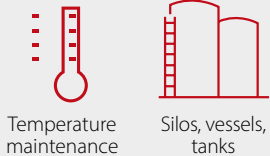


At a Glance

Applications



- › Chemistry and Petrochemistry
- › Oil and Gas Industry
- › Industrial processes
- › Mobile processing facilities
- › Vacuum processes

Benefits

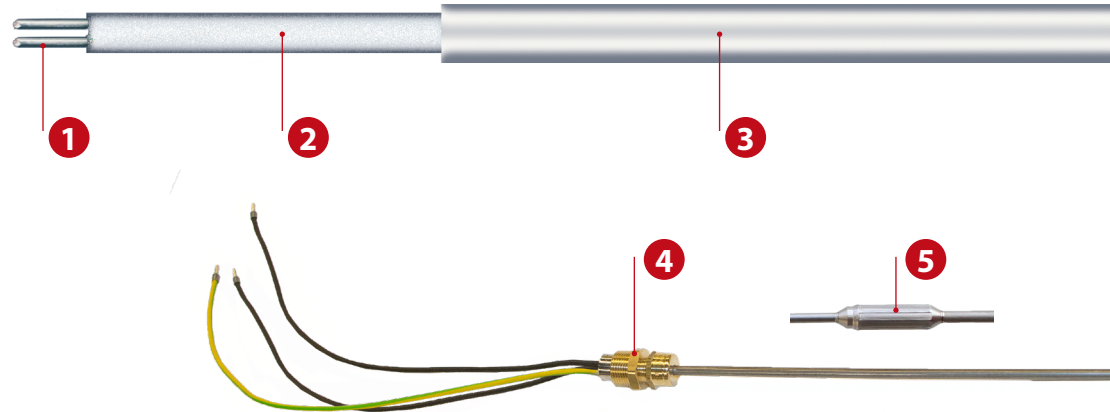
- › 100% homogeneous design
- › No filling holes
- › High temperature resistance
- › Maximum resistance to chemicals
- › High power output
- › Protection against stress corrosion
- › Resistant against moisture

Approvals



- › Classification
- II 2 G Ex 60079-30-1 db eb IIC Gb
- II 2 D Ex 60079-30-1 tb IIIC Db
- › Certification
- FM15ATEX0046X
- FM18US0191X
- FM18CA0089X
- IECEx FME 15.0009X

ELK-MI VA up to 700 °C, twin conductor



1 Heating conductors (TWIN)	Nichrome R, KP, Constantan, Alloy 60 or Copper
2 Insulation	Magnesium oxide (MgO) acc. ASTM E1652-Standard
3 Outer jacket	Stainless steel 1.4541 (AISI 321)
4 Cable gland	Brass or Stainless steel M20 x 1.5 / M25 x 1.5
5 Connection	Laser welded, pressed

Manufactured and assembled exclusively from premium nickel/chrome Alloy 825 or stainless steel 1.4541. eltherm's revolutionary Clean Laser Seal technology (CLS) guarantees high output and reliability in all industrial applications. This technology offers the technologically best possible protection against stress corrosion, especially with aggressive chemicals such as leachable chlorides or high sulphur content. MI trace heating consists of one- or two-wire heating cables and mineral-insulated cold conductor connections with Clean Laser Seal connection. The free end of the cold conductor is sealed seamlessly and connected with a flexible supply line.

Checklist

Junction boxes

ELAK-6-SP	220 x 120 x 90 mm, ALU, up to 3 heating cables, 6x M20, 1x M25	MDA0002
ELAK-3-SP	122 x 120 x 90 mm, ALU, up to 1 heating cable, 1x M25, 2x M20	MDA0003
ELAK-5-SP	122 x 120 x 90 mm, ALU, up to 2 heating cables, 1x M25, 4x M20	MDA0005

