



Main features:

- Measurement of nozzle touch force (nozzle pressure force) in injection-molding and die-casting machines
- User-friendly, small and compact
- Force measurement range: 200kN / 450kN
- Very high repeatability
- Direct connection to our signal amplifiers and monitors
- Various nozzle adapters can be retrofitted (e.g., brass)
- Magnetic bases can be retrofitted in different sizes

Modern fully electronic injection molding machines have to be tested regularly the nozzle touch force. This applies, in particular, to ISO 9000 quality assurance.

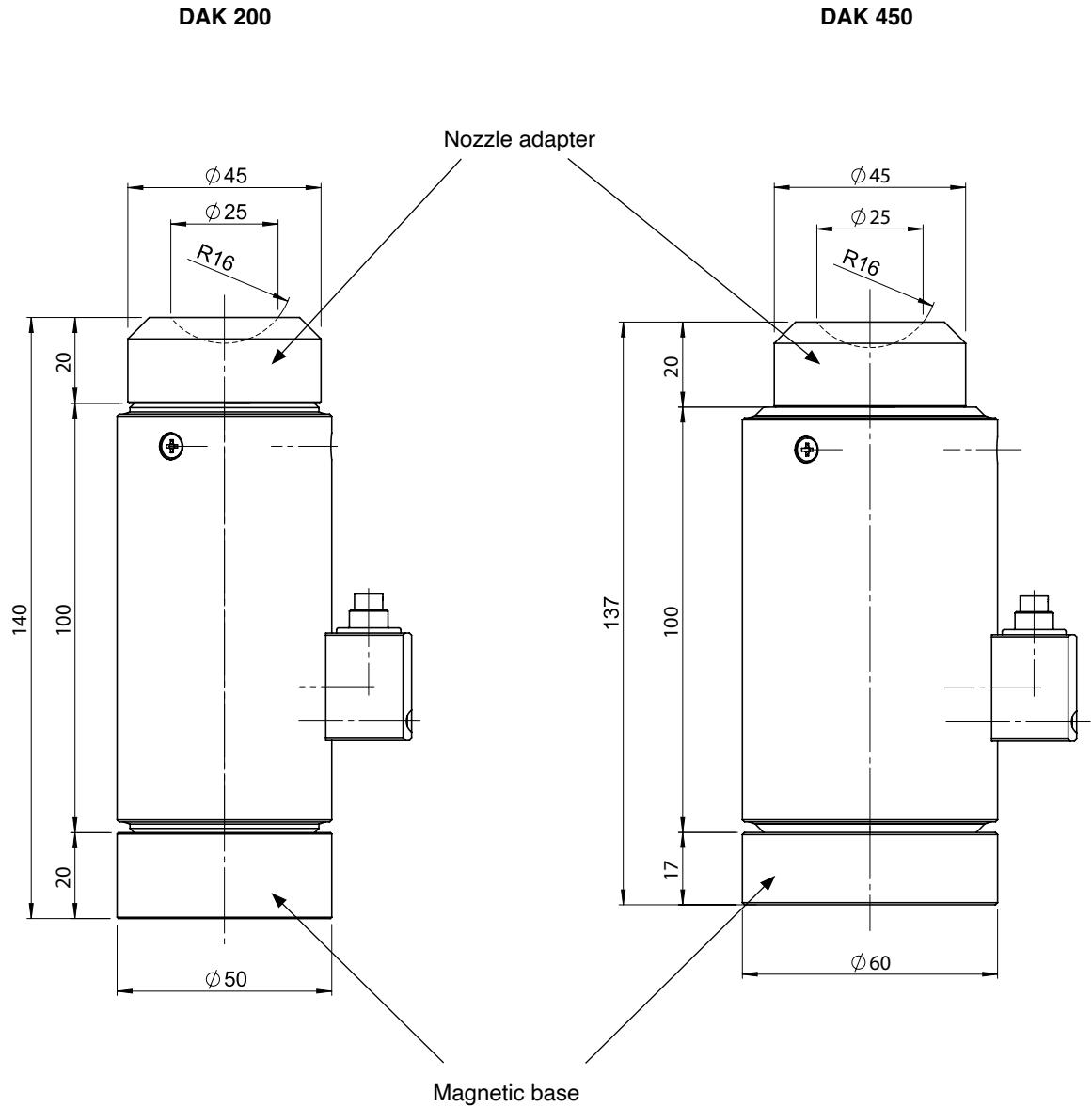
The nozzle touch force sensor DAK measure the nozzle touch force (nozzle pressure force) in injection-molding and die-casting machines reliably and reproducibly. Simply place the DAK with the magnetic base onto the mold, connect it to our existing monitor and move the nozzle on to the sensor. Then it can be measured immediately. The sensor is made of hardened and tempered steel (corrosion-protected) and is therefore very solid and durable.

