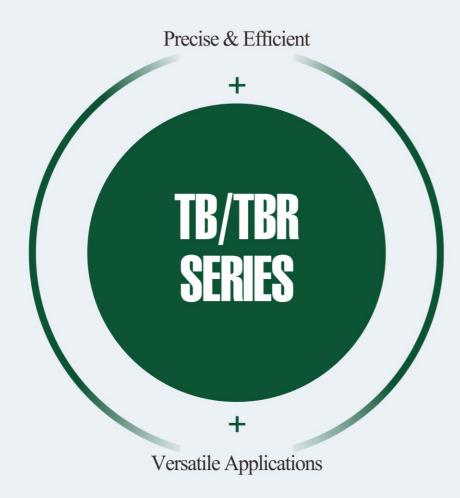
# **Precision Planetary Reducer**



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





**G**ERKO®

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# TB042 Series

TB042 One Stage

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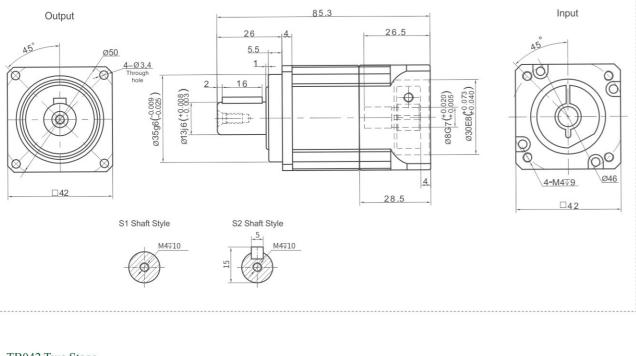
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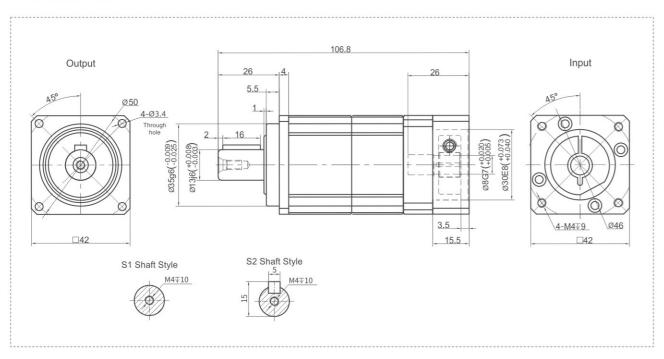
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TB042 Two Stage



# 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	Т	Nm	- 19 20 19 19 17 - 14	-     19     20     19     19     17     20     19     19     17     14
Emergency Stop Torque	T <sub>2</sub>	Nm	T₁×3	T,×3
Nominal Input Speed	Sı	rpm	5000	5000
Maximum Input Speed	S₂	rpm	10000	10000
Maximum Output Torque	T₄	Nm	T,×3×60%	T,×3×60%
Maximum Radial Force	F <sub>a</sub>	N	780	780
Maximum Axial Force	F₅	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
	P0		≤1	€3
Backlash	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.cm²	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.

