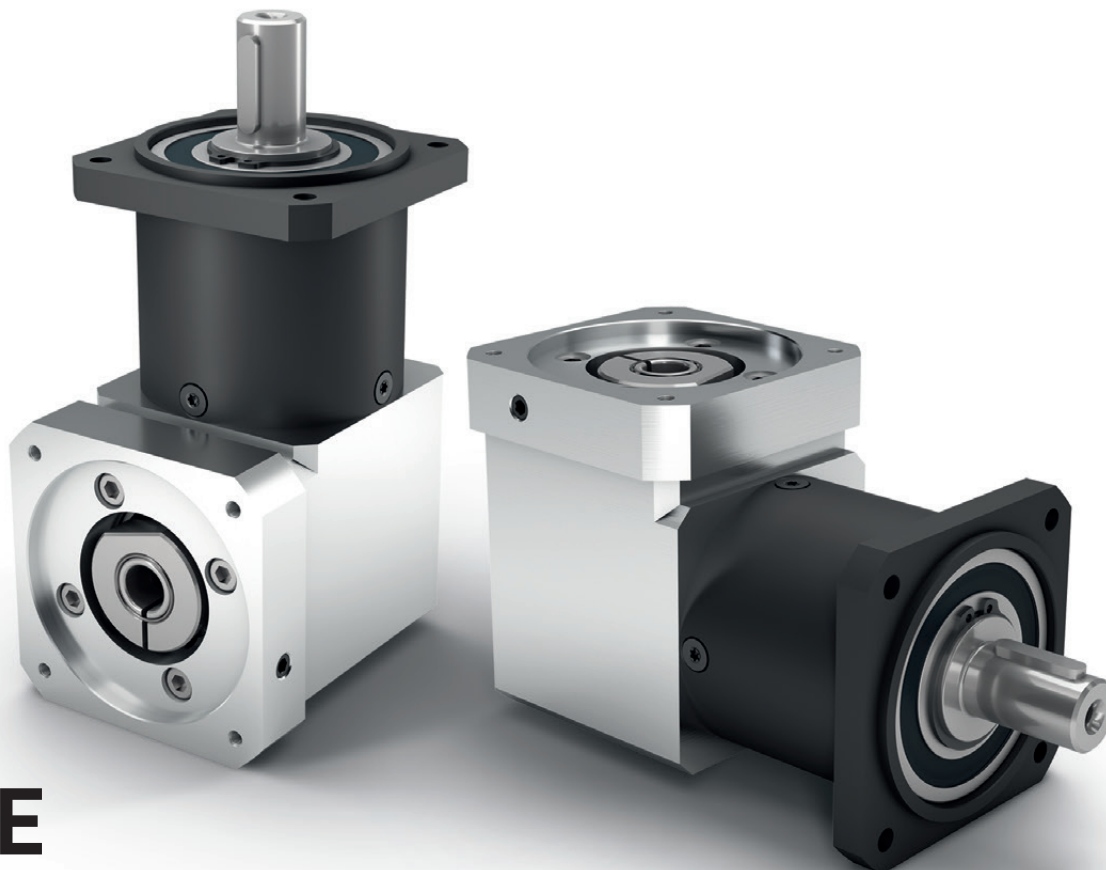




# WPLQE

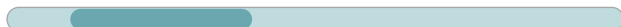
The right angle planetary gearbox with universal output flange – flexible installation options and for high forces

Our **WPLQE** is the right-angle gearbox with a square output flange. This makes it particularly easy to mount, versatile and, thanks to its larger deep groove ball bearings, also suitable for higher radial and axial forces.