When using the DU-1D, DU-4D or DU-4USB monitors, make sure that the diameter of the sensor body is set on the monitor. Only a properly adjusted diameter shows the measured force correctly in „kN“ and „t“.

TECHNICAL DATA

Strain gauge type	Foil (GF = 2.0)	
Bridge resistance	350Ω	
Measuring range	200/450 kN	
Output signal 2/4 bridge	200 kN / 450 KN	1358 με
Output signal 4/4 bridge	200 kN / 450 KN	1.7 mV/V
Sensitivity tolerance	± 0.2%	
Transverse sensitivity	0.9 ± 0.2%	
Accuracy	< ± 0.2% FS	
Linearity	< ± 0.2% FS	
Hysteresis	< ± 0.1% FS	
Repeatability	< ± 0.1% FS	
Supply voltage	5VDC (max 8VDC)	
Supply current	< 15mA	
Operating temperatur range	-30...+50°C	
Storage temperatur range	-30...+50°C	
Overload capability	150% FS	
Protection class	IP67	
Sensor material	Hardened and tempered steel corrosion-protected	
Cover material	Anodized aluminium	
Weight, including cable	2.5kg	

DIMENSION



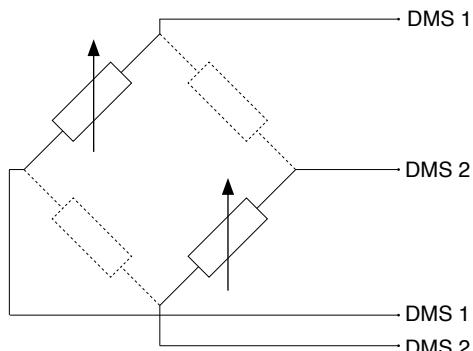
Monitor settings (DU-1D / DU-4D / DU-4USB)

Sensor version	Sensor body diameter
DAK 200	Ø 30mm
DAK 450	Ø 45mm

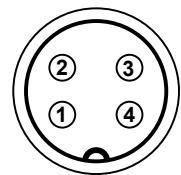
Dimension in mm

ELECTRICAL CONNECTIONS

2/4 bridge version

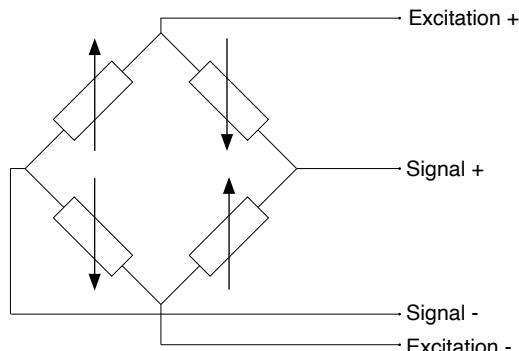


Connector PIN	Function
1	DMS 1
2	DMS 1
3	DMS 2
4	DMS 2

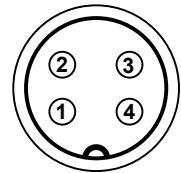


M9 4-pin

4/4 bridge version



Connector PIN	Function
1	Excitation +
2	Excitation -
3	Signal -
4	Signal +



M9 4-pin

ORDER CODE

Nozzle touch force sensor

DAK - 

Measuring range	
200 kN	200
450 kN	450

Bridge	
2/4 bridge	2
4/4 bridge	4

Example: DAK - 200 - 2

Nozzle touch force sensor DAK, measuring range = 200 kN, 2/4 bridge

ACCESSORIES

Description	Order code	Code
Cable for 2/4 bridge version	3 m	C - 712W - 030 - 680 - 2
	5 m	C - 712W - 050 - 680 - 2
	10 m	C - 712W - 100 - 680 - 2
Cable for 4/4 bridge version	3 m	C - 712W - 030 - 680 - 4
	5 m	C - 712W - 050 - 680 - 4
	10 m	C - 712W - 100 - 680 - 4
Nozzle adapter	NA - 1	F069650
Magnetic base	Ø 50mm	MA - 1
	Ø 60mm	IN - 0000 - O - 000 - S - O - O
VDA - Amplifier	see separately data sheet for ordering information	
DU - Monitor	see separately data sheet for ordering information	

GEFRAN spa reserves the right to make any kind of design or functional modification at any moment without prior notice.

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