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# TB060 Series

# TB060 One Stage

Output

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S1 Shaft Style

S2 Shaft Style

S3 Shaft Style

S4 Sand Style

S5 Shaft Style

S5 Shaft Style

S5 Shaft Style

S6 Shaft Style

S6 Shaft Style

S1 Shaft Style

S2 Shaft Style

S2 Shaft Style

S3 Shaft Style

S2 Shaft Style

S3 Shaft Style

S3 Shaft Style

S4 Shaft Style

S5 Shaft Style

S6 Shaft Style

# 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			≥97 20000 ≤58 1.3 ≤1												1	Γwo	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,	Nm	52	50	58	55	50	45	-	42	52	50	58	58	50	45	58	55	50	45	42
Emergency Stop Torque	T <sub>2</sub>	Nm				Т,	×3									T, ×	3				
Nominal Input Speed	Sı	rpm				50	00									500	00				
Maximum Input Speed	S₂	rpm				100	000									100	00				
Maximum Output Torque	$T_{\scriptscriptstyle{4}}$	Nm			Т	×3	× 60	%							Т,	×3×	60%				
Maximum Radial Force	F <sub>a</sub>	N				15	30									153	30				
Maximum Axial Force	F₀	N														76	5				
Torsional Rigidity	-	Nm/arcmin		7												7					
Efficiency	η	%														≥9	4				
Service Life	-	h				200	000									200	00				
Noise	-	dB				< .	58									≤6	0				
Weight	-	Kg				1.	.3									1.9	9				
	P0					<	1									<;	3				
Backlash	P1	arcmin				<	3									</td <td>5</td> <td></td> <td></td> <td></td> <td></td>	5				
	P2					<	5									€.	7				
Operating Temperature	-	°C				-20	~90									-20~	90				
Lubrication		-			S	yntheti	c Grea	se							Sy	nthetic	Grease				
Protection Class		_				IP	65									IP6	5				
Mounting Position		-			Α	ny Dir	rection								A	ny Dire	ction				
Moment of Inertia	J	kg.cm²	0.16	0.14			0.	13								0.13	3				

### 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.
- $\begin{tabular}{ll} \begin{tabular}{ll} \be$

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

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# TB090 Series

TB090 One Stage

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Output Input

145

48

10 10 4-07

Through hole

1.5

3 32

32

332

4-M5 ¥12

090

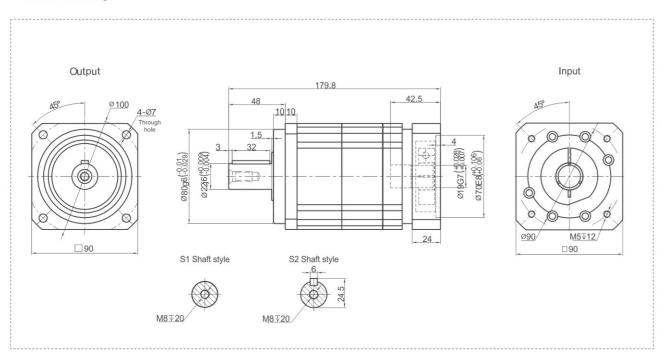
S1 Shaft Style

S2 Shaft Style

M8¥20

M8¥20

# 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	Stag	ge							1	Γwo	Stage	,			
Speed Ratio		<u>į</u>	3	4	5	6	7	8	9	10	15	20	25	30	35	40	50	60	70	80	100
Nominal Output Torque	T,	Nm	130	140	160	148	3 140	123	-	102	130	140	160	148	140	123	160	148	140	123	102
Emergency Stop Torque	T2	Nm			*	T <sub>1</sub>	×3									T,×	3			*********	
Nominal Input Speed	S <sub>1</sub>	rpm				40	000									400	00				
Maximum Input Speed	S₂	rpm				80	000									800	00				
Maximum Output Torque	T <sub>4</sub>	Nm			Т	,×3	×60	%							T <sub>1</sub>	×3×	60%	)			
Maximum Radial Force	Fa	N				32	250								********	325	50				
Maximum Axial Force	F <sub>δ</sub>	N				16	325								*******	162	25				
Torsional Rigidity	-	Nm/arcmin		14 ≥97											14	1					
Efficiency	η	%		14 ≥97											≥9	14					
Service Life	-	h				20	000									200	00				
Noise	-	dB				<	60									≤6	3				
Weight	-	Kg				3	.6								********	4.	5				
	P0					\$	<u>[</u> ]									<;	3				
Backlash	P1	arcmin				\$	3									</td <td>5</td> <td></td> <td></td> <td></td> <td></td>	5				
	P2					\$	<b>5</b>					********				€.	7				
Operating Temperature	-	°C				-20	~90									-20~	90				
Lubrication		-		Synthetic Grease											Sy	nthetic	Grease				
Protection Class		_		IP65												IP6	5				
Mounting Position		-				Any D	irection	1							Aı	ny Dire	ection				
Moment of Inertia	J	kg.cm²	0.61	0.48	0.47	7 (	).45		0.44				0.4	7					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.