Nominal output torque **14 - 260 Nm**



Radial force **900 - 2950 N**



Axial force **1000 - 2500 N**



Torsional backlash **11 - 21 arcmin**



Protection class **IP54**

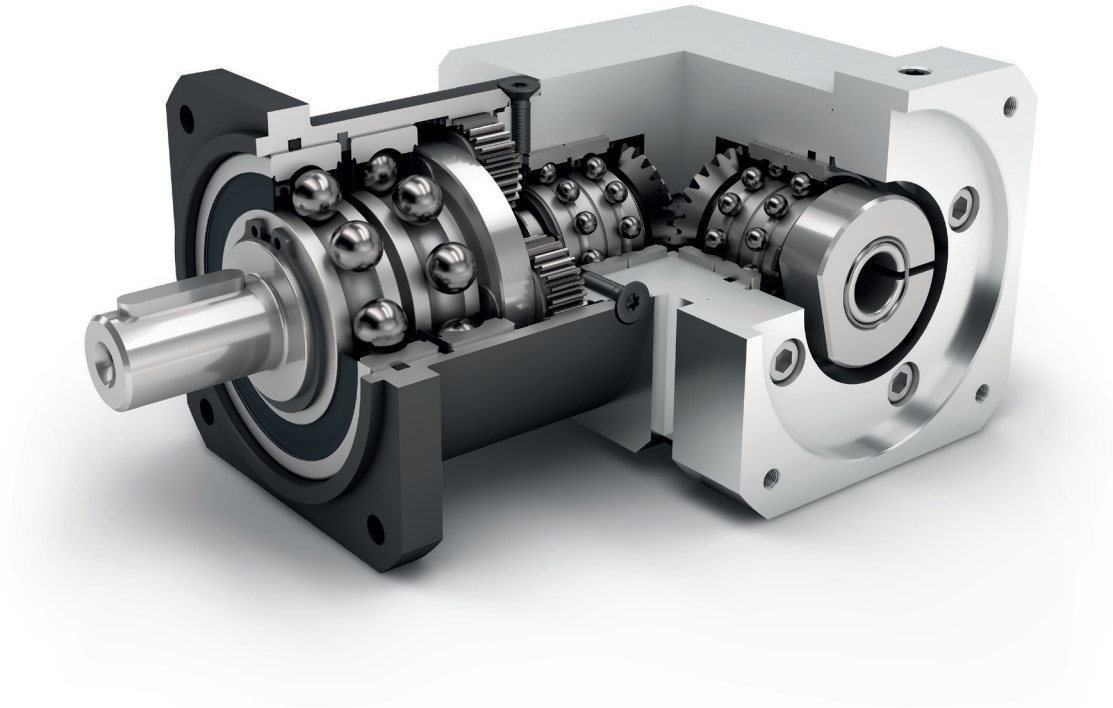


Frame sizes

60

80

120



Economy Line



Equidirectional rotation



Bevel gear right angle stage



Reinforced deep groove ball bearings



Planet carrier in disc design



Right angle gearbox



Spur gear



Square type output flange



High ratio variety  $i=3$  up to  $i=512$



Option: Painted surface  
– RAL 9005 Jet black

Detailed explanations of the technical features starting on page 173.

