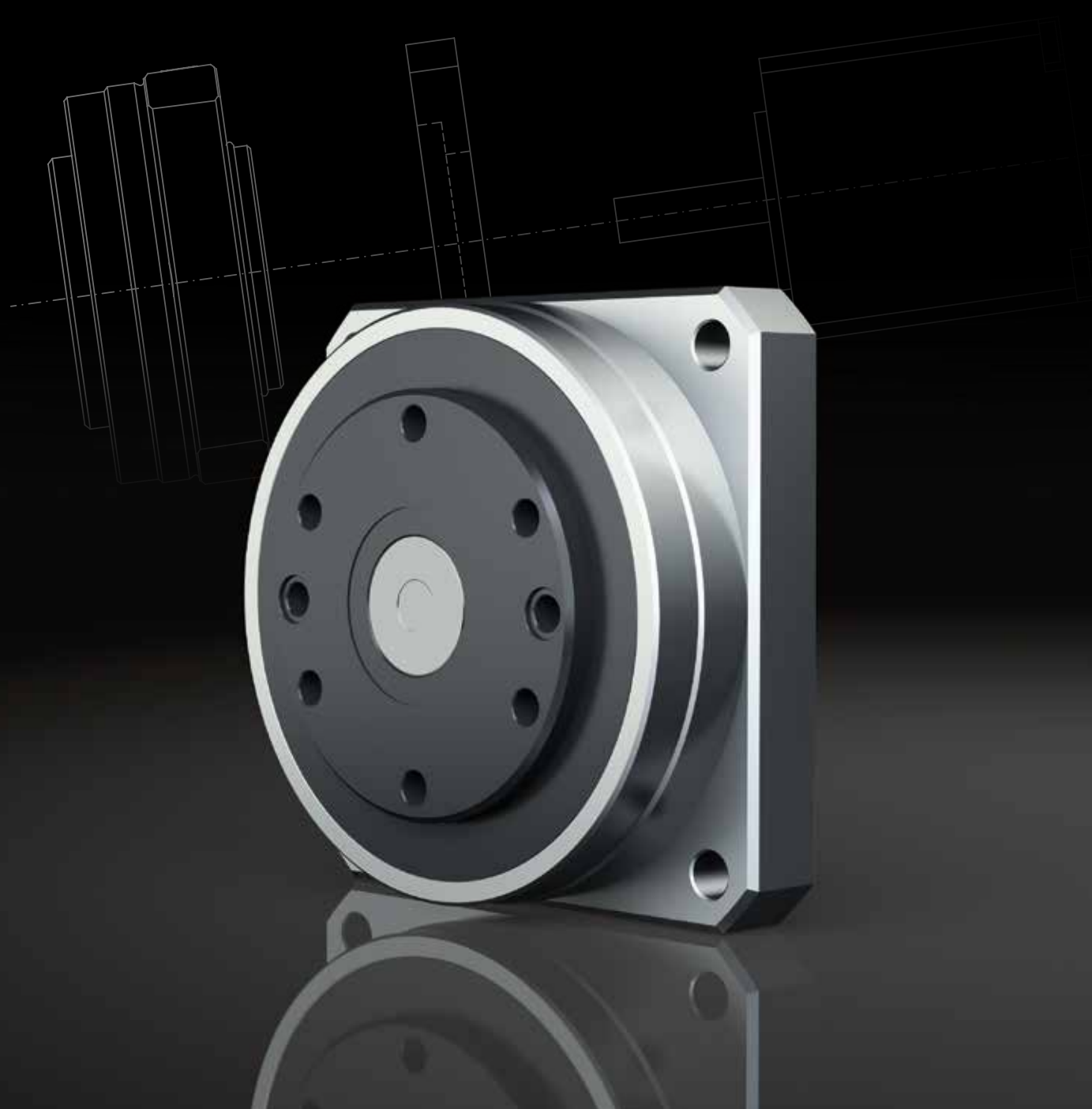


Gearboxes CSF-2UP



Harmonic
Drive AG

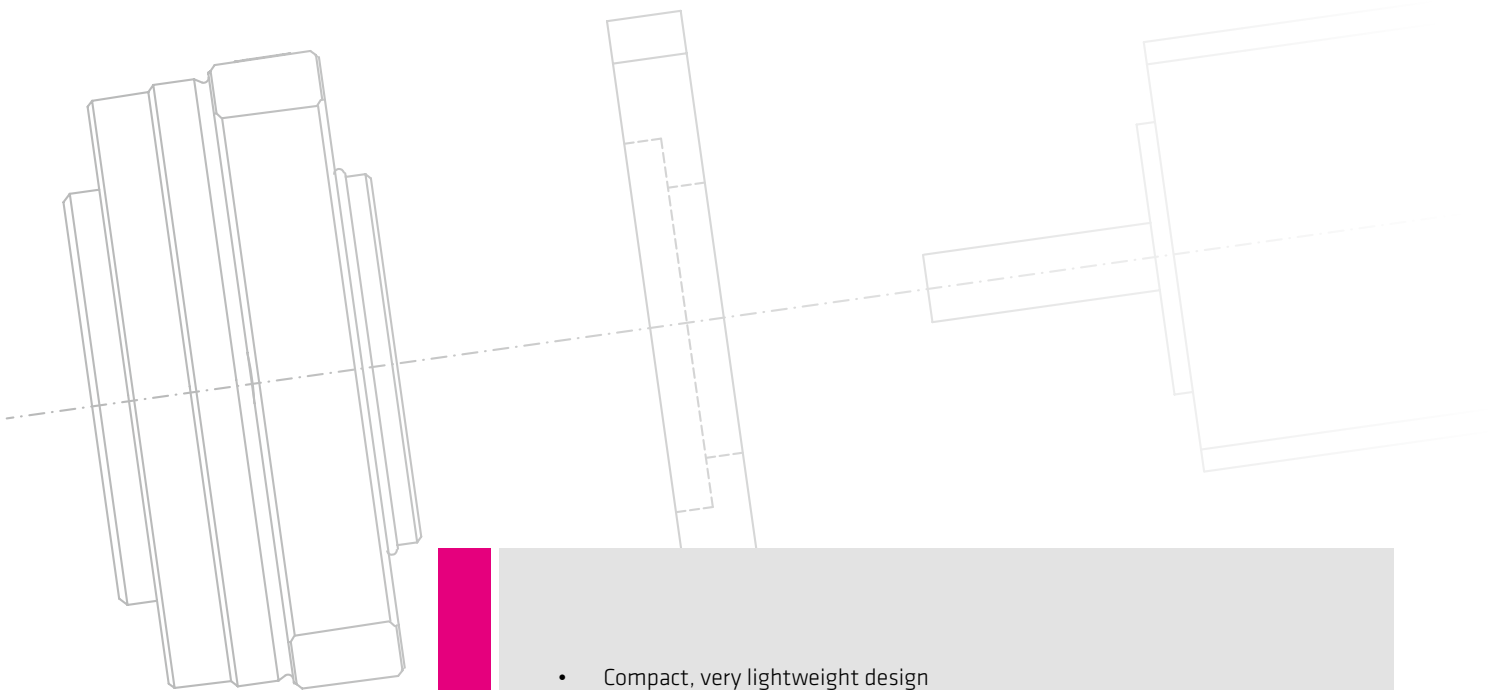


New version: CSF-2UP Mini Series Gearbox

The CSF-2UP Mini Gearboxes are extremely light and compact and provide high rigidity with the cross roller bearing connected directly to the output flange. This arrangement enables direct attachment of high payloads without further support and thus permits simple and space saving designs. On the input side, the gear is designed so that the motor can be attached by a simple flange for an extremely compact solution.

Harmonic Drive® Gearboxes combine the precision Harmonic Drive® Component Sets consisting of three components - Circular Spine, Flexspline and Wave Generator - and integral high load capacity, tilt resistant output bearings.

