



Servo planetary gearbox product catalogue



ROTOTRANS INDIA Pvt. Ltd.
An ISO 9001-2015 Certified Company

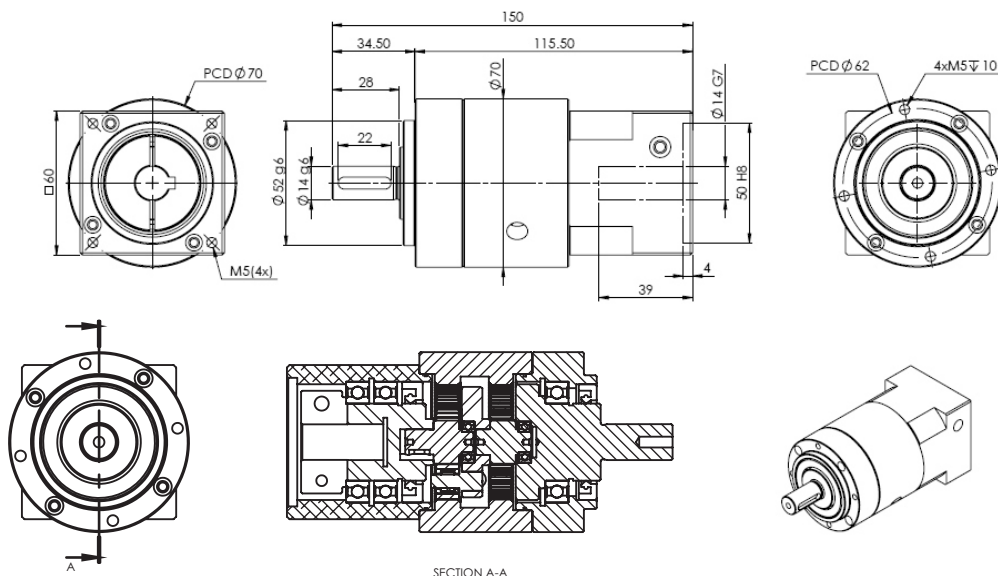
www.rototransindia.com

Product Series		RPG	RTO
Catalog Page		3	11
Axis of Orientation		Coaxial	Coaxial
Gear Description		Planetary	Planetary
Frame	Smallest	60	64
	Largest	235	285
Ratio	Min.	3	4
	Max.	100	100
Installation			
Rounded, Tapping Holes on Casing		•	
Square, Through Holes on Casing			
Rounded, Through Holes on Casing			•
Lubrication			
Gerease		•	•
Oil		•	•
Input			
Direct Clamp		•	•
Keyed Shaft			
Output			
Smooth Shaft with Tapping Hole		•	
Shaft with Tapping Hole and Keyway		•	
Flanged Connection			•
Flange with Hollow Bore			
Bearing Type on Output			
Ball Bearing		•	•
Tapered Roller Bearing			•
Cross Roller Bearing			
Performance Specification			
Radial Load		Ordinary	Excellent
Thrust Load		Ordinary	Excellent
Backlash Rating	< 1 arc-min		
	≤ 2 arc-min		
	≤ 3 arc-min		
	≤ 5 arc-min		
	≤ 6 arc-min		
	≤ 8 arc-min		
	≤ 9 arc-min		
	≤ 10 arc-min		
	≤ 11 arc-min		
	≤ 15 arc-min		
	≤ 30 arc-min		
Torsional Rigidity		Ordinary	Excellent
Efficiency		Excellent	Excellent

