# GROUP 4 - Flexible heating elements

### **HEATING HOSES, MODELS ELH**

Heating hoses are the ideal solution for flexible transportation of liquids or gases without heat loss.

The necessary temperature, wattage, application, and type of outer protective material determine the choice of the most suitable heating hose.

Standard heated hoses are available for temperatures up to 250°C and a range of pressure from 500 bar (it depends on the diameter). Heated hoses over 250°C are available on request.

In analysis techniques, gaseous substances driven from the measuring point to the analysing instrument must be protected against cooling, condensation, or guaranteeing constant temperatures up to 250°C (for example, in refineries, the chemical industry, engine smoke analysis, etc).



#### General applications

- To keep a product in a fluid state during its processing
- Maintaining liquids or gases at a specific working temperature
- To optimise their characteristics for processing
- To prevent condensation in gaseous mediums
- · To process products in a cheaper way
- · To guarantee constant quality
- To guarantee mobility of the production or measuring equipment
- Transportation of gas samples from a measuring point to an analyser
- For connecting mobile groups and equipment

#### **Examples of applications**

- In polyurethane foam rubber production plants
- In wax production installations
- In asphalt and bitumen projection and application equipment
- In gluing machines that work with cold glue (labellers)
- In installations of hot glue application and their equipment (hotmelt)
- In heavy oil ducts
- In gas analysis instruments

Glands

· In food product processing installations, etc.

## Standardised models Pressure/ Heating up to 250 °C. Types ELH-MD, ELH-HD and ELH-SHD

ELH heating hoses are used to maintain the temperature and transportation of substances without heat losses

#### **General Characteristics** Constructive options

Up to 310 W/m (higher power upon request) PTFE with stainless steelbraiding Heating power Inner hose single= T1, double=T2, triple=T3 0,3 m up to 60 m Maximum length Steel bichromate coated Fittings Nominal diameter DN4 up to DN25

Up to 250 °C (higher temperatures upon request) Outer Sheath PA corrugated Operation temperature

PU spirally wound corrugated Polyamide braiding Galvanized steel braiding Operating pressure 80 bar (T1 - DN25) 500 bar (T3 - DN6) Stainless steel (AISI 303) Nominal voltage 12 V - 24 V - 110 V - 230 V - 400 V

End Cap Silicone PT 100, Thermo couple Temperature sensor EPDM without silicone

Plastic Metal

Lateral to the front Cable exit

Led back Front side

Stainless steel

Under end cap led back

Lateral Combinations Fixed glands Moveable glands

### Pressure work for work temperatures between +20 °C and +50 °C

	DN										
	4	6	8	10	13	16	20	25			
ELH-MD	275	240	200	175	150	135	100	80			
ELH-HD		275	250	225	200	175	150	130			
ELH-SHD		500	475	475	450	363	275	225			

## Normalised heating power at 230 V or 400 V

	DN									
	4	6	8	10	13	16	20	25		
Heating power at 100 °C (W/m)	85	100	110	135	160	180	210	240		
Maximum length (m)	60	55	50	40	35	30	25	20		
Heating power at 200 °C (W/m)	110	120	130	150	180	225	260	290		
Maximum length (m)	50	45	40	35	30	23	20	18		
Heating power at 250 °C (W/m)	110	130	150	180	210	240	270	310		
Maximum length (m)	45	40	35	30	25	20	18	16		

## Constructive detail of an ELH heating hose

- Coupling
- End cap
- Outer sheath
- 4+5 Insulation
- 6 Heating lead with PTFE insulation
- Inside hose with single, double or triple pressure layer
- 8 Spacer
- Temperature sensor
- 10 Additional leads
- 11 Mains leads



