

# Planetary Gearheads

## 4,5 Nm

For combination with (overview on page 14-15)  
 DC-Micromotors:  
 2342, 2642, 2657, 3557  
 Brushless DC-Servomotors:  
 2232, 2248, 2444, 3056, 3564

### Series 30/1

	30/1
Housing material	metal
Geartrain material	steel <sup>1)</sup>
Recommended max. input speed for:	
– continuous operation	4 000 rpm
Backlash, at no-load	≤ 1°
Bearings on output shaft	ball bearings
Shaft load, max.:	
– radial (15 mm from mounting face)	≤ 150 N
– axial	≤ 150 N
Shaft press fit force, max.	≤ 200 N
Shaft play (on bearing output):	
– radial	≤ 0,015 mm
– axial	≤ 0,15 mm
Operating temperature range	– 30 ... + 100 °C

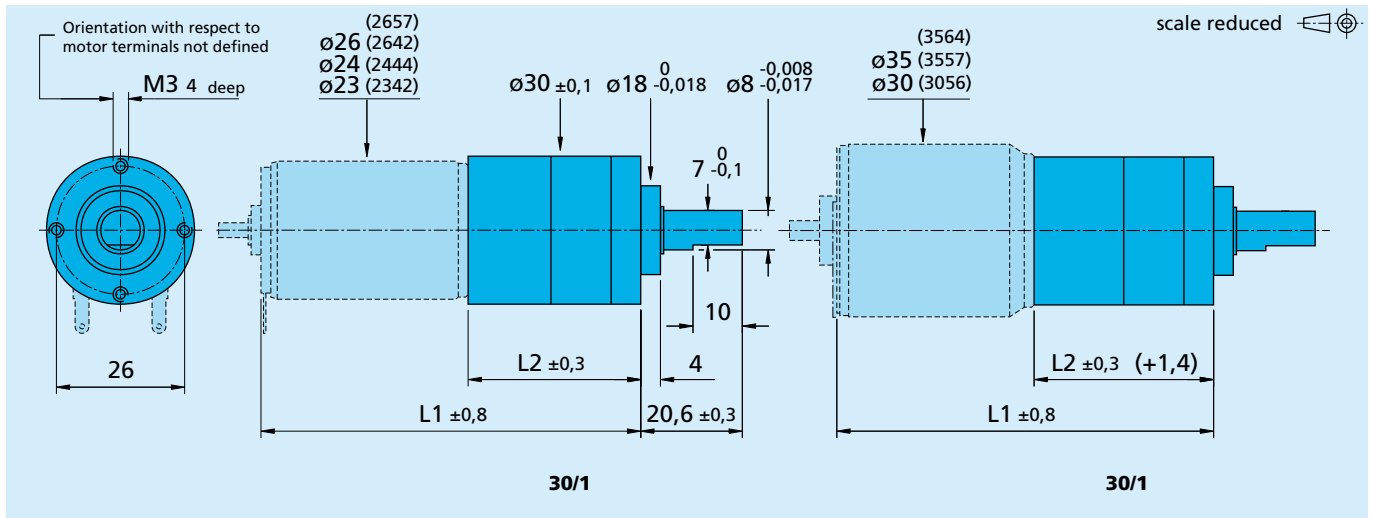
### Specifications

reduction ratio (nominal)	weight without motor	length without motor L2	length with motor					output torque		direction of rotation (reversible)	efficiency
			2444 S	2342 S 2642 W	3056 K	2657 W 3557 K	3564 K	continuous operation	intermittent operation		
	g	mm	L1	L1	L1	L1	L1	M max. Nm	M max. Nm		%
3,71:1	107	27,1	71,1	69,1	84,5	85,5	92,5	1,5	3,0	=	88
9,7 :1 <sup>2)</sup>	139	35,1	79,1	77,1	92,5	93,5	100,5	4,5	6,0	=	80
14 :1	139	35,1	79,1	77,1	92,5	93,5	100,5	0,35 (4,5)	0,5 (6,0)	=	80
23 :1 <sup>2)</sup>	139	35,1	79,1	77,1	92,5	93,5	100,5	4,5	6,0	=	80
43 :1	171	43,1	87,1	85,1	100,6	101,6	108,6	1,2 (4,5)	1,6 (6,0)	=	70
66 :1	171	43,1	87,1	85,1	100,6	101,6	108,6	1,8 (4,5)	2,4 (6,0)	=	70
86 :1 <sup>2)</sup>	171	43,1	87,1	85,1	100,6	101,6	108,6	4,5	6,0	=	70
134 :1	203	51,2	95,2	93,2	108,6	109,6	116,6	3,5 (4,5)	4,5 (6,0)	=	60
159 :1	203	51,2	95,2	93,2	108,6	109,6	116,6	4,5 (4,5)	6,0 (6,0)	=	60
246 :1	203	51,2	95,2	93,2	108,6	109,6	116,6	4,5 (4,5)	6,0 (6,0)	=	60
415 :1	235	59,2	103,2	101,2	116,6	117,6	124,6	4,5 (4,5)	6,0 (6,0)	=	55
592 :1	235	59,2	103,2	101,2	116,6	117,6	124,6	4,5 (4,5)	6,0 (6,0)	=	55
989 :1	235	59,2	103,2	101,2	116,6	117,6	124,6	4,5 (4,5)	6,0 (6,0)	=	55
1 526 :1	235	59,2	103,2	101,2	116,6	117,6	124,6	4,5 (4,5)	6,0 (6,0)	=	55

<sup>1)</sup> Gearheads with ratio ≥ 14:1 have plastic gears in the input stage. For extended life performance, the gearheads are available with all steel gears and heavy duty lubricant as type 30/1 S.  
 The values for the torque rating indicated in parenthesis, are for gearheads, type 30/1 S with all steel gears.

<sup>2)</sup> Gearheads with ratio 9,7:1 - 23:1 - 86:1 are available only as type 30/1 S.

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



For details on technical information and lifetime performance refer to pages 118-122.

Specifications subject to change without notice.