RPG060 - Double Stage Specifications

Frame Size	060					
Stage	2-Stage					
Ratio	Unit	Note	15	20	30	40
Nominal Output Torque	[Nm]	*1	18	27	18	27
Maximum Output Torque	[Nm]	*2	35	50	35	50
Emergency Stop Torque	[Nm]	*3	80	100	80	100
Nominal Input Speed	[rpm]	*4	3000			
Maximum Input Speed	[rpm]	*5	6000			
No Load Running Torque	[rpm]	*6	0.04			
Permitted Radial Load	[N]	*7	740	810	930	1000
Permitted Axial Load	[N]	*8	630	720	860	970
Maximum Radial Load	[N]	*9	1200			
Maximum Axial Load	[N]	*10	1100			
Moment of Inertia ($\leq \emptyset 8$)	[kgcm ²]	—	0.055	0.054	0.049	0.049
Moment of Inertia ($\leq \emptyset 14$)	[kgcm ²]	—	0.140	0.130	0.130	0.130
Moment of Inertia ($\leq \emptyset 19$)	[kgcm ²]	—	0.350	0.350	0.340	0.340
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/aromin]	*12	3			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	≤ 66			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	1.7			

RPG060 - Double Stage Dimensions Input Shaft Bore = $\emptyset D$

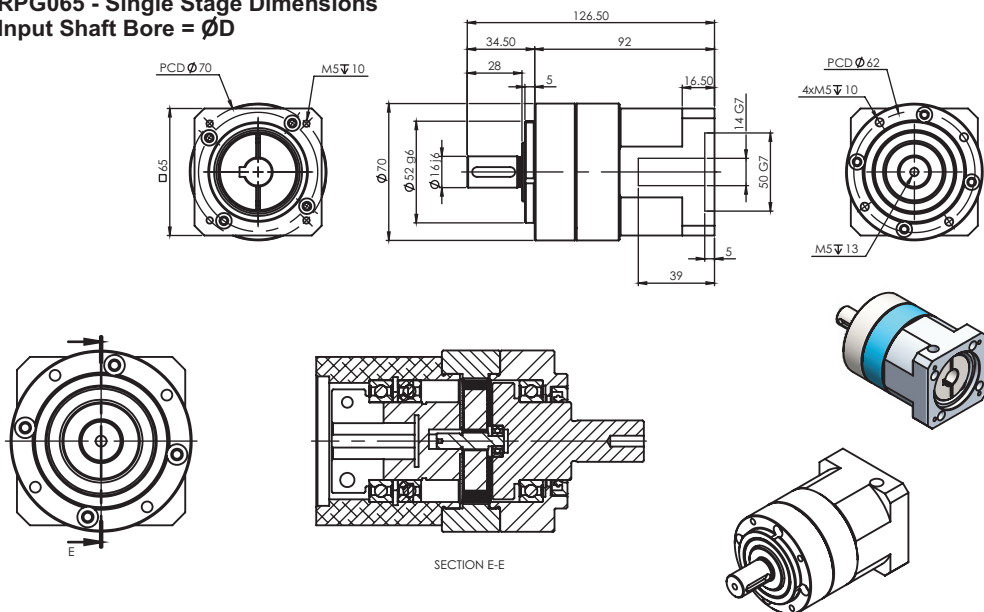


* Note : Supply as per customer requirements.

RPG065 - Single Stage Specifications

Frame Size	065					
Stage	1-Stage					
Ratio	Unit	Note	4	5	8	10
Nominal Output Torque	[Nm]	*1	27	27	27	18
Maximum Output Torque	[Nm]	*2	50	50	50	35
Emergency Stop Torque	[Nm]	*3	100	100	100	80
Nominal Input Speed	[rpm]	*4	3000			
Maximum Input Speed	[rpm]	*5	6000			
No Load Running Torque	[rpm]	*6	0.08			
Permitted Radial Load	[N]	*7	470	510	600	640
Permitted Axial Load	[N]	*8	360	390	480	530
Maximum Radial Load	[N]	*9	1200			
Maximum Axial Load	[N]	*10	1100			
Moment of Inertia ($\leq \emptyset 8$)	[kgcm ²]	—	0.095	0.077	0.059	0.056
Moment of Inertia ($\leq \emptyset 14$)	[kgcm ²]	—	0.170	0.160	0.140	0.140
Moment of Inertia ($\leq \emptyset 19$)	[kgcm ²]	—	0.380	0.360	0.340	0.340
Efficiency	[%]	*11	95			
Torsional Rigidity	[Nm/arcmin]	*12	3			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	≤ 66			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	1.5			

