

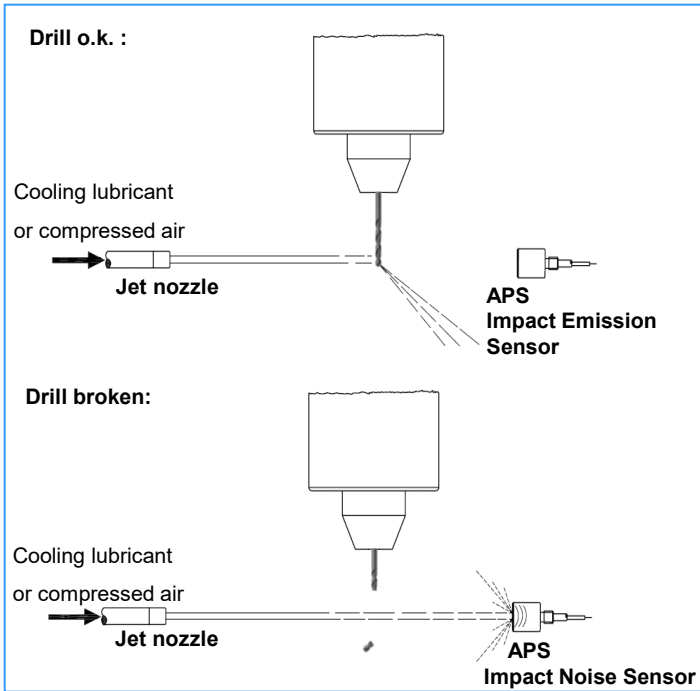


## Jet barrier on the basis of Impact Emission Sensor APS



Jet nozzle

### Measuring principle:



Impact Emission Sensor APS-L



Impact Emission Sensor APS-O



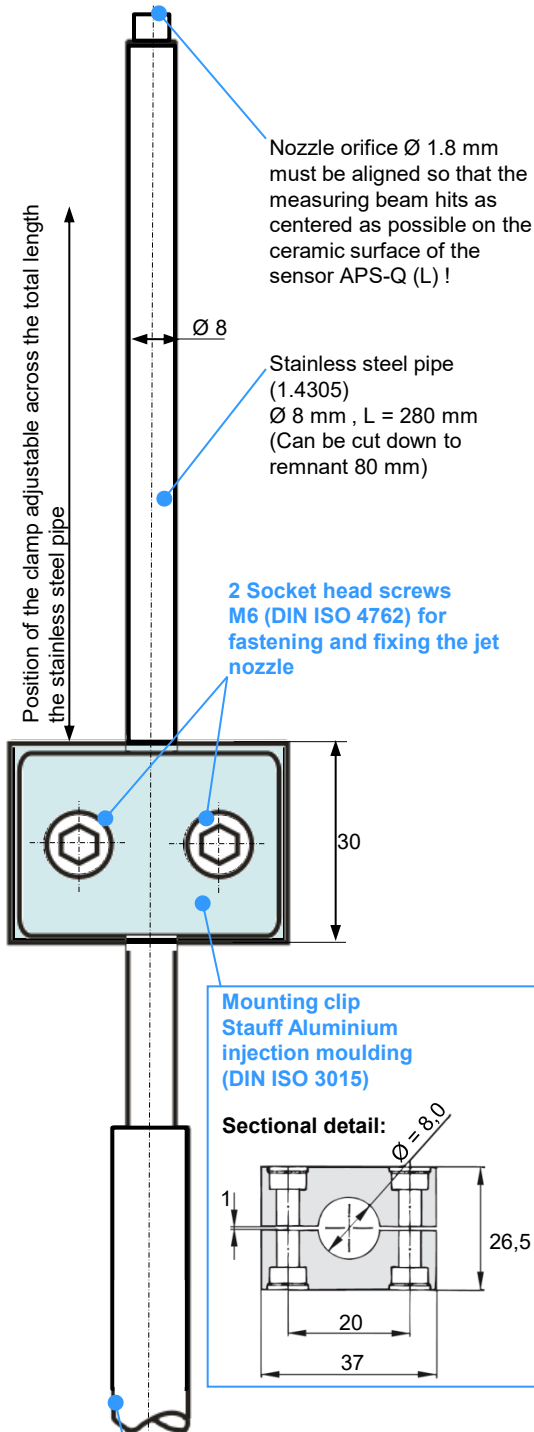
### Technical Details:

Measuring range:	10 – 100 dB
Temperature range:	-40°C to +85°C
Power supply:	Via SEP (Acoustic emission processor) (Order No. 6.5.10)
Line:	Koax RG 174U Standard length: 5m
Casing material:	Stainless Steel 1.4305