CSF-2UP Mini Series Gearboxes are available in three sizes with the ratios 30, 50 and 100:1 offering repeatable peak torques from 1.8 up to 28 Nm.



Features

- Compact, very lightweight design
- Direct motor connection
- Excellent lifetime precision
- High dynamics due to zero backlash
- Integrated high capacity output bearing

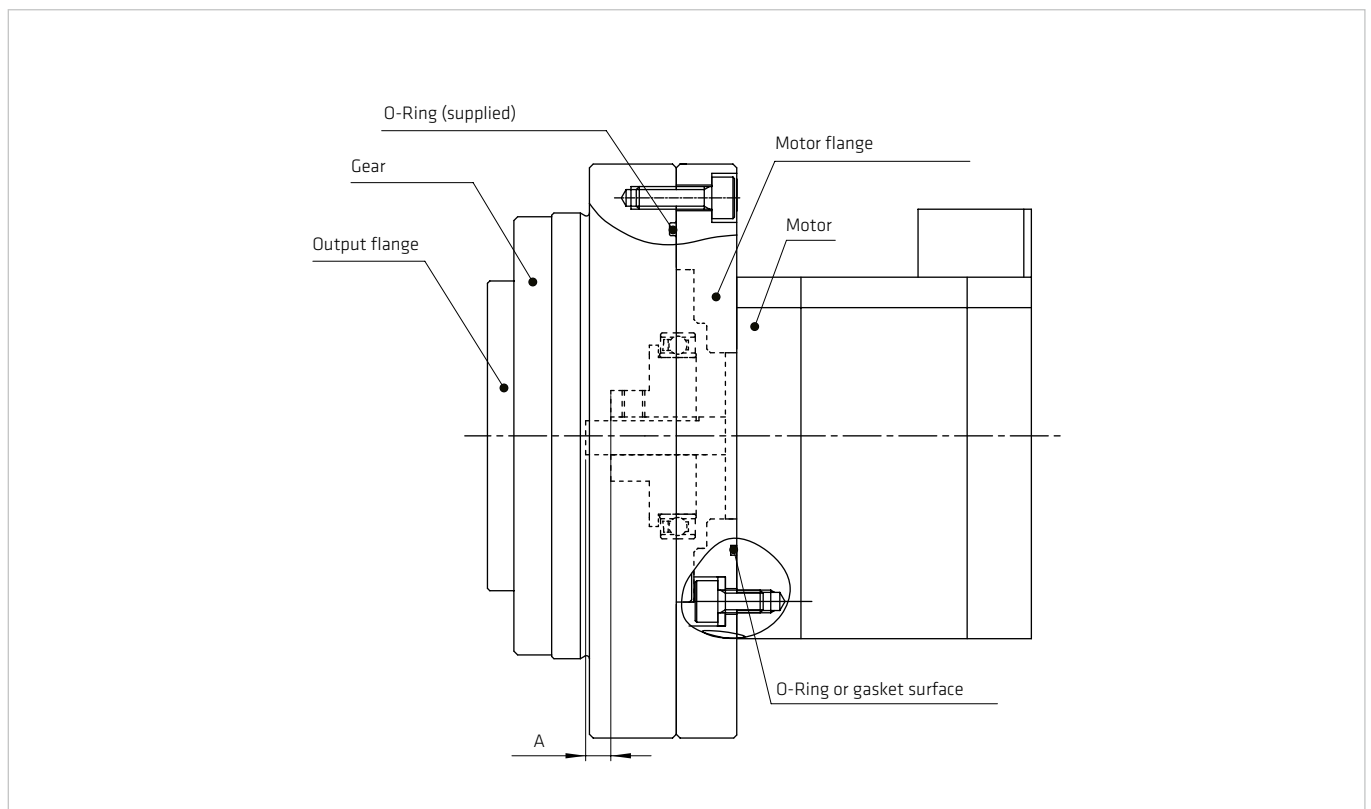
Technical Data

Table 3.1

Size	Ratio	Rated torque at rated speed 2000 rpm	Limit for repeatable peak torque	Limit for average torque	Limit for momentary peak torque	Maximum input speed	Limit for average input speed	Moment of inertia