RPG065 - Single Stage Dimensions Input Shaft Bore = $\emptyset D$

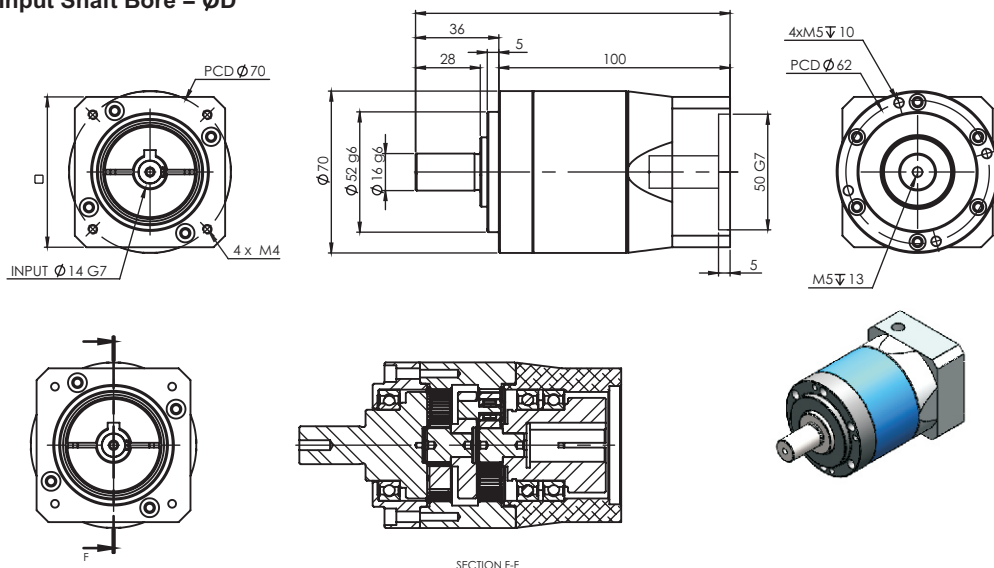


* Note : Supply as per customer requirements.

RPG065 - Double Stage Specifications

Frame Size	065					
Stage	2-Stage					
Ratio	Unit	Note	15	20	30	40
Nominal Output Torque	[Nm]	*1	18	27	18	27
Maximum Output Torque	[Nm]	*2	35	50	35	50
Emergency Stop Torque	[Nm]	*3	80	100	80	100
Nominal Input Speed	[rpm]	*4	3000			
Maximum Input Speed	[rpm]	*5	6000			
No Load Running Torque	[rpm]	*6	0.04			
Permitted Radial Load	[N]	*7	740	810	930	1000
Permitted Axial Load	[N]	*8	630	720	860	970
Maximum Radial Load	[N]	*9	1200			
Maximum Axial Load	[N]	*10	1100			
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	—	0.055	0.054	0.049	0.049
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	—	0.140	0.130	0.130	0.130
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	—	0.350	0.350	0.340	0.340
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/arcmin]	*12	3			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	≤ 66			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	1.7			

