

# Solution details for

## 2224R003SR + 22/2 308:1

Your comments

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### Your Requirements

Load transmission	Direct rotational	
Ambient temperature	22	°C
Available diameter	30	mm
Available length	100	mm
Available supply voltage	24	V
Available current	5	A
Efficiency, min.	10	%
Required load speed	10	1/min
Required load torque	0,04	Nm

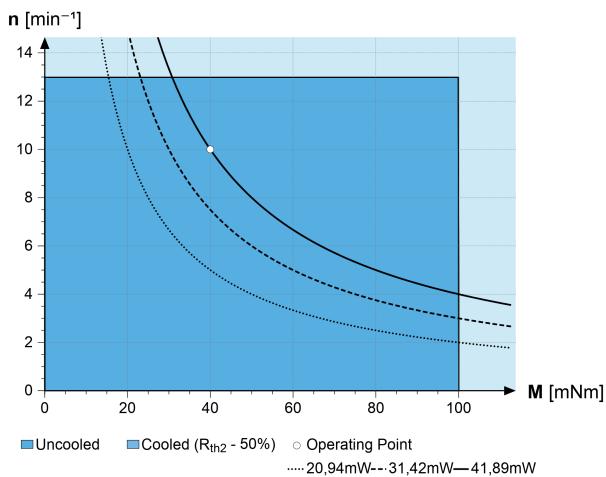
### Results of the Load Calculation

Load current	131,5	mA
Load voltage	1,2	V
Motor winding temperature	23,73	°C
Motor housing temperature	23,68	°C
Required motor torque	0,23	mNm
Required motor speed	3.079,54	1/min
Output power	41,89	mW
Efficiency (over all)	26,6	%

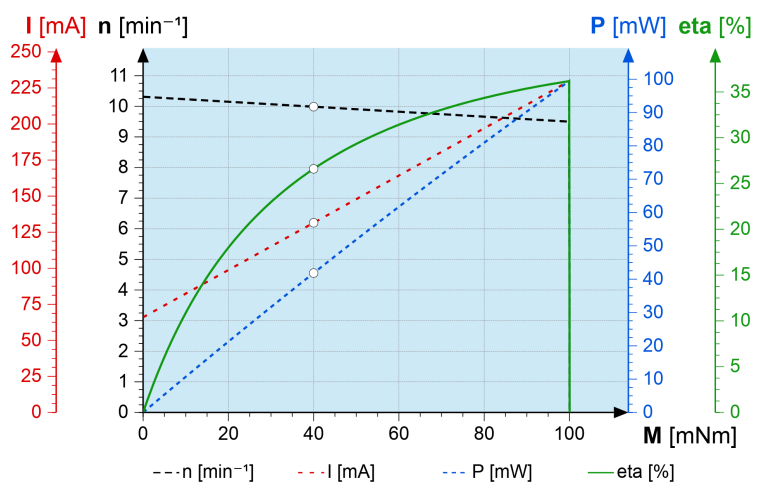
### Overall Dimensions

Diameter	23,8	mm
Length	59,4	mm
Mass	128	g

### Operating Area



### Characteristic curves



**Motor Characteristic Data**

Nominal voltage	$U_N$	3	V
Terminal resistance	R	560	m $\Omega$
Torque constant	$k_M$	3,49	mNm/A
No load speed	$n_0$	8.100	1/min
Stall torque	$M_H$	18,5	mNm
Speed constant	$k_n$	2.730	1/min/V
Rotor inductance	L	11	$\mu$ H
Slope of n-M curve	$\Delta n/\Delta M$	438	1/min/mNm
Rotor inertia	J	2,4	gcm <sup>2</sup>
Mechanical time constant	$\tau$	11	ms
Efficiency max.	$\eta_{max}$	80	%

**Gearhead Characteristic Data**

Housing material	metal		
Geartrain material	metal		
Backlash at no load	3		°
Bearings on output shaft	sintered bearings, ball bearings, preloaded		
Shaft load, max. radial	3		N
Shaft load, max. axial	5		N
Shaft press fit force, max.	50		N
Number of gear stages	6		
Reduction ratio	308		:1
Calculated reduction	307,95		:1
Continuous torque	100		mNm
Mass	82		g
Efficiency, max.	66		%
Gearshaft diameter	4		mm
Gearhead diameter	23,8		mm

**Contact**

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 Please contact your local representative or fill out our contact form.  
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