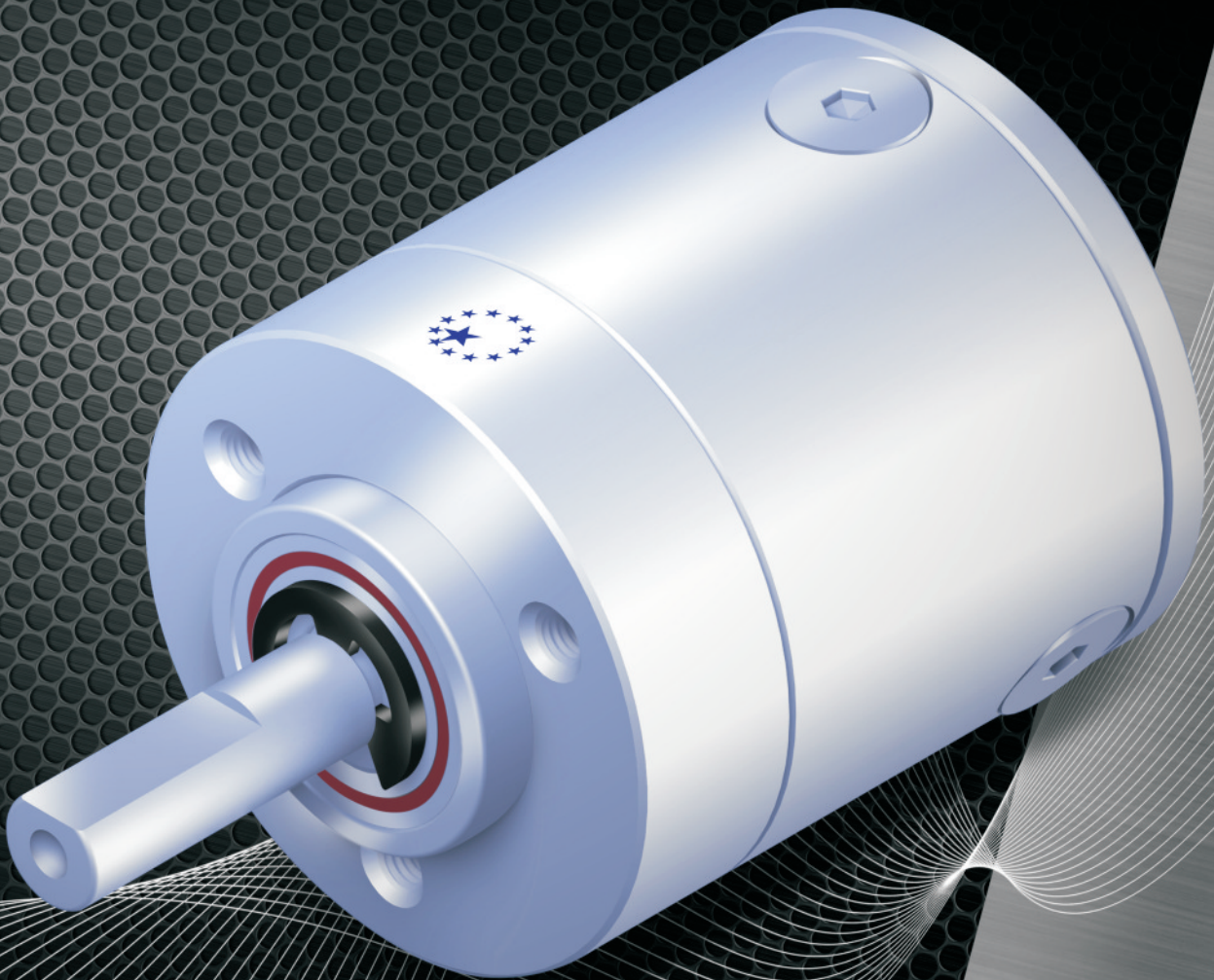




APEX DYNAMICS, INC.

CPM *SERIES*



Micro-Planetary Gearboxes

Stainless

AM Series

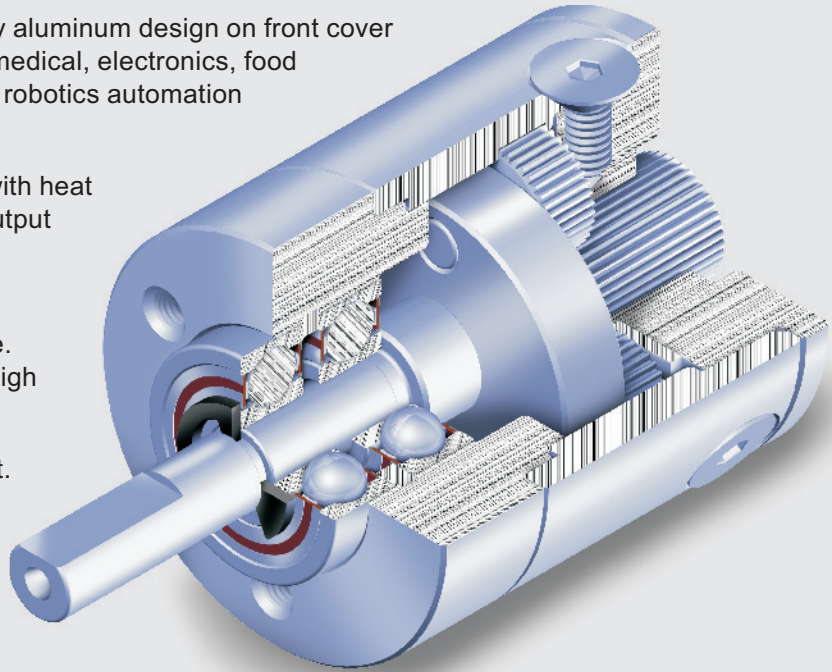
Characteristic Highlights

Stainless steel housing with alloy aluminum design on front cover and motor adapter. Suitable for medical, electronics, food industry, packaging industry and robotics automation applications.

