



▶ HIGH PERFORMANCE: SSP SERIES

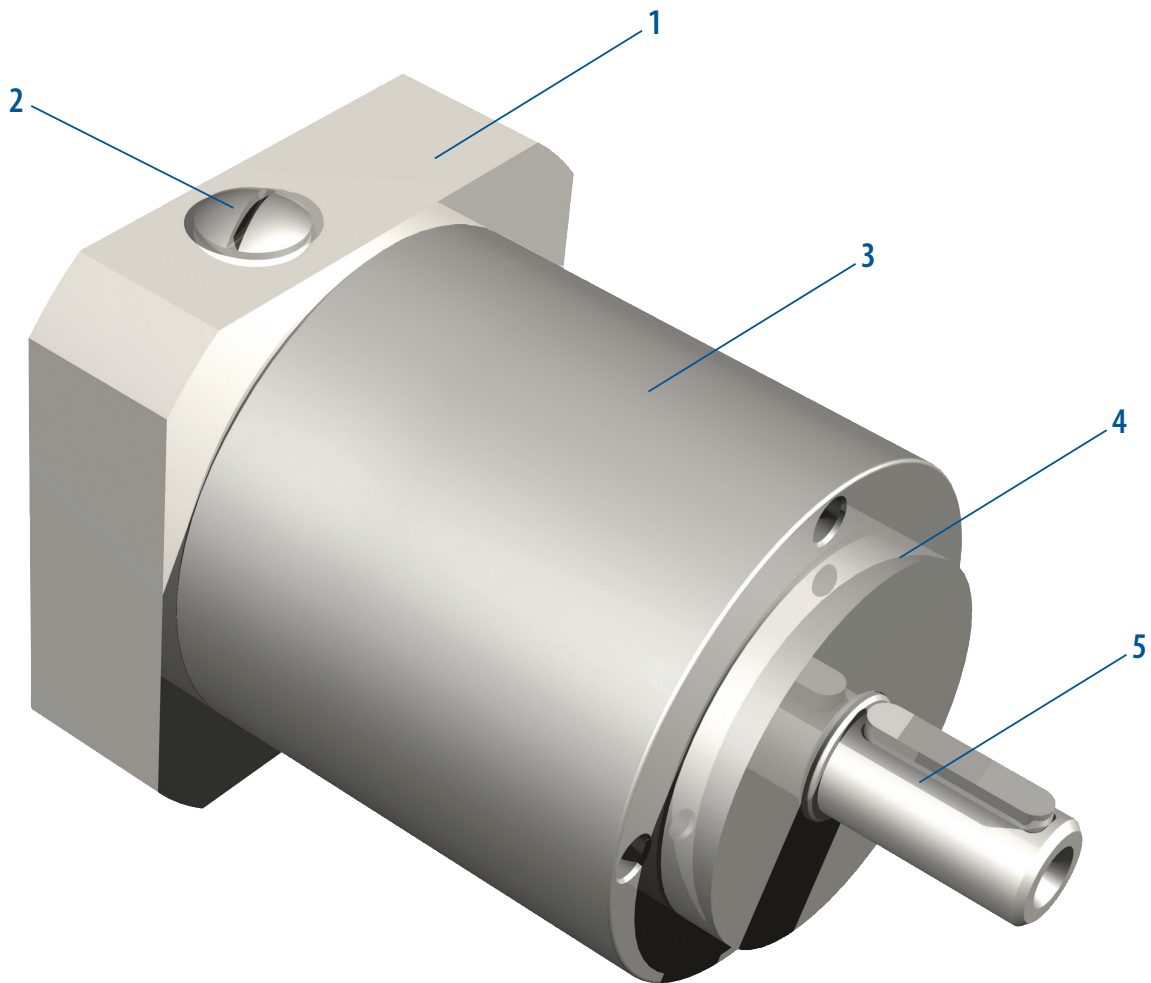
GAM can.

If you don't see exactly what you need, let us know. We can modify the SSP Series gearboxes to meet your needs. Page 4 provides a list of commonly requested modifications to give you a feel for our capabilities.

Our Stainless Steel Planetary (SSP) Series is an innovative washdown servo gearbox solution designed for food, medical or sanitary applications. It is a precision planetary gearbox outwardly constructed of 300-series stainless steel. The motor adapter plate, housing and shaft are all stainless steel. Viton® seals, stainless steel hardware and sealed interfaces provide outstanding corrosion resistance in all types of wet and caustic washdown environments. Ideal for any light or demanding servo application where corrosion resistance is a requirement, the SSP Series offers economy, high precision, and long lasting performance.