		T_N [Nm]	T_R [Nm]	T_A [Nm]	T_M [Nm]	[rpm]	[rpm]	J_{in} [$\times 10^{-8}$ kgm ²]
8	30	0.9	1.8	1.4	3.3	8500	3500	40
	50	1.8	3.3	2.3	6.6			
	100	2.4	4.8	3.3	9.0			
11	30	2.2	4.5	3.4	8.5	8500	3500	150
	50	3.5	8.3	5.5	17			
	100	5.0	11	8.9	25			
14	30	4.0	9.0	6.8	17	8500	3500	400
	50	5.4	18	6.9	35			
	100	7.8	28	11	54			

Assembly example

Illustration 3.2



Dimensions

Illustration 4.1

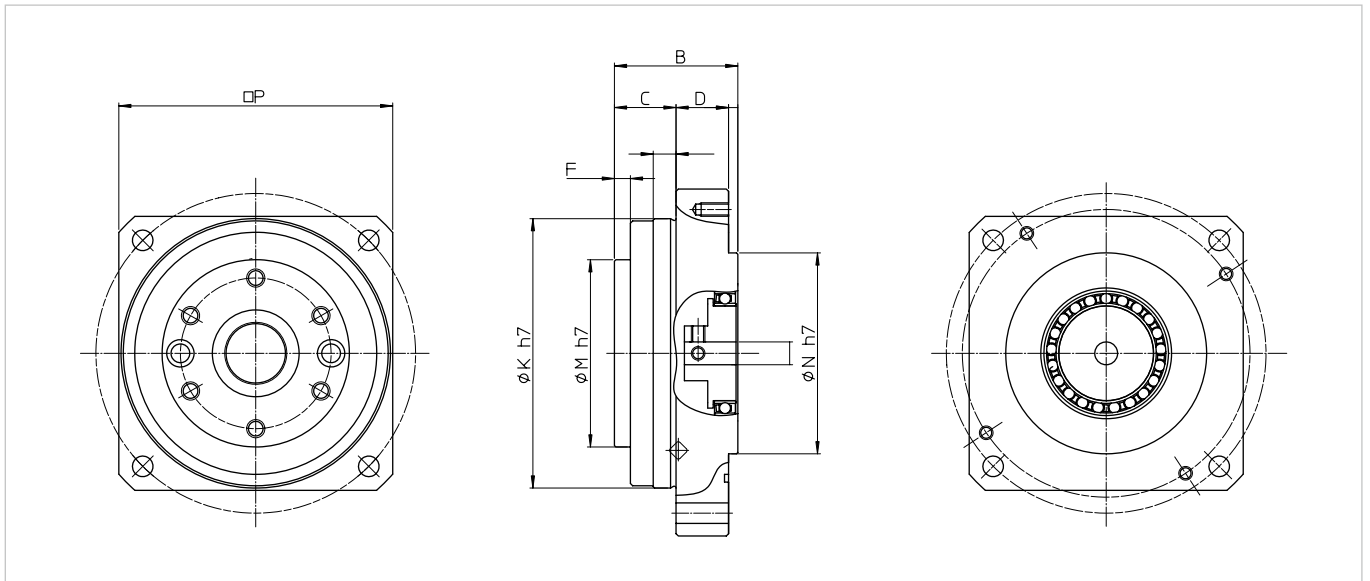



Table 4.2

[mm]


Size	8	11	14
B	24.8	27	33.5
C	13	13.5	18.5
D	9	11.5	12
F	3	3.5	3.5
øK	49	59	74
øM	33.5	41	52.5
øN	30	44	52
□P	50±1	60±1	75±1
Weight [g]	200	330	620

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