



PLANETARY GEAR REDUCER
PGR High-Torque Series | Precision Planetary Gear Reducer

High-Torque Series | 32 / 36 / 42 mm planetary gear reducer.

HIGH-TORQUE SERIES SELECTION

Website Group	ARTUS Model	Size	Stages	Reduction Ratios	Rated Torque	Input Speed
High-Torque Series	PGR-32	32 mm	1-4	3.5-509.1	35-80 kgf·cm	≤ 8000 rpm
	PGR-36	36 mm	1-4	3.66-625	40-100 kgf·cm	≤ 8000 rpm
	PGR-42	42 mm	1-4	3.8-660.7	80-150 kgf·cm	≤ 8000 rpm



PLANETARY GEAR REDUCER

PGR-32 | High-Torque Series Planetary Gear Reducer Specification

PRODUCT PLATFORM

ARTUS MODEL	PGR-32
SIZE / POSITIONING	Ø32 mm 1-4 stages

Parameter	Unit	1 Stage	2 Stage	3 Stage	4 Stage
Reduction Ratio	:1	3.5 / 4 / 4.75	12.2 / 14 / 16 / 16.6 / 19 / 22.6	42.9 / 49 / 56 / 58.2 / 64 / 66.5 / 76 / 79 / 90.2 / 107.2	150.1 / 171.5 / 196 / 203.7 / 224 / 232.7 / 256 / 266 / 276.4 / 304 / 315.9 / 361 / 375.1 / 428.7 / 509.1
Gearbox Length L	mm	28.05	36.35	44.65	52.95
Rated Permissible Torque	kgf·cm	35.0	50.0	65.0	80.0
Instantaneous Permissible Torque	kgf·cm	70.0	100.0	130.0	160.0
Efficiency	%	90%	80%	73%	66%
Housing Material	—	Steel	Steel	Steel	Steel
Gear Material	—	Steel	Steel	Steel	Steel
Output Shaft Bearing	—	Ball bearings	Ball bearings	Ball bearings	Ball bearings
Radial Load	kgf	≤ 8.0	≤ 8.0	≤ 8.0	≤ 8.0
Axial Load	kgf	≤ 3.5	≤ 3.5	≤ 3.5	≤ 3.5
Radial Clearance	mm	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04
Axial Clearance	mm	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3

Backlash — No Load	°	≤ 1.2	≤ 1.2	≤ 1.2	≤ 1.2
Max. Continuous Input Speed	rpm	≤ 8000	≤ 8000	≤ 8000	≤ 8000
Operating Temperature	°C	−40 to 120	−40 to 120	−40 to 120	−40 to 120

PLANETARY GEAR REDUCER

PGR-36 | High-Torque Series Planetary Gear Reducer Specification

PRODUCT PLATFORM

ARTUS MODEL	PGR-36
SIZE / POSITIONING	Ø36 mm 1-4 stages

Parameter	Unit	1 Stage	2 Stage	3 Stage	4 Stage
Reduction Ratio	:1	3.66 / 4.2 / 5.0	13.4 / 15.4 / 17.6 / 18.3 / 21 / 25	49 / 56.3 / 64.6 / 67 / 74.1 / 76.9 / 88.2 / 91.5 / 105 / 125	179.4 / 205.9 / 236.3 / 245.1 / 271.2 / 281.3 / 311.2 / 322.8 / 334.9 / 370.5 / 384.3 / 441 / 457.5 / 525 / 625
Gearbox Length L	mm	30.6	40.9	51.2	61.5
Rated Permissible Torque	kgf·cm	40.0	60.0	80.0	100.0
Instantaneous Permissible Torque	kgf·cm	80.0	120.0	160.0	200.0
Efficiency	%	90%	80%	73%	66%
Housing Material	—	Steel	Steel	Steel	Steel
Gear Material	—	Steel	Steel	Steel	Steel
Output Shaft Bearing	—	Ball bearings	Ball bearings	Ball bearings	Ball bearings
Radial Load	kgf	≤ 10.0	≤ 10.0	≤ 10.0	≤ 10.0
Axial Load	kgf	≤ 6.0	≤ 6.0	≤ 6.0	≤ 6.0
Radial Clearance	mm	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04
Axial Clearance	mm	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3

Backlash — No Load	°	≤ 1.2	≤ 1.2	≤ 1.2	≤ 1.2
Max. Continuous Input Speed	rpm	≤ 8000	≤ 8000	≤ 8000	≤ 8000
Operating Temperature	°C	−40 to 120	−40 to 120	−40 to 120	−40 to 120

PLANETARY GEAR REDUCER
PGR-42 | High-Torque Series Planetary Gear Reducer Specification

PRODUCT PLATFORM

ARTUS MODEL	PGR-42
SIZE / POSITIONING	Ø42 mm 1-4 stages

Parameter	Unit	1 Stage	2 Stage	3 Stage	4 Stage
Reduction Ratio	:1	3.8 / 4.3 / 5.1	14.4 / 16.3 / 18.6 / 19.2 / 21.8 / 25.7	54.4 / 61.9 / 70.4 / 72.8 / 80.1 / 82.8 / 94.2 / 97.4 / 110.8 / 130.3	206.4 / 234.6 / 266.8 / 276 / 303.5 / 313.9 / 345 / 357 / 369.2 / 406 / 419.9 / 477.5 / 493.93 / 561.70 / 660.7
Gearbox Length L	mm	35.6	46.9	58.2	69.5
Rated Permissible Torque	kgf·cm	80.0	100.0	120.0	150.0
Instantaneous Permissible Torque	kgf·cm	160.0	200.0	240.0	300.0
Efficiency	%	90%	80%	73%	66%
Housing Material	—	Steel	Steel	Steel	Steel
Gear Material	—	Steel	Steel	Steel	Steel
Output Shaft Bearing	—	Ball bearings	Ball bearings	Ball bearings	Ball bearings
Radial Load	kgf	≤ 16.0	≤ 16.0	≤ 16.0	≤ 16.0
Axial Load	kgf	≤ 8.0	≤ 8.0	≤ 8.0	≤ 8.0
Radial Clearance	mm	≤ 0.04	≤ 0.04	≤ 0.04	≤ 0.04
Axial Clearance	mm	≤ 0.3	≤ 0.3	≤ 0.3	≤ 0.3

Backlash — No Load	°	≤ 1.2	≤ 1.2	≤ 1.2	≤ 1.2
Max. Continuous Input Speed	rpm	≤ 8000	≤ 8000	≤ 8000	≤ 8000
Operating Temperature	°C	−40 to 120	−40 to 120	−40 to 120	−40 to 120