



60 YEARS OF ITALIAN TRADITION

Luxor is an important industrial reality, world wide and European market leader in the production of flexible hoses and components for hydro and thermo-sanitary installations. Luxor has been the expression of the most prestigious made in Italy and the great Italian high technology mechanical workings tradition for fifty years; a quality certified and recognized by the most prestigious International Certification Institutes all over the world.

Our mission is the complete customer satisfaction through a process of continuous technological research in order to make high quality, reliable products, anticipating the market evolutions by innovative partnership with both customers and suppliers. Luxor mission takes

place in its own Research and Development Centre in which new and advanced technologies are constantly analyzed and researched with continuous investments to offer the most innovative and reliable solutions for the international markets at competitive costs, ensuring strict quality controls on each single piece.

Luxor entirely plans and realizes each product, thanks to its decennial know how. The great production strength, a "slender" innovative and advanced industrial organization together with a modern logistic conception, make Luxor able to satisfy every kind of request, even customized, with fast deliveries all over the world.



Luxor is certified ISO 9001:2015 by DEKRA Group certification body

CERTIFICATION



Please contact our offices for information about technical specifications and certified products or visit the website of the corresponding certification body for the latter.

Please refer to www.nsf.org for a complete list of NSF approved products.
Please refer to www.iapmort.org for a complete list of UPC/CUPC approved products.



LUXOR®

5 / ELECTRICAL AND ELECTRONIC ACCESSORIES

THERMOELECTRIC HEADS



TECHNICAL DATA

Thermoelectric heads function by exploiting the expansion of a thermosensitive element, which is heated up through an electrical resistor when the valve needs to be opened.

This allows for a slow open/close cycle and protects the system against water hammer.

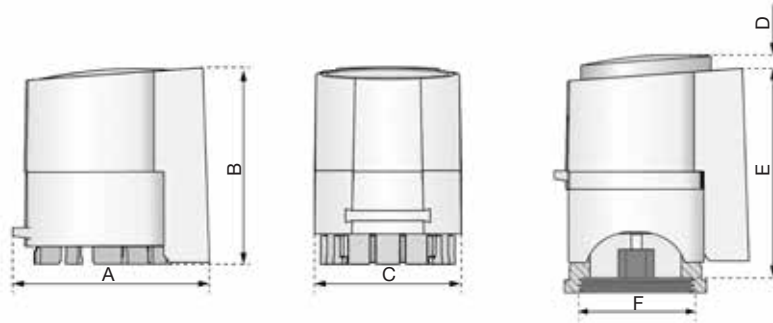
Thermoelectric heads can only be connected to on/off thermostats or chronothermostats. Do not use 3-point or modulating thermostats or chronothermostats. TE thermoelectric heads are of the normally closed type, so they only open when

an opening input (voltage) comes from the control sensor (ex. thermostat).

This allow the head to work only when there is a need for hot or cold water to flow through the heating body, and to remain idle for the rest of the time.

The new thermoelectric heads can be installed in any position, even upside down, since they are secured against leakage from the thermostatic screws.

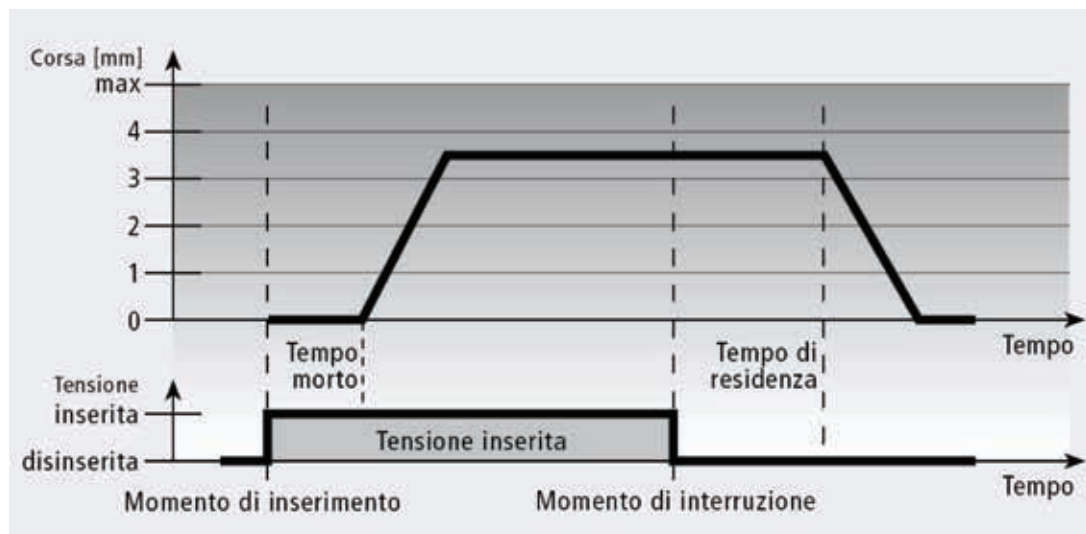
	TE 3010	TE 3011	TE 3012	TE 3013
supply voltage	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC, +20%...-10%	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC, +20%...-10%
max input current	<550 mA per max 100 ms	<300 mA per max 2 min	<550 mA per max 100 ms	<300 mA per max 2 min
operating power	1 W	1 W	1 W	1 W
stroke	3.5 mm	3.5 mm	3.5 mm	3.5 mm
actuating force	90 N +10%	90 N +10%	90 N +10%	90 N +10%
micro-switch voltage	-	-	230 V AC: resistive load, 5 A, inductive load 1 A	24 V AC: resistive load 3 A, inductive load 1 A
micro-switch trigger point	-	-	Ca. 2 mm	Ca. 2 mm
liquid temperature	0÷100 °C	0÷100 °C	0÷100 °C	0÷100 °C
storage temperature	-25÷60 °C	-25÷60 °C	-25÷60 °C	-25÷60 °C
room temperature	0÷60 °C	0÷60 °C	0÷60 °C	0÷60 °C
protection degree	IP 54	IP 54	IP 54	IP 54
protection class	II	III	II	III
CE conformity	EN 60730	EN 60730	EN 60730	EN 60730
housing material	Polyamide			
housing colour	Light grey RAL 7035			
connecting cable	2x0.75 mm ² PVC	2x0.75 mm ² PVC	4x0.75 mm ² PVC	4x0.75 mm ² PVC
cable colour	Light grey RAL 7035			
cable length	1 m	1 m	1 m	1 m
weight	100 g	100 g	Ca. 150 g	Ca. 150 g
overvoltage resistance according to EN 60730-1	2.5 kV	1 kV	2.5 kV	1 kV



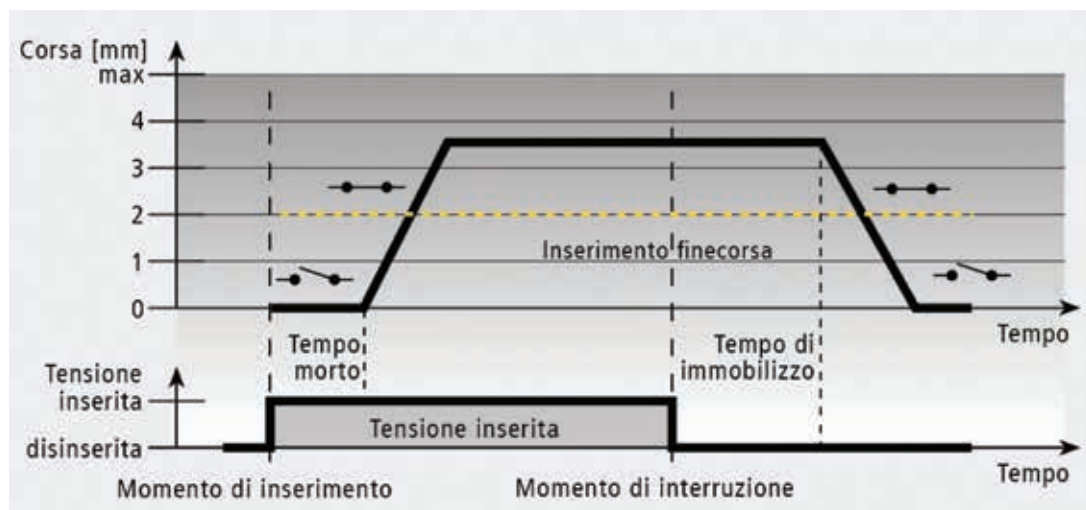
CODE	SIZE	A	B	C	D	E	F	G	H	L
69011051	M30x1,5	49	47,5	36	7	51	M30x1,5	-	-	-
69011052		49	47,5	36	7	51		-	-	-
69011056		59	50	36	7	53,5		-	-	-
69011057		59	50	36	7	53,5		-	-	-