Gearing set is using alloy steel with heat treatment. It can transmit high output torque and longer service life.

All parts are made out by high precision machine tools in-house. Smooth rotation, low backlash, high efficiency and low noise level.

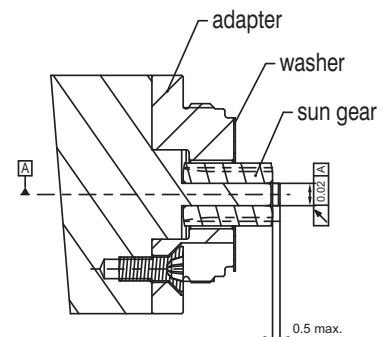
Compact design with light weight. Wide variation of ratios selection, ideal for adapting with DC motor, step motor and servomotor. Excellent design for easy installation. No need to use special tooling.



Micro Planetary Gearbox Installation Manual

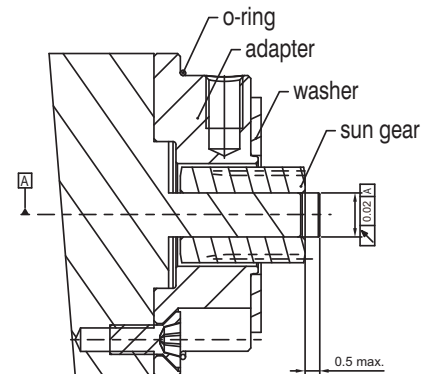
» AM013 Assemble Procedures:

1. Check motor shaft runout. $\sqrt{0.02A}$
2. Clean the grease or oil on motor shaft. Apply Loctite 638 on motor shaft (please see apply glue procedures).
3. Slide and rotate the sun gear on motor shaft.
4. Bolts the adapter on motor.
5. Put washer on adapter surface.
6. Screw the gearbox on adapter all the way and verify is seal tight.



» AM016 / 022 / 026 / 032 Assemble Procedures:

1. Check motor shaft runout. $\sqrt{0.02A}$
2. Clean the grease or oil on motor shaft. Apply Loctite 638 on motor shaft (please see apply glue procedures).
3. Slide and rotate the sun gear on motor shaft.
4. Bolts the adapter on motor.
5. Put washer on adapter surface, check o-ring position.
6. Bolts the gearbox and motor together. Verify is seal tight.



» Apply Glue Procedures:

1. Check motor shaft and sun gear hole tolerance within 0.02mm. (sun gear hole tolerance is H7).
2. Clean the grease or oil in sun gear hole and motor shaft.
3. Sun gear can rotate or slide on motor shaft.
4. Minimum dry time for Loctite 638 is 4 hours. Keep the assembly in horizontal position.
5. After dried, under no-load test run for 15 minutes.

