

# Spur Gearheads

## 0,1 Nm

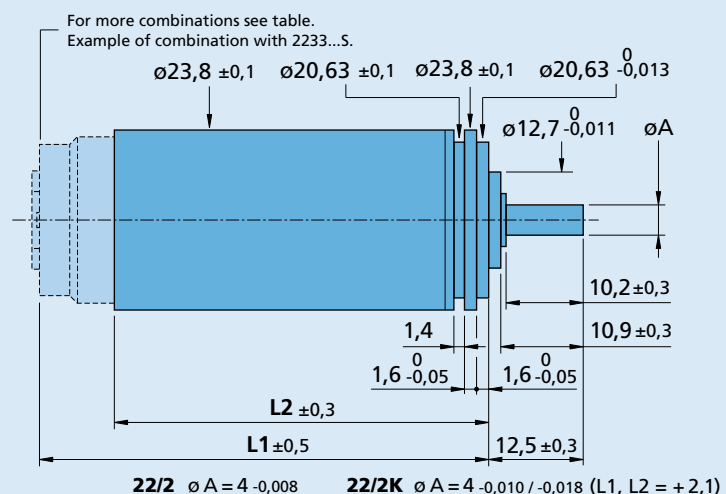
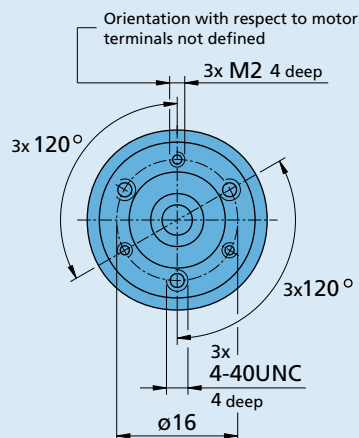
For combination with  
DC-Micromotors  
Stepper Motors

### Series 22/2

	22/2	22/2K
Housing material	metal	metal
Geartrain material	metal	metal
Recommended max. input speed for:		
– continuous operation	4 000 min <sup>-1</sup>	4 000 min <sup>-1</sup>
Backlash, at no-load	≤ 3 °	≤ 3 °
Bearings on output shaft	sintered bearings	ball bearings, preloaded
Shaft load, max.:		
– radial (6 mm from mounting face)	≤ 3 N	≤ 100 N
– axial	≤ 5 N	≤ 5 N
Shaft press fit force, max.	≤ 50 N	≤ 5 N
Shaft play		
– radial (6 mm from mounting face)	≤ 0,05 mm	≤ 0,03 mm
– axial	≤ 0,2 mm	= 0 mm
Operating temperature range	- 30 ... + 100 °C	- 30 ... + 100 °C

Technical data		2	3	4	5	6	7	8	9	10
Number of gear stages		2	3	4	5	6	7	8	9	10
Continuous torque	mNm	100	100	100	100	100	100	100	100	100
Intermittent torque	mNm	400	400	400	400	400	400	400	400	400
Mass without motor, ca.	g	58	68	72	77	82	88	93	98	103
Efficiency, max.	%	90	86	81	73	66	59	53	48	43
Direction of rotation, drive to output		=	≠	=	≠	=	≠	=	≠	=
Reduction ratio <sup>1)</sup> (rounded)		3,1:1 5,4:1	9,7:1	17,2:1 30,7:1	54,6:1 97,3:1	173:1 308:1	548:1 975:1	1 734:1 3 088:1	5 490:1 9 780:1	17 386:1 30 969:1
L2 [mm] = length without motor		40,8	46,6	49,5	52,4	55,3	58,2	61,1	64,0	66,9
L1 [mm] = length with motor										
	2224R...SR	45,4	50,7	53,6	56,5	59,4	62,3	65,2	68,1	71,0
	2230F/R...S	51,2	56,5	59,4	62,3	65,2	68,1	71,0	73,9	76,8
	2232R...SR	53,4	58,7	61,6	64,5	67,4	70,3	73,2	76,1	79,0
	2233F/R...S	53,8	59,1	62,0	64,9	67,8	70,7	73,6	76,5	79,4
	AM2224...14	48,9	54,2	57,1	60,0	62,9	65,8	68,7	71,6	74,5

<sup>1)</sup> The reduction ratios are rounded, the exact values are available on request or at [www.faulhaber.com](http://www.faulhaber.com).



# Spur Gearheads

## 0,1 Nm

For combination with  
DC-Micromotors  
Stepper Motors

### Series 22/2

	22/2	22/2K
Housing material	metal	metal
Geartrain material	metal	metal
Recommended max. input speed for:		
– continuous operation	4 000 min <sup>-1</sup>	4 000 min <sup>-1</sup>
Backlash, at no-load	≤ 3 °	≤ 3 °
Bearings on output shaft	sintered bearings	ball bearings, preloaded
Shaft load, max.:		
– radial (6 mm from mounting face)	≤ 3 N	≤ 100 N
– axial	≤ 5 N	≤ 5 N
Shaft press fit force, max.	≤ 50 N	≤ 5 N
Shaft play		
– radial (6 mm from mounting face)	≤ 0,05 mm	≤ 0,03 mm
– axial	≤ 0,2 mm	= 0 mm
Operating temperature range	- 30 ... + 100 °C	- 30 ... + 100 °C

#### Technical data

	11	12	13
Number of gear stages			
Continuous torque	mNm 100	100	100
Intermittent torque	mNm 400	400	400
Mass without motor, ca.	g 108	113	118
Efficiency, max.	% 39	35	31
Direction of rotation, drive to output	≠	=	≠
Reduction ratio <sup>1)</sup> (rounded)	55 057:1 98 070:1	174 350:1 310 560:1	552 113:1 983 447:1
L2 [mm] = length without motor	69,8	72,7	75,6
L1 [mm] = length with motor			
2224R...SR	73,9	76,8	79,7
2230F/R...S	79,7	82,6	85,5
2232R...SR	81,9	84,8	87,7
2233F/R...S	82,3	85,2	88,1
AM2224...14	77,4	80,3	83,2

<sup>1)</sup> The reduction ratios are rounded, the exact values are available on request or at [www.faulhaber.com](http://www.faulhaber.com).

