

# Spur Gearheads

## 1,2 Nm

For combination with  
 DC-Micromotors:  
 2224, 2230, 2232, 2233, 2342  
 Brushless DC-Servomotors:  
 2232, 2248, 2444  
 DC-Motor-Tacho Combinations:  
 2251

### Series 38/3

	38/3
Housing material	plastic/metal
Geartrain material	steel <sup>1)</sup>
Recommended max. input speed for:	
– continuous operation	5 000 rpm
Backlash, at no-load	≤ 2°
Bearings on output shaft	sintered sleeve bearings
Shaft load, max.:	
– radial (15 mm from mounting face)	≤ 50 N
– axial	≤ 30 N
Shaft press fit force, max. (with rear plate supported)	≤ 500 N
Shaft play:	
– radial (on bearing output)	≤ 0,1 mm
– axial	≤ 0,5 mm
Operating temperature range	– 15 ... + 65 °C

### Specifications

reduction ratio (nominal)	weight without motor <sup>2)</sup>	length without motor <sup>3)</sup>	length with motor						output torque		direction of rotation (reversible)	efficiency	
			2224 U	2230 U	2232 U	2233 U	2342 S	2444 S	continuous operation	intermittent operation			
	g	L2 mm	L1 mm	L1 mm	L1 mm	L1 mm	L1 mm	L1 mm	L1 mm	M max. mNm	M max. mNm		%
5,42 :1	66	23,8	43,5	49,3	56,0	51,9	65,8	67,8	67,8	75	2 000	=	81
10,3 :1	71	23,8	43,5	49,3	56,0	51,9	65,8	67,8	67,8	150	2 000	≠	73
18,2 :1	71	23,8	43,5	49,3	56,0	51,9	65,8	67,8	67,8	225	2 000	≠	73
34,7 :1	79	29,8	49,5	55,3	62,0	57,9	71,8	73,8	73,8	325	2 000	=	66
61,1 :1	79	29,8	49,5	55,3	62,0	57,9	71,8	73,8	73,8	450	2 000	=	66
116 :1	85	29,8	49,5	55,3	62,0	57,9	71,8	73,8	73,8	600	2 000	≠	59
205 :1	85	29,8	49,5	55,3	62,0	57,9	71,8	73,8	73,8	800	2 000	≠	59
391 :1	92	32,9	52,6	58,4	65,1	61,0	74,9	76,9	76,9	1 000	2 000	=	53
689 :1	92	32,9	52,6	58,4	65,1	61,0	74,9	76,9	76,9	1 200	2 000	=	53
586 :1 <sup>4)</sup>	94	32,9					76,9	74,9	74,9	1 000	2 000	≠	48
1 034 :1 <sup>4)</sup>	94	32,9					76,9	74,9	74,9	1 200	2 000	≠	48

<sup>1)</sup> Gearheads with ratios ≥ 34,7:1 have a plastic input gearwheel. Gearheads with ratios ≤ 18,2:1 have a steel input gearwheel.

<sup>2)</sup> Type 38/3... - K700 with square flange has an additional weight of 17 g.

<sup>3)</sup> Gearheads available for motor types 2224, 2230, 2232 and 2233 are 4,5 mm tight .

<sup>4)</sup> These ratios are available only with motor types 2342 and 2444.

**Note:** The reduction ratios are rounded, the exact values are available on request.

