

The DynaGear Economy series, versions DE-PL, is available with solid shafts on the output end.

The dimensions of the output correspond to those of a standard planetary gear.

The DE-PL series can be used to replace planetary gears.



Performance table/Technical data

DynaEco DE-PL

| Size | | DG-PL55 | DE-PL75 | DE-PL90 | DE-PL55 | DE-PL75 | DE-PL90 |
|--|---------------------------------|---------|---------|---------|---------|---------|---------|
| Ratio | i | 5/8/10 | | | 15 | | |
| Output torque | | | | | | | |
| Nominal torque | T_{2N} [Nm] | 35 | 70 | 140 | 25 | 50 | 95 |
| Maximum acceleration ④ | T_{2B} [Nm] | 53 | 105 | 210 | 38 | 75 | 143 |
| Emergency stop torque ③ | T_{2Not} [Nm] | 70 | 140 | 280 | 50 | 100 | 190 |
| Maximum input speed | n_{1max} [min ⁻¹] | 6000 | 6000 | 5000 | 6000 | 6000 | 5000 |
| Nominal input speed i = 5/8 | n_{1N} [min ⁻¹] | 3100 | 2400 | 2100 | – | – | – |
| Nominal input speed i = 10/15 | n_{1N} [min ⁻¹] | 3800 | 2900 | 2600 | 3800 | 2900 | 2600 |
| Backlash ① | j_t [arcmin] | < 7 | < 7 | < 6 | < 7 | < 7 | < 6 |
| Backlash stiffness at output ⑤ | C_{t21} [Nm/arcmin] | 2.5 | 5.0 | 12.0 | 2.5 | 5.0 | 12.0 |
| Radial force ② | F_{2Rmax} [N] | 2200 | 4050 | 6200 | 2200 | 4050 | 6200 |
| Axial force ② | F_{2Amax} [N] | 1100 | 2025 | 3100 | 1100 | 2025 | 3100 |
| Efficiency rating at full load | η [%] | > 96 | > 96 | > 96 | > 93 | > 93 | > 93 |
| Noise level ($n_1=3000$ min ⁻¹) | L_{pA} [dB(A)] | < 66 | < 66 | < 68 | < 66 | < 66 | < 68 |
| Weight approx | m [kg] | 2.6 | 4.5 | 9.0 | 2.6 | 4.5 | 9.0 |

Service life (SL) [h]: > 15.000 based operation mode S5
Lubrication: see "Technical service and maintenance" page 21
Mounting positions: Any
Operation temperature: -10 °C to 90 °C
Paint: Primary coated RAL 9005 – black
Ex-protection: Ex II 2 D/G c T4
type of protection: IP 64

