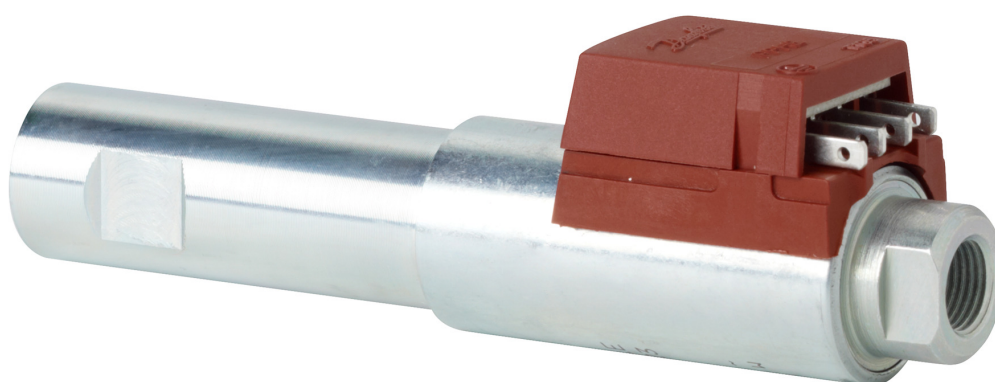




Preheaters

FPHE 5 LE

Description

FPHE-LE oil preheaters are special versions of the standard preheaters types FPHE 3 and 5 with built-in LE valve – a hydraulically operated diaphragm valve, which in combination with an LE-pump significantly reduces emissions during start and stop phases. The LE valve can also be used as a safety shut-off valve in accordance with DIN EN ISO 23553-1. FPHE-LE are designed for oil burners with capacity up to 6 kg/h using standard fuel oil with viscosity up to 10 cSt. They are available with different heating elements and thermostats for selection of release time and temperature.

Features & Benefits

- Standard types of gasoil with viscosity of max. 10 cSt. (at 20° C)
- Capacity up to 6 kg/h
- Built-in LE valve
- Max. temperature limitation
- Improved atomisation
- High average efficiency of the burner

Applications

- Oil burners with capacity up to 6 kg/h using standard fuel oil with viscosity up to 10 cSt.

Ordering

Product code numbers

Product Type	Connections	Neck diameter [mm]	PTC element	Thermostat	Code number
FPHE 5 LE	G 1/8	18.5	1 x 70	60/32	030N5123
FPHE 5 LE	M8 x 1	18.5	1 x 70	60/32	030N5125
FPHE 5 LE	M8 x 1	18.5	1 x 50	60/32	030N5133
FPHE 5 LE	G 1/8	18.5	1 x 50	60/32	030N5136
FPHE 5 LE	M8 x 1	18.6	1 x 50	60/32	030N5510
FPHE 5 LE	M8 x 1	18.6	1 x 50	60/32	030N5514
FPHE 5 LE	M8 x 1	18.6	1 x 50	60/32	030N5515
FPHE 5 LE	M8 x 1	18.6	1 x 50	60/32	030N5516

Identification

The preheater is laser engraved with the following information (example):

FPHE 5-LE	Type
030N5123	Code no.
230 V	Voltage
30-110 W	Power consumption
130805	Date of manufacture



Accessories code numbers

If your product code is not listed as a related product for any accessories, please reach out to us for assistance.



030N0180
FPHB/E CABLE L=350
FPHB/E CABLE L=350

Related products

- 030N5129
- 030N5131
- 030N5134
- 030N5137
- 030N5150
- 030N6123



030N0184
FPHB/E CABLE L=600
FPHB/E CABLE L=600

Related products

- 030N5129
- 030N5131
- 030N5134
- 030N5137
- 030N5150
- 030N6123



030N0185
FPHB/E CABLE L=700
FPHB/E CABLE L=700

Related products

- 030N5129
- 030N5131
- 030N5134
- 030N5137
- 030N5150
- 030N6123



030N0183
FPHB/E CABLE L=500
FPHB/E CABLE L=500

Related products

- 030N5129
- 030N5131
- 030N5134
- 030N5137
- 030N5150
- 030N6123



030N0181
FPHB/E CABLE L=400
FPHB/E CABLE L=400

Related products

- 030N5129
- 030N5131
- 030N5134
- 030N5137
- 030N5150
- 030N6123



030N0900
PLUG FOR FPHB/E
PLUG FOR FPHB/E

Related products

- 030N5129
- 030N5131
- 030N5134
- 030N5137
- 030N5150
- 030N6123



030N0182
FPHB/E CABLE L=450
FPHB/E CABLE L=450

Related products

- 030N5129
- 030N5131
- 030N5134
- 030N5137
- 030N5150
- 030N6123

If your product code is not listed as a related product for any accessories, please reach out to us for assistance.

Spare parts code numbers

If your product code is not listed as a related product for any accessories, please reach out to us for assistance.