| Code                                                                 | Gearbox characteristics                |                              |                                                | WPLQE060                 | WPLQE080                                                | WPLQE120                     | p <sup>(1)</sup> |  |
|----------------------------------------------------------------------|----------------------------------------|------------------------------|------------------------------------------------|--------------------------|---------------------------------------------------------|------------------------------|------------------|--|
|                                                                      | Service life (L <sub>10h</sub> )       | t <sub>L</sub>               | h                                              | 20,000                   |                                                         |                              |                  |  |
|                                                                      | Service life at T <sub>2N</sub> x 0,88 |                              |                                                | 30,000                   |                                                         |                              |                  |  |
|                                                                      | Efficiency at full load <sup>(2)</sup> | η                            | %                                              | 95                       |                                                         |                              | 1                |  |
|                                                                      |                                        |                              |                                                | 94                       |                                                         |                              | 2                |  |
|                                                                      |                                        |                              |                                                | 88                       |                                                         |                              | 3                |  |
|                                                                      | Min. operating temperature             | T <sub>min</sub>             | °C<br>(°F)                                     | -25 (-13)                |                                                         |                              |                  |  |
|                                                                      | Max. operating temperature             | T <sub>max</sub>             |                                                | 90 (194)                 |                                                         |                              |                  |  |
|                                                                      | Protection class                       |                              | IP54                                           |                          |                                                         |                              |                  |  |
|                                                                      | Standard lubrication                   |                              | Grease (lifetime lubrication)                  |                          |                                                         |                              |                  |  |
|                                                                      | Food grade lubrication                 |                              | Grease (lifetime lubrication)                  |                          |                                                         |                              |                  |  |
| Low temperature lubrication <sup>(3)</sup>                           | Grease (lifetime lubrication)          |                              |                                                |                          |                                                         |                              |                  |  |
| Installation position                                                | Any                                    |                              |                                                |                          |                                                         |                              |                  |  |
| S                                                                    | Standard backlash                      | j <sub>t</sub>               | arcmin                                         | < 16                     | < 13                                                    | < 11                         | 1                |  |
|                                                                      |                                        |                              |                                                | < 18                     | < 15                                                    | < 13                         | 2                |  |
|                                                                      |                                        |                              |                                                | < 21                     | < 17                                                    | < 15                         | 3                |  |
|                                                                      | Torsional stiffness <sup>(2)</sup>     | c <sub>g</sub>               | Nm /arcmin<br>(lb <sub>r</sub> .in/<br>arcmin) | 1.9 - 3.1<br>(17 - 27)   | 4.4 - 9.4<br>(39 - 83)                                  | 9.3 - 15.3<br>(82 - 135)     | 1                |  |
|                                                                      |                                        |                              |                                                | 3.3 - 4.0<br>(29 - 35)   | 8.5 - 13.0<br>(75 - 115)                                | 15.3 - 19.0<br>(135 - 168)   | 2                |  |
|                                                                      |                                        |                              |                                                | 3.3 - 4.1<br>(29 - 36)   | 9.4 - 13.3<br>(83 - 118)                                | 15.6 - 19.0<br>(138 - 168)   | 3                |  |
|                                                                      | Gearbox weight <sup>(2)</sup>          | m <sub>G</sub>               | kg<br>(lb <sub>m</sub> )                       | 1.8<br>(3.9 - 4.0)       | 4.2 - 4.5<br>(9.3 - 9.9)                                | 10.4 - 10.5<br>(22.9 - 23.1) | 1                |  |
|                                                                      |                                        |                              |                                                | 1.9 - 2.0<br>(4.3 - 4.4) | 4.9 - 5.0<br>(10.9 - 11.0)                              | 12.1 - 12.3<br>(26.7 - 27.1) | 2                |  |
|                                                                      |                                        |                              |                                                | 2.2<br>(4.8 - 4.9)       | 5.4 - 5.5<br>(11.9 - 12.1)                              | 13.9 - 14.1<br>(30.7 - 31.1) | 3                |  |
|                                                                      | S                                      | Standard surface             |                                                |                          | Housing: Steel – heat-treated and post-oxidized (black) |                              |                  |  |
|                                                                      | B                                      | Painted surface              |                                                |                          | RAL 9005 Jet black                                      |                              |                  |  |
|                                                                      |                                        | Running noise <sup>(4)</sup> | Q <sub>g</sub>                                 | dB(A)                    | 70                                                      | 73                           | 75               |  |
| Max. bending moment based on the gearbox input flange <sup>(5)</sup> |                                        | M <sub>b</sub>               | Nm<br>(lb <sub>r</sub> .in)                    | 5 (44)                   | 10.5 (93)                                               | 26 (230)                     |                  |  |

| Output shaft loads                            |                         |                             | WPLQE060   | WPLQE080   | WPLQE120   | p <sup>(1)</sup> |
|-----------------------------------------------|-------------------------|-----------------------------|------------|------------|------------|------------------|
| Radial force for 20,000 h <sup>(6)(7)</sup>   | F <sub>r 20,000 h</sub> | N<br>(lb <sub>f</sub> )     | 900 (202)  | 2050 (461) | 2950 (663) |                  |
| Axial force for 20,000 h <sup>(6)(7)</sup>    | F <sub>a 20,000 h</sub> |                             | 1000 (225) | 2500 (562) | 2500 (562) |                  |
| Radial force for 30,000 h <sup>(6)(7)</sup>   | F <sub>r 30,000 h</sub> |                             | 700 (157)  | 1700 (382) | 2400 (540) |                  |
| Axial force for 30,000 h <sup>(6)(7)</sup>    | F <sub>a 30,000 h</sub> |                             | 800 (180)  | 2000 (450) | 2100 (472) |                  |
| Maximum radial force <sup>(7)(8)</sup>        | F <sub>r Stat</sub>     |                             | 1500 (337) | 2500 (562) | 4000 (899) |                  |
| Maximum axial force <sup>(7)(8)</sup>         | F <sub>a Stat</sub>     |                             | 1950 (438) | 3800 (854) | 3800 (854) |                  |
| Tilting moment for 20,000 h <sup>(6)(8)</sup> | M <sub>K 20,000 h</sub> | Nm<br>(lb <sub>f</sub> .in) | 37 (327)   | 102 (898)  | 232 (2050) |                  |
| Tilting moment for 30,000 h <sup>(6)(8)</sup> | M <sub>K 30,000 h</sub> |                             | 29 (254)   | 84 (745)   | 188 (1667) |                  |