AM013 Series

Specifications

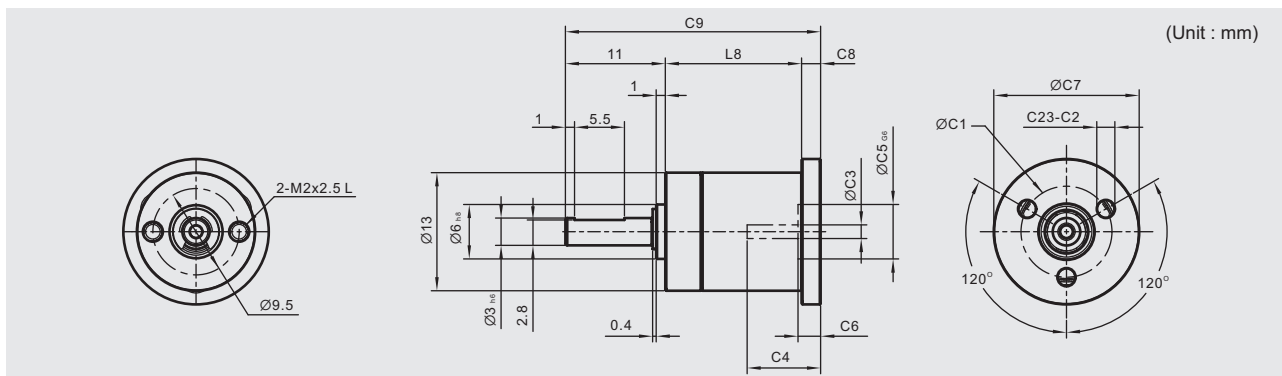
Gearbox Performance

| Model No. | | 1-Stage | | 2-Stage | | 3-Stage | | 4-Stage | | 5-Stage | |
|---|-------------------|------------------------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|
| Nominal Output Torque T_{2N} | Nm | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue |
| | | Absolute Ratios | | Absolute Ratios | | Absolute Ratios | | Absolute Ratios | | Absolute Ratios | |
| | | 4.1 | 0.2 | 17 | 0.2 | 67 | 0.3 | 275 | 0.3 | 1119 | 0.35 |
| | | 57/14 | | 3249/196 | | 185193/2744 | | 10556001/38416 | | 601692057/537824 | |
| | | 5.1 | 0.2 | 26 | 0.2 | 131 | 0.3 | 664 | 0.3 | 3373 | 0.35 |
| 66/13 | 4356/169 | 287496/2197 | | 18974736/28561 | | 1252332576/371293 | | | | | |
| Max. Acceleration Torque T_{2B} | Nm | 1.5 times of Nominal Output Torque | | | | | | | | | |
| Nominal Input Speed n_{1N} | rpm | 8,000 | | 8,000 | | 8,000 | | 8,000 | | 8,000 | |
| Max. Acceleration Input Speed n_{1B} | rpm | 12,000 | | 12,000 | | 12,000 | | 12,000 | | 12,000 | |
| Backlash (No-Load) | Deg | ≤ 1 | | ≤ 1.2 | | ≤ 1.5 | | ≤ 1.8 | | ≤ 2 | |
| Max. Radial Load F_{2rB} ² | N | 10 | | | | | | | | | |
| Max. Axial Load F_{2aB} ² | N | 5 | | | | | | | | | |
| Mass Moment of Inertia J_1 | g.cm ² | 4.1 | 0.007 | 17 | 0.007 | 67 | 0.007 | 275 | 0.007 | 1119 | 0.007 |
| | | 5.1 | 0.003 | 26 | 0.003 | 131 | 0.003 | 664 | 0.003 | 3373 | 0.003 |
| Service Life | hr | 10,000* | | | | | | | | | |
| Efficiency η (MAX) | % | 91 | | 83 | | 75 | | 69 | | 62 | |
| Weight | g | 11 | | 16 | | 21 | | 26 | | 31 | |
| Operating Temperature | °C | -30°C~+100°C | | | | | | | | | |
| Degree of Gearbox Protection | | IP44 | | | | | | | | | |
| Mounting Position | | all directions | | | | | | | | | |

1. Ratio ($i=N_n/N_{out}$)

2. Apply to the output shaft center @ 100 rpm

* S1 service life 5000 hrs



| Dimension | | 1-Stage | | 2-Stage | | 3-Stage | | 4-Stage | | 5-Stage | |
|-------------------------|-------------------------------|--------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|--------------------|-------|
| Length | L8 | 15 | | 21 | | 27 | | 33 | | 39 | |
| Mounting hole PCD | C1 ³ | 10 | | | | | | | | | |
| Mounting hole O.D. | C2 ³ | 1.8 | | | | | | | | | |
| Number of mounting hole | C23 ³ | 3 | | | | | | | | | |
| Motor shaft O.D. | C3 ³ _{H7} | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. |
| | | 4.1 | ≤ 1.5 | 17 | ≤ 1.5 | 67 | ≤ 1.5 | 275 | ≤ 1.5 | 1119 | ≤ 1.5 |
| | | 5.1 | ≤ 1.5 | 26 | ≤ 1.5 | 131 | ≤ 1.5 | 664 | ≤ 1.5 | 3373 | ≤ 1.5 |
| Motor Shaft Length | C4 ³ | 8.1 | | | | | | | | | |
| Motor Pilot O.D. | C5 ³ _{G6} | 6 | | | | | | | | | |
| Motor Pilot Depth | C6 ³ | 2.5 | | | | | | | | | |
| Motor adapter O.D. | C7 ³ | 16 | | | | | | | | | |
| Motor adapter Thickness | C8 ³ | 2.1 | | | | | | | | | |
| Total Length | C9 ³ | 28.1 | | 34.1 | | 40.1 | | 46.1 | | 52.1 | |

3. C1 ~ C9 are motor specific dimensions (metric std shown). Refer to apexdyna.com and AM Design Tool to view your specific motor mounting system.