SSP Series benefits:

- All exposed surfaces stainless steel
- Frame sizes from 70 to 120 mm
- Ratios from 3:1 to 100:1



Suitable for food or medical applications!

1. Adapter Flange

(Stainless steel adapter for quick and easy motor mounting)

2. Hole Plug

(Threaded stainless steel plug)

3. Lubrication (internal)

(Standard with food grade grease)

4. Seals (internal)

(Viton® seals keep contaminants out and lubricant in and achieves an IP66 rating)

5. Shaft

(Stainless steel keyed output shaft)

Sold & Serviced By:

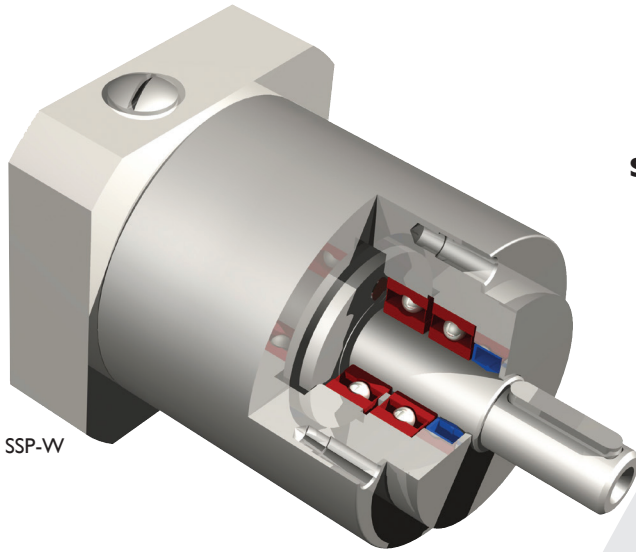
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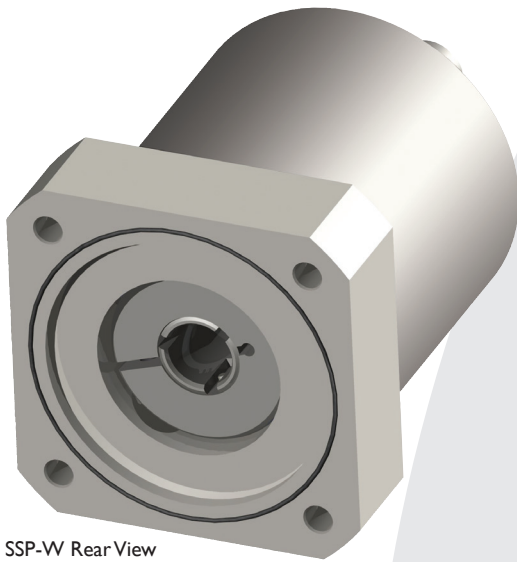
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SSP-W

SSP-W

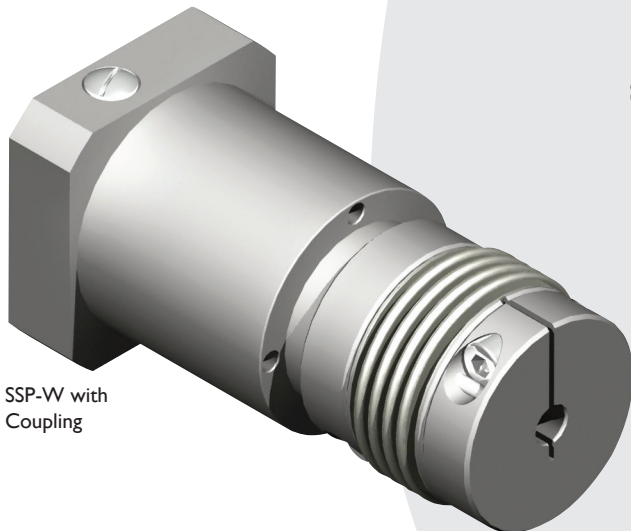
- Dual output bearings for high radial and axial loading
- Frame sizes from 70 mm to 120 mm
- Ratios from 3:1 to 100:1



SSP-W Rear View

SSP-W

- Input clamping element for fast and easy mounting
- Optional input O-ring to keep contaminants out custom designed for your motor. (Special request at time of order)



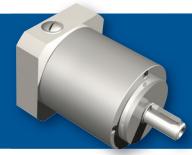
SSP-W with Coupling

SSP-W

- Optional stainless steel output coupling KG-VA for corrosion resistant connections to other shafts
- Contact GAM for more information on these couplings