| Moment of inertia                     |   |                                                                             | WPLQE060                         | WPLQE080                          | WPLQE120                           | p <sup>(1)</sup> |
|---------------------------------------|---|-----------------------------------------------------------------------------|----------------------------------|-----------------------------------|------------------------------------|------------------|
| Mass moment of inertia <sup>(2)</sup> | J | kgcm <sup>2</sup><br>(lb <sub>f</sub> .in.s <sup>2</sup> 10 <sup>-4</sup> ) | 0.210 - 0.359<br>(1.859 - 3.177) | 0.874 - 1.355<br>(7.736 - 11.993) | 2.648 - 3.702<br>(23.437 - 32.765) | 1                |
|                                       |   |                                                                             | 0.210 - 0.340<br>(1.859 - 3.009) | 0.869 - 1.196<br>(7.691 - 10.585) | 2.679 - 3.601<br>(23.711 - 31.872) | 2                |
|                                       |   |                                                                             | 0.210 - 0.221<br>(1.859 - 1.956) | 0.868 - 1.162<br>(7.682 - 10.285) | 2.679 - 3.506<br>(23.711 - 31.031) | 3                |

(1) Number of stages

(2) The ratio-dependent values can be retrieved in Tec Data Finder – [www.neugart.com](http://www.neugart.com)(3) T<sub>min</sub> = -40°C. Optimal operating temperature max. 50°C(4) Sound pressure level from 1 m, measured on input running at n<sub>i</sub>=3000 rpm no load; i=5(5) Max. motor weight\* in kg = 0.2 x M<sub>b</sub> / motor length in m

\* with symmetrically distributed motor weight

\* with horizontal and stationary mounting

(6) These values are based on an output shaft speed of n<sub>2</sub>=100 rpm

(7) Based on center of output shaft

(8) Other (sometimes higher) values following changes to T<sub>2N</sub>, F<sub>r</sub>, F<sub>a</sub>, cycle, and service life of bearing. Application specific configuration with NCP – [www.neugart.com](http://www.neugart.com)