CHARACTERISTIC CURVES

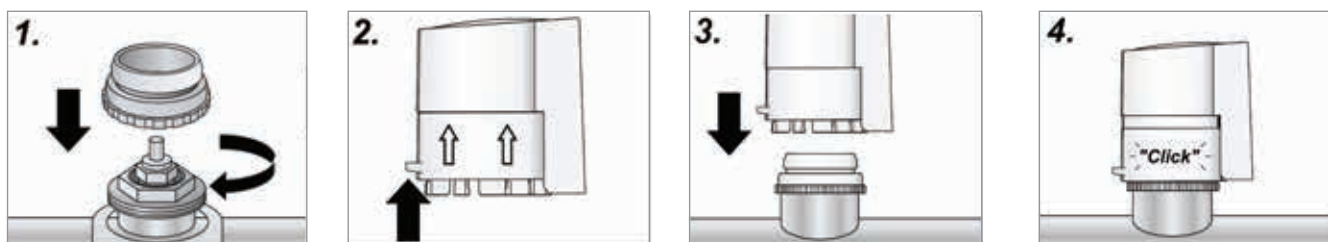
TE 3010 - TE 3011



TE 3012 - TE 3013

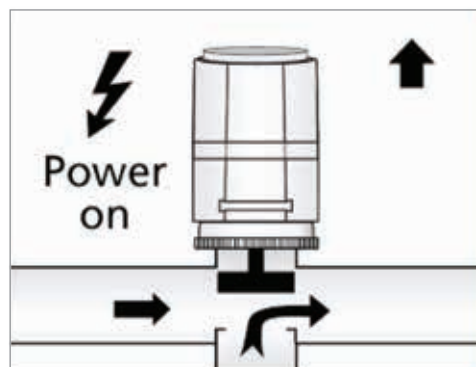
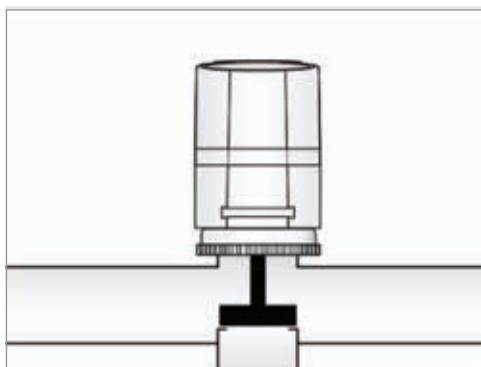


INSTALLATION INSTRUCTIONS: ASSEMBLY WITH VALVE ADAPTER



INSTALLATION INSTRUCTIONS FOR THERMOELECTRIC HEADS

- Screw the plastic adapter to the thermostatic screw (fig. 1);
- Push upwards the stop ring of the thermoelectric head (fig. 2);
- Place the head perpendicular to the valve (fig. 3);
- With a slight hand pressure, plug the head to the adapter: simply push until you hear a "click" (fig. 4).

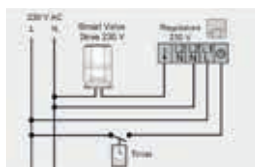


FUNCTION INDICATOR

The function indicator (round light blue diskette) allows to easily see (or feel, if in the dark) if the valve is open or closed. The indicator pops up when the valve opens.

START-UP OF THERMOELECTRIC HEADS

All thermoelectric heads are supplied in a locked, partially opened position (ca. 1/4). In order to unlock and start up, the head must be fed power for at least 6 minutes (for example from the thermostat in heating position). During this time, the head opens completely and breaks the block. After that, the head is ready to function.

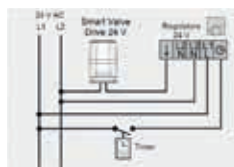


THERMOELECTRIC HEAD
ART. TE 3010
COD. 69011051

Thermolectric head 230V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

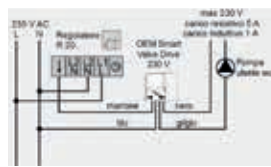


THERMOELECTRIC HEAD
ART. TE 3011
COD. 69011052

Thermolectric head 24V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

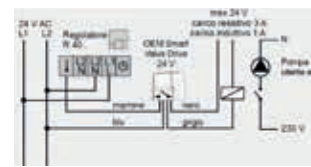


THERMOELECTRIC HEAD
ART. TE 3012
COD. 69011056

Thermolectric head 230V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable



THERMOELECTRIC HEAD
ART. TE 3013
COD. 69011057

Thermolectric head 24V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable



CONNECTIONS

The thermostat and/or chrono-thermostat output to which the thermolectric heads must be connected are generally as shown in the following wiring diagrams:

Where:

C: Connection to power supply

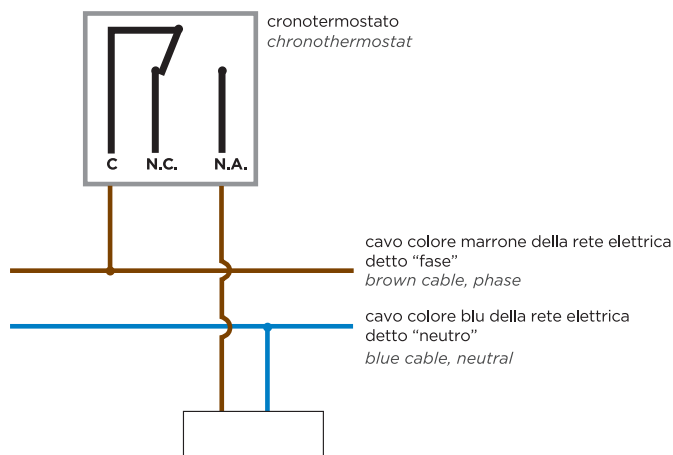
N.C.: output normally closed for cable from the thermolectric head (do not use since our thermolectric head is normally closed).

N.A.: output normally open for the connection cable coming from the thermolectric head (the brown electric cable coming from the thermostatic head must be connected to this type of output).

APPLICATION EXAMPLE WITH CONNECTIONS:

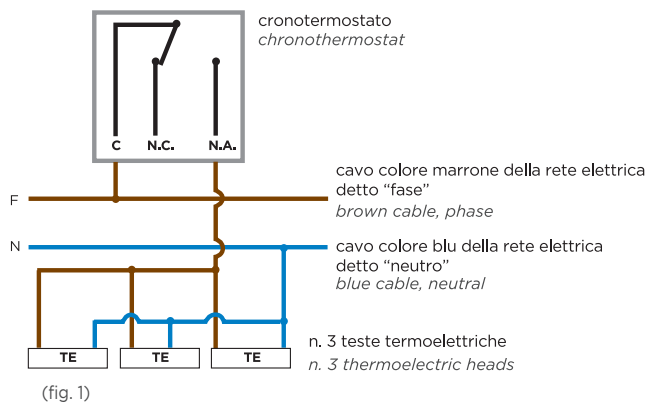
- 1 chronothermostat
- 1 thermoelectric head

Each thermostat or chronothermostat can normally fit up to 10 thermoelectric heads in parallel. To know exactly the number of heads which can be connected, divide the thermostat output contact value N.A. by the head starting power.



APPLICATION EXAMPLE WITH CONNECTIONS:

- 1 chronothermostat
- 3 thermoelectric heads with parallel connection

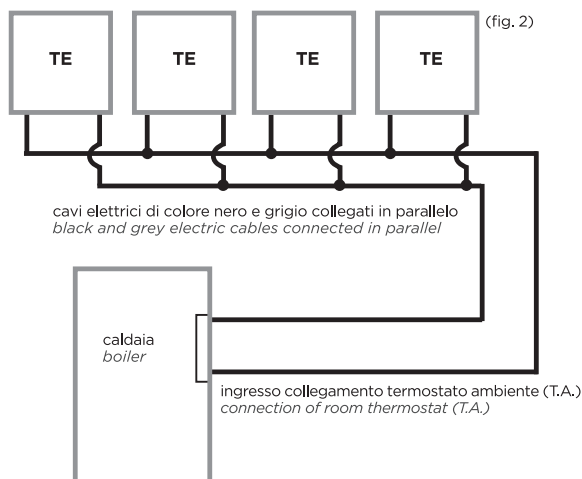


THERMOELECTRIC HEADS WITH AUXILIARY OR LIMIT SWITCH CONTACT

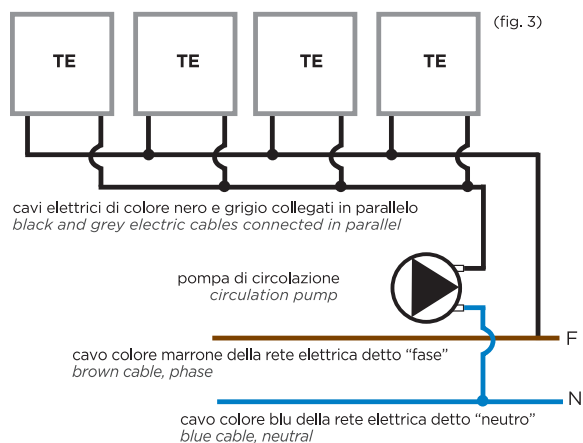
The limit switch contact is used to start the heating system pump when there is at least one thermoelectric head functioning, hence the pump cannot function when all the thermostatic valves are closed.