AM016 Series

Specifications

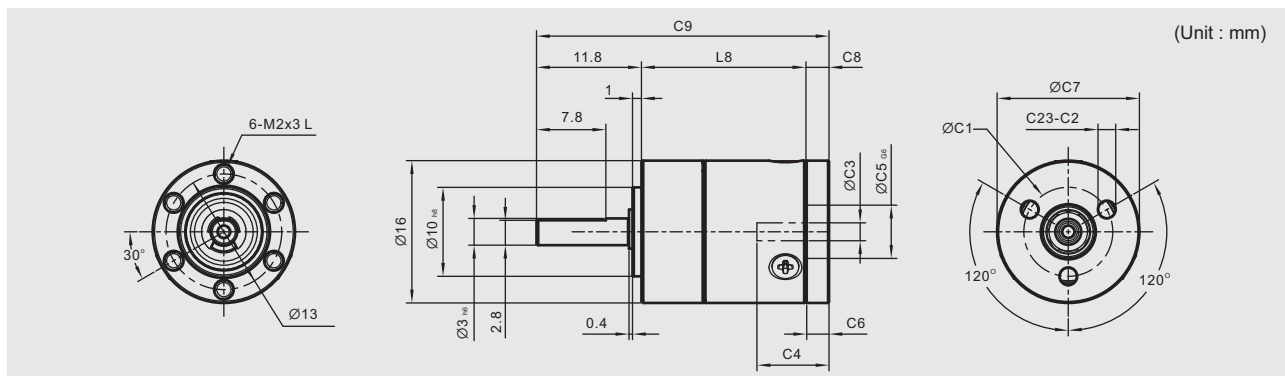
Gearbox Performance

| Model No. | 1-Stage | | 2-Stage | | 3-Stage | | 4-Stage | | 5-Stage | | | |
|--|--------------------|------------------------------------|--------------------|---------------|--------------------|------------------|--------------------|--------|--------------------|--------|-------|--|
| | Ratio ¹ | Torque | Ratio ¹ | Torque | Ratio ¹ | Torque | Ratio ¹ | Torque | Ratio ¹ | Torque | | |
| Nominal Output Torque T _{2N} | Nm | 4.4 | 19 | 84 | 370 | 1621 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | |
| | | 57/13 | 3249/169 | 185193/2197 | 10556001/28561 | 601692057/371293 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | |
| | | 5.4 | 24 | 104 | 455 | 1996 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | |
| | | 27/5 | 1539/65 | 87723/845 | 5000211/10985 | 285012027/142805 | 0.1 | 0.15 | 0.2 | 0.25 | 0.3 | |
| | | | 29 | 128 | 561 | 2458 | | | | | | |
| | | | 729/25 | 41553/325 | 2368521/4225 | 135005697/54925 | | | | | | |
| | | | | 157 | 690 | 3027 | | | | | | |
| | | | | 19683/125 | 1121931/1625 | 63950067/21125 | | | | | | |
| | | | | | 850 | 3728 | | | | | | |
| | | | | | 531441/625 | 30292137/8125 | | | | | | |
| | | | | 4592 | | | | | | | | |
| | | | | 14348907/3125 | | | | | | | | |
| Max. Acceleration Torque T _{2B} | Nm | 1.5 times of Nominal Output Torque | | | | | | | | | | |
| Nominal Input Speed n _{1N} | rpm | 8,000 | | | | | | | | | | |
| Max. Acceleration Input Speed n _{1B} | rpm | 12,000 | | | | | | | | | | |
| Backlash (No-Load) | Deg | ≤ 1.4 | | ≤ 1.6 | | ≤ 2 | | ≤ 2.4 | | ≤ 3 | | |
| Max. Radial Load F _{2RB} ² | N | 25 | | | | | | | | | | |
| Max. Axial Load F _{2AB} ² | N | 12.5 | | | | | | | | | | |
| Mass Moment of Inertia J ₁ | g.cm ² | 4.4 | 0.01 | 19 | 0.01 | 84 | 0.01 | 370 | 0.01 | 1621 | 0.01 | |
| | | 5.4 | 0.005 | 24 | 0.01 | 104 | 0.01 | 455 | 0.01 | 1996 | 0.01 | |
| | | | | 29 | 0.005 | 128 | 0.01 | 561 | 0.01 | 2458 | 0.01 | |
| | | | | | | 157 | 0.005 | 690 | 0.005 | 3027 | 0.005 | |
| | | | | | | | | 850 | 0.005 | 3728 | 0.005 | |
| | | | | | | | | 4592 | 0.005 | | | |
| Service Life | hr | 10,000* | | | | | | | | | | |
| Efficiency η (MAX) | % | 90 | | 81 | | 73 | | 65 | | 59 | | |
| Weight | g | 22 | | 30 | | 35 | | 42 | | 49 | | |
| Operating Temperature | °C | -30°C~+100°C | | | | | | | | | | |
| Degree of Gearbox Protection | | IP44 | | | | | | | | | | |
| Mounting Position | | all directions | | | | | | | | | | |

1. Ratio (i=N_{in}/N_{out})

2. Apply to the output shaft center @ 100 rpm

* S1 service life 5000 hrs



| Dimension | 1-Stage | | 2-Stage | | 3-Stage | | 4-Stage | | 5-Stage | | | |
|-------------------------|-------------------------------|--------------------|---------|--------------------|---------|--------------------|---------|--------------------|---------|--------------------|-------|--|
| Length | L8 | | 24 | | 29.5 | | 35 | | 40.5 | | | |
| Mounting hole PCD | C1 ³ | | | | 10 | | | | | | | |
| Mounting hole O.D. | C2 ³ | | | | 1.8 | | | | | | | |
| Number of mounting hole | C23 ³ | | | | 3 | | | | | | | |
| Motor shaft O.D. | C3 ³ _{H7} | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | |
| | | 4.4 | ≤ 2 | 19 | ≤ 2 | 84 | ≤ 2 | 370 | ≤ 2 | 1621 | ≤ 2 | |
| | | 5.4 | ≤ 1.5 | 24 | ≤ 2 | 104 | ≤ 2 | 455 | ≤ 2 | 1996 | ≤ 2 | |
| | | | | 29 | ≤ 1.5 | 128 | ≤ 2 | 561 | ≤ 2 | 2458 | ≤ 2 | |
| | | | | | | 157 | ≤ 1.5 | 690 | ≤ 1.5 | 3027 | ≤ 1.5 | |
| | | | | | | 850 | ≤ 1.5 | 3728 | ≤ 1.5 | | | |
| | | | | | | | | 4592 | ≤ 1.5 | | | |
| Motor Shaft Length | C4 ³ | | | | 8.1 | | | | | | | |
| Motor Pilot O.D. | C5 ³ _{GB} | | | | 6 | | | | | | | |
| Motor Pilot Depth | C6 ³ | | | | 2.5 | | | | | | | |
| Motor adapter O.D. | C7 ³ | | | | 16 | | | | | | | |
| Motor adapter Thickness | C8 ³ | | | | 2.6 | | | | | | | |
| Total Length | C9 ³ | | 32.9 | | 38.4 | | 43.9 | | 49.4 | | 51.9 | |