| Output torques                          |                   |                             | WPLQE060                | WPLQE080                  | WPLQE120                  | i <sup>(1)</sup> | p <sup>(2)</sup> |
|-----------------------------------------|-------------------|-----------------------------|-------------------------|---------------------------|---------------------------|------------------|------------------|
| Nominal output torque <sup>(3)(4)</sup> | T <sub>2N</sub>   | Nm<br>(lb <sub>f</sub> .in) | 14 (124)                | 40 (354) <sup>(5)</sup>   | 80 (708) <sup>(5)</sup>   | 3                | 1                |
|                                         |                   |                             | 19 (168)                | 53 (469) <sup>(5)</sup>   | 105 (929) <sup>(5)</sup>  | 4                |                  |
|                                         |                   |                             | 24 (212)                | 67 (593) <sup>(5)</sup>   | 130 (1151) <sup>(5)</sup> | 5                |                  |
|                                         |                   |                             | 25 (221)                | 65 (575)                  | 135 (1195)                | 7                |                  |
|                                         |                   |                             | 18 (159)                | 50 (443)                  | 120 (1062)                | 8                |                  |
|                                         |                   |                             | 15 (133)                | 38 (336)                  | 95 (841)                  | 10               |                  |
|                                         |                   |                             | 44 (389) <sup>(5)</sup> | 130 (1151) <sup>(5)</sup> | 210 (1859) <sup>(5)</sup> | 9                | 2                |
|                                         |                   |                             | 44 (389)                | 120 (1062) <sup>(5)</sup> | 260 (2301) <sup>(5)</sup> | 12               |                  |
|                                         |                   |                             | 44 (389)                | 110 (974)                 | 230 (2036)                | 15               |                  |
|                                         |                   |                             | 44 (389)                | 120 (1062)                | 260 (2301)                | 16               |                  |
|                                         |                   |                             | 44 (389)                | 120 (1062)                | 260 (2301)                | 20               |                  |
|                                         |                   |                             | 40 (354)                | 110 (974)                 | 230 (2036)                | 25               |                  |
|                                         |                   |                             | 44 (389)                | 120 (1062)                | 260 (2301)                | 32               |                  |
|                                         |                   |                             | 40 (354)                | 110 (974)                 | 230 (2036)                | 40               |                  |
|                                         |                   |                             | 18 (159)                | 50 (443)                  | 120 (1062)                | 64               |                  |
|                                         |                   |                             | 44 (389)                | 110 (974)                 | 260 (2301)                | 60               |                  |
|                                         |                   |                             | 44 (389)                | 120 (1062)                | 260 (2301)                | 80               |                  |
|                                         |                   |                             | 44 (389)                | 120 (1062)                | 260 (2301)                | 100              |                  |
|                                         |                   |                             | 44 (389)                | 110 (974)                 | 230 (2036)                | 120              |                  |
|                                         |                   |                             | 44 (389)                | 120 (1062)                | 260 (2301)                | 160              |                  |
|                                         |                   |                             | 40 (354)                | 110 (974)                 | 230 (2036)                | 200              |                  |
|                                         |                   |                             | 44 (389)                | 120 (1062)                | 260 (2301)                | 256              |                  |
|                                         |                   |                             | 40 (354)                | 110 (974)                 | 230 (2036)                | 320              |                  |
|                                         |                   |                             | 18 (159)                | 50 (443)                  | 120 (1062)                | 512              |                  |
| Max. output torque <sup>(4)(6)</sup>    | T <sub>2max</sub> | Nm<br>(lb <sub>f</sub> .in) | 22 (195)                | 64 (566)                  | 128 (1133)                | 3                | 1                |
|                                         |                   |                             | 30 (266)                | 85 (752)                  | 168 (1487)                | 4                |                  |
|                                         |                   |                             | 38 (336)                | 107 (947)                 | 208 (1841)                | 5                |                  |
|                                         |                   |                             | 40 (354)                | 104 (920)                 | 216 (1912)                | 7                |                  |
|                                         |                   |                             | 29 (257)                | 80 (708)                  | 192 (1699)                | 8                |                  |
|                                         |                   |                             | 24 (212)                | 61 (540)                  | 152 (1345)                | 10               |                  |
|                                         |                   |                             | 70 (620)                | 208 (1841)                | 336 (2974)                | 9                | 2                |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 12               |                  |
|                                         |                   |                             | 70 (620)                | 176 (1558)                | 368 (3257)                | 15               |                  |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 16               |                  |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 20               |                  |
|                                         |                   |                             | 64 (566)                | 176 (1558)                | 368 (3257)                | 25               |                  |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 32               |                  |
|                                         |                   |                             | 64 (566)                | 176 (1558)                | 368 (3257)                | 40               |                  |
|                                         |                   |                             | 29 (257)                | 80 (708)                  | 192 (1699)                | 64               |                  |
|                                         |                   |                             | 70 (620)                | 176 (1558)                | 416 (3682)                | 60               |                  |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 80               |                  |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 100              |                  |
|                                         |                   |                             | 70 (620)                | 176 (1558)                | 368 (3257)                | 120              |                  |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 160              |                  |
|                                         |                   |                             | 64 (566)                | 176 (1558)                | 368 (3257)                | 200              |                  |
|                                         |                   |                             | 70 (620)                | 192 (1699)                | 416 (3682)                | 256              |                  |
|                                         |                   |                             | 64 (566)                | 176 (1558)                | 368 (3257)                | 320              |                  |
|                                         |                   |                             | 29 (257)                | 80 (708)                  | 192 (1699)                | 512              |                  |

(1) Ratios (i=n<sub>1</sub>/n<sub>2</sub>)