This device, stopping the pump when the system is not working, reduces wear on the pump and noise caused by the cavitation.

Teste termoelettriche con contatto di fine corsa art. TE 3012
Thermostatic head with limit switch art. TE 3012



Teste termoelettriche con contatto di fine corsa art. TE 3012
Thermostatic head with limit switch art. TE 3012



THERMOELECTRIC HEADS

**TE 3010**

Thermoelectric head 230 V (normally closed, opens with voltage)

- supply voltage 230 VAC
- supply cable 2 wires x 0,75 mm².

Length 1000 mm.

ARTICLE DISCONTINUED.

CODE	SIZE			
69011051	M30x1,5	100	1	100

**TE 3011**

Thermoelectric head 24 V (normally closed, opens with voltage)

- supply voltage 24 VAC
- supply cable 2 wires x 0,75 mm².

Length 1000 mm.

ARTICLE DISCONTINUED.

CODE	SIZE			
69011052	M30x1,5	100	1	100

**TE 3012**

Thermoelectric head 230 V with limit switch (normally closed-opens with voltage)

- supply voltage 230 VAC
- supply cable 4 wires x 0,75 mm².

Length 1000 mm.

ARTICLE DISCONTINUED.

CODE	SIZE			
69011056	M30x1,5	150	1	100



Limit switch

**TE 3013**

Thermoelectric head 24 V with limit switch (normally closed-opens with voltage)

- supply voltage 24 VAC
- supply cable 4 wires x 0,75 mm².

Length 1000 mm.

ARTICLE DISCONTINUED.

CODE	SIZE			
69011057	M30x1,5	150	1	100



Limit switch

**VA 3090S**

Replacement adapter for thermoelectric heads TE series.

ARTICLE DISCONTINUED.

CODE	SIZE			
69015024	M30x1,5	8	-	-

THERMOELECTRIC HEADS



TECHNICAL DATA

Thermoelectric heads function by exploiting the expansion of a thermosensitive element, which is heated up through an electrical resistor when the valve needs to be opened.

This allows for a slow open/close cycle and protects the system against water hammer.

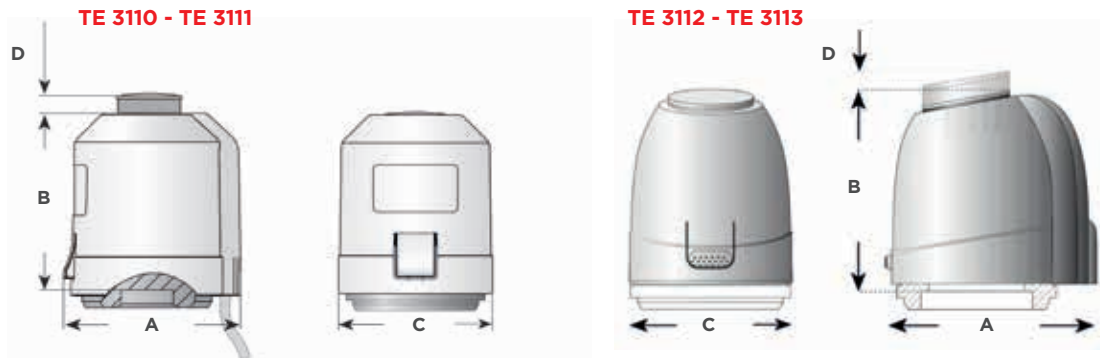
Thermoelectric heads can only be connected to on/off thermostats or chronothermostats. Do not use 3-point or modulating thermostats or chronothermostats. TE thermoelectric heads are of the normally closed type, so they only open when

an opening input (voltage) comes from the control sensor (ex. thermostat).

This allow the head to work only when there is a need for hot or cold water to flow through the heating body, and to remain idle for the rest of the time.

The new thermoelectric heads can be installed in any position, even upside down, since they are secured against leakage from the thermostatic screws.

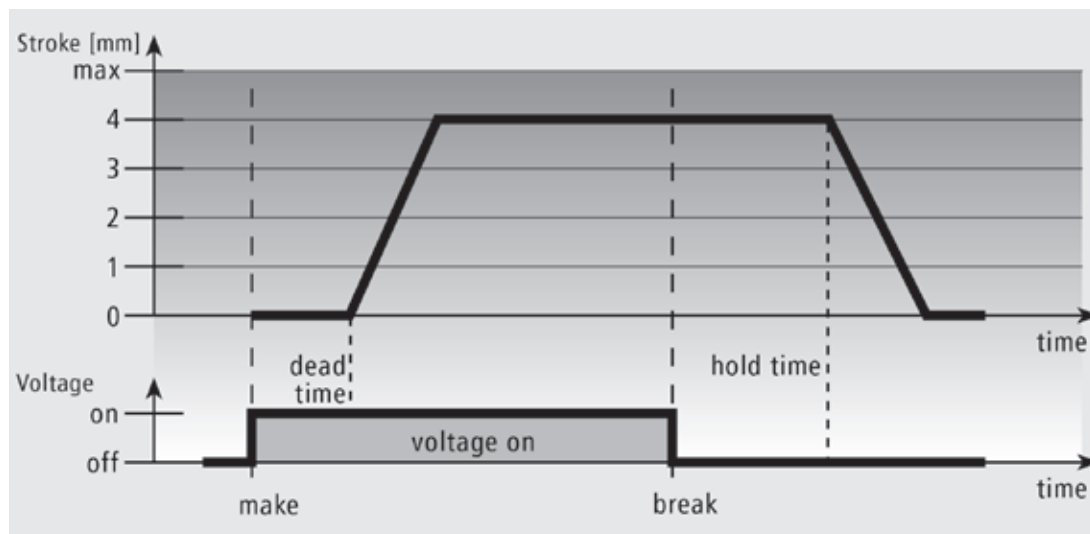
	TE 3110	TE 3111	TE 3112	TE 3113
supply voltage	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC +20%...-10%, 0-60 Hz	230 V AC, +10%...-10%, 50/60 Hz	24 V AC/DC, +20%...-10%, 50/60 Hz
max input current	350 mA	200 mA	350 mA	200 mA
operating power	1 W	1 W	1 W	1 W
stroke	5 mm	5 mm	5 mm	5 mm
actuating force	100 N +10%	100 N +10%	100 N +10%	100 N +10%
micro-switch voltage	-	-	230 V AC: resistive load 5 A inductive load 1 A	24 V AC: resistive load 5 A inductive load 1 A 24 V DC: resistive load 3 A inductive load 1 A
micro-switch trigger point	-	-	2,6 ± 0,6 mm	2,6 ± 0,6 mm
liquid temperature	0÷100 °C	0÷100 °C	0÷100 °C	0÷100 °C
storage temperature	-25÷60 °C	-25÷60 °C	-25÷60 °C	-25÷60 °C
room temperature	0÷60 °C	0÷60 °C	0÷60 °C	0÷60 °C
protection degree	IP 54	IP 54	IP 54	IP 54
protection class	II	III	II	III
CE conformity	✓	✓	✓	✓
housing material	Polyamide			
housing colour	Grey			
connecting cable	2x0.75 mm ² PVC	2x0.75 mm ² PVC	4x0.75 mm ² PVC	4x0.75 mm ² PVC
cable colour	Grey			
cable lenght	1 m	1 m	1 m	1 m
weight	105 g	105 g	160 g	160 g
overvoltage resistance	2.5 kV	1 kV	2.5 kV	1 kV