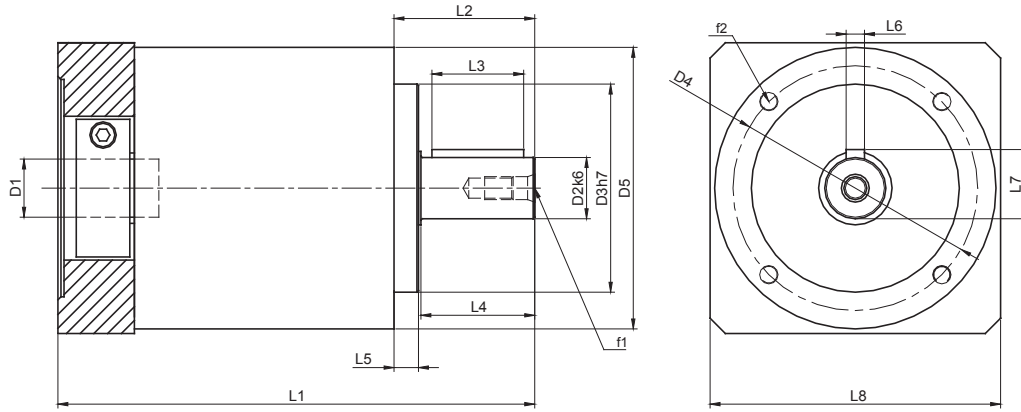
▶ SSP-SERIES - SSP



| SSP Series | | 70 | 90 | 120 | |
|---|---|--|--------------|--------------|--------------|
| Stock Ratios | | 5,10 | | | |
| All Ratios Available | | 1-stage: 3, 4, 5, 7, 10 2-stage: 12, 16, 20, 25, 35, 40, 50, 70, 100 For other ratios, consult GAM | | | |
| Nominal Output Torque (T_{2n}) | Nm (lb-in) | 3:1 | 20 (177) | 40 (354) | 100 (885) |
| | | 4, 5, 7:1 | 26 (230) | 54 (478) | 120 (1062) |
| | | 10, 100, 1000:1 | 16 (142) | 40 (354) | 105 (929) |
| | | 12:1 | 36 (319) | 80 (708) | 170 (1505) |
| | | all other ratios | 42 (372) | 100 (885) | 210 (1859) |
| Max Acceleration Output Torque (T_{2B}) | Nm (lb-in) | 3:1 | 36 (319) | 70 (620) | 180 (1593) |
| | | 4, 5, 7:1 | 44 (389) | 100 (885) | 200 (1770) |
| | | 10, 100, 1000:1 | 24 (212) | 75 (664) | 180 (1593) |
| | | 12:1 | 45 (398) | 100 (885) | 215 (1903) |
| | | all other ratios | 52 (460) | 125 (1106) | 255 (2257) |
| Emergency Output Torque (T_{2not}) | Nm (lb-in) | 3:1 | 72 (637) | 160 (1416) | 200 (1770) |
| | | 4, 5, 7:1 | 84 (743) | 216 (1912) | 480 (4248) |
| | | 10, 100, 1000:1 | 62 (549) | 160 (1416) | 410 (3629) |
| | | 12:1 | 72 (637) | 160 (1416) | 400 (3540) |
| | | all other ratios | 84 (743) | 216 (1912) | 480 (4248) |
| Nominal Input Speed (n_{1n}) | RPM | - | 3500 | 3000 | 2500 |
| Max Speed (n_{1max}) | | - | 6000 | 6000 | 5000 |
| Standard Output Backlash (j) | arcmin | 3:1 - 10:1 | < 10 | < 10 | < 8 |
| | | 12:1 - 100:1 | < 14 | < 14 | < 12 |
| Allowable Radial Load (F_{rad}) ¹⁾ | N (lbs) | - | 910 (205) | 1500 (338) | 3000 (675) |
| Allowable Axial Load (F_{axial}) | N (lbs) | - | 500 (113) | 1000 (225) | 1500 (338) |
| Torsional Stiffness (C_{t21}) | Nm/ arcmin (lb-in/ rcmin) | 10:1, 100:1 | 1.3 (11.5) | 3.4 (30.1) | 8.3 (73.5) |
| | | 7:1, 70:1 | 1.7 (15) | 4.8 (42.5) | 13.6 (120.4) |
| | | all other ratios | 2.4 (21.2) | 7.1 (62.8) | 17.2 (152.2) |
| Weight (m) | kg (lbs) | 1-stage | 2 (4.4) | 3.9 (8.6) | 8.8 (19.4) |
| | | 2-stage | 2.3 (5.1) | 4.7 (10.4) | 10.9 (24) |
| Noise Level (L_{pk}) | dB(A) | - | < 64 | < 66 | < 68 |
| Mass Moment of Inertia (J_1) | kg cm ² (lb-in ²) | 3:1 | 0.45 (0.154) | 1.37 (0.468) | 6.54 (2.235) |
| | | 4:1, 12:1, 16:1 | 0.38 (0.130) | 1.14 (0.390) | 4.8 (1.640) |
| | | 5:1, 20:1, 25:1 | 0.36 (0.123) | 1.05 (0.359) | 4.05 (1.384) |
| | | 7:1, 35:1 | 0.35 (0.120) | 0.97 (0.331) | 3.4 (1.162) |
| | | 10:1, 40:1 - 100:1 | 0.34 (0.116) | 0.93 (0.318) | 3.1 (1.059) |
| Efficiency at Load | | 1-stage: 94% 2-stage: 92% | | | |
| Service Life | | > 30,000 hours | | | |
| Lubrication | | Food Grade Grease: Note 1. Meets FDA 21 CFR 178.3570 requirements Note 2. USDA H1 authorized (authorized for use in federally inspected meat and poultry plants) | | | |
| Protection Rating | | IP 66 | | | |
| Operating Temperature Range | | -20°C to 90°C | | | |