(2) Number of stages

(3) Application specific configuration with NCP – www.neugart.com

(4) Values for feather key (code "A"): for repeated load

(5) Different service life: 10,000 h at T<sub>2N</sub>

(6) 30,000 rotations of the output shaft permitted; see page 166

| Output torques                       |             |                             | WPLQE060 | WPLQE080   | WPLQE120   | $i^{(1)}$ | $p^{(2)}$ |
|--------------------------------------|-------------|-----------------------------|----------|------------|------------|-----------|-----------|
| Emergency stop torque <sup>(3)</sup> | $T_{2Stop}$ | Nm<br>(lb <sub>r</sub> .in) | 66 (584) | 180 (1593) | 360 (3186) | 3         | 1         |
|                                      |             |                             | 86 (761) | 240 (2124) | 474 (4195) | 4         |           |
|                                      |             |                             | 80 (708) | 220 (1947) | 500 (4425) | 5         |           |
|                                      |             |                             | 80 (708) | 178 (1575) | 340 (3009) | 7         |           |
|                                      |             |                             | 80 (708) | 190 (1682) | 380 (3363) | 8         |           |
|                                      |             |                             | 70 (620) | 170 (1505) | 430 (3806) | 10        |           |
|                                      |             |                             | 88 (779) | 260 (2301) | 500 (4425) | 9         | 2         |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 12        |           |
|                                      |             |                             | 88 (779) | 220 (1947) | 500 (4425) | 15        |           |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 16        |           |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 20        |           |
|                                      |             |                             | 80 (708) | 220 (1947) | 500 (4425) | 25        |           |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 32        |           |
|                                      |             |                             | 80 (708) | 220 (1947) | 500 (4425) | 40        |           |
|                                      |             |                             | 80 (708) | 190 (1682) | 380 (3363) | 64        |           |
|                                      |             |                             | 88 (779) | 220 (1947) | 520 (4602) | 60        |           |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 80        |           |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 100       |           |
|                                      |             |                             | 88 (779) | 220 (1947) | 500 (4425) | 120       |           |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 160       | 3         |
|                                      |             |                             | 80 (708) | 220 (1947) | 500 (4425) | 200       |           |
|                                      |             |                             | 88 (779) | 240 (2124) | 520 (4602) | 256       |           |
|                                      |             |                             | 80 (708) | 220 (1947) | 500 (4425) | 320       |           |
|                                      |             |                             | 80 (708) | 190 (1682) | 380 (3363) | 512       |           |

| Input speeds                                              |              |     | WPLQE060            | WPLQE080            | WPLQE120            | $i^{(1)}$ | $p^{(2)}$ |
|-----------------------------------------------------------|--------------|-----|---------------------|---------------------|---------------------|-----------|-----------|
| Average thermal input speed at $T_{2N}$ and $S1^{(4)(5)}$ | $n_{1N}$     | rpm | 4500 <sup>(6)</sup> | 3100 <sup>(6)</sup> | 2850 <sup>(6)</sup> | 3         | 1         |
|                                                           |              |     | 4500 <sup>(6)</sup> | 3250 <sup>(6)</sup> | 2950 <sup>(6)</sup> | 4         |           |
|                                                           |              |     | 4500 <sup>(6)</sup> | 3350 <sup>(6)</sup> | 3050 <sup>(6)</sup> | 5         |           |
|                                                           |              |     | 4500                | 4000 <sup>(6)</sup> | 3500 <sup>(6)</sup> | 7         |           |
|                                                           |              |     | 4500                | 4000 <sup>(6)</sup> | 3500 <sup>(6)</sup> | 8         |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 10        |           |
|                                                           |              |     | 4500 <sup>(6)</sup> | 3150 <sup>(6)</sup> | 2950 <sup>(6)</sup> | 9         | 2         |
|                                                           |              |     | 4500 <sup>(6)</sup> | 3750 <sup>(6)</sup> | 3050 <sup>(6)</sup> | 12        |           |
|                                                           |              |     | 4500                | 4000 <sup>(6)</sup> | 3500 <sup>(6)</sup> | 15        |           |
|                                                           |              |     | 4500                | 4000 <sup>(6)</sup> | 3450 <sup>(6)</sup> | 16        |           |
|                                                           |              |     | 4500                | 4000 <sup>(6)</sup> | 3500 <sup>(6)</sup> | 20        |           |
|                                                           |              |     | 4500                | 4000                | 3500 <sup>(6)</sup> | 25        |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 32        |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 40        |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 64        |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 60        |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 80        |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 100       |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 120       | 3         |
|                                                           |              |     | 4500                | 4000                | 3500                | 160       |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 200       |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 256       |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 320       |           |
|                                                           |              |     | 4500                | 4000                | 3500                | 512       |           |
| Max. mechanical input speed <sup>(4)</sup>                | $n_{1Limit}$ | rpm | 13,000              | 7000                | 6500                |           |           |