3. C1 – C9 are motor specific dimensions (metric std shown). Refer to apexdyna.com and AM Design Tool to view your specific motor mounting system.

AM022 Series

Specifications

Gearbox Performance

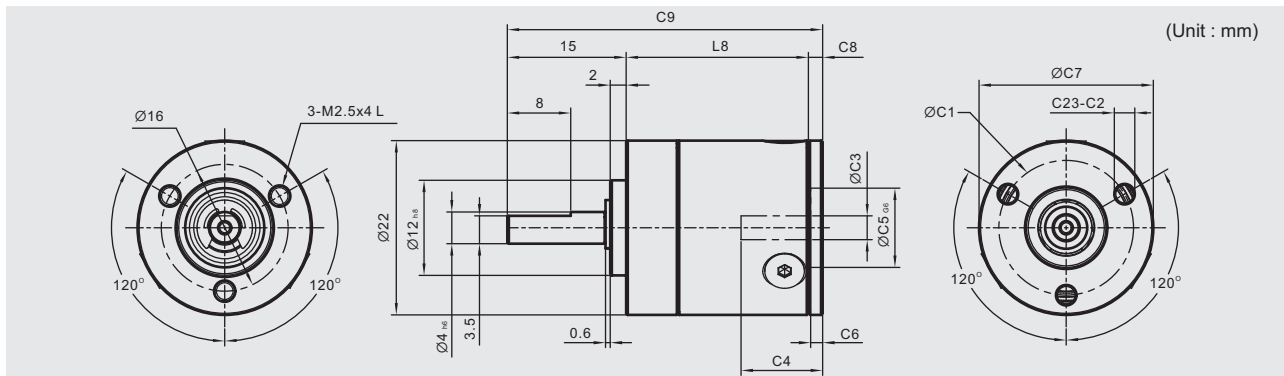
| Model No. | | 1-Stage | | 2-Stage | | | | 3-Stage | | | |
|---|-------------------|------------------------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|
| Nominal Output Torque T_{2N} | Nm | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue |
| | | 4 | 0.2 | 16 | 1 | 49 | 1 | 64 | 1.5 | 196 | 1.5 |
| | | 5 | 0.2 | 20 | 1 | | | 80 | 1.5 | 245 | 1.5 |
| | | 7 | 0.2 | 28 | 1 | | | 112 | 1.5 | 343 | 1.5 |
| | | 9 | 0.2 | 35 | 1 | | | 140 | 1.5 | | |
| Max. Acceleration Torque T_{2B} | Nm | 1.5 times of Nominal Output Torque | | | | | | | | | |
| Nominal Input Speed n_{1N} | rpm | 6,000 | | 6,000 | | | | 6,000 | | | |
| Max. Acceleration Input Speed n_{1B} | rpm | 10,000 | | 10,000 | | | | 10,000 | | | |
| Backlash* | acrmin | ≤ 20 | | ≤ 35 | | | | ≤ 50 | | | |
| Max. Radial Load F_{2RB} ² | N | 40 | | | | | | | | | |
| Max. Axial Load F_{2aB} ² | N | 20 | | | | | | | | | |
| Mass Moment of Inertia J_1 | g.cm ² | 4 | 0.067 | 16 | 0.067 | 49 | 0.006 | 64 | 0.067 | 196 | 0.067 |
| | | 5 | 0.024 | 20 | 0.024 | | | 80 | 0.067 | 245 | 0.024 |
| | | 7 | 0.006 | 28 | 0.006 | | | 112 | 0.067 | 343 | 0.006 |
| | | 9 | 0.003 | 35 | 0.006 | | | 140 | 0.067 | | |
| Service Life | hr | 10,000* | | | | | | | | | |
| Efficiency η (MAX) | % | 96 | | 90 | | | | 85 | | | |
| Weight | g | 47.38 | | 67.34 | | | | 84.3 | | | |
| Operating Temperature | °C | -30°C~+100°C | | | | | | | | | |
| Degree of Gearbox Protection | | IP44 | | | | | | | | | |
| Mounting Position | | all directions | | | | | | | | | |