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

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# TB115 Series

TB115 One Stage

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Output

206

Input

4-09

Though hole

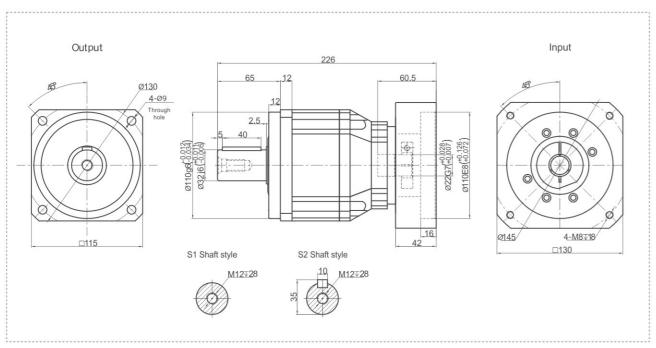
S1 Shaft style

S2 Shaft style

S2 Shaft style

M12E28

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	Stag	e							7	wo i	Stage	;			
Speed Ratio		į	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	210	290	333	310	300	260	-	235	210	290	333	310	300	260	333	310	300	260	235
Emergency Stop Torque	T <sub>2</sub>	Nm				T, 2	×3									T, ×	3				
Nominal Input Speed	Sı	rpm				40	00									400	00				
Maximum Input Speed	S <sub>2</sub>	rpm				80	00									800	00				
Maximum Output Torque	T <sub>4</sub>	Nm			Т	×3:	× 609	%							T,	×3×	60%				
Maximum Radial Force	F <sub>a</sub>	N				67	00									670	00				
Maximum Axial Force	F <sub>δ</sub>	N		3350											335	50					
Torsional Rigidity	-	Nm/arcmin		25												25	5				
Efficiency	η	%				≥9	97									≥9	4				
Service Life	-	h				200	000									200	00				
Noise	-	dB				€(	3									≤6	3				
Weight	-	Kg				8.	5									9.5	5				
	P0					≤	1									€3	3				
Backlash	Р1	arcmin				≤	3									€!	5				
	P2					≤	5									€7	7				
Operating Temperature	-	°C				-20	-90									-20~	90				
Lubrication		-		-20~90 Synthetic Grease											Sy	nthetic	Grease				
Protection Class		-		Synthetic Grease IP65												IP6	5				
Mounting Position		-			A	ny Di	rection	1							Aı	ny Dire	ction				
Moment of Inertia	J	kg.cm²	3.25	2.74	2.71	2.65	2.62	2.58	-	2.57				0.47				C	.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.
- $\begin{tabular}{ll} \begin{tabular}{ll} \be$

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

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# TB142 Series

# TB142 One Stage

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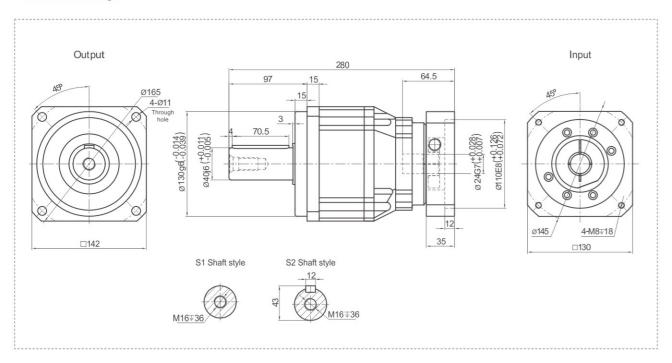
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# TB142 Two Stage



