MAKING MODERN LIVING POSSIBLE


# Service Handbook