1. Ratio ($i=N_o/N_{in}$)

* S1 service life 5000 hrs

2. Apply to the output shaft center @ 100 rpm

* Backlash is test under 2% of T_{2N}



| Dimension | | 1-Stage | | 2-Stage | | | | 3-Stage | | | |
|-------------------------|-------------------------------|--------------------|-------|--------------------|-------|--------------------|-------|--------------------|------|--------------------|-------|
| Length | L8 | 23 | | 31.5 | | | | 40 | | | |
| Mounting hole PCD | C1 ³ | 17 | | | | | | | | | |
| Mounting hole O.D. | C2 ³ | 2.2 | | | | | | | | | |
| Number of mounting hole | C23 ³ | 3 | | | | | | | | | |
| Motor shaft O.D. | C3 ³ ₁₇ | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. |
| | | 4 | ≤ 4 | 16 | ≤ 4 | 49 | ≤ 1.5 | 64 | ≤ 4 | 196 | ≤ 4 |
| | | 5 | ≤ 3 | 20 | ≤ 3 | | | 80 | ≤ 4 | 245 | ≤ 3 |
| | | 7 | ≤ 1.5 | 28 | ≤ 1.5 | | | 112 | ≤ 4 | 343 | ≤ 1.5 |
| | | 9 | ≤ 1 | 35 | ≤ 1.5 | | | 140 | ≤ 4 | | |
| Motor Shaft Length | C4 ³ | 10.3 | | | | | | | | | |
| Motor Pilot O.D. | C5 ³ ₀₆ | 10 | | | | | | | | | |
| Motor Pilot Depth | C6 ³ | 1.5 | | | | | | | | | |
| Motor adapter O.D. | C7 ³ | 22 | | | | | | | | | |
| Motor adapter Thickness | C8 ³ | 1.8 | | | | | | | | | |
| Total Length | C9 ³ | 39.8 | | 48.3 | | | | 56.8 | | | |

3. C1 ~ C9 are motor specific dimensions (metric std shown). Refer to apexdyna.com and AM Design Tool to view your specific motor mounting system.

AM026 Series

Specifications

Gearbox Performance

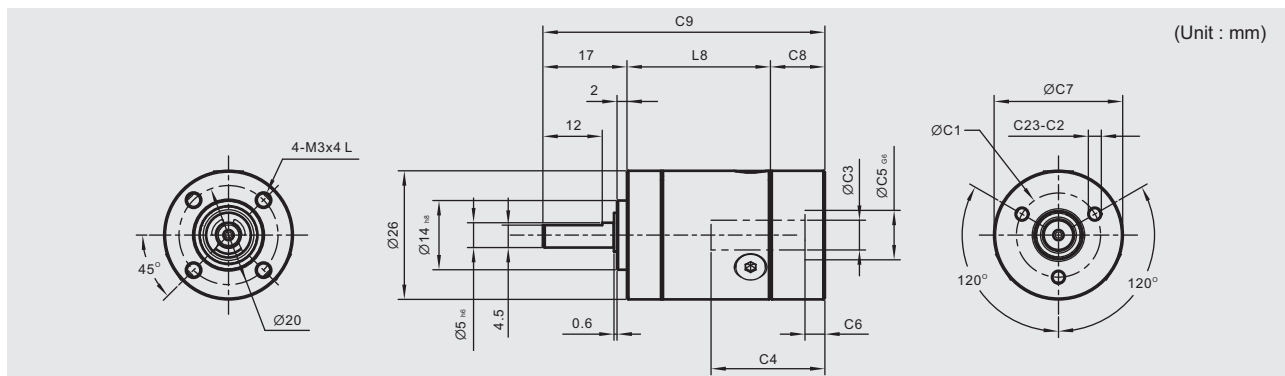
| Model No. | | 1-Stage | | 2-Stage | | | 3-Stage | | | | |
|---|-------------------|------------------------------------|--------|--------------------|--------|--------------------|---------|--------------------|--------|--------------------|--------|
| Nominal Output Torque T_{2N} | Nm | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue |
| | | 3.5 | 0.6 | 12.25 | 2 | 46 | 2 | 81.37 | 3 | 216 | 3 |
| | | 4.33 | 0.6 | 18.78 | 2 | | | 112.67 | 3 | 276 | 3 |
| | | 6 | 0.6 | 26 | 2 | | | 143.96 | 3 | 352.67 | 3 |
| | | 7.67 | 0.6 | 33.22 | 2 | | | 199.33 | 3 | | |
| Max. Acceleration Torque T_{2B} | Nm | 1.5 times of Nominal Output Torque | | | | | | | | | |
| Nominal Input Speed n_{1N} | rpm | 6,000 | | 6,000 | | | 6,000 | | | | |
| Max. Acceleration Input Speed n_{1B} | rpm | 10,000 | | 10,000 | | | 10,000 | | | | |
| Backlash* | acrmin | ≤ 20 | | ≤ 35 | | | ≤ 50 | | | | |
| Max. Radial Load F_{2rB} ² | N | 55 | | | | | | | | | |
| Max. Axial Load F_{2aB} ² | N | 27.5 | | | | | | | | | |
| Mass Moment of Inertia J_1 | g.cm ² | 3.5 | 0.273 | 12.25 | 0.273 | 46 | 0.024 | 81.37 | 0.117 | 216 | 0.024 |
| | | 4.33 | 0.117 | 18.78 | 0.117 | | | 112.67 | 0.117 | 276 | 0.024 |
| | | 6 | 0.024 | 26 | 0.117 | | | 143.96 | 0.117 | 352.67 | 0.024 |
| | | 7.67 | 0.011 | 33.22 | 0.117 | | | 199.33 | 0.117 | | |
| Service Life | hr | 10,000* | | | | | | | | | |
| Efficiency η (MAX) | % | 96 | | 90 | | | 85 | | | | |
| Weight | g | 98.66 | | 137.83 | | | 170.62 | | | | |
| Operating Temperature | °C | -30°C~+100°C | | | | | | | | | |
| Degree of Gearbox Protection | | IP44 | | | | | | | | | |
| Mounting Position | | all directions | | | | | | | | | |

