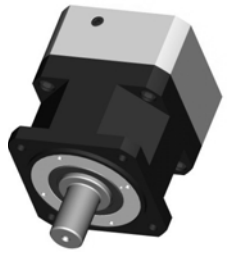
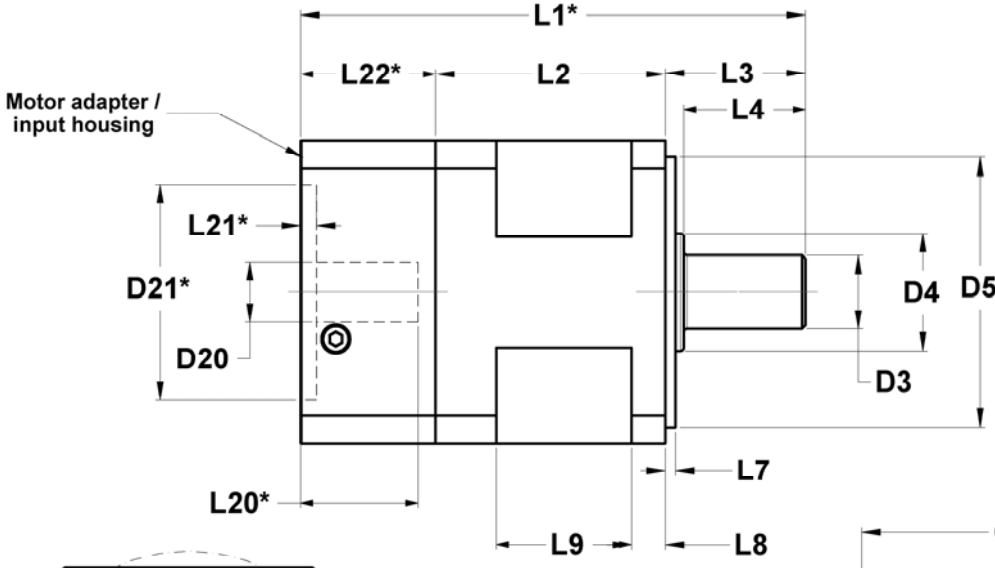
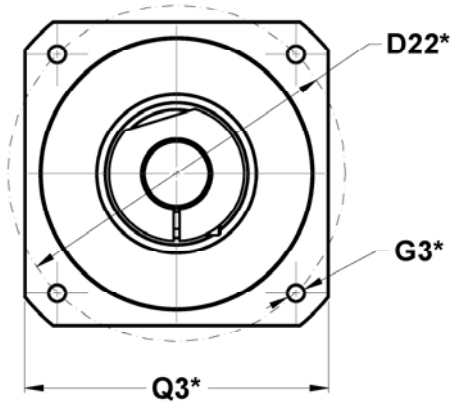


# PLS-HP

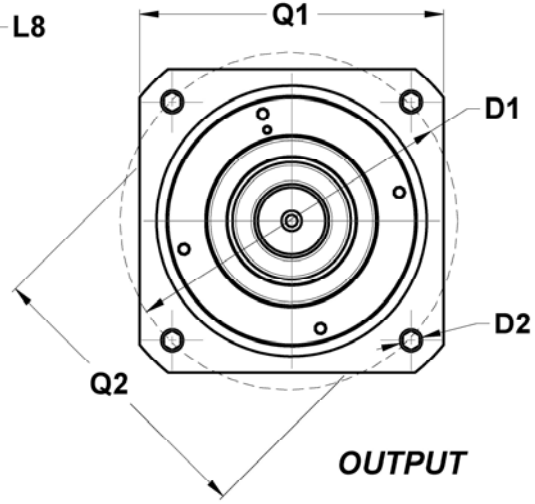
## High Performance Planetary Servo Gearhead