### Function:

- Construction of jet barriers by means of cooling lubricant or compressed air beam to monitor breakage-induced tool shortening or the clamping position or the presence of workpieces (Alternative to laser light curtain)
- Measurement of the crackling noise of the beam hitting on its round ceramic plate

# Jet nozzle

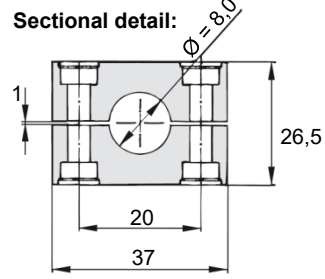


Nozzle orifice  $\varnothing$  1.8 mm must be aligned so that the measuring beam hits as centered as possible on the ceramic surface of the sensor APS-Q (L) !

Stainless steel pipe (1.4305)  $\varnothing$  8 mm , L = 280 mm (Can be cut down to remnant 80 mm)

2 Socket head screws M6 (DIN ISO 4762) for fastening and fixing the jet nozzle

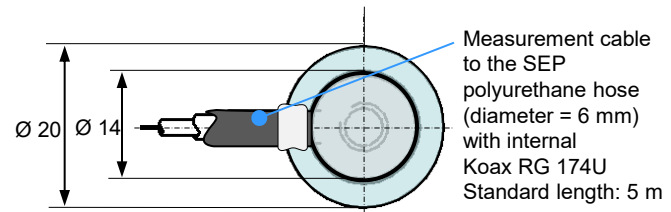
Mounting clip Stauff Aluminium injection moulding (DIN ISO 3015)



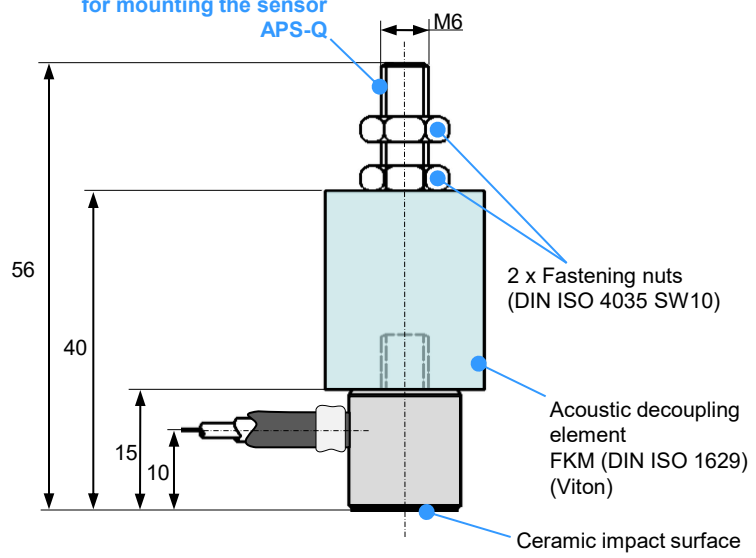
Connections for cooling lubricant or compressed air

Polyurethane hose			Hose connection Norma GRS 12-10	
Length	Outside	Inside	Length	Outside
L= 300	$\varnothing$ = 8.4	$\varnothing$ = 6	L= 35	$\varnothing$ = 12 / 10

# APS-Q



Thread (M6 / L = 16 mm ) for mounting the sensor APS-Q

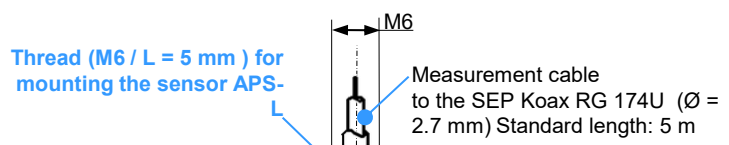


2 x Fastening nuts (DIN ISO 4035 SW10)

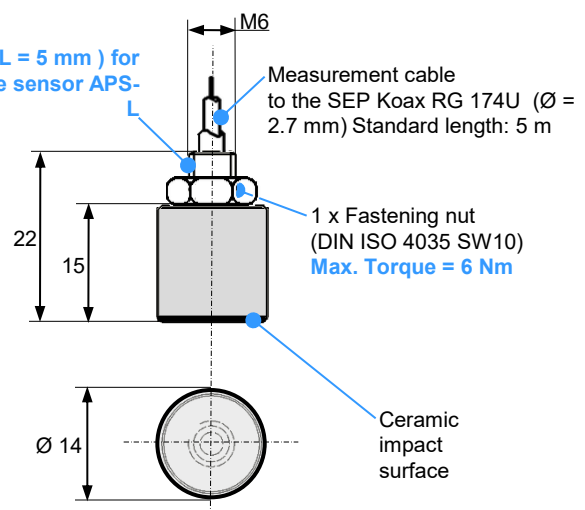
Acoustic decoupling element FKM (DIN ISO 1629) (Viton)