1. Ratio ($i=N_{in}/N_{out}$)

* S1 service life 5000 hrs

2. Apply to the output shaft center @ 100 rpm

* Backlash is test under 2% of T_{2N}



| Dimension | | 1-Stage | | 2-Stage | | | 3-Stage | | | | |
|-------------------------|--------------------|--------------------|-------|--------------------|------|--------------------|---------|--------------------|------|--------------------|-------|
| Length | L8 | 29 | | 40.5 | | | 52 | | | | |
| Mounting hole PCD | C1 ³ | 17 | | | | | | | | | |
| Mounting hole O.D. | C2 ² | 2.2 | | | | | | | | | |
| Number of mounting hole | C23 ³ | 3 | | | | | | | | | |
| Motor shaft O.D. | C3 ^{3 HT} | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. |
| | | 3.5 | ≤ 6 | 12.25 | ≤ 6 | 46 | ≤ 2.5 | 81.37 | ≤ 4 | 216 | ≤ 2.5 |
| | | 4.33 | ≤ 4 | 18.78 | ≤ 4 | | | 112.67 | ≤ 4 | 276 | ≤ 2.5 |
| | | 6 | ≤ 2.5 | 26 | ≤ 4 | | | 143.96 | ≤ 4 | 352.67 | ≤ 2.5 |
| | | 7.67 | ≤ 1.5 | 33.22 | ≤ 4 | | | 199.33 | ≤ 4 | | |
| Motor Shaft Length | C4 ³ | 23 | | | | | | | | | |
| Motor Pilot O.D. | C5 ^{3 GB} | 10 | | | | | | | | | |
| Motor Pilot Depth | C6 ³ | 4 | | | | | | | | | |
| Motor adapter O.D. | C7 ³ | 26 | | | | | | | | | |
| Motor adapter Thickness | C8 ³ | 11 | | | | | | | | | |
| Total Length | C9 ³ | 57 | | 68.5 | | | 80 | | | | |

3. C1 – C9 are motor specific dimensions (metric std shown). Refer to apexdyna.com and AM Design Tool to view your specific motor mounting system.

AM032 Series

Specifications

Gearbox Performance

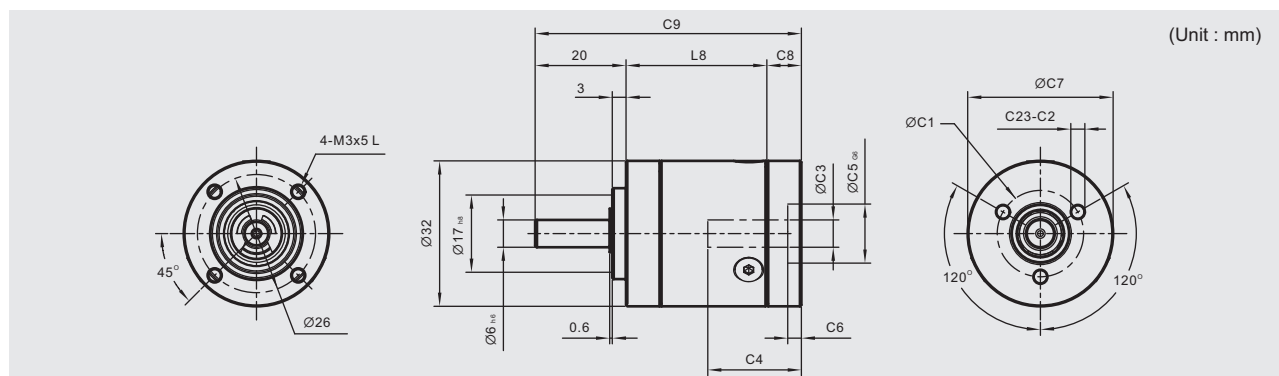
| Model No. | | 1-Stage | | 2-Stage | | | | 3-Stage | | | | | |
|---|-------------------|------------------------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|--------------------|--------|
| Nominal Output Torque T_{2N} | Nm | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue | Ratio ¹ | Torgue |
| | | 4 | 0.8 | 16 | 4 | 36 | 4 | 64 | 6 | 144 | 6 | 288 | 6 |
| | | 4.5 | 0.8 | 18 | 4 | 41.6 | 4 | 72 | 6 | 175.78 | 6 | 332.8 | 6 |
| | | 5.2 | 0.8 | 20.8 | 4 | 50 | 4 | 81 | 6 | 200 | 6 | 400 | 6 |
| | | 6.25 | 0.8 | 25 | 4 | 64 | 4 | 100 | 6 | 225 | 6 | 512 | 6 |
| 8 | 0.8 | 32 | 4 | | | 130 | 6 | 256 | | | | | |
| Max. Acceleration Torque T_{2B} | Nm | 1.5 times of Nominal Output Torque | | | | | | | | | | | |
| Nominal Input Speed n_{1N} | rpm | 5,000 | | 5,000 | | | | 5,000 | | | | | |
| Max. Acceleration Input Speed n_{1B} | rpm | 8,000 | | 8,000 | | | | 8,000 | | | | | |
| Backlash* | acrmin | ≤20 | | ≤35 | | | | ≤50 | | | | | |
| Max. Radial Load F_{2rB} ² | N | 90 | | | | | | | | | | | |
| Max. Axial Load F_{2aB} ² | N | 45 | | | | | | | | | | | |
| Mass Moment of Inertia J_1 | g.cm ² | 4 | 0.378 | 16 | 0.378 | 36 | 0.248 | 64 | 0.378 | 144 | 0.378 | 288 | 0.248 |
| | | 4.5 | 0.248 | 18 | 0.378 | 41.6 | 0.116 | 72 | 0.378 | 175.78 | 0.248 | 332.8 | 0.116 |
| | | 5.2 | 0.116 | 20.8 | 0.378 | 50 | 0.056 | 81 | 0.248 | 200 | 0.378 | 100 | 0.056 |
| | | 6.25 | 0.056 | 25 | 0.378 | 64 | 0.024 | 100 | 0.378 | 225 | 0.248 | 512 | 0.024 |
| | | 8 | 0.024 | 32 | 0.378 | | | 130 | 0.378 | 256 | 0.378 | | |
| Service Life | hr | 10,000* | | | | | | | | | | | |
| Efficiency η (MAX) | % | 96 | | 90 | | | | 85 | | | | | |
| Weight | g | 156.3 | | 218.32 | | | | 265.83 | | | | | |
| Operating Temperature | °C | -30°C~+100°C | | | | | | | | | | | |
| Degree of Gearbox Protection | | IP44 | | | | | | | | | | | |
| Mounting Position | | all directions | | | | | | | | | | | |