# 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	Stag	e							1	Γwo	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	Т	Nm	340	545	650	600	555	500	-	460	340	545	650	600	555	500	650	600	555	500	460
Emergency Stop Torque	T <sub>2</sub>	Nm				T, ×	3									T <sub>1</sub> ×	3				
Nominal Input Speed	Sı	rpm				300	00									300	00				
Maximum Input Speed	S₂	rpm				600	00									600	00				
Maximum Output Torque	T₄	Nm			T,	×3×	60%	6							T,	×3×	60%				
Maximum Radial Force	Fa	N				940	0									940	00				
Maximum Axial Force	F₅	N		4700 50											470	00					
Torsional Rigidity	-	Nm/arcmin													50	)					
Efficiency	η	%				≥9	7									≥9	4				
Service Life	-	h				200	00									200	00				
Noise	-	dB				≤6	5									≤6	5				
Weight	-	Kg				16.	5									16.	4				
	P0					€	l									€3	3				
Backlash	Р1	arcmin				<3	3									€!	5				
	P2					€!	5									≤1	0				
Operating Temperature	-	°C				-20~	90									-20~	90				
Lubrication		-		-20~90 Synthetic Grease											Sy	nthetic	Grease				
Protection Class		_		Synthetic Grease												IP6	5				
Mounting Position		-			F	Any Di	rection	ı							Aı	ny Dire	ction				
Moment of Inertia	J	kg.cm²	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.

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# TB180 Series

# TB180 One Stage

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Output

289

Input

4-913

Through hole

9215

4-913

7500

9500

9500

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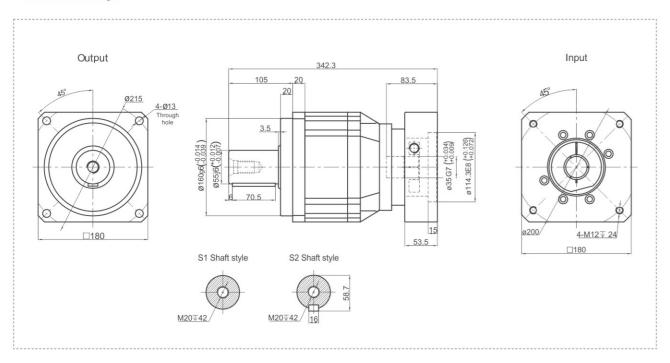
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# TB180 Two Stage



# 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,	Nm	590 1050 1200 1108 1100 1000 - 910	590 1050 1200 1108 1100 1000 1200 1108 1100 1000 910
Emergency Stop Torque	T <sub>2</sub>	Nm	T,×3	T,×3
Nominal Input Speed	Sı	rpm	3000	3000
Maximum Input Speed	S₂	rpm	6000	6000
Maximum Output Torque	T₄	Nm	T, × 3 × 60%	T <sub>1</sub> ×3×60%
Maximum Radial Force	F <sub>a</sub>	N	14500	14500
Maximum Axial Force	F₀	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
	P0		≤1	≼3
Backlash	P1	arcmin	<b>≤</b> 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.cm²	28.9823.6723.2922.7522.4822.59 — 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.
- **⑤** 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.

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# TB220 Series

TB220 One Stage

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Output

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Input

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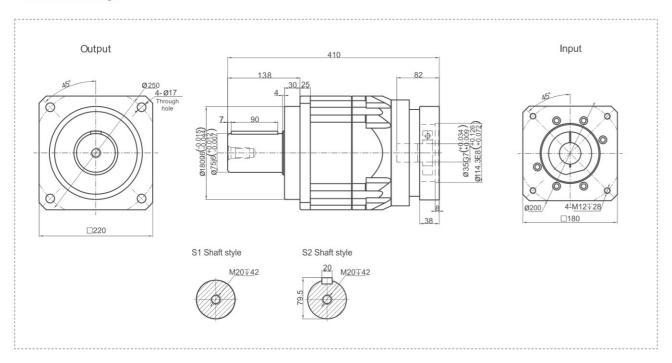
1220