030N4026
LE-VALVE SERVICE
LE-VALVE SERVICE

Related products

- 030N5123
- 030N5125
- 030N5126
- 030N5128
- 030N5129
- 030N5130
- 030N5131
- 030N5132
- 030N5133
- 030N5134
- 030N5135
- 030N5136
- 030N5137
- 030N5138
- 030N5139
- 030N5141
- 030N5143
- 030N5146
- 030N5149
- 030N5150
- 030N5152
- 030N5162
- 030N5510
- 030N5511
- 030N5514
- 030N5515
- 030N5516
- 030N6123



030N4031
LE5 VALVE SERVICE
LE5 VALVE SERVICE

Related products

- 030N5123
- 030N5125
- 030N5126
- 030N5128
- 030N5129
- 030N5130
- 030N5131
- 030N5132
- 030N5133
- 030N5134
- 030N5135
- 030N5136
- 030N5137
- 030N5138
- 030N5139
- 030N5141
- 030N5143
- 030N5146
- 030N5149
- 030N5150
- 030N5152
- 030N5162
- 030N5510
- 030N5511
- 030N5514
- 030N5515
- 030N5516
- 030N6123



030N4030
LE6 VALVE SERVICE
LE6 VALVE SERVICE

Related products

030N5123	030N5125	030N5126	030N5128
030N5129	030N5130	030N5131	030N5132
030N5133	030N5134	030N5135	030N5136
030N5137	030N5138	030N5139	030N5141
030N5143	030N5146	030N5149	030N5150
030N5152	030N5162	030N5510	030N5511
030N5514	030N5515	030N5516	030N6123



030N4027
LE-VALVE OEM
LE-VALVE OEM

Related products

030N5123	030N5125	030N5126	030N5128
030N5129	030N5130	030N5131	030N5132
030N5133	030N5134	030N5135	030N5136
030N5137	030N5138	030N5139	030N5141
030N5143	030N5146	030N5149	030N5150
030N5152	030N5162	030N5510	030N5511
030N5514	030N5515	030N5516	030N6123



030N4029
LE9 VALVE OEM
LE9 VALVE OEM

Related products

030N5123	030N5125	030N5126	030N5128
030N5129	030N5130	030N5131	030N5132
030N5133	030N5134	030N5135	030N5136
030N5137	030N5138	030N5139	030N5141
030N5143	030N5146	030N5149	030N5150
030N5152	030N5162	030N5510	030N5511
030N5514	030N5515	030N5516	030N6123

If your product code is not listed as a related product for any accessories, please reach out to us for assistance.

Functions

Operation

Cold start

When the boiler thermostat cuts-in, voltage is applied to the PTC heating element and the oil in the heat exchanger is heated until it reaches the cut-in temperature of the preheater thermostat (see below table). Now the burner performs a normal starting sequence.

Warm start

If the oil temperature in the preheater is higher than the cut-out temperature of the preheater thermostat, the burner starts immediately.

Operation

If the oil temperature is low and the flow rate is high, compared with the preheater capacity, the preheater thermostat might cut off during operation. To avoid this an oil burner control with holding function must be used.

Note! The LE- valve must be replaced after 250.000 operations or 10 years (approved life expectancy).

Release times and temperatures

Type	PTC	Thermostat 60/32 & 60/45		Thermostat 73/60	
		Release time, seconds	Release temp. in outlet, °C	Release time, seconds	Release temp. in outlet, °C
FPHE 3-LE	40	100	20	-	-
FPHE 5-LE	50	145	27	-	-
	70	80	20	135	35
	120	55	18	80	30

The figures given are measured average values on cold start and without blown air

Note that the PTC element continues to heat during prepurge.

Product details

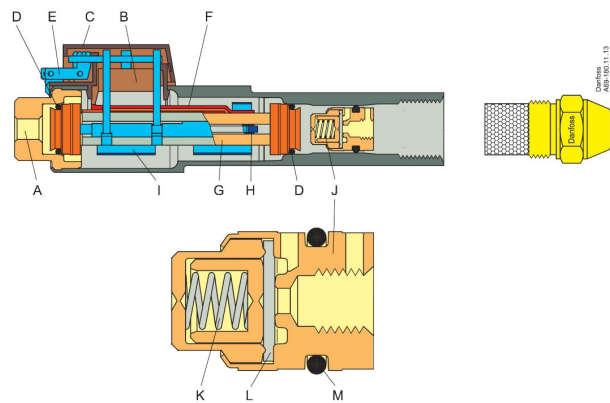
General data

	FPHE 3-LE	FPHE 5-LE
Oil types	Standard fuel gas oil and fuel gas oil acc. to DIN 51603-6 EL A (bio content, FAME)	
Nominal voltage*	230 V, 50-60 Hz	
Contact load, thermostat	10 (3) A - 250 V	
Max. permissible pressure	30 bar	
Capacity	max. 3 kg/h	max. 6 kg/h
Max. ambient temperature	105°C	
Storage temperature	-20 to 105°C	
Max. pressure drop	0.12 bar at 3 kg/h	0.20 bar at 5 kg/h
Recommended tightening torque	15 to 20 Nm	
Valve opening pressure	6.5 bar	6.9 bar
Viscosity	max. 10 cSt. at 20°C	