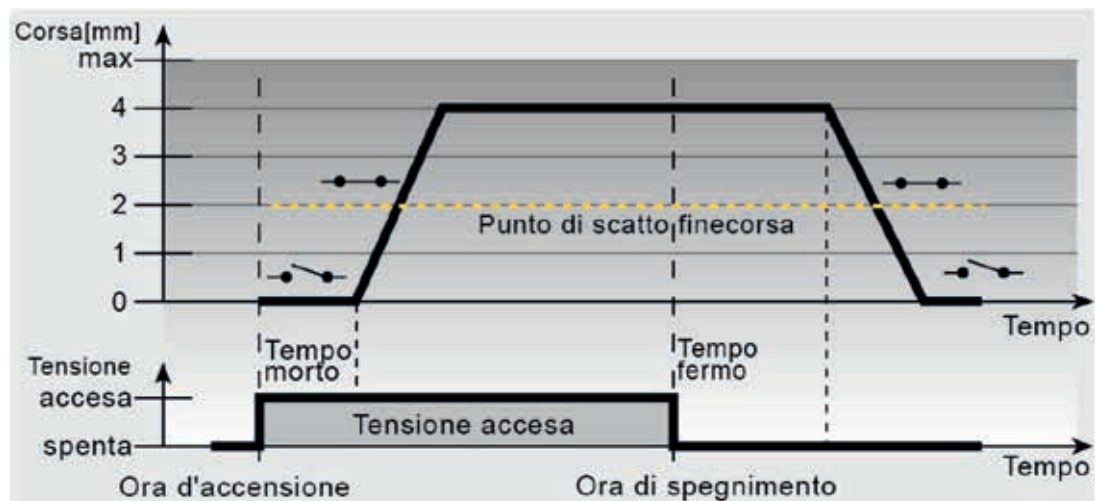
CODE	ARTICLE	SIZE	A	B	C	D	E	F	G	H
69011021	TE 3110	M30x1,5	50	54	44	5,5	-	M30x1,5	-	-
69011022	TE 3111		50	54	44	5,5	-		-	-
69011026	TE 3112		56	54	44	4	-		-	-
69011027	TE 3113		56	54	44	4	-		-	-

CHARACTERISTIC CURVES

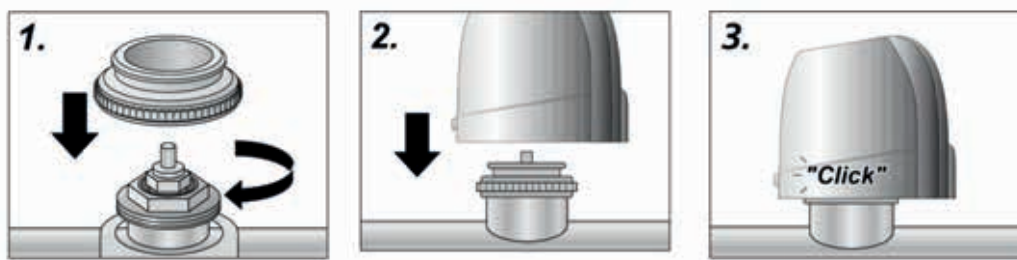
TE 3110 - TE 3111



TE 3112 - TE 3113



INSTALLATION INSTRUCTIONS: ASSEMBLY WITH VALVE ADAPTER

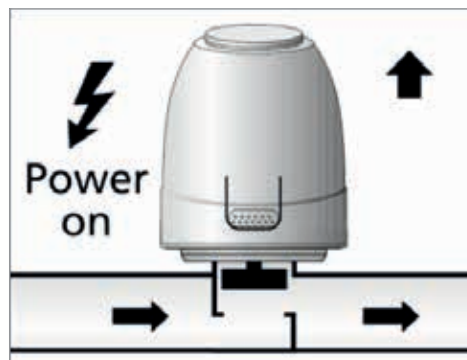
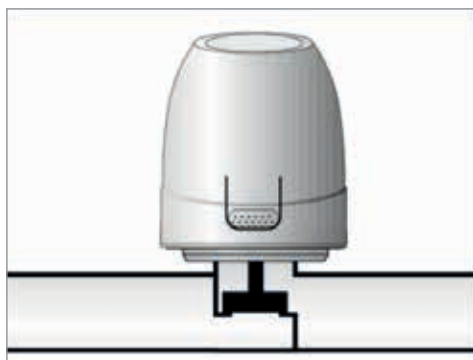


INSTALLATION INSTRUCTIONS FOR THERMOELECTRIC HEADS

- Screw the valve adapter manually onto the valve. (fig. 1);
- Position the actuator manually in vertical position to the

valve adapter. (fig. 2);

- Simply latch the actuator to the valve adapter manually by applying vertical pressure; a clicking sound can be heard. (fig. 3).

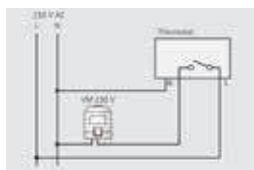


FUNCTION INDICATOR

The function indicator (round light blue or red diskette) allows to easily see (or feel, if in the dark) if the valve is open or closed. The indicator pops up when the valve opens.

START-UP OF THERMOELECTRIC HEADS

All thermoelectric heads are supplied in a locked, partially opened position (ca. 1/4). In order to unlock and start up, the head must be fed power for at least 6 minutes (for example from the thermostat in heating position). During this time, the head opens completely and breaks the block. After that, the head is ready to function.

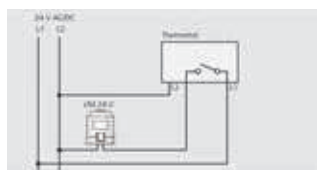


THERMOELECTRIC HEAD
ART. TE 3110
COD. 69011021

Thermoelectric head 230V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

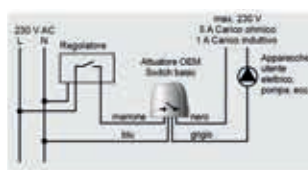


THERMOELECTRIC HEAD
ART. TE 3111
COD. 69011022

Thermoelectric head 24V, normally closed, without limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral

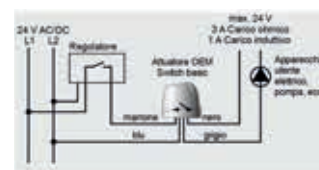


THERMOELECTRIC HEAD
ART. TE 3112
COD. 69011026

Thermoelectric head 230V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable

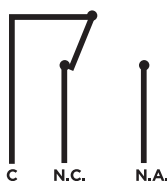


THERMOELECTRIC HEAD
ART. TE 3113
COD. 69011027

Thermoelectric head 24V, normally closed, with limit switch.

Connections cables colours and corresponding function.

COLOUR	DESCRIPTION
brown	connecting head to voltage
blue	connecting head to neutral
black and grey	limit switch exit cable



CONNECTIONS

The thermostat and/or chrono-thermostat output to which the thermoelectric heads must be connected are generally as shown in the following wiring diagrams:

Where:

C: Connection to power supply

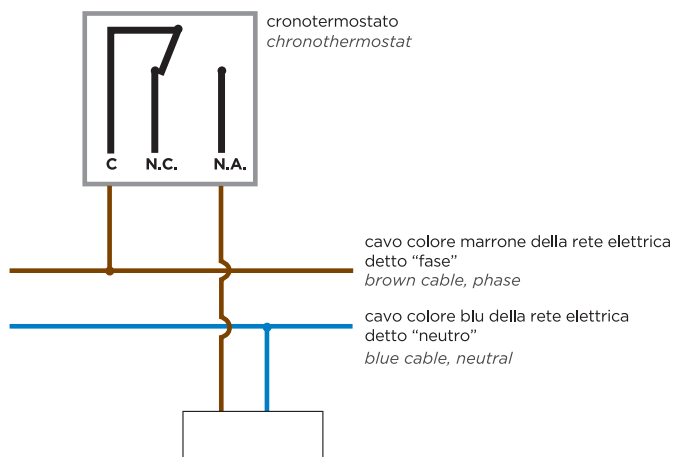
N.C.: output normally closed for cable from the thermoelectric head (do not use since our thermoelectric head is normally closed).

N.A.: output normally open for the connection cable coming from the thermoelectric head (the brown electric cable coming from the thermostatic head must be connected to this type of output).

APPLICATION EXAMPLE WITH CONNECTIONS:

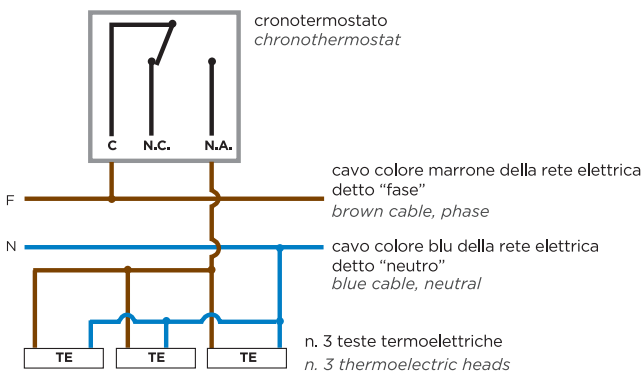
- 1 chronothermostat
- 1 thermoelectric head

Each thermostat or chronothermostat can normally fit up to 10 thermoelectric heads in parallel. To know exactly the number of heads which can be connected, divide the thermostat output contact value N.A. by the head starting power.