RPG065 - Double Stage Dimensions Input Shaft Bore = $\varnothing D$



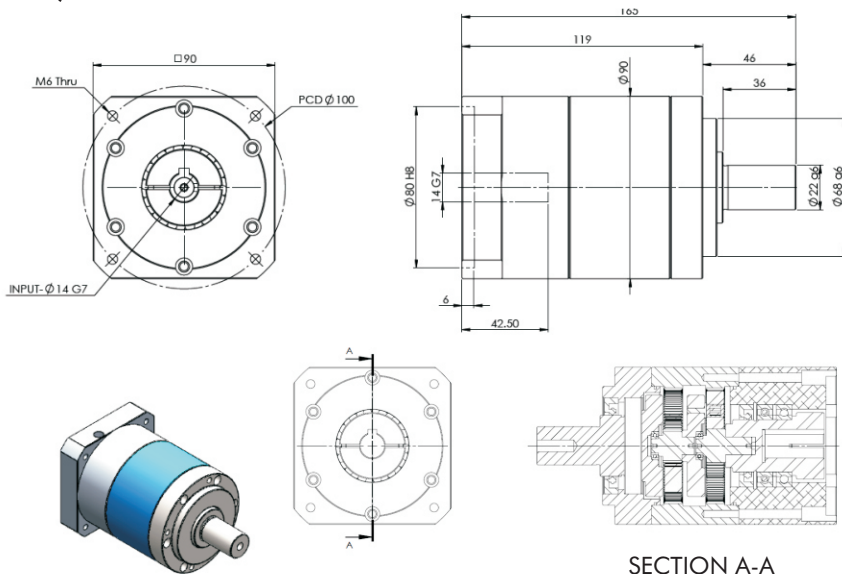
* Note : Supply as per customer requirements.

RPG090 - Double Stage Specifications

Frame Size	090					
Stage	2-Stage					
Ratio	Unit	Note	15	20	30	40
Nominal Output Torque	[Nm]	*1	50	75	50	75
Maximum Output Torque	[Nm]	*2	80	125	80	125
Emergency Stop Torque	[Nm]	*3	200	250	200	250
Nominal Input Speed	[rpm]	*4	3000			
Maximum Input Speed	[rpm]	*5	6000			
No Load Running Torque	[rpm]	*6	0.06			
Permitted Radial Load	[N]	*7	1400	1500	1700	1900
Permitted Axial Load	[N]	*8	1600	2100	2200	2200
Maximum Radial Load	[N]	*9	2400			
Maximum Axial Load	[N]	*10	2200			
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	—	0.130	0.130	0.100	0.099
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	—	0.280	0.280	0.250	0.250
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	—	0.720	0.720	0.700	0.700
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/aromin]	*12	10			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	67			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	4			

RPG090 - Double Stage Dimensions

Input Shaft Bore = $\varnothing D$

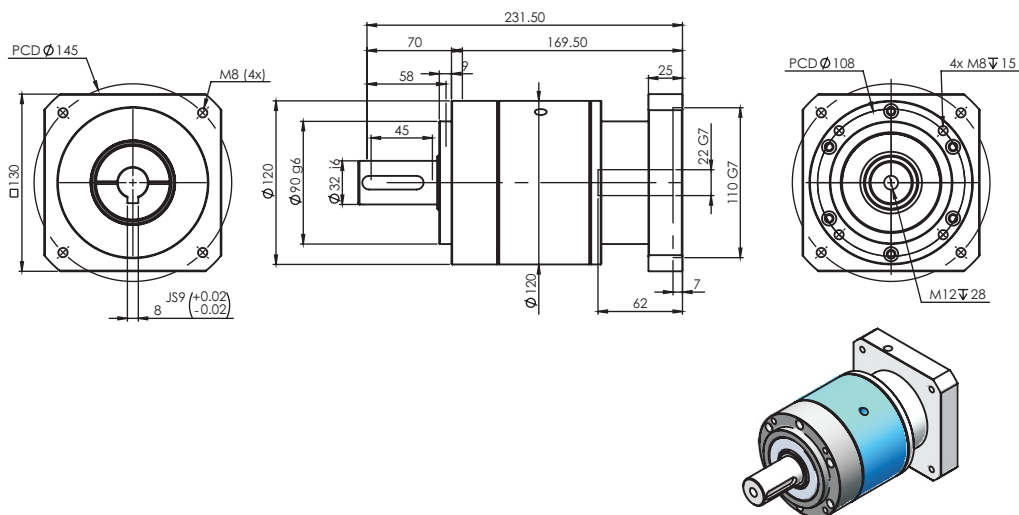


* Note : Supply as per customer requirements.

