

# Pressure Mate

## Cutting force measurement on rotary die cutters



### Technical data sensor AFS®

Rated measuring range (F <sub>N</sub> )	kN	0...10
Rated output	mV/V	1,0
Rated output tolerance	%	< ±0,2
Accuracy class		0,1
Excitation voltage max.	V	12
Reference excitation voltage	V	10
Input resistance	Ω	350 ±3
Output resistance	Ω	350 ±1
Isolation resistance	GΩ	> 10
Rated temperature range	°C	5...50
Operational temperature range	°C	-10...70
Storage temperature range	°C	-30...70
Reference temperature	°C	23
Temperature influence per 10 K		
- on the zero point (TK0)	% F <sub>N</sub>	< ±0,1
- on the calibration (TKC)	% F <sub>N</sub>	< ±0,15
Creep after 30 minutes	% F <sub>N</sub>	< ±0,1
Linear output signal up to	% F <sub>N</sub>	approx. 125
Deflection at nominal force	mm	< 0,005
Natural frequency of the sensor	kHz	> 40 (depending on nominal force)
Weight	kg	approx. 1
Sensor housing	high-tensile steel, black finishing	
Protection class	IP 65	

### Rated measuring range

Nominal force [kN]			
10			

The measuring range of the sensor begins at the force's zero point.  
Nominal forces differing from the list are available.

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### Technical data measuring amplifier DMV 05

Design	Desktop unit with LCD displays for 2 channels	
Display per channel	3½ -digit LCD display, Increment 10 kg, optional 1 kg	
Sensor connection	female socket, 6-pole 270°, gold-plated contacts	
Nominal measuring range $U_{sig}$	<b>mV</b>	±10
Nominal gain $G_{nom}$		1000
Accuracy class		0,1
Bridge excitation voltage	<b>V DC</b>	10, highly stable
Adjustment range zero	<b>% v.E.<sup>1</sup></b>	approx. ±45
Voltage output $V_{out}$ per channel	<b>V</b>	0 to ±10; $R_L \geq 10\text{ k}\Omega$
Cut-off frequency (-3dB) output signal	<b>Hz</b>	approx. 70
Nominal temperature range	<b>°C</b>	5 to 50
Operation temperature range	<b>°C</b>	0 to 50
Storage temperature range	<b>°C</b>	-30 to 70
Temperature influence per 10 K	<b>mV</b> <b>% v.E.<sup>1</sup></b>	< 10
- on zero at amplifier output		< 0,05
- on calibration		
Supply voltage	<b>V AC</b>	230 / 115 ±10%, switchable
Frequency	<b>Hz</b>	45 to 60
Power consumption	<b>VA</b>	approx. 3
Housing	<b>mm</b> <b>kg</b>	robust aluminium die cast housing with antislip housing feet
Dimensions (L x W x H)		172 x 115 x 135
Weight		approx. 1,5
Protection class	IP 40	

<sup>1</sup> v.E. ⇒ of final value

### Scope of supply

- 2 threaded spindles with built-in force sensors
- measuring amplifier
- 2 sensor connection cables, length 2 m
- mains cable

### Option

- display with increment 1 kg

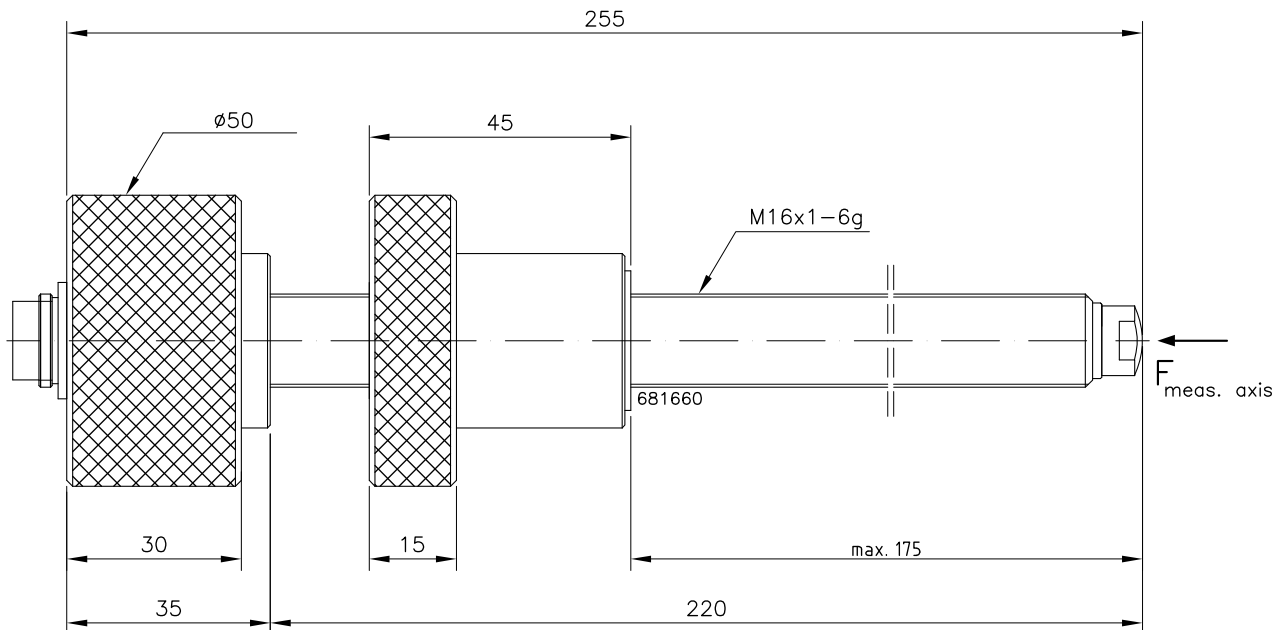
### Special designs

- further nominal force ranges
- dimensions for thread, spindle length and spindle adjusting range differing from standard

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## Scale drawing of sensor



All dimensions in mm

## Block diagram