*Dimensional Data*

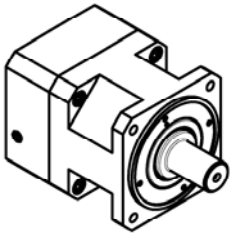



*INPUT*

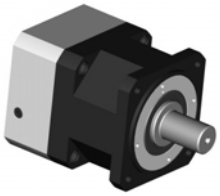



*OUTPUT*



**PLS HP High-performance inline planetary gearhead**

**PLS 70 HP; PLS 90 HP; PLS 115 HP; PLS 142 HP**



# PLS-HP

## High Performance Planetary Servo Gearhead

### Dimensional Data

| DIMENSIONS mm (in.) | | Tol./# | PLS-HP 70 | PLS-HP 90 | PLS-HP115 | PLS-142 HP |
|---|---|---|---|---|---|---|
| D1 | Output flange bolt circle | • | 75 (2.952) | 100 (3.937) | 130 (5.118) | 165 (6.496) |
| D2 | Output flange mounting hole diameter | 4 | 5.5 (0.216) | 6.5 (0.256) | 9 (0.354) | 11 (0.433) |
| D3 | Output shaft diameter | k6 | 19 (0.748) | 22 (0.866) | 32 (1.259) | 40 (1.575) |
| D4 | Output shaft collar diameter | • | 23.5 (0.925) | 32.5 (1.280) | 39.5 (1.555) | 53.5 (2.106) |
| D5 | Pilot diameter | h7 | 60 (2.362) | 80 (3.150) | 110 (4.331) | 130 (5.118) |
| Q1 | Gearbox housing / output flange □ | • | 70 (2.756) | 90 (3.543) | 115 (4.528) | 142 (5.591) |
| L2 | Main housing length 1-stage | • | 63 (2.480) | 68 (2.677) | 86.5 (3.406) | 105 (4.134) |
| | 2-stage | • | 95.5 (3.760) | 109.5 (4.311) | 133 (5.236) | 164.5 (6.476) |
| L3 | Output shaft length to mounting face | • | 32 (1.259) | 41.5 (1.634) | 64.5 (2.539) | 87 (3.425) |
| L4 | Output shaft length to shaft collar (root) | • | 28 (1.102) | 36 (1.417) | 58 (2.283) | 80 (3.150) |
| L7 | Output pilot length | • | 2.8 (0.110) | 3 (0.118) | 4 (0.157) | 5 (0.197) |
| L8 | Output flange thickness | • | 10 (0.394) | 10 (0.394) | 15 (0.591) | 20 (0,787) |
| L9 | Housing recess width | • | 30 (1.181) | 40 (1.575) | 53 (2.087) | 58 (2.283) |
| Q2 | Housing recess □ (across flats) | • | 65 (2.559) | 87 (3.425) | 115 (4.528) | 140 (5.512) |
| D20 | Maximum input pinion bore (1) | • | 19 (0.748) | 24 (0.945) | 35 (1.378) | 48 (1.890) |
| **Available standard bushings (1)** | mm | | 9.525; 10; 11; 12; 12.7; 14; 15.875; 16; | 11; 12.7; 14; 15.87; 16; 19; 19.05; 22; 22.22 | 19; 22; 24; 28; 28.575; 32 | 28; 32; 35; 38; 42 |
| (1) For motor shaft smaller than **D20**, a precision standard bushing is supplied. | inch | | .375; .393; .433; .472; .500; .551; .625; .630 | .433; .500; .551; .625; .630; .748; .750; .866; .875 | .748; .866; .944; 1.125; 1.102; 1.260 | .945; 1.1260; 1.378; 1.496; 1.654; |
| **Motor-dependent dimensions:** D21*, D22*, L1*, L20* L21*, L22*, G3*, Q3* | | | **Adapter / input housing dimensions and unit overall length depend on motor output geometry.** **A motor-specific adapter / input housing is supplied with every gearhead.** | | | |
| **L22* dimension calculation** **L22* tolerance +5 / -0 (+0.196" / -0)** | | | Determine L22* calc = Motor shaft length + ΔL<br>If L22* calc ≤ L22* minimum → L22* = L22* minimum + tolerance<br>If L22* calc > L22* minimum → L22* = L22* calc + tolerance | | | |
| **ΔL** | | | 3 (0.118) | 11 (0.433) | 12 (0.472) | 11.5 (0.453) |
| **L22* minimum** | | | 27 (1.063) | 29 (1.142) | 38 (1.496) | 48.5 (1.909) |