S1 Shaft style

M20V42

M20V42

# 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	Stag	e							1	Γwo	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,	Nm	1150	J 17	700	2008	1900	1810	1600	-	1550	1150	1700	2008	1900	1810	1600	2008	1900	1810	1600	1550
Emergency Stop Torque	T <sub>2</sub>	Nm					T,×	3					•				T,×	3				
Nominal Input Speed	Sı	rpm					200	00									200	00				
Maximum Input Speed	S <sub>2</sub>	rpm					400	00									400	00				
Maximum Output Torque	T <sub>4</sub>	Nm				Т,	×3>	609	6							Т,	×3×	60%				
Maximum Radial Force	Fa	N					500	00									500	00				
Maximum Axial Force	F₀	N		25000											250	00						
Torsional Rigidity	-	Nm/arcmin		225											22	5						
Efficiency	η	%					≥9	7									≥9	4				
Service Life	-	h					200	00									200	00				
Noise	-	dB					≤7	0									≤7	0				
Weight	-	Kg					51	.5									63.	5				
	P0						<	1									€3	3				
Backlash	P1	arcmin					<.	3									€!	5				
	P2						< !	5									< 7	7				
Operating Temperature	-	°C					-20~	90									-20~	90				
Lubrication		-				S	ynthet	ic Grea	ise							Sy	nthetic	Grease				
Protection Class		_					IP6	5									IP6	5				
Mounting Position		-				F	Any Di	rection	ı							Aı	ny Dire	ction				
Moment of Inertia	J	kg.cm²	69.6	154	1.37	53.27	51.72	50.97	50.84	-	50.56				23.29					22.5	1	

### 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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**TBR** 

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TBR042 Series

TBR042 One Stage

TBR

TD

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TR

Output

Output

103.8

Input

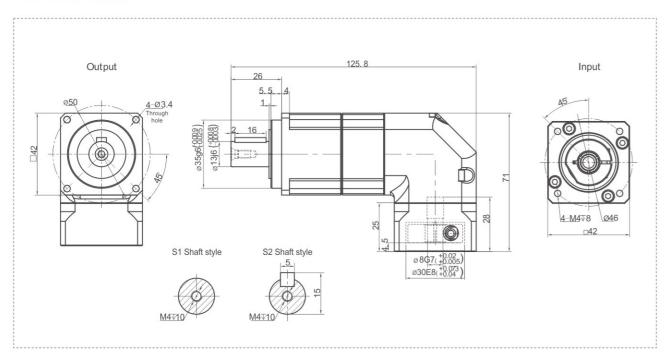
103.8

Input

St. Shaft style

St. Shaft sty

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,	Nm	- 15 18 18 19 17 - 14	15 18 18 19 17 18 18 19 17 14
Emergency Stop Torque	T <sub>2</sub>	Nm	T,×3	T,×3
Nominal Input Speed	Sı	rpm	5000	5000
Maximum Input Speed	S₂	rpm	10000	10000
Maximum Output Torque	T <sub>4</sub>	Nm	T, ×3×60%	T,×3×60%
Maximum Radial Force	Fa	Ν	780	780
Maximum Axial Force	F₅	Ν	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
	P0		-	-
Backlash	Р1	arcmin	≤4	≤7
	P2		≤6	≪9
Operating Temperature	-	°C	-20~90	-20~90
Lubrication	-		Synthetic Grease	Synthetic Grease
Protection Class	-		IP65	IP65
Mounting Position	-		Any Direction	Any Direction
Moment of Inertia	J	kg.cm²	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.