APPLICATION EXAMPLE WITH CONNECTIONS:

- 1 chronothermostat
- 3 thermoelectric heads with parallel connection



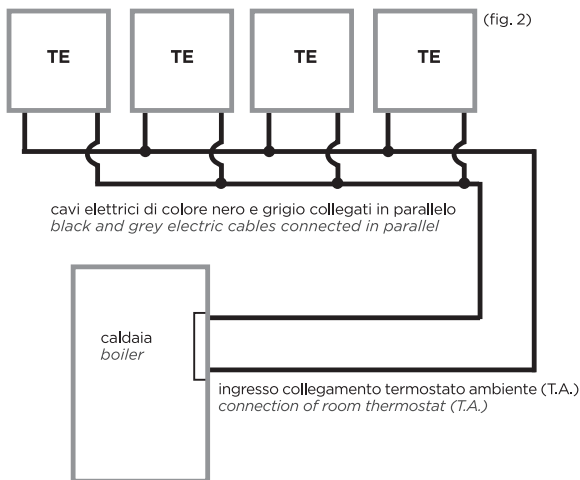
(fig. 1)

THERMOELECTRIC HEADS WITH AUXILIARY OR LIMIT SWITCH CONTACT

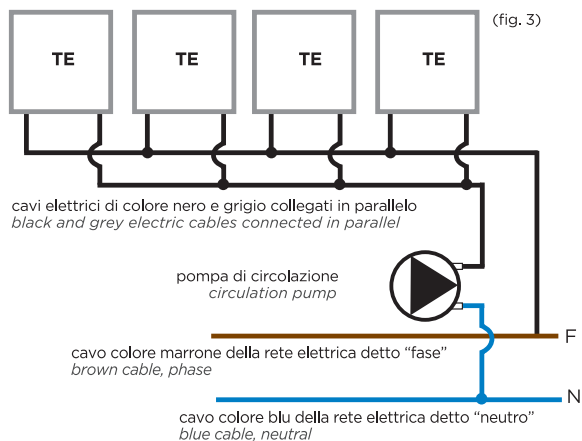
The limit switch contact is used to start the heating system pump when there is at least one thermoelectric head functioning, hence the pump cannot function when all the thermostatic valves are closed.

This device, stopping the pump when the system is not working, reduces wear on the pump and noise caused by the cavitation.

Teste termoelettriche con contatto di fine corsa art. TE 3112
Thermostatic head with limit switch art. TE 3112



Teste termoelettriche con contatto di fine corsa art. TE 3112
Thermostatic head with limit switch art. TE 3112



THERMOELECTRIC HEADS

TE 3110

Thermoelectric head 230 V (normally closed, opens with voltage)

- supply voltage 230 VAC
 - supply cable **2 wires** x 0,75 mm².
- Length 1000 mm.

CODE	SIZE			
69011021	M30x1,5	105	1	100

TE 3111

Thermoelectric head 24 V (normally closed, opens with voltage)

- supply voltage 24 VAC
 - supply cable **2 wires** x 0,75 mm².
- Length 1000 mm.

CODE	SIZE			
69011022	M30x1,5	105	1	100

TE 3112

Thermoelectric head 230 V with limit switch (normally closed-opens with voltage)

- supply voltage 230 VAC
 - supply cable **4 wires** x 0,75 mm².
- Length 1000 mm.

CODE	SIZE			
69011026	M30x1,5	160	1	100

**TE 3113**

Thermoelectric head 24 V with limit switch (normally closed-opens with voltage)

- supply voltage 24 VAC
 - supply cable **4 wires** x 0,75 mm².
- Length 1000 mm.

CODE	SIZE			
69011027	M30x1,5	160	1	100

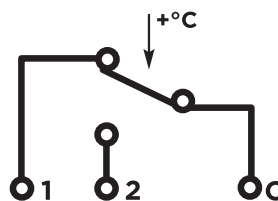
**VA 3090**

Replacement adapter for thermoelectric heads TE series.

CODE	SIZE			
69015023	M30x1,5	8	-	-



CONTACT OR IMMERSION SAFETY THERMOSTATS



Collegamento elettrico
Electrical connection

TECHNICAL DATA

Contact Thermostat

Temperature regulation range: 0°C ÷ 90°C
 Temperature gradient: 1°C/min
 Minimum temperature tolerance ±4 °C
 Maximum temperature tolerance ±6 °C
 Differential temperature: 8 ±12 °C
 Nominal voltage on contacts:
 • 16 (4)A 250 V-
 • 6 (1)A 400 V-
 Nominal impulsive voltage 4kV
 Temperature limit of the control head: 85 °C
 Protection grade: IP 40
 Insulation class: I

Immersion thermostat

Temperature regulation range: 10°C ÷ 90°C
 Temperature gradient: 1°C/min
 Differential temperature: 6 ± 1°C
 Nominal voltage on contacts:
 • 15 (6)A / 250 V-
 Temperature limit of the control head: 85 °C
 Protection grade: IP 40
 Insulation class: I

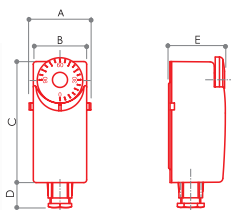
CONSTRUCTIVE FEATURES

The purpose of safety thermostats is to maintain the water temperature in heating systems within set limits, and especially well under the critical point. Safety thermostats TS 3030, TS 3035, TS 3032, TS 3037 and TS 3050 are either contact or immersion thermostats.

These thermostats may function both as normally open and normally closed. The type of functioning is to be chosen during the electrical connection phase.

Electrical connection:

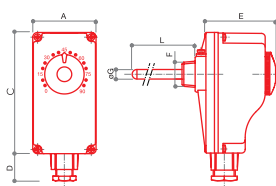
- Terminal C: phase
 - Terminal 1: opens the circuit when the temperature increases
 - Terminal 2: closes the circuit when the temperature increases
- Generally, in heating systems the electric appliance is connected to terminals C and 1 of the thermostat.



TS 3030

Contact safety thermostat, to be set as normally closed or open during installation.

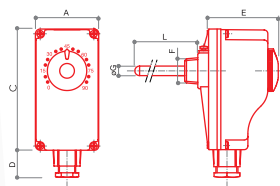
CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011230	-	45	38	88	18	42	-	-	-	-	132	1	10






TS 3037

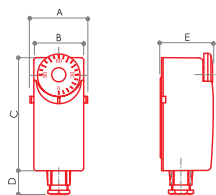
Safety thermostat with immersion probe, to be set as normally closed or open during installation.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011237	-	40	-	70	10	43	16	6,5	-	105	128	1	8




**TS 3035**

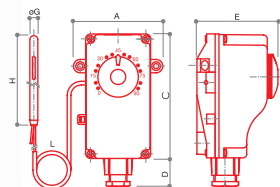
Safety thermostat with immersion probe, to be set as normally closed or open during installation.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011235	G 1/2	40	-	70	10	43	16	6,5	-	105	128	1	8




**TS 3032**

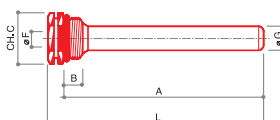
Contact safety thermostat pre-wired, normally closed.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011232	-	45	38	88	18	42	-	-	-	-	250	1	8


**TS 3050**

Safety thermostat with immersion probe, to be set as normally closed or open during installation.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011250	-	40	-	70	10	43	-	6,5	73	1000	132	1	8

**PS 541**

Yellow housing for probe TS 3050 and TS 3037.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
9446952	G 1/2	100	10	22	-	-	7	12	-	108	84	20	160

CIRCULATION PUMP

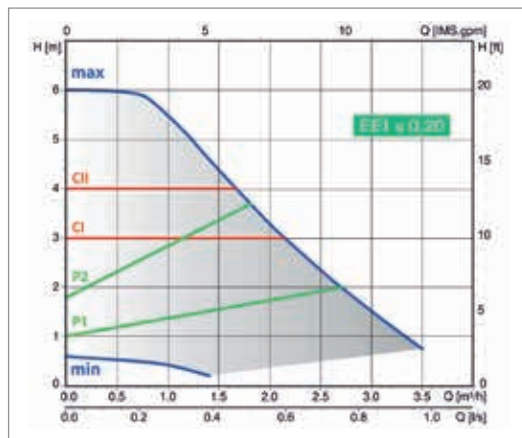


TECHNICAL DATA

	PCEEI 752	PCE 756	PCE 757
EEL	≤ 0.20	< 0,23	< 0,23
liquid temperature	2 ÷ 95 °C	-10 ÷ 95 °C	-10 ÷ 90 °C
room temperature	0 ÷ 40 °C	0 ÷ 40 °C	0 ÷ 40 °C
max pressure	6 bar	6 bar	6 bar
max glycol quantity	40 %	20 %	20 %
connection threading	ISO 228 G 1"1/2	ISO 228 G 1"1/2	ISO 228 G 1"1/2
voltage supply	230 V (-10%; +6%)	230 V (-15%; 10%)	230 V (-15%; 10%)
frequency	50/60 HZ	50/60 HZ	50/60 HZ
protection	IP 44	IP 44	IP 44
insulation class	H	H	H