Temperature-resistant power connection line

Power connection line VA, TWIN , 400 V, 2 * 1.5 mm ² , Ø 7.5 mm	20330K0025
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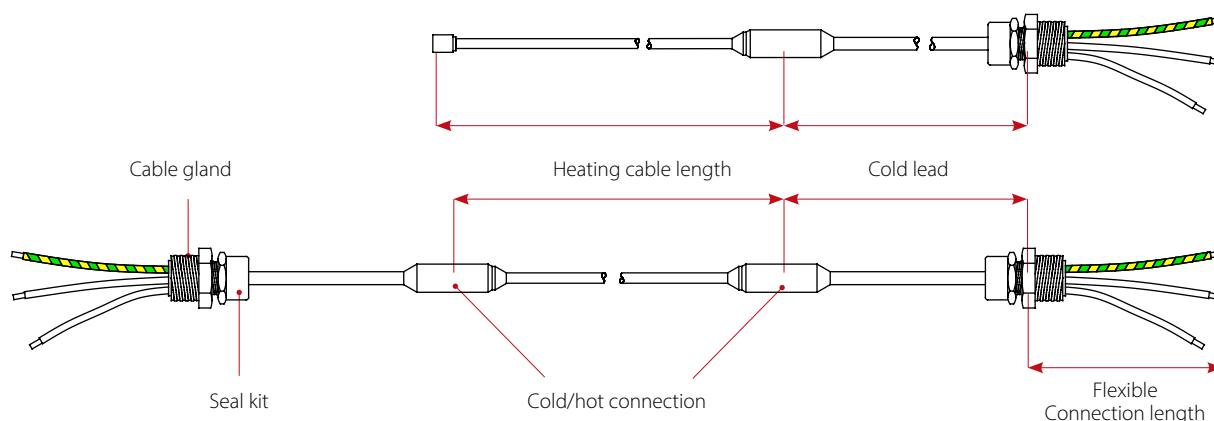
Factory assembly

ELVB-MI-VA-T-1,5mm ²	Laser welded, TWIN 1.5 mm ²	MAG0002
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Technical Information

Rated temperature	up to 700 °C (565 °C in hazardous areas accord. Ex certificate)
Ambient temperature	-60 °C up to +60 °C
Nominal output	up to 250 W/m *
Nominal voltage	up to 500 V AC
Min. Bending radius	Diameter x 6
Min. Installation temperature	- 60 °C
Protective conductor connection	Protective connection integrated
Protection rating / protection class	IP65 / Protection class I
Power connection line	1/2 x 0.50 m



NOTE

- * The output per meter of heating cable and the maximum possible operating temperatures depend on the respective application. For individual cases, we recommend that you contact our engineers – we will be pleased to advise you.
- An excerpt from the possible resistances is listed here. Additional cold conductor diameters are also available. Please feel free to contact us!
- Cables shall neither intersect nor contact.
- Provide protection by means of circuit breaker FI 30. mA
- Please observe the standards IEC 62395-2, EN 60519-10.



Heating cable data

Nominal resistance	Outer Ø	Bending radius	Conductor material	Temperature coefficient α	Max. conductor temperature	Art.-No.
[Ω/km @ 20°C]	[mm]	[mm]		[$\times 10^{-5} / \text{K}$]	[°C]	
36000	3,7	22	NiCr8020	1,006	700	2033003600
24600	4,0	24	NiCr8020	1,006	700	2033002461
19680	3,8	23	NiCr8020	1,006	700	2033001968
13120	4,4	26	NiCr8020	1,006	700	2033001312
9840	5,1	31	NiCr8020	1,006	700	2033000984
6600	5,0	30	NiCr8020	1,006	700	2033000660
4600	5,3	32	NiCr8020	1,006	700	2033000460
3200	4,0	24	CuNi44	1	700	2033000320
2460	5,0	30	CuNi44	1	700	2033000246
1600	4,7	28	CuNi44	1	700	2033000162
1000	4,4	26	CuNi6	1,07	450	2033000102
750	5,1	37	CuNi6	1,07	450	2033000075
330	6,7	40	CuNi6	1,07	450	2033000033