RPG130 - Double Stage Specifications

Frame Size	130					
Stage	2-Stage					
Ratio	Unit	Note	10	20	30	40
Nominal Output Torque	[Nm]	*1	50	75	50	75
Maximum Output Torque	[Nm]	*2	80	125	80	125
Emergency Stop Torque	[Nm]	*3	200	250	200	250
Nominal Input Speed	[rpm]	*4	3000			
Maximum Input Speed	[rpm]	*5	6000			
No Load Running Torque	[rpm]	*6	0.06			
Permitted Radial Load	[N]	*7	1200	1500	1700	1900
Permitted Axial Load	[N]	*8	1600	2100	2200	2200
Maximum Radial Load	[N]	*9	2400			
Maximum Axial Load	[N]	*10	2200			
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	—	—	0.130	0.100	0.099
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	—	0.290	0.280	0.250	0.250
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	—	0.280	0.720	0.700	0.700
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/arcmin]	*12	10			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	67			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	4			

RPG130- Double Stage Dimensions Input Shaft Bore = $\varnothing D$

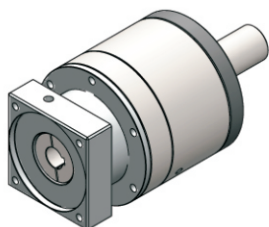
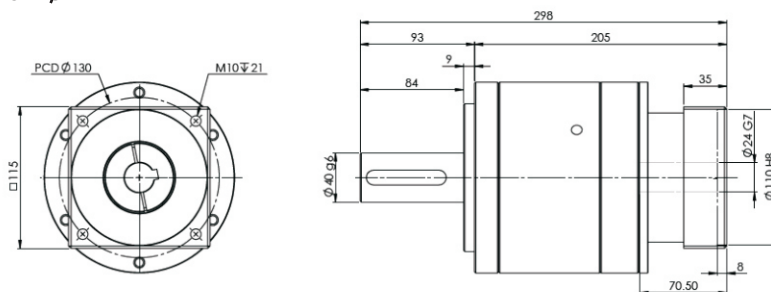


* Note : Supply as per customer requirements.

RPG155 - Double Stage Specifications

Frame Size	115					
Stage	2-Stage					
Ratio	Unit	Note	30	50	70	90
Nominal Output Torque	[Nm]	*1	240	360	360	240
Maximum Output Torque	[Nm]	*2	470	700	700	470
Emergency Stop Torque	[Nm]	*3	1000	1250	1250	1000
Nominal Input Speed	[rpm]	*4	2000			
Maximum Input Speed	[rpm]	*5	4000			
No Load Running Torque	[rpm]	*6	0.56			
Permitted Radial Load	[N]	*7	6800	8100	9100	9100
Permitted Axial Load	[N]	*8	6600	8200	8200	8200
Maximum Radial Load	[N]	*9	9100			
Maximum Axial Load	[N]	*10	8200			
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	—	0.85	0.81	0.800	0.800
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	—	2.80	2.80	2.80	2.80
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	—	10.00	10.00	10.00	10.00
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/aromin]	*12	10			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	67			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	18			

RPG155- Double Stage Dimensions Input Shaft Bore = $\varnothing D$



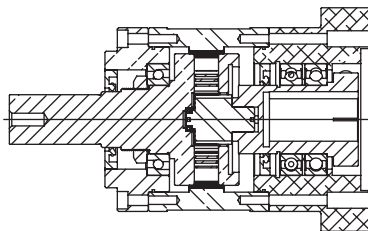
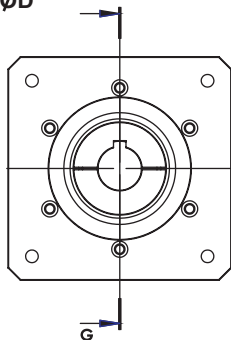
* Note : Supply as per customer requirements.