1) Load applied at center of output shaft @100 RPM

SSP-W



| SSP Series | | 70 | | 90 | | 120 | |
|-------------------|-----------------------|-------------|---------|----------------|---------|--------------|---------|
| | | mm | (in) | mm | (in) | mm | (in) |
| D1 max standard | motor shaft diameter | 14 | (0.551) | 19 | (0.748) | 24 | (0.945) |
| D1 max available* | motor shaft diameter | 16 | (0.63) | 24 | (0.945) | 32 | (1.26) |
| D2 k6 | output shaft diameter | 16 | (0.63) | 22 | (0.866) | 32 | (1.26) |
| D3 h7 | pilot diameter | 52 | (2.047) | 68 | (2.677) | 90 | (3.543) |
| D4 | bolt circle | 62 | (2.441) | 80 | (3.15) | 108 | (4.252) |
| D5 | housing diameter | 70 | (2.756) | 92 | (3.622) | 122 | (4.803) |
| f1 | shaft thread | M5x12 | | M6x16 | | M10x22 | |
| f2 | mounting holes | M6x12 | | M6x14 | | M8x18 | |
| L1 1-STAGE*** | gearbox total length | 131 (5.157) | | 174 (6.85) | | 232 (9.134) | |
| L1 2-STAGE*** | | 153 (6.024) | | 207 (8.15) | | 271 (10.669) | |
| L2 | shaft length | 36 (1.417) | | 46 (1.811) | | 70 (2.756) | |
| L3 | key length | 25 (0.984) | | 30 (1.181) | | 50 (1.969) | |
| L4 | usable shaft length | 28 (1.102) | | 36 (1.417) | | 58 (2.283) | |
| L5 | pilot height | 7 (0.276) | | 9 (0.354) | | 11 (0.433) | |
| L6 | key width | 5 (0.197) | | 6 (0.236) | | 8 (0.315) | |
| L7 | key height | 18 (0.709) | | 24.600 (0.969) | | 34.8 (1.37) | |

* for these larger motor shaft diameters, please contact GAM

** depending on the motor, value can vary



Recommended Output Coupling (if necessary)

all stainless bellows

KG-VA-80

KG-VA-220

KG-VA-350

TYPE CODES FOR SSP SERIES (SSP-W)

Example: SSP - W - 090 - 005 G - [115 - A01] - S111

Gearbox Series

Stainless Steel
Planetary Series

Gearbox Style

W = Output Shaft

Gearbox Size

070, 090, 120

Ratio

3, 4, 5, 7, 10, 12, 16, 20, 25, 35, 40, 50, 70, 100

Special Options

Assigned by GAM

Motor Mount Kit

Assigned by GAM

Options Available for This Product

G = Key on output DIN688

Tolerances (mm)

| Size | k6 | h7 |
|----------|--------|--------|
| Over 10 | +0.012 | 0 |
| Thru 18 | +0.001 | -0.018 |
| Over 18 | +0.015 | 0 |
| Thru 30 | +0.002 | -0.021 |
| Over 30 | +0.018 | 0 |
| Thru 50 | +0.002 | -0.025 |
| Over 50 | +0.021 | 0 |
| Thru 80 | +0.002 | -0.030 |
| Over 80 | +0.025 | 0 |
| Thru 120 | +0.003 | -0.035 |

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