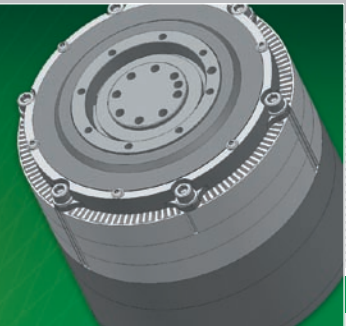


Highest performance  
in a small installation space



- **Rotary Direct Drive System**  
RDDS-20-A

# RDDS-20-A

## Features, benefits, applications, drawing

### Features

- Integrated air cooling
- Highest reliability due to dust protection of moving parts and measurement system
- High dynamics
- Optimised for minimum inertia

### Benefits

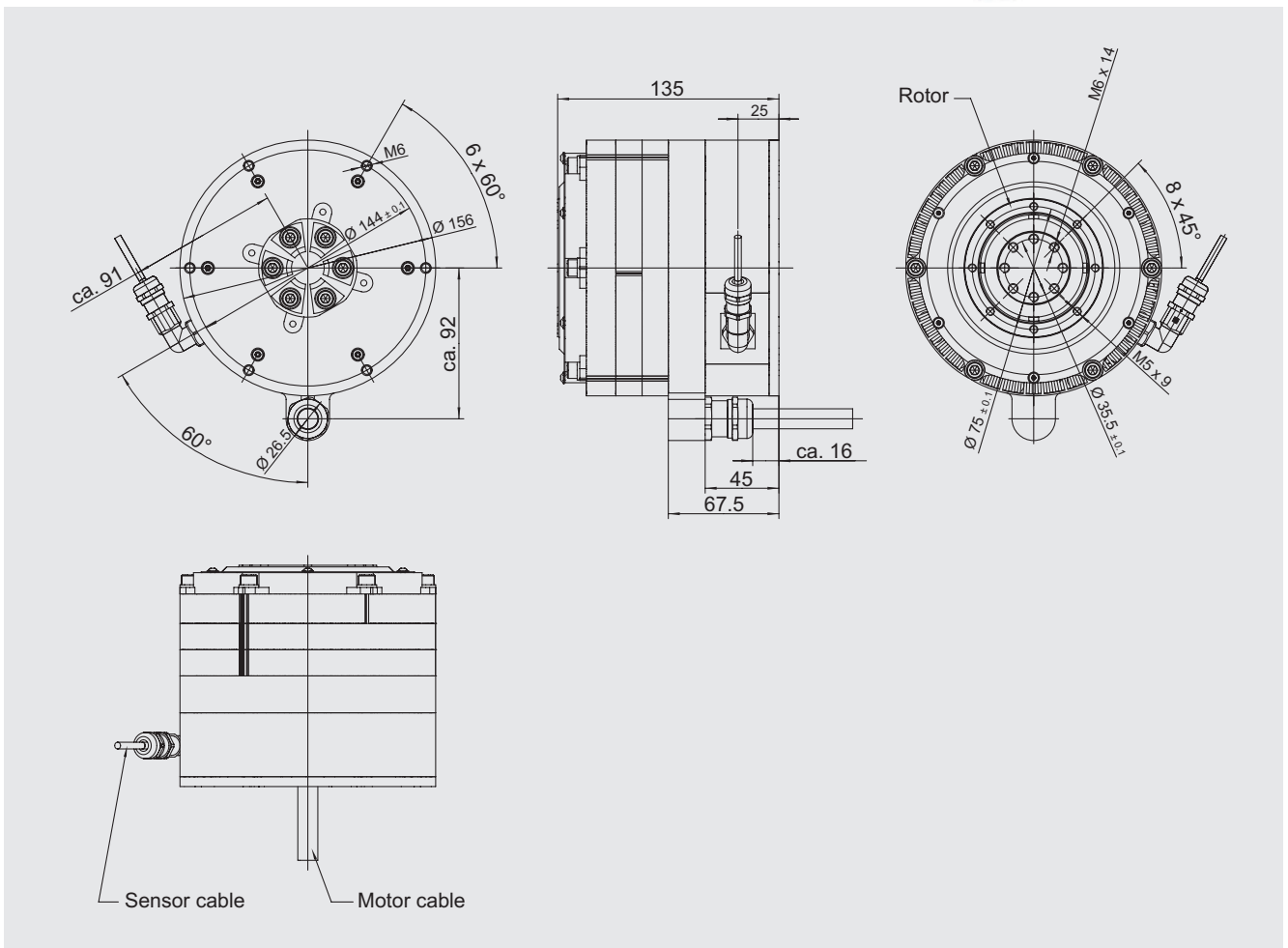
- 70% more torque in installation space
- Application with up to 115,000 cycles per hour
- Highest performance
- Compact design

### Applications

- Robot kinematics
- Handling
- Automation
- Laser industry
- Positioning system for point-to-point applications



### Drawing



## RDDS-20-A

### System data, system components, motor data

System data	Symbol	Unit	RDDS-20-A
Dimensions	$\varnothing \times H$	mm	156 x 135
Total mass	$m_{\text{total}}$	kg	9.8
Mounting version			Base plate
Contact version			Cable connection
Moment of inertia	J	kgm <sup>2</sup>	$2.11 \times 10^{-3}$
Axial run-out		$\mu\text{m}$	$\pm 10$
Radial run-out		$\mu\text{m}$	$\pm 10$
Limiting speed	$n_{\text{max}}$	rpm	On request
System components	Symbol	Unit	RDDS-20-A
Bearing			Spindle bearing
Measuring system			Incremental measuring system with optical scanning $1 V_{\text{pp}} \sin/\cos$ , 2500 increments per revolution
Air cooling			DC fan, electronically commutated, 24 V <sub>DC</sub>
Motor data	Symbol	Unit	RDDS-20-A
<b>Motor type: RI11-3P-89x50</b>			
Ultimate torque (1 s) at $I_u$	$T_u$	Nm	59.3
Peak torque (saturation range) at $I_p$	$T_p$	Nm	53.7
Peak torque (linear range) at $I_{pl}$	$T_{pl}$	Nm	38.1
Continuous torque, air cooled at $I_{ca}$	$T_{ca}$	Nm	18.0
Continuous torque, not cooled at $I_c$	$T_c$	Nm	10.5
Motor constant (25 °C)	$k_m$	N/ $\sqrt{W}$	1.57
Ultimate current (1 s)	$I_u$	A <sub>rms</sub>	25.2
Peak current (saturation range)	$I_p$	A <sub>rms</sub>	20.2
Peak current (linear range)	$I_{pl}$	A <sub>rms</sub>	12.3
Continuous current, air cooled	$I_{ca}$	A <sub>rms</sub>	5.8
Continuous current, not cooled	$I_c$	A <sub>rms</sub>	3.3
DC link voltage	$U_{\text{DCL}}$	V	600



**INA – Drives & Mechatronics AG & Co. KG**

Mittelbergstrasse 2  
98527 Suhl, Germany

Phone +49 3681 | 7574-0  
Fax +49 3681 | 7574-30

E-mail [idam@schaeffler.com](mailto:idam@schaeffler.com)  
Web [www.idam.de](http://www.idam.de)