RPG180 - Single Stage Specifications

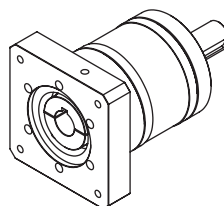
Frame Size	180					
Stage	1-Stage					
Ratio	Unit	Note	4	5	8	10
Nominal Output Torque	[Nm]	*1	750	750	750	500
Maximum Output Torque	[Nm]	*2	3400	1400	1400	970
Emergency Stop Torque	[Nm]	*3	2750	2750	2750	2200
Nominal Input Speed	[rpm]	*4	1500			
Maximum Input Speed	[rpm]	*5	3000			
No Load Running Torque	[rpm]	*6	2.68			
Permitted Radial Load	[N]	*7	6200	6700	7800	8400
Permitted Axial Load	[N]	*8	4900	5400	6600	7300
Maximum Radial Load	[N]	*9	15000			
Maximum Axial Load	[N]	*10	14000			
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	—	28.00	22.00	15.000	14.000
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	—	50.00	44.00	37.00	35.00
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	—	110.00	100.00	97.00	96.00
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/aromin]	*12	10			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	67			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	39			

RPG180- Single Stage Dimensions

Input Shaft Bore = $\varnothing D$



SECTION G-G

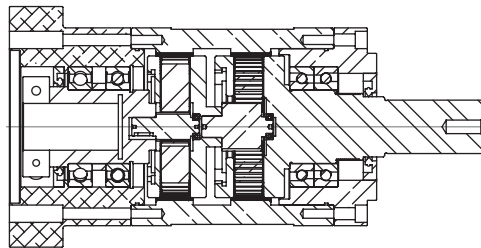
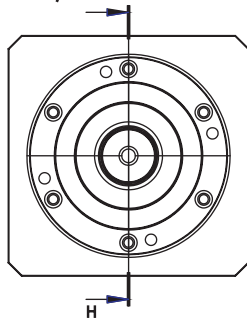


* Note : Supply as per customer requirements.

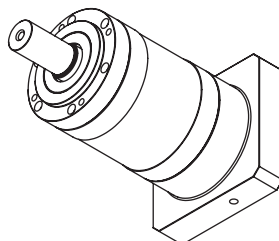
RPG180 - Double Stage Specifications

Frame Size	180					
Stage	2-Stage					
Ratio	Unit	Note	15	20	30	40
Nominal Output Torque	[Nm]	*1	500	750	500	750
Maximum Output Torque	[Nm]	*2	970	1400	970	1400
Emergency Stop Torque	[Nm]	*3	2200	2750	2200	2750
Nominal Input Speed	[rpm]	*4	1500			
Maximum Input Speed	[rpm]	*5	3000			
No Load Running Torque	[rpm]	*6	1.39			
Permitted Radial Load	[N]	*7	9600	11000	12000	13000
Permitted Axial Load	[N]	*8	8700	9900	12000	13000
Maximum Radial Load	[N]	*9	15000			
Maximum Axial Load	[N]	*10	14000			
Moment of Inertia ($\leq \emptyset 8$)	[kgcm ²]	—	4.70	4.40	3.200	3.200
Moment of Inertia ($\leq \emptyset 14$)	[kgcm ²]	—	12.00	12.00	11.00	11.00
Moment of Inertia ($\leq \emptyset 19$)	[kgcm ²]	—	34.00	34.00	33.00	33.00
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/aromin]	*12	10			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	67			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	40			

