	-	dB	$\leq 70$														$\leq 70$													
Weight	-	Kg	25.2														21.4													
Backlash	P0:		$\leq 2$														$\leq 4$													
	P1:	arcmin	$\leq 4$														$\leq 7$													
	P2:		$\leq 6$														$\leq 9$													
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 <sup>2</sup>	23.4							21.8							6.84							6.25						

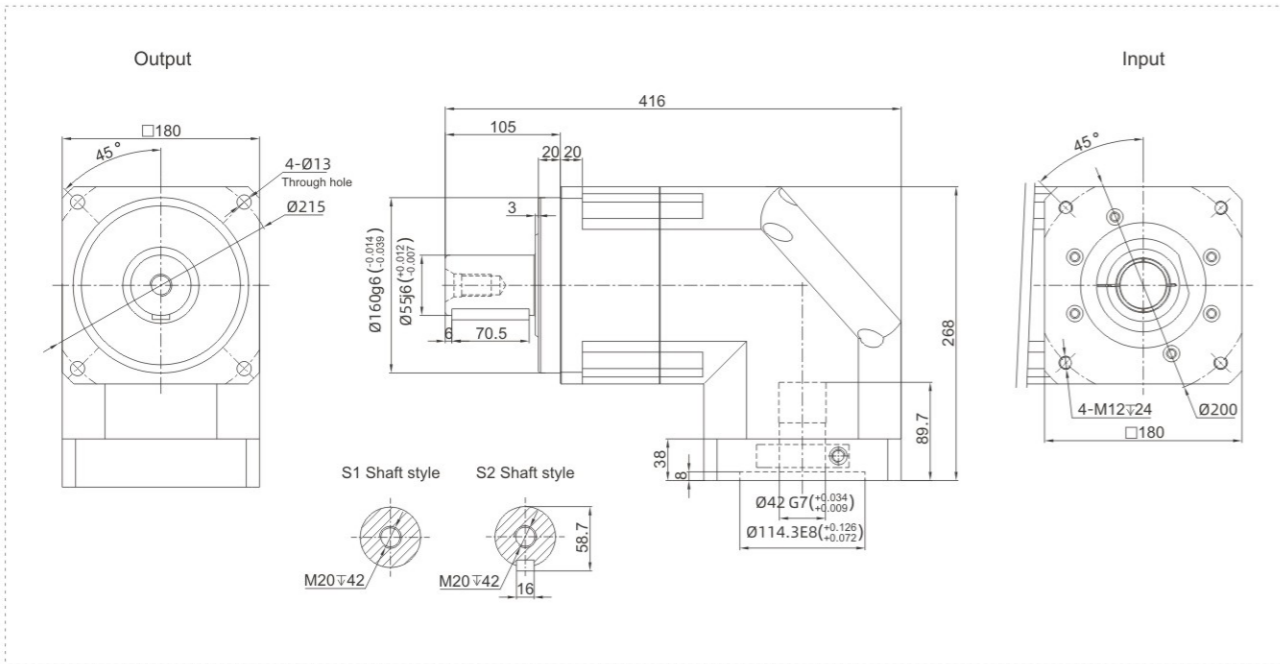
### Notes:

- 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,  $i=10$ .

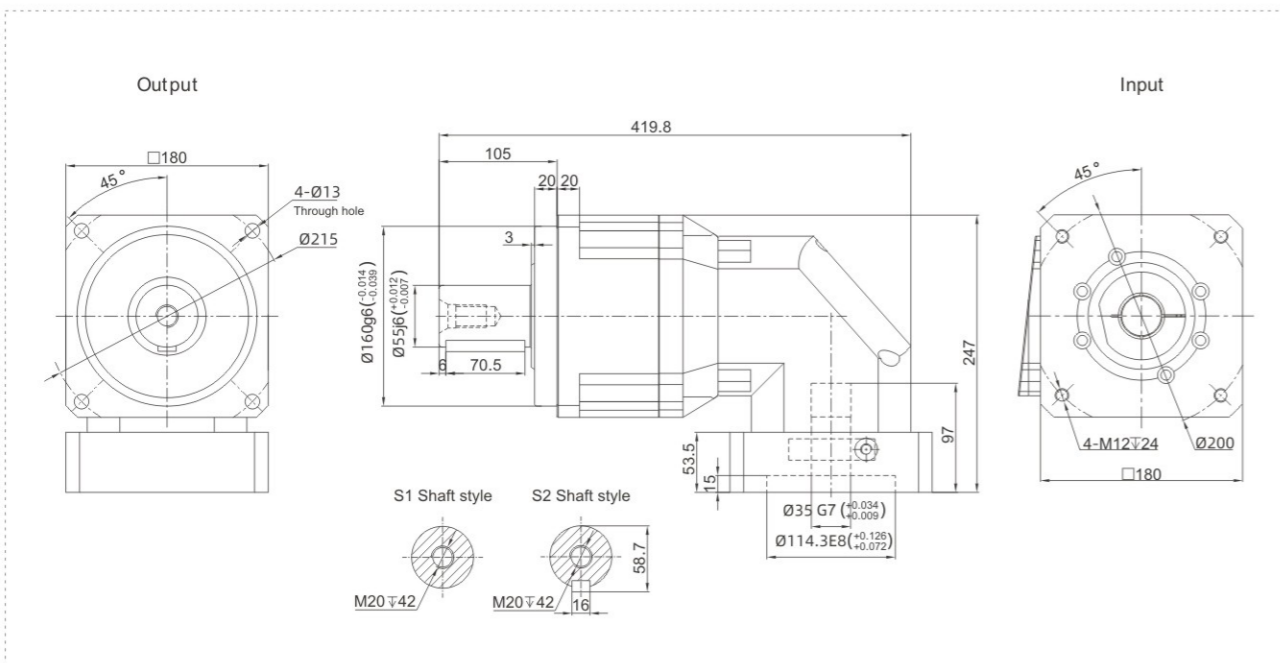
Any product models and parameters in this sample are subject to change without prior notice. Please confirm with the company before ordering.

## 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	$\eta$	%	$\geq 95$														$\geq 92$													
Service Life	-	h	20000														20000													
Noise	-	dB	$\leq 72$														$\leq 72$													
Weight	-	Kg	46.5														43													
Backlash	P0		$\leq 2$														$\leq 4$													
	P1	arcmin	$\leq 4$														$\leq 7$													
	P2		$\leq 6$														$\leq 9$													
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 <sup>2</sup>	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.