<sup>(1)</sup> Ratios ( $i=n_1/n_2$ )

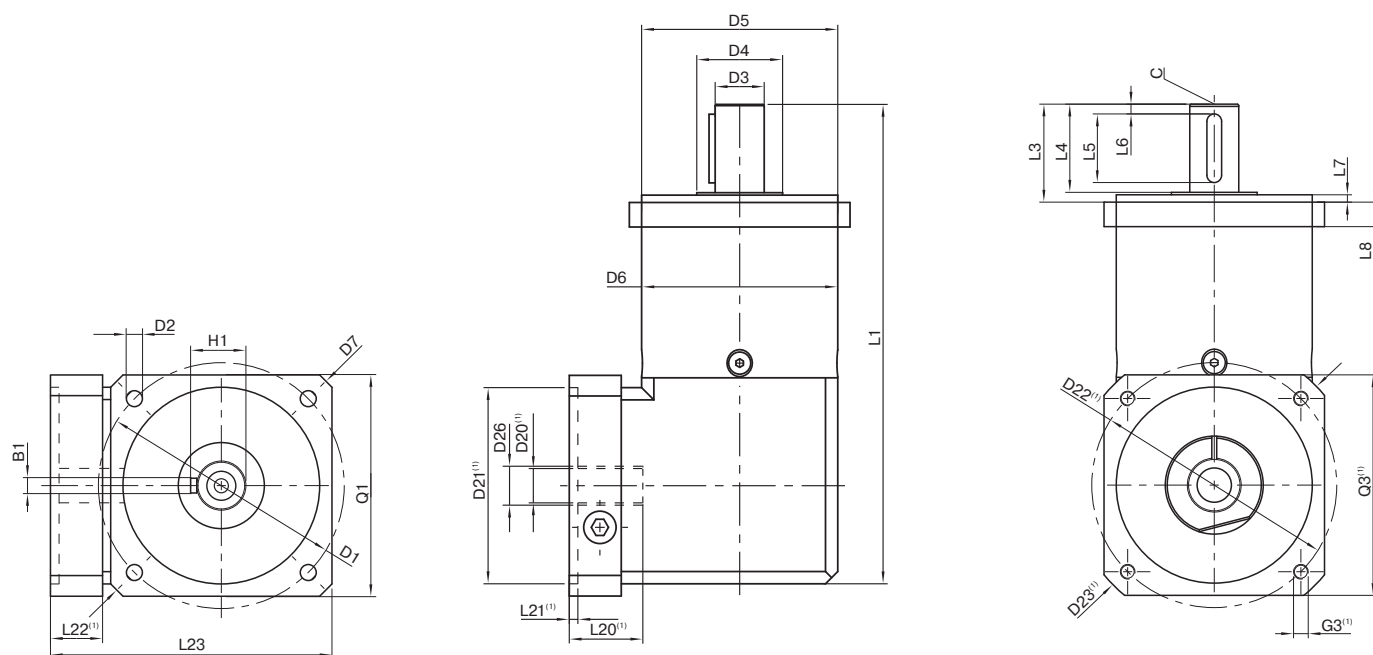
<sup>(2)</sup> Number of stages

<sup>(3)</sup> Permitted 1000 times

<sup>(4)</sup> Application-specific speed configurations with NCP – www.neugart.com

<sup>(5)</sup> See page 166 for the definition

<sup>(6)</sup> Average thermal input speed at 50%  $T_{2N}$  and  $S1$



Drawing corresponds to a WPLQE080 / 1-stage / output shaft with feather key / 19 mm clamping system / motor adaptation – 2-part – square universal flange / B5 flange type motor