RPG180- Double Stage Dimensions Input Shaft Bore = $\emptyset D$



SECTION H-H

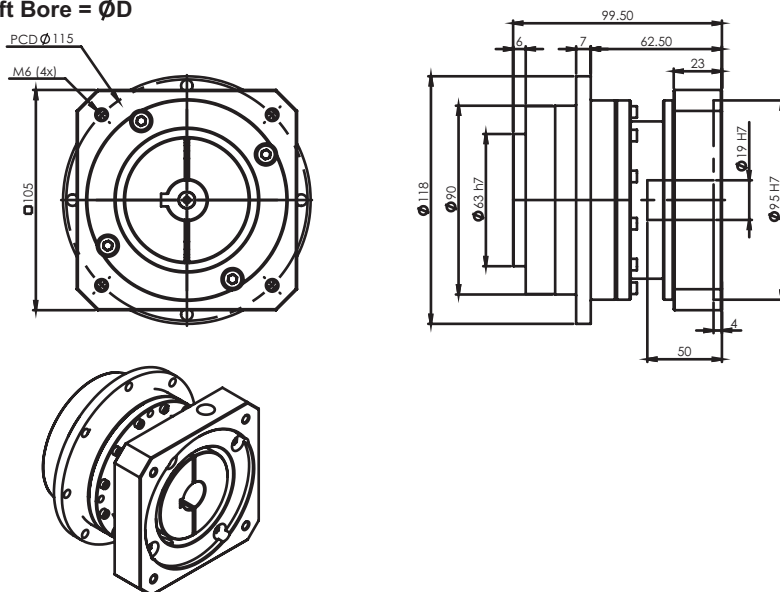


* Note : Supply as per customer requirements.

RTO090 - Single Stage Specifications

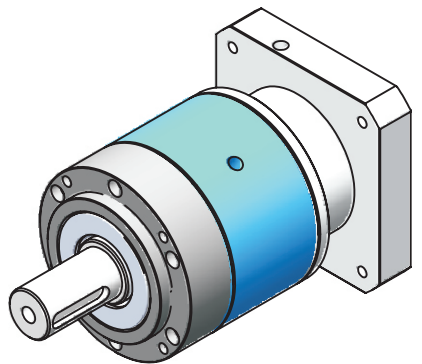
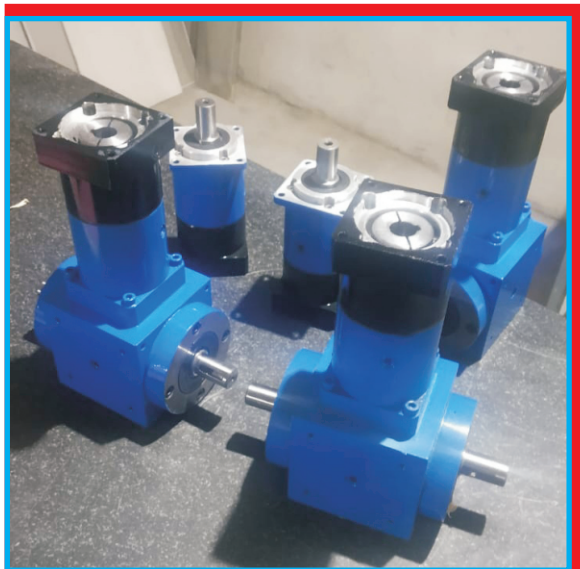
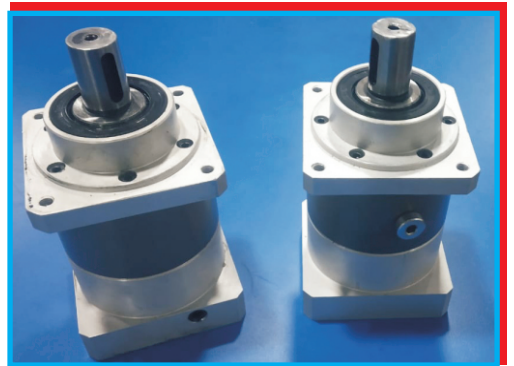
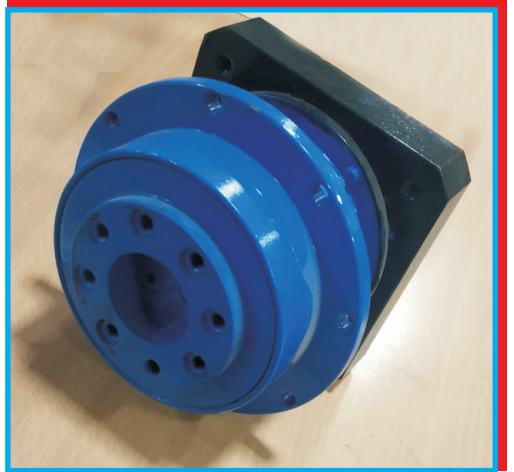
Frame Size	105					
Stage	1- Stage					
Ratio	Unit	Note	4	5	8	10
Nominal Output Torque	[Nm]	*1	75	75	75	50
Maximum Output Torque	[Nm]	*2	125	125	125	80
Emergency Stop Torque	[Nm]	*3	250	250	250	200
Nominal Input Speed	[rpm]	*4	3000			
Maximum Input Speed	[rpm]	*5	6000			
No Load Running Torque	[rpm]	*6	0.17			
Permitted Radial Load	[N]	*7	720	780	910	980
Permitted Axial Load	[N]	*8	620	680	830	920
Maximum Radial Load	[N]	*9	3300			
Maximum Axial Load	[N]	*10	1700			
Moment of Inertia ($\leq \varnothing 8$)	[kgcm ²]	—	0.77	0.58	0.350	0.330
Moment of Inertia ($\leq \varnothing 14$)	[kgcm ²]	—	1.20	1.00	0.81	0.80
Moment of Inertia ($\leq \varnothing 19$)	[kgcm ²]	—	2.90	2.90	2.80	2.80
Efficiency	[%]	*11	90			
Torsional Rigidity	[Nm/arcmin]	*12	10			
Maximum Torsional Backlash	[Arc-min]	—	≤ 5			
Noise Level	[dB]	*13	≤ 67			
Protection Class	—	*14	IP54 (IP65)			
Ambient Temperature	[°C]	—	0-40			
Permitted Housing Temperature	[°C]	—	90			
Weight	[kg]	*15	3.6			