CHARACTERISTIC CURVES

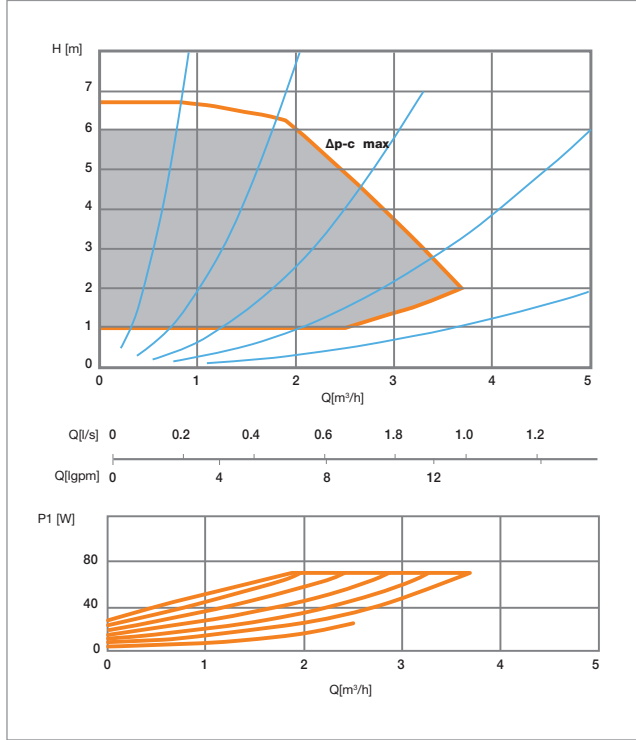
PCEEI 752



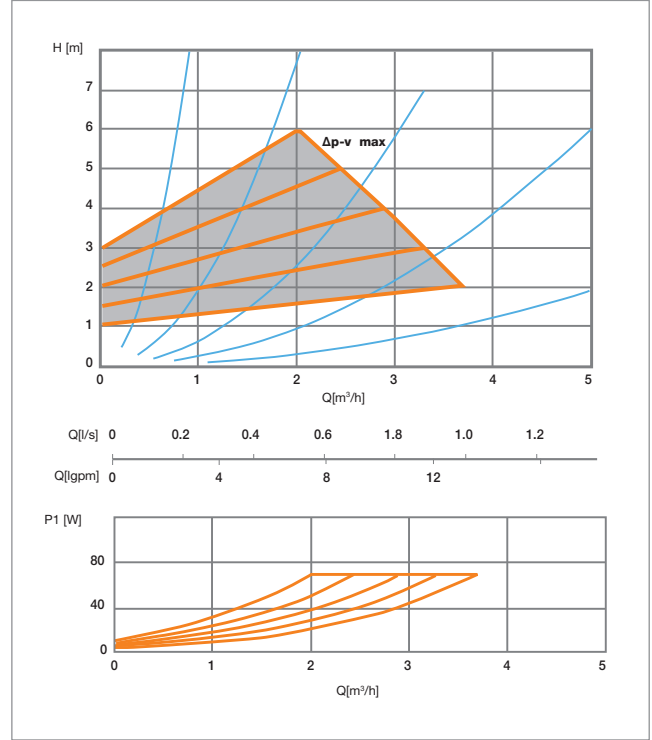
CI-CII constant curve
 P1-P2 proportional curve
 min-max n fixed curves

PCE 756

ΔP constant

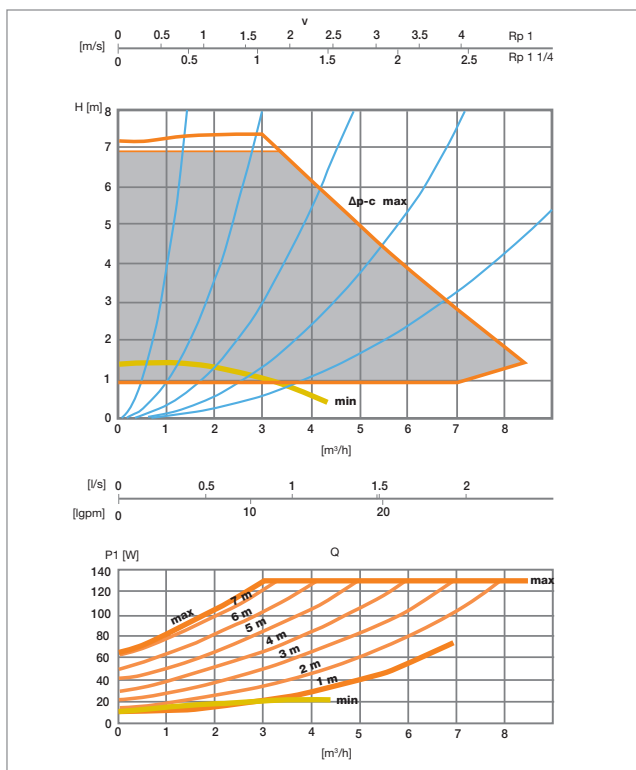


ΔP variable

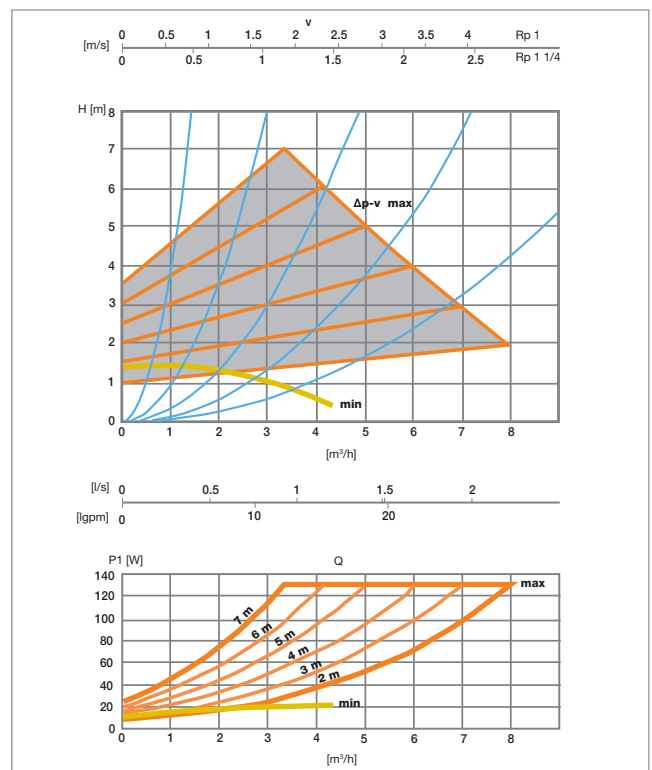


PCE 757

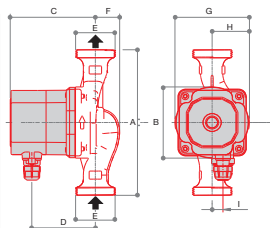
ΔP constant



ΔP variable



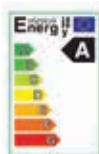
CIRCULATION PUMP



PCEEI 752

Electronic circulation pump with synchronous motor 25/60, interaxis 130 mm.

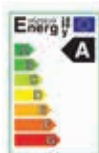
CODE	SIZE	A	B	C	D	E	F	G	H	I			
69011558	25/60-INT. 130 mm	130	88	104.5	78	G1"1/2	29.5	90	45	13.2	1810	1	-



PCE 756

Electronic circulation pump with synchronous motor 25/70, interaxis 130 mm.

CODE	SIZE			
69011562	25/70-INT. 130 mm	2036	1	-



PCE 757

Electronic circulation pump with synchronous motor 25/80, interaxis 180 mm.

CODE	SIZE			
69011564	25/80-INT. 180 mm	3718	1	-



VP 5012

Ball valve for pumps with female connection G 1" and swivel nut G 1"1/2.

CODE	SIZE			
68559752	G 1"1/2 x G 1"	314	10	80

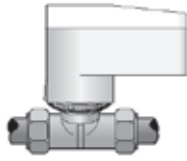


TZ 800

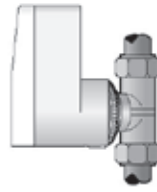
Galvanized nozzle for system testing, interaxis 130 mm.

CODE	SIZE			
7116601	G 1"1/2	676	3	24

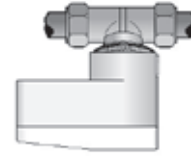
INSTALLATION POSITION



VERTICAL



HORIZONTAL



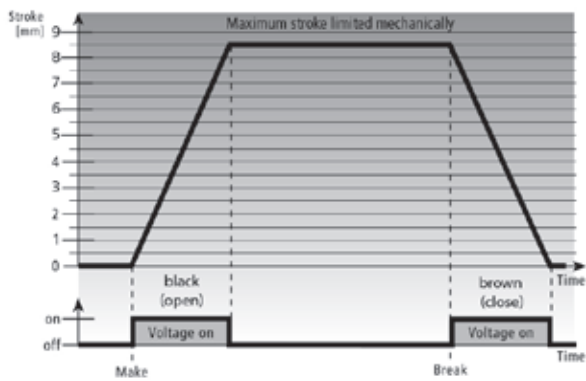
"UPSIDE DOWN"

The servomotor can be used at any installation location. The preferred installation locations to be used, where possible, are horizontal or vertical.