1. Ratio ($i=N_n/N_{out}$)

* S1 service life 5000 hrs

2. Apply to the output shaft center @ 100 rpm

* Backlash is test under 2% of T_{2N}



| Dimension | | 1-Stage | | 2-Stage | | | | 3-Stage | | | | | |
|-------------------------|-------------------------------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|--------------------|------|
| Length | L8 | 31 | | 43 | | | | 55 | | | | | |
| Mounting hole PCD | C1 ³ | 19 | | | | | | | | | | | |
| Mounting hole O.D. | C2 ³ | 2.7 | | | | | | | | | | | |
| Number of mounting hole | C23 ³ | 3 | | | | | | | | | | | |
| Motor shaft O.D. | C3 ³ ₁₇ | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. | Ratio ¹ | O.D. |
| | | 4 | ≤6 | 16 | ≤6 | 36 | ≤5 | 64 | ≤6 | 144 | ≤6 | 288 | ≤5 |
| | | 4.5 | ≤5 | 18 | ≤6 | 41.6 | ≤4 | 72 | ≤6 | 175.78 | ≤5 | 332.8 | ≤4 |
| | | 5.2 | ≤4 | 20.8 | ≤6 | 50 | ≤3 | 81 | ≤5 | 200 | ≤6 | 400 | ≤3 |
| | | 6.25 | ≤3 | 25 | ≤6 | 64 | ≤2 | 100 | ≤5 | 225 | ≤6 | 512 | ≤2 |
| 8 | ≤2 | 32 | ≤6 | | | 130 | ≤6 | 256 | ≤6 | | | | |
| Motor Shaft Length | C4 ³ | 20.6 | | | | | | | | | | | |
| Motor Pilot O.D. | C5 ³ _{G6} | 13 | | | | | | | | | | | |
| Motor Pilot Depth | C6 ³ | 3 | | | | | | | | | | | |
| Motor adapter O.D. | C7 ³ | 32 | | | | | | | | | | | |
| Motor adapter Thickness | C8 ³ | 7.6 | | | | | | | | | | | |
| Total Length | C9 ³ | 58.6 | | 70.6 | | | | 82.6 | | | | | |

3. C1 ~ C9 are motor specific dimensions (metric std shown). Refer to apexdyna.com and AM Design Tool to view your specific motor mounting system.

Ordering Code



| AM013 | 4.1 | | | | | MOTOR |
|--------|----------------------------|--|---|----------------------------|---------------------------------------|--------------------------------|
| Ratios | 1-Stage | 2-Stage | 3-Stage | 4-Stage | 5-Stage | Motor Designation |
| AM013 | 4.1, 5.1 | 17, 26 | 67, 131 | 275, 664 | 1119, 3373 | Manufacturer Type and Model |
| AM016 | 4.4, 5.4 | 19, 24, 29 | 84, 104, 128, 157 | 370, 455, 561, 690, 850 | 1621, 1996, 2458, 3027, 3728, 4592 | |
| AM022 | 4, 5, 7, 9 | 16, 20, 28, 35, 49 | 64, 80, 112, 140, 196, 245, 343 | | | |
| AM026 | 3.5, 4.33, 6, 7.67 | 12.25, 18.78, 26, 33.22, 46 | 81.37, 112.67, 143.96, 199.33, 216, 276, 352.67 | | | |
| AM032 | 4, 4.5, 5.2, 6.25, 8 | 16, 18, 20.8, 25, 32, 36, 41.6, 50, 64 | 64, 72, 81, 100, 130, 144, 175.78, 200, 225, 256, 288, 332.8, 400, 512 | | | |

Ordering Example : AM032 - 16 / MAXON 283872

AM SERIES
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