Ceramic impact surface

# APS-L



Thread (M6 / L = 5 mm ) for mounting the sensor APS-



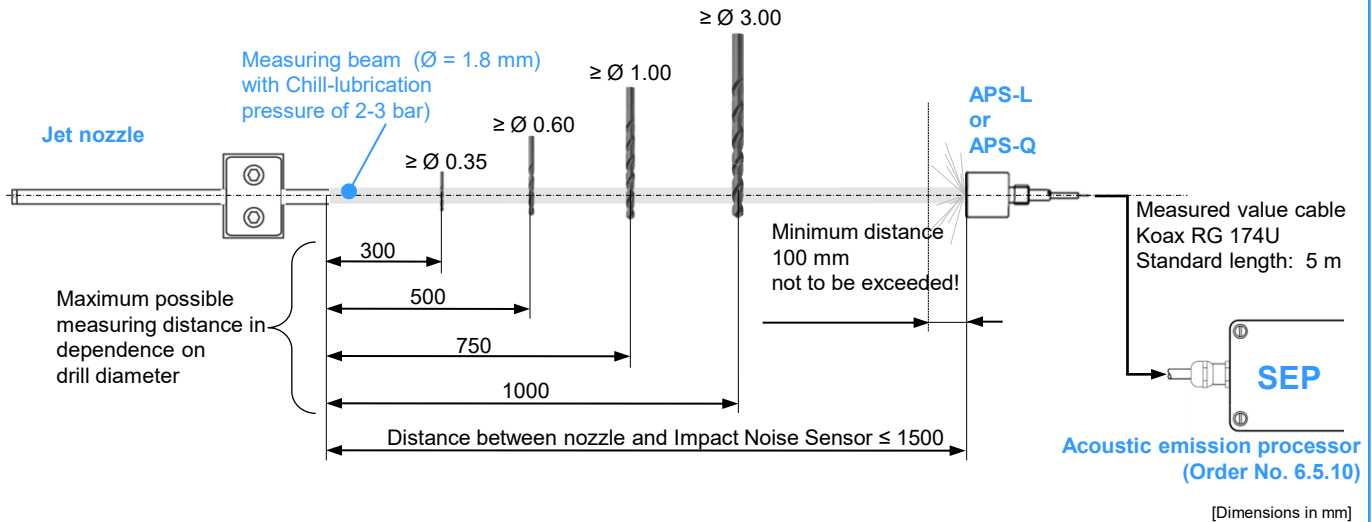
1 x Fastening nut (DIN ISO 4035 SW10) Max. Torque = 6 Nm

Ceramic impact surface

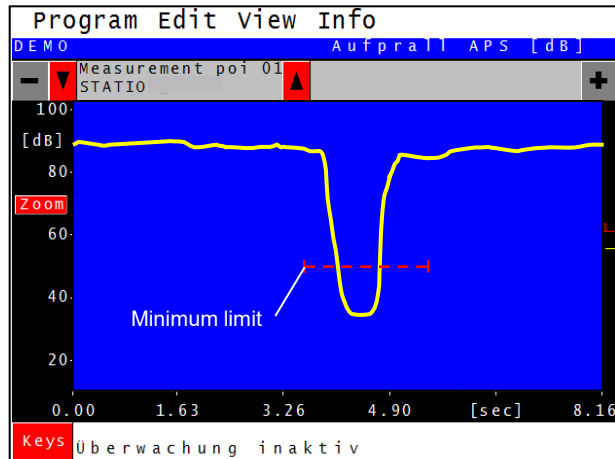
## Assembly:

The jet nozzle is to be mounted in such a manner that the measuring beam hits concentrically on the ceramic surface of the Sensor (APS-L and/or APS-Q). The Impact Emission Sensors differ in the array of the measuring cable exits: Lengthwise = APS-L, across = APS-Q. The respective distances of the tools to be tested for rupture-related shortening to the jet nozzle can be seen below in the assembly array. The connection of the APS-L/-Q to the tool monitor occurs via **Acoustic emission processor SEP (order number 6.5.10)**. You will find further information on the connections in the installation instructions of the **Acoustic emission processor SEP**.

## Assembly array with jet medium Chill lubricant (Emulsion):



## Curve view in Tool Monitor with interruption of the beam by a drill:



## Order number:

6.11.L **APS-L** (Impact Sound Sensor APS-L for Jet barriers)

6.11.Q **APS-Q** (Impact Sound Sensor APS-Q for Jet barriers)

9.7.1 **Jet nozzle** (Nozzle tube with nozzle and clamp fixture for jet barrier with air or chill lubricant beam)