ТВ

# TBR060 Series

# TBR060 One Stage

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Output

Input

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Through fold

S1 Shaft style

S2 Shaft style

S2 Shaft style

S3 Shaft style

S3 Shaft style

S4 Shaft style

S5 Shaft style

S6 Shaft style

S6 Shaft style

S7 Shaft style

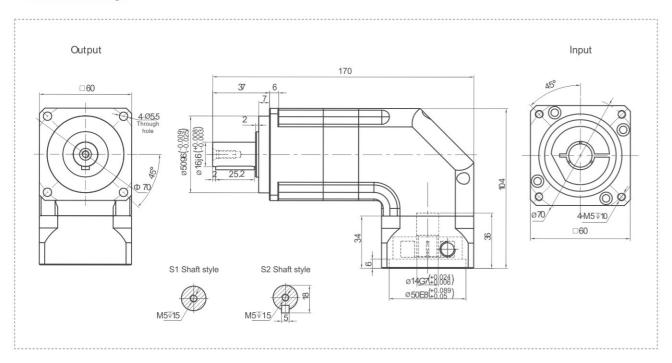
S8 Shaft style

S8 Shaft style

S8 Shaft style

S9 Shaft s

### 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 Sta	ige	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,	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 <sub>2</sub>	Nm	T,×3		T <sub>1</sub> ×3
Nominal Input Speed	Sı	rpm	5000		5000
Maximum Input Speed	S₂	rpm	10000		10000
Maximum Output Torque	T₄	Nm	T, ×3×60%		T,×3×60%
Maximum Radial Force	F <sub>a</sub>	N	1530		1530
Maximum Axial Force	F₅	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
	P0		-		-
Backlash	Р1	arcmin	≤4		≤7
	P2		≤6		≤9
Operating Temperature	-	°C	-20~90		-20~90
Lubrication		-	Synthetic Grease		Synthetic Grease
Protection Class		_	IP65		IP65
Mounting Position		-	Any Direction		Any Direction
Moment of Inertia	J	kg.cm²	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.

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**TBR** 

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# TBR090 Series

# TBR090 One Stage

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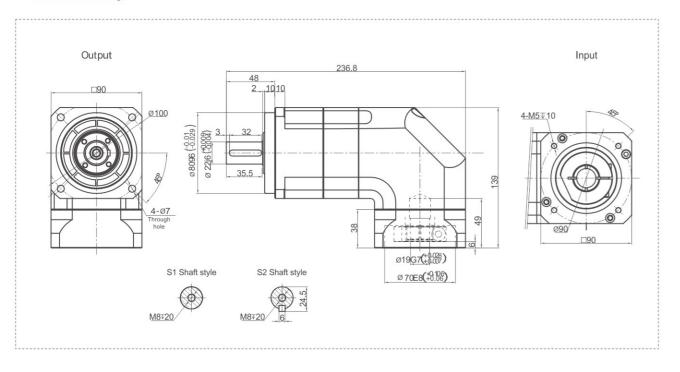
ТМ

TR

Output Input

| 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 10

# 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 S	tage							Tw	o Stag	ge			
Speed Ratio		i	3 4 5	6 7	8	9 10 12	2 14	16 20	25 3	30 35	5 40	50	60 7	0 80	100 12	0 140	160 180	200
Nominal Output Torque	T,	Nm	100 120 150	148 14	10123	- 102 14	8 140	123 102	150 1	48 14	0 120	150	148 14	10 123	102 14	8 140	123 -	102
Emergency Stop Torque	T <sub>2</sub>	Nm			T, ×3								Т	1×3				
Nominal Input Speed	S <sub>1</sub>	rpm			4000								4	000				
Maximum Input Speed	S <sub>2</sub>	rpm			8000								8	000				
Maximum Output Torqu	e T <sub>4</sub>	Nm		T,×	3×60	1%							$T_1 \times 3$	3×60	%			
Maximum Radial Force	F <sub>a</sub>	N			3250								3	250				
Maximum Axial Force	Fь	N			1625								1	625				
Torsional Rigidity	-	Nm/ arcmin			14									14				
Efficiency	η	%			≥95								3	≥92				
Service Life	-	h		2	20000								20	0000				
Noise	-	dB			≤65								\$	≤65				
Weight	-	Kg			6									6.3				
	P0				≤2									≤4				
Backlash	P1	arcmin			≤4									≤7				
	P2				≤6									<b>≤</b> 9				
Operating Temperature	-	°C		-:	20~90								-2	0~90				
Lubrication		-		Synt	hetic Grea	ise							Synthe	etic Grea	ise			
Protection Class		-			IP65								I	P65				
Mounting Position		-		Any	Direction	1							Any I	Direction				
Moment of Inertia	J	kg.cm²		2.25			1	.87			2	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.