RTO-090 Single Stage Dimensions Input Shaft Bore = $\varnothing D$



* Note : Supply as per customer requirements.

IMAGES



* Note : Supply as per customer requirements.

IMAGES



* Note : Supply as per customer requirements.

IMAGES



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IMAGES



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General Information

The RT Planetary Gearboxes are best used in applications requiring precise positioning & dynamic response. They are fitted between the motor (Servo, stepper, Brushless etc) and the mechanical parts. In such cases where high level of precision & accuracy of movements are required, which sometimes cannot be measured & controlled, it is necessary to use Gearbox of certified quality standard, which offers high level of precision as well as flexible assembly and reliability in use.

- (1) At nominal input speed, service life is 20,000 hours
- (2) The maximum torque when starting or stopping operation
- (3) The maximum torque allowed under a stress situation (Permitted 1,000 times during service life)
- (4) The average input speed
- (5) The maximum intermittent input speed
- (6) This is the torque at no load applied on the input shaft
- (7) At this load and nominal input speed, service life will be 20,000 hours
- (8) At this load and nominal input speed, service life will be 20,000 hours
- (9) The maximum radial load that the reducer can accept
- (10) The maximum axial load that the reducer can accept
- (11) The efficiency at the nominal torque rating
- (12) This does not include the lost motion
- (13) Contact ROTO-TRANS for the testing conditions and environment
- (14) IP65 (wash-down) is available as an option. Contact ROTO-TRANS for more details
- (15) The weight may vary slightly between models



MAKE IN INDIA

ROTOTRANS INDIA Pvt. Ltd.

(Formerly known as Captivtrade Pvt. Ltd.)

An ISO 9001-2015 Certified Company



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