① At the output, at 2 % load and max. 10 Nm

② Resulting force centre of output shaft at output speed 400 min⁻¹

③ Max 1000 times during the service life of the gearbox

④ At max 1000 cycles per hour, please consider reducing factor in other cases

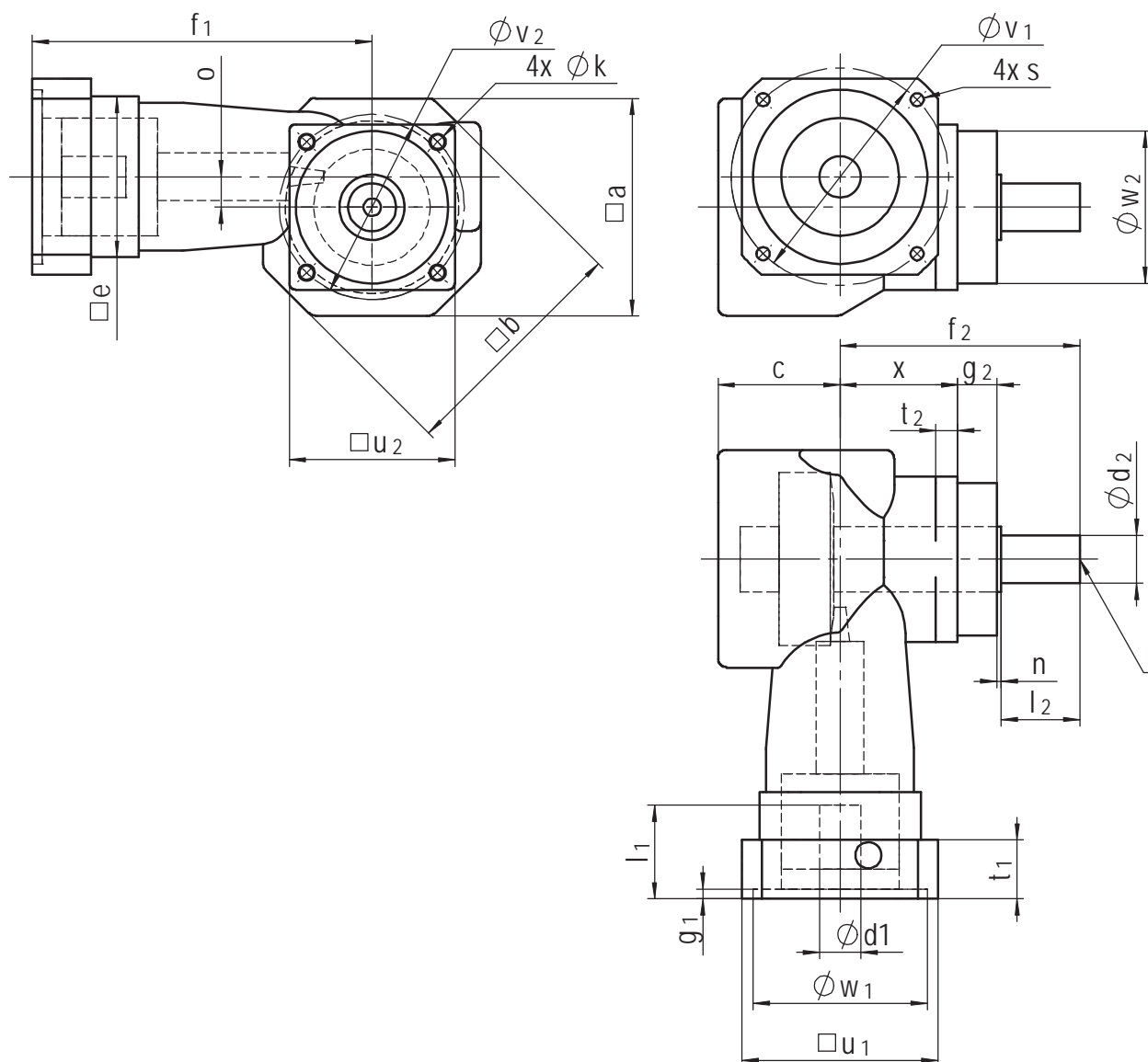
Mass moment of inertia I_1 related to input [kgcm²] (coupling included)

| Ratio i | Size | | |
|---------|---------|---------|---------|
| | DE-PL55 | DE-PL75 | DE-PL90 |
| 5:1 | 0.44 | 1.06 | 3.6 |
| 8:1 | 0.37 | 0.88 | 3.0 |
| 10:1 | 0.35 | 0.84 | 2.9 |
| 15:1 | 0.33 | 0.79 | 2.7 |

Symbols and units see page 19

Dimensions and Configurations DE-PL

DYNA GEAR Economy



| Size | $\square a$ | $\square b$ | c | x | o | $\square e$ | f_1 | g_1 | t_1 | g_2 | t_2 | ϕk | $\square u_2$ | ϕv_2 | ϕw_2 g6 |
|---------|-------------|-------------|------|----|----|-------------|-------|-------|-------|-------|-------|----------|---------------|------------|---------------|
| DE-PL55 | 84 | 91.5 | 46.5 | 47 | 9 | 58 | 130 | 4.5 | 20 | 18 | 8.5 | 5.5 | 66 | 68 | 60 |
| DE-PL75 | 100 | 110 | 56 | 54 | 14 | 74 | 156 | 4.5 | 27 | 18 | 10 | 6.5 | 76 | 85 | 70 |
| DE-PL90 | 125 | 139 | 68 | 68 | 18 | 89 | 187 | 4.5 | 33 | 20 | 13 | 9 | 101 | 120 | 90 |

Input with motor flange and coupling

| Size | Version | ϕd_1 | l_1 | $\square u_1$ | ϕv_1 | ϕw_1 F7 | s |
|---------|---------|------------|-------|---------------|------------|---------------|----|
| DE-PL55 | V1 | 9 | 23 | 60 | 63 | 40 | M4 |
| | V2 | 11 | 26 | 75 | 75 | 60 | M5 |
| | V3 | 14 | 33 | 75 | 75 | 60 | M5 |
| DE-PL75 | V1 | 11 | 26 | 75 | 75 | 60 | M5 |
| | V2 | 14 | 33 | 75 | 75 | 60 | M5 |
| | V3 | 19 | 43 | 90 | 100 | 80 | M6 |
| DE-PL90 | V1 | 14 | 33 | 90 | 100 | 80 | M6 |
| | V2 | 19 | 43 | 90 | 100 | 80 | M6 |
| | V3 | 24 | 53 | 115 | 130 | 110 | M8 |

Output with solid shaft

| Size | ϕd_2 k6 | l_2 | f_2 | n | r^ϕ |
|---------|---------------|-------|-------|---|----------|
| DE-PL55 | 16 | 28 | 95 | 2 | M5 |
| DE-PL75 | 22 | 36 | 110 | 2 | M8 |
| DE-PL90 | 32 | 58 | 148 | 2 | M12 |

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