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# TBR115 Series

# TBR115 One Stage

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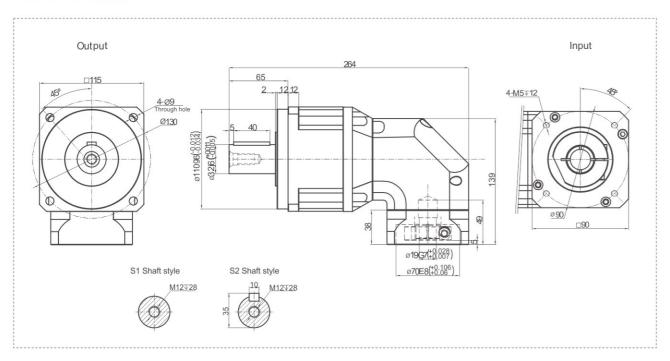
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# TBR115 Two Stage



# 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	1	Гwo 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,	Nm	200 260 330 310 300 260	- 235 310 300 260 23	5 330 310 300 260 330 310	300 260 235 310 300 260 - 235
Emergency Stop Torque	Т2	Nm	T, ×	3		T, ×3
Nominal Input Speed	Sı	rpm	400	00		4000
Maximum Input Speed	S <sub>2</sub>	rpm	800	00		8000
Maximum Output Torque	T <sub>4</sub>	Nm	T,×3>	60%	T,	×3×60%
Maximum Radial Force	Fa	Ν	670	00		6700
Maximum Axial Force	Fь	Ν	335	50		3350
Torsional Rigidity	-	Nm/ arcmin	25	5		25
Efficiency	η	%	≥9	15		≥92
Service Life	-	h	200	00		20000
Noise	-	dB	≤6	8		≤68
Weight	-	Kg	13	3		12.5
	P0		€:	2		≤4
Backlash	P1	arcmin	€.	4		≤7
	P2		€(	6		≤9
Operating Temperature	-	°C	-20~	90		-20~90
Lubrication		-	Synthetic	Grease	Sy	nthetic Grease
Protection Class		-	IP6	55		IP65
Mounting Position		-	Any Dire	ection	A	ny Direction
Moment of Inertia	J	kg.cm²	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.

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# TBR142 Series

TBR142 One Stage

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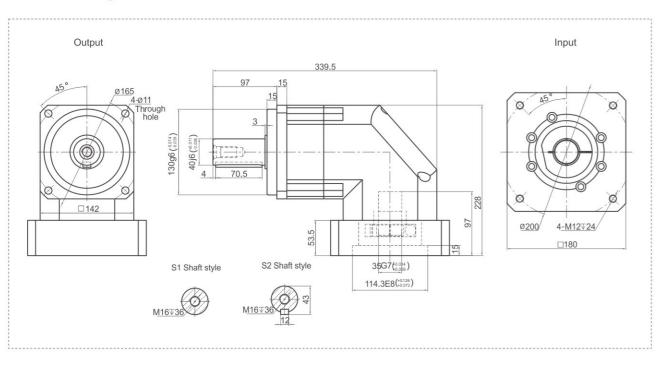
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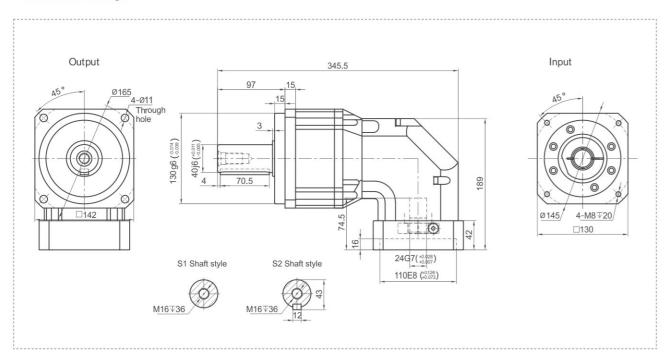
TCE