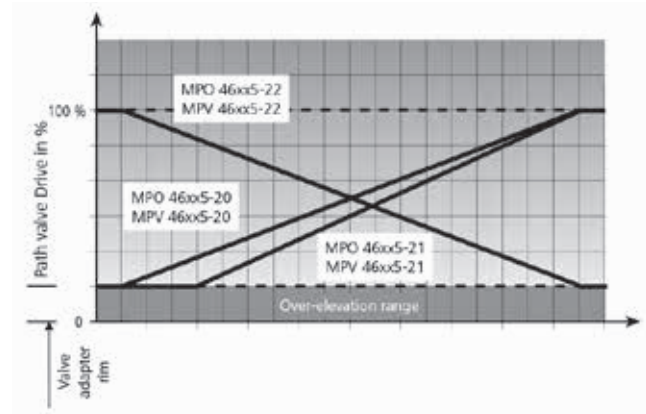
The "upside down" installation, in particular circumstances (e.g. wastewater), can reduce the service life of the servomotor.

OPERATING DIAGRAMS

SM 1346

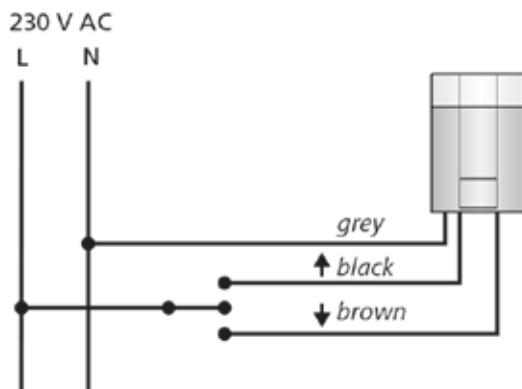


SM 1348

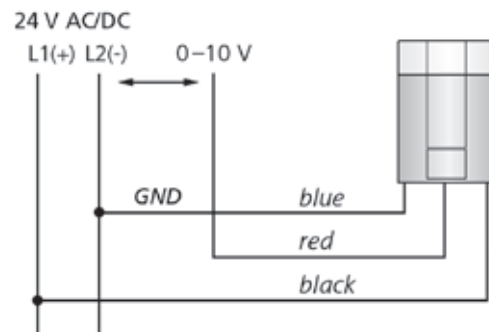


ELECTRICAL CONNECTIONS

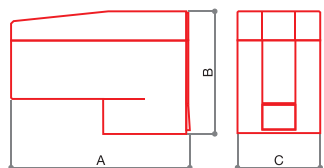
SM 1346






SM 1348

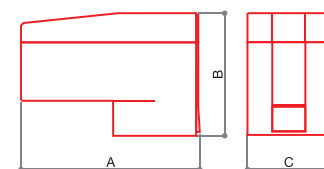


SERVOMOTORS




**SM 1346**

3-point servomotor, 230 V,
connection M30x1,5.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011717	230 V	90	65	44	-	-	-	-	-	-	208	1	-

**SM 1348**

Modulating actuator, 24V, connection
M30x1,5.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011719	24 V 0-10V	90	65	44	-	-	-	-	-	-	163	1	-

ACTUATOR FOR ROOM TEMPERATURE CONTROL



Those who install heating, ventilation and cooling systems ask for economical but state-of-the-art technologies to guarantee the safety of the systems they develop.

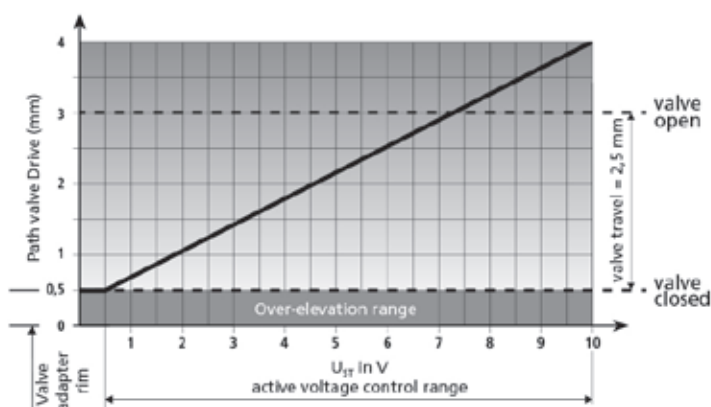
Luxor's actuator TE 3020, with Direct Digital Control for operating voltages from 0 to 10 Volt, offers the following advantageous features:

- **modulating**: continuous and permanent adjustment with 0-10 V actuation;
- **automatic calibration**: self-regulation with zero-point detection and tolerance compensation;
- **easy maintenance**: function indicator;
- **silent**: thermoelectric principle;
- **long-life performance**: wear-resistant, no need for maintenance, operating safety guaranteed;
- **economical**: excellent price-performance ratio.

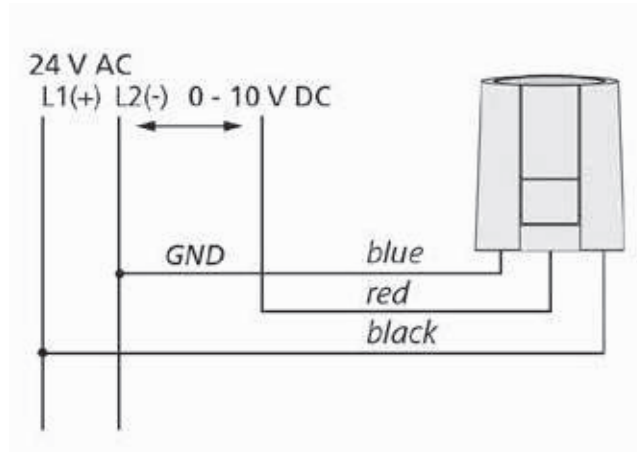
TECHNICAL DATA

Type: normally closed
 Supply voltage: 24V AC, -10%...+20%, 50-60 Hz
 Max inrush current: <math>< 320 \text{ mA}</math> during 2 min. max.
 Operating power: 1 W
 Working voltage: 0-10 V DC
 Input resistance: 100 k Ω
 Work stroke: 4 mm (minus 0.5 mm over-elevation)
 Pushing force: 100 N +5%
 Liquid temperature: 0÷100 °C
 Storage temperature: -25÷60 °C
 Room temperature: 0÷60 °C
 Degree of protection: IP 54
 Protection class: III
 CE conformity according to EN 60730: EN 60730
 Material: White polyamide
 Power cables: 3x0.22 mm² PVC
 Power cable length: 1 m

CHARACTERISTIC CURVES



OPERATING INSTRUCTIONS



When assembled on control valves, the actuator TE 3020 performs several switch-on and adjustment activities as a modulating (continuous) regulating element. The 0-10 V actuation is proportionally transformed into a 0-4 mm stroke. The electrical heating up of the wax element is controlled by the built-in electronics.

According to the operating voltage applied, the valve silently opens thanks to the lifting of the wax element. The actuator TE 3020 reaches its maximum stroke with operating voltages above 10 V.

INSTALLATION WITH ADAPTER



1. Manually screw the valve adapter onto the valve.



2. Connect the power cable to the actuator.



3. Manually position the actuator vertically on the valve adapter.

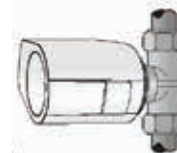


4. Attach the actuator to the valve adapter by manually applying the vertical pressure until you hear a click.

INSTALLATION POSITION



VERTICAL



HORIZONTAL



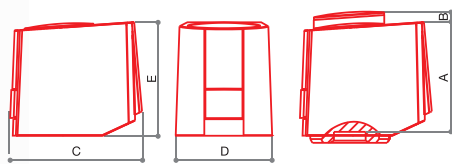
"UPSIDE DOWN"

The TE 3020 actuators are equipped with the "first open" operation, that is, the actuator at the time of delivery is in the normally open state. This allows the system to be washed and filled with already assembled heads, even before the electrical wiring. In the following commissioning, the application of operating voltage (for more than 6 minutes) causes the automatic triggering of the "first open" operation and the actuator is thus ready for operation.

The actuator can be installed in any position, however the recommended positions are vertical and horizontal.




The "upside down" position in some circumstances, e.g. dripping, could reduce the life of the device.

ACTUATOR FOR ROOM TEMPERATURE CONTROL



TE 3020

Actuator for room temperature control.
Thermoelectric head 0-10 Volt.