* Working voltage: 100 to 265 V, 50-60 Hz

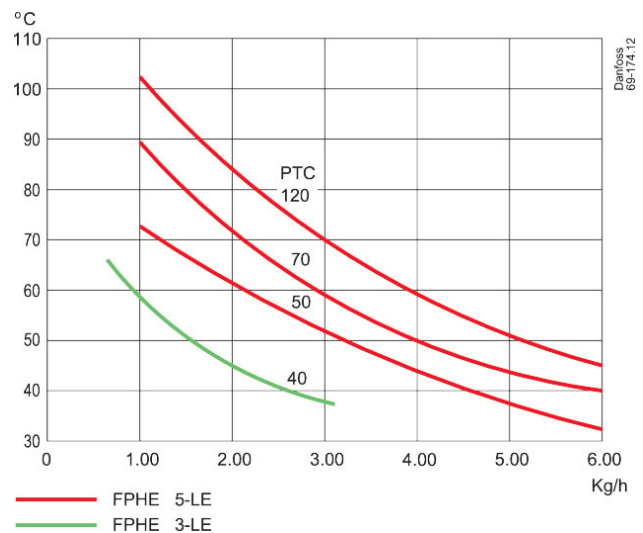
Design

- A. Connection port
- B. Thermostat
- C. Cover
- D. O-ring
- E. Electrical connection
- F. Heat conductor (not FPHE 3-LE)
- G. Heat exchanger
- H. PTC element
- I. Clamp
- J. LE valve
- K. Spring
- L. Diaphragm
- M. O-ring

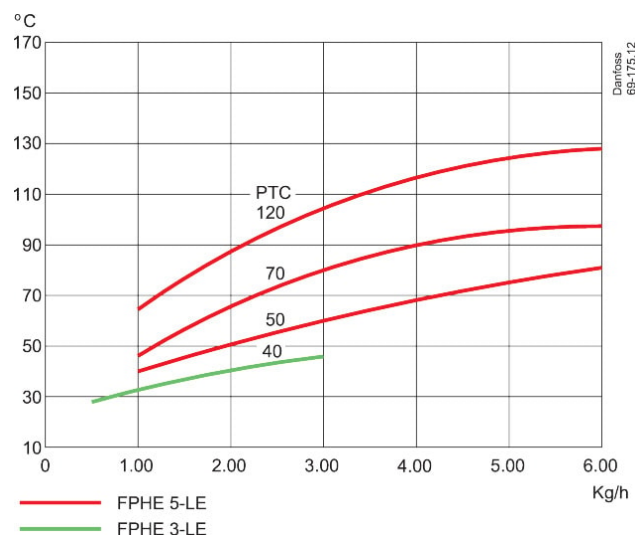


Capacity

Temperature / capacity



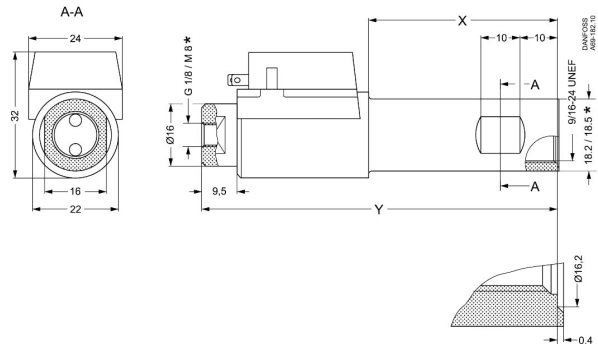
Power consumption / capacity





Dimensions & weights

Type	X	Y
FPHE 3-LE	50	108
FPHE 5-LE	50	108

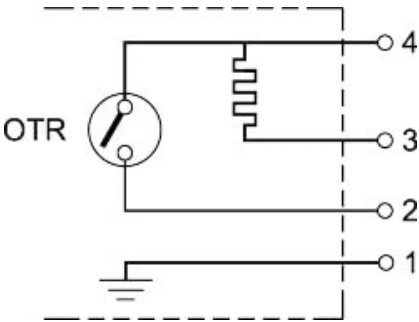


*Thread and neck diameter (see code nos.)

Connections

Electrical connection

- 4 = Black
- 3 = Blue
- 2 = Brown
- 1 = Yellow / Green
- OTR: Thermostat in oil preheater



Certificates, declarations and approvals

The list contains all certificates, declarations, and approvals for this product type. Individual code number may have some or all of these approvals, and certain local approvals may not appear on the list.

When you click on the link you will be directed to the latest version of the 'Declaration of Conformity'. Products developed and sold before this date of issue conform to the directives/standards in force at the time of their sale.

Approval type	Title	Certification body	Approval topic
EU-UK Declaration	Danfoss EU-UK 030N.05	Danfoss	LVD
Manufacturer's Declaration	Danfoss MD MA EU-UK 030N.05	Danfoss	EU RoHS
Export Control Declaration	Oil preheaters	Danfoss	

Contact details

Online support

Danfoss offers a wide range of support along with our products, including digital information, software, mobile apps and expert guidance. See the possibilities below.



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