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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	e Stage				Two	Stage	e		
Speed Ratio		i	3 4 5 6 7 8	3 9 10 12 14	16 20	25 30 3	35 40 5	60 60 70	80 1	00:120	140 160 1	80 200
Nominal Output Torque	T,	Nm	340 540 650 600 555 50	00 - 460600555	500 450	650 600 5	55 500 6	50 600 555	500 4	60 600	555 500	- 460
Emergency Stop Torque	T <sub>2</sub>	Nm	Т	-,×3				$T_1 \times$	3			
Nominal Input Speed	Sı	rpm	3	3000				300	0			
Maximum Input Speed	S₂	rpm	6	6000				600	0			
Maximum Output Torque	T <sub>4</sub>	Nm	T, ×;	3×60%				$T_1 \times 3 \times$	60%			
Maximum Radial Force	F <sub>a</sub>	N	9	9400				940	0			
Maximum Axial Force	F₅	N	4	700				470	0			
Torsional Rigidity	-	Nm/ arcmin		50				50				
Efficiency	η	%	}	≥95				≥92	2			
Service Life	-	h	20	0000				2000	00			
Noise	-	dB	\$	<b>≤</b> 70				€70	0			
Weight	-	Kg	2	25.2				21.4	4			
	P0			≤2				≤4				
Backlash	P1	arcmin		≤4				≤7	,			
	P2			<b>≤</b> 6				<9	)			
Operating Temperature	-	°C	-2	0~90				-20~9	90			
Lubrication		_	Synthe	etic Grease				Synthetic (	Grease			
Protection Class		_	li	P65				IP6	5			
Mounting Position		-	Any [	Direction				Any Direc	tion			
Moment of Inertia	J	kg.cm <sup>2</sup>	23.4	21.8			6.84				6.2	5

### 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.

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**TBR** 

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# TBR180 Series

### TBR180 One Stage

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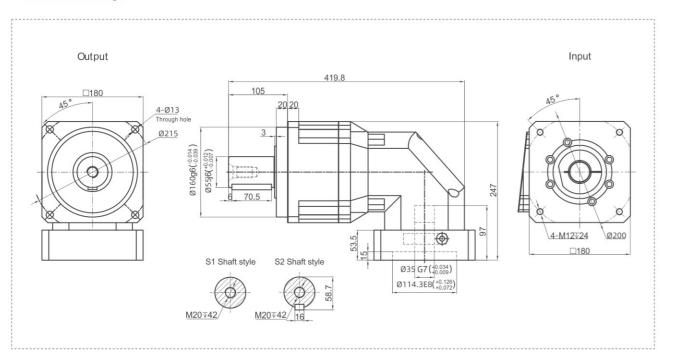
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# TBR180 Two Stage



# 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 80 70 80 100 120 140 160 180 200
Nominal Output Torque	T,	Nm	59010401200110811001000 - 910110811001000910	1200 1103 1100 1000 1100 1100 1100 1100
Emergency Stop Torque	T <sub>2</sub>	Nm	T,×3	T <sub>1</sub> ×3
Nominal Input Speed	Sı	rpm	3000	3000
Maximum Input Speed	S₂	rpm	6000	6000
Maximum Output Torque	E T <sub>4</sub>	Nm	T,×3×60%	T,×3×60%
Maximum Radial Force	F <sub>a</sub>	N	14500	14500
Maximum Axial Force	F₅	N	7250	7250
Torsional Rigidity	-	Nm/ arcmin	145	145
Efficiency	η	%	≥95	≥92
Service Life	-	h	20000	20000
Noise	-	dB	<b>≤</b> 72	≤72
Weight	-	Kg	46.5	43
Backlash	P0		≤2	≤4
	Р1	arcmin	≤4	≤7
	P2		≤6	≪9
Operating Temperature	-	°C	-20~90	-20~90
Lubrication		-	Synthetic Grease	Synthetic Grease
Protection Class	-		IP65	IP65
Mounting Position		-	Any Direction	Any Direction
Moment of Inertia	J	kg.cm²	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.