CODE	SIZE	A	B	C	D	E	F	G	H	L			
69011420	M30x1,5	51.1	7	61.5	44.3	53	-	-	-	-	150	1	-

GENERAL CONDITIONS OF SALE

1 PREMISES - 1.1 The present conditions of sale apply to all supplies of Luxor Spa Products (hereafter "Luxor"). Any general conditions, and in particular the conditions of purchase of the Buyer (hereafter "Customer"), unless expressly accepted in writing by Luxor, shall not bind the latter nor exempt the Customer from the application of the present General Conditions (hereafter GSC)

2. ORDERS - 2.1 The Purchase Orders (referred to as 'Orders') are an irrevocable purchase proposal. By placing an Order, customers fully accept the present General Conditions of Sale.

2.2 Orders are considered accepted only after Luxor confirms them in writing. The Order confirmation and/or Invoice issued by Luxor will be considered as confirmation.

2.3 Any changes to the Order requested by the Customer after the sending of the Order Confirmation will only be valid and enforceable after written acceptance by Luxor. Cancellation or modification of Orders without the prior written consent of Luxor, will give Luxor the right to act to obtain reimbursement of the costs incurred, without prejudice to the right to compensation for greater damages.

3 PRICES - 3.1 Luxor products will be invoiced based on the current price list at the time the order is accepted. Prices do not include VAT or any other taxes.

3.2 Prices listed in sales catalogues/lists are merely indicative and may be subject to change due to production cost increases. In such cases, Luxor will inform the purchaser of the price increase and provide the reasons.

4 DELIVERY TERMS - 4.1 The supplies in each individual Order will be delivered within the stated terms in the Order Confirmation.

4.2 Luxor will not be held responsible for delays in delivery that are not caused by Luxor, such as delays by third parties, including suppliers and sub-suppliers, shippers, and causes of force majeure that result in total or partial inactivity of the plants. In the cases mentioned above, the Customer cannot refuse delivery of the goods, even if it is only partial, nor can they use a delay in delivery as a reason to terminate the contract or claim damages.

5 SHIPMENTS - 5.1 The products will be delivered to the 'Assigned Port' (Incoterms 2020 EXW), with transport costs and risks borne by the buyer, unless otherwise agreed.

5.2 Even in the case of agreed delivery in "Free Port" (Incoterms 2020 DDP) with costs borne by Luxor, the goods will still travel at the buyer's risk. Regardless of the delivery terms agreed upon by the parties, the risks will pass to the buyer at the latest with delivery to the first carrier.

5.3 The transfer of ownership of the goods is suspended until the full price has been paid, but this does not affect the transfer of risk to the purchaser.

5.4 If special packaging is required, an additional charge as indicated in the price list or order confirmation will be added to the invoice.

6 PAYMENTS - 6.1 Payments are due as per the terms and manner specified in the order confirmation and/or invoice.

6.2 Unless otherwise expressly agreed, payments must be made to the bank details mentioned in the sales invoice. For payments made from abroad via bank transfer, the OUR option must be selected to ensure that Luxor receives the net amount on the invoice after deducting bank charges and expenses. Luxor does not authorize any third parties, including agents and representatives, to collect money on its behalf.

6.3 The Customer is not permitted to suspend or delay payments, even in the event of claims or complaints of defects, and must adhere to the agreed terms.

6.4 In case of payment interruption or suspension, the Customer will be considered in default. Luxor reserves the right to charge expenses and interest as per Art. 5 and 6 of D.Lgs n. 192/2012, without prejudice to the right to terminate the contract. Delayed payment may also result in Luxor excluding the guarantee for the entire period of delay.

6.5 If the Customer fails to adhere to the agreed payment terms, or interrupts or suspends payment, Luxor reserves the right to suspend any ongoing supplies and/or make the execution of the current order conditional on the payment of the outstanding debt. Luxor may also withdraw from any further contracts with the Customer and cancel any previously granted favourable conditions, such as discounts or free gifts.

6.6 The Customer is not permitted to offset any claims they may have against Luxor with debts they owe to Luxor, unless formally authorised by Luxor

7 EXPRESS TERMINATION CLAUSE - 7.1 Luxor may terminate the contract immediately if the Customer is undergoing bankruptcy or liquidation proceedings, as well as in the event that the Customer is subject to execution proceedings and/or protests and the economic conditions suggest the purchaser is insolvent.

8 WARRANTY - 8.1 Luxor guarantees the conformity of the products supplied, free from defects that could make them unsuitable for their intended use. The guarantee may be invoked if the defect is due to

manufacturing errors or defects in raw materials that are the responsibility of Luxor.

8.2 Unless otherwise expressly agreed, the guarantee lasts for one (1) year from the date of delivery. The Customer must make a written complaint within eight (8) days from delivery in the case of apparent defects, or, in the case of hidden defects, from the time of discovery and in any event not later than twelve (12) months from delivery.

8.3 In the event of non-conforming products, Luxor may, at its discretion, provide the Buyer with replacement products of the same type and quantity free of charge ex works, after verifying the returned products. Any return must always be previously agreed and authorised by Luxor. The goods in question must be returned 'carriage paid' along with a note explaining the reason for the return within 30 days of Luxor's approval. Failure to do so will result in the authorization becoming invalid.

8.4 If Luxor does not recognize the defective products upon verification, it will invoice those sent as replacements. If Luxor does not recognize the defective products upon verification, they will invoice the replacements. If Luxor is unable to replace defective products, they may issue a credit note to the customer for the value of the defective products. This does not imply any responsibility on Luxor for direct, indirect, or consequential damages resulting from or connected to the defects or faults of the products.

8.5 It is important to note that this guarantee does not cover instances where the product has been installed, used or maintained in a manner that is contrary to the instructions and warnings provided in the installation, use, and maintenance manuals that were included with the product. Additionally, any installation or repair work should only be carried out by qualified personnel.

8.6 The guarantee will not apply if the Purchaser breaches their contractual obligations.

8.7 This warranty is the only warranty and replaces any other written, oral or implied warranties. By accepting these General Terms and Conditions, the Purchaser expressly waives any right of recourse arising from the sale and/or installation of the Products to a non-professional consumer.

9. RESERVATION OF PROPERTY 9.1 The sale of Luxor S.p. A's Products is carried out under reservation of ownership. Therefore the products will remain the property of Luxor S.p.A. until the full payment of the price by the buyer.

10 TRANSFER OF THE CONTRACT 10.1 It is forbidden to transfer the Contract and/or any interest, right and obligation connected to it to third parties without specific written approval by Luxor.

11 PRIVACY - 11.1 The Customer confirms that they have read the information regarding the processing of their personal data, as required by Articles 13 and 14 of Regulation (EU) 2016/679 (GDPR) as amended. The information can be found at <https://luxor.it/privacy-policy>. By accepting these GTC, the Customer consents to the processing of their personal data.

11.2 Luxor will process the personal data provided by the Customer, including through external parties, to fulfil legal obligations and carry out administrative and commercial tasks related to the contractual relationship.

12 APPLICABLE LAW AND COURT OF JURISDICTION - 12.1 Contract is governed by Italian law. Anything not expressly governed by these GVCs shall be governed by the rules on sale provided for in articles 1470 et seq. of the Italian Civil Code.

12.2 The Parties expressly exclude the application of the Vienna Convention on Contracts for the International Sale of Goods. Any disputes related to the Contract, including those regarding its validity, interpretation, execution, and termination, must be referred exclusively to the Court of Brescia.

12.3 Luxor reserves the right to take legal action at the competent court of the Customer's location to recover any outstanding debts. The local law will apply in this case.

13 FINAL CLAUSES - 13.1 The possible nullity and/or ineffectiveness of one or more provisions of these GTC shall not affect the validity of the Contract as a whole.

13.2 Any amendment to the Contract shall be valid only if made in writing and signed by authorised representatives of both Parties.

The customer acknowledges that they are not a 'consumer' and therefore the provisions of law relating to relations between entrepreneurs and consumers do not apply. The customer declares that they have paid particular attention to the following clauses: Introduction (1.1), Orders (2.1-2.3), Prices (3.2), Delivery Terms (4.1-4.2), Shipping (5.1-5.3), and 6. The following sections require approval: Payments (6.2 - 6.3 - 6.4 - 6.5 - 6.6); 7 Express Termination Clause (7.1); 8 Warranty (8.1 - 8.2 - 8.3 - 8.4 - 8.5 - 8.6 - 8.7); 9. Retention of Title (9.1); 10. Applicable Law and Jurisdiction (12.1 - 12.2 - 12.3); 13 Final Clauses (13.1 - 13.2), and they are to be specifically approved.

These general terms and conditions are published on LUXOR's website (<https://luxor.it/>) where they may be consulted, thereby taking full and proper cognisance thereof, pursuant to and for the purposes of Articles 1341 and 1342 of the Civil Code.