## **PIPE CLAMPS**

# MÜPRO

# Insulation clamps type 170 EX

#### galvanised

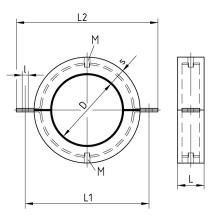
#### Application

- Thermal decoupled pipe attachment in the field of refrigeration
- Specially suitable for attachments in ventilation, air-conditioning, heating, refrigeration installations as well as
- for hot and chilled water pipes Stable insulating element for high impacts

#### Your advantages

- Exterior connection joints (without screws)
- With dual-side metric connection thread
- High vapour diffusion resistance
- With caoutchouc lining on the pipe side and on the separation surfaces of the insulating clamp, no PU-Sealer neccessary
- Ideal for separating individual pipe sections when using open diffusion insulating materials (mineral fibre)





### Features

Material	Polyurethane, black				
Fire classification	B2 acc. to DIN 4102 (normally flammable)				
Effective density [kg/m <sup>3</sup> ]	250				
Thermal conductivity	λ = 0.029 W/mK at -180 °C, $λ = 0.032$ W/mK at -150 °C, λ = 0.038 W/mK at -100 °C, $λ = 0.044$ W/mK at -50 °C, λ = 0.047 W/mK at -20 °C, $λ = 0.049$ W/mK at 0 °C, λ = 0.052 W/mK at +20 °C, $λ = 0.054$ W/mK at +40 °C				
Temperature range	-50 °C to +105 °C				
Water vapour diffusion resistance	μ = 1,430				
Compression strength	8.11 N/mm² at -180 °C, 9.62 N/mm² at -80 °C, 4.91 N/mm² at 0 °C, 3.96 N/mm² at +23 °C				

Pipe outer Ø D [mm]	Connecting thread M	Insulation thickness s [mm]	Shell length L [mm]	Strip perforation for I	Permanent load-bearing capacity [N]		nsions m] L2	Part no.	Sales unit	Pack unit		
114.3	M10	40	60	M12	2,740	238	274	111173	5	Pieces		
133					3,190	264 300	111175					
139.7					3,350			111177				
159	M12				3,830	279	319	111179	4			
168.3					4,040	288	328	111181				
219.1	M16				100		5,260	359	399	111183	1	
273				M16	8,190	413	453	111187				
323.9	M20				11,600	464	504	111191				
406.4	M24			120		19,500	556	606	111199			
219.1	M16	60	100	M12	5,260	399	439	111185				
273				M16	8,190	453	493	111189				
323.9	M20				11,600	504	544	111193				
355.6					12,000	536	576	111195				
368			120		13,250	548	588	111197				
406.4	M24	24			19,500	596	646	111201				
457.2					21,900	647	697	111203				
508					24,300	698	748	111205				
609.6			140		29,200	798	848	111207				

According to the AGI Working Sheet Q 11 ("Arbeitsgemeinschaft Industriebau", an association for industrial construction works) the insulation of refrigeration lines must be made diffusion tight. The connection with the outer pipe insulation is made by using a complying adhesive for the insulation material (use adhesive suitable for PU).