

# Solution details for 2342S012CR + 26/1R 3,71:1

Your comments

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## Your Requirements

### Motor and Gearhead Preselection (optional)

Motor series	All
Gear series	All

### Global settings

Ambient temperature	22	°C
Available diameter	100	mm
Available length	400	mm
Available supply voltage	24	V

### Advanced settings

Available current	5	A
Efficiency, min.	10	%
RTH2 Reduction		%

### Your entries

Load transmission	Direct rotational	
Required load speed	1.000	1/min
Required load torque	10	mNm

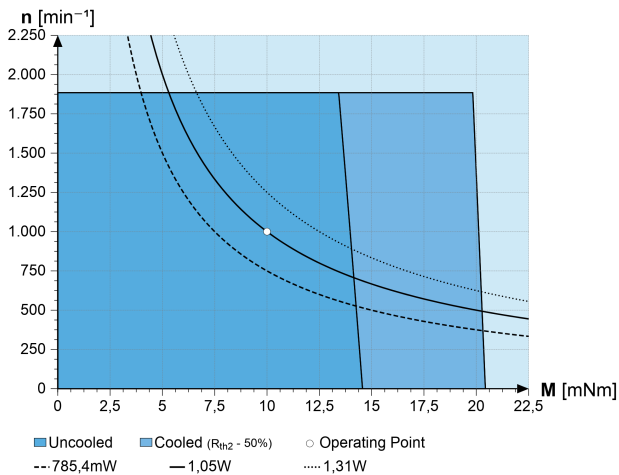
## Results of the Load Calculation

Load current	871,5	mA
Load voltage	7,39	V
Motor winding temperature	52,46	°C
Motor housing temperature	47,61	°C
Required motor torque	10,29	mNm
Required motor speed	3.714,29	1/min
Output power	1,05	W
Efficiency (over all)	16,26	%

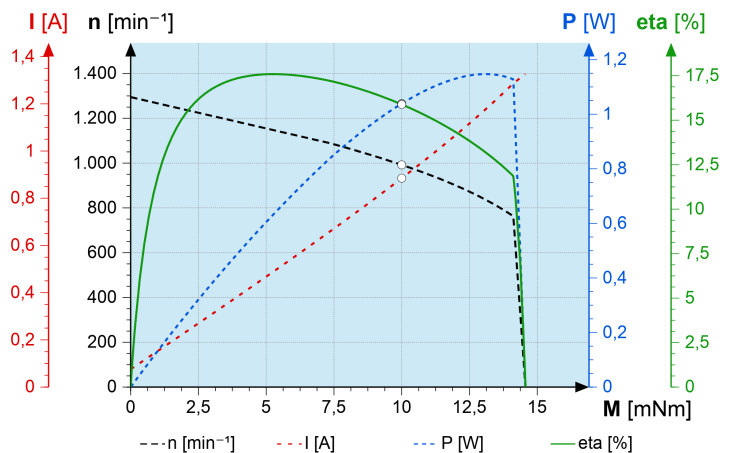
## Overall Dimensions

Diameter	26	mm
Length	70,4	mm
Mass	181	g

## Operating Area



## Characteristic curves



### Motor Characteristic Data

Nominal voltage	$U_N$	12	V
Terminal resistance	R	1,9	$\Omega$
Torque constant	$k_M$	13,4	mNm/A
No load speed	$n_0$	8.100	1/min
Stall torque	$M_H$	80	mNm
Speed constant	$k_n$	713	1/min/V
Rotor inductance	L	65	$\mu H$
Slope of n-M curve	$\Delta n/\Delta M$	101	1/min/mNm
Rotor inertia	J	5,7	gcm <sup>2</sup>
Mechanical time constant	$\tau$	6	ms
RTH2 Reduction		30	%
Efficiency max.	$\eta_{max}$	80	%

### Gearhead Characteristic Data

Housing material	metal		
Geartrain material	steel		
Backlash at no load	1		°
Bearings on output shaft	ball bearings, preloaded		
Shaft load, max. radial	150		N
Shaft load, max. axial	100		N
Shaft press fit force, max.	150		N
Number of gear stages	1		
Reduction ratio	3,71		:1
Calculated reduction	3.7142857142857		:1
Continuous torque	400		mNm
Mass	93		g
Efficiency, max.	91		%
Gearshaft diameter	5		mm
Gearhead diameter	26		mm

### Contact

Do you have any questions regarding FAULHABER Products, our Services, or other Drive System related issues?  
Please contact your local representative or fill out our contact form.  
<https://www.faulhaber.com/contact/>

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