<sup>(1)</sup> The dimensions vary with the motor/gearbox flange. The input flange dimensions can be retrieved for each specific motor in Tec Data Finder at [www.neugart.com](http://www.neugart.com)

| Geometry <sup>(2)</sup>                         |     |                                                                                     | WPLQE060                         | WPLQE080      | WPLQE120       | p <sup>(3)</sup> | Code |
|-------------------------------------------------|-----|-------------------------------------------------------------------------------------|----------------------------------|---------------|----------------|------------------|------|
| Pitch circle diameter output                    | D1  |                                                                                     | 75 (2.953)                       | 100 (3.937)   | 130 (5.118)    |                  |      |
| Mounting bore output                            | D2  | 4x                                                                                  | 5.5 (0.217)                      | 6.5 (0.256)   | 8.5 (0.335)    |                  |      |
| Shaft diameter output                           | D3  | h7                                                                                  | 16 (0.630)                       | 20 (0.787)    | 25 (0.984)     |                  |      |
| Shaft collar output                             | D4  |                                                                                     | 20 (0.787)                       | 35 (1.378)    | 35 (1.378)     |                  |      |
| Centering diameter output                       | D5  | h7                                                                                  | 60 (2.362)                       | 80 (3.150)    | 110 (4.331)    |                  |      |
| Housing diameter                                | D6  |                                                                                     | 60 (2.362)                       | 80 (3.150)    | 115 (4.528)    |                  |      |
| Diagonal dimension output                       | D7  |                                                                                     | 92 (3.622)                       | 116 (4.567)   | 145 (5.709)    |                  |      |
| Flange cross section output                     | Q1  | ■                                                                                   | 70 (2.756)                       | 90 (3.543)    | 115 (4.528)    |                  |      |
| Total length                                    | L1  |                                                                                     | 152 (5.984)                      | 195.5 (7.697) | 274.5 (10.807) | 1                |      |
|                                                 |     |                                                                                     | 164.5 (6.476)                    | 213 (8.386)   | 302.5 (11.909) | 2                |      |
|                                                 |     |                                                                                     | 177 (6.969)                      | 230.5 (9.075) | 330 (12.992)   | 3                |      |
| Shaft length output                             | L3  |                                                                                     | 32 (1.260)                       | 40 (1.575)    | 55 (2.165)     |                  |      |
| Centering depth output                          | L7  |                                                                                     | 3 (0.118)                        | 3 (0.118)     | 4 (0.157)      |                  |      |
| Flange thickness output                         | L8  |                                                                                     | 10 (0.394)                       | 10 (0.394)    | 15 (0.591)     |                  |      |
| Min. overall height                             | L23 |                                                                                     | 90,5 (3.563)                     | 114,5 (4.508) | 145,5 (5.728)  |                  |      |
| Motor shaft diameter j6/k6                      | D20 |                                                                                     | More information on page 163/164 |               |                |                  |      |
| Clamping system diameter input                  | D26 |                                                                                     |                                  |               |                |                  |      |
| Output shaft with feather key (DIN 6885-1)      |     |                                                                                     | A 5x5x20                         | A 6x6x28      | A 8x7x40       |                  |      |
| Feather key width (DIN 6885-1)                  | B1  |  | 5 (0.197)                        | 6 (0.236)     | 8 (0.315)      |                  | A    |
| Shaft height including feather key (DIN 6885-1) | H1  |                                                                                     | 18 (0.709)                       | 22.5 (0.886)  | 28 (1.102)     |                  |      |
| Shaft length from shoulder                      | L4  |                                                                                     | 28 (1.102)                       | 36 (1.417)    | 50 (1.969)     |                  |      |
| Feather key length                              | L5  |                                                                                     | 20 (0.787)                       | 28 (1.102)    | 40 (1.575)     |                  |      |
| Distance from shaft end                         | L6  |                                                                                     | 4 (0.157)                        | 4 (0.157)     | 5 (0.197)      |                  |      |
| Center hole (DIN 332, type DR)                  | C   |                                                                                     | M5x12.5                          | M6x16         | M10x22         |                  |      |
| Smooth output shaft                             |     |                                                                                     |                                  |               |                |                  |      |
| Shaft length from shoulder                      | L4  |  | 28 (1.102)                       | 36 (1.417)    | 50 (1.969)     |                  | B    |

<sup>(2)</sup> Dimensions in mm

<sup>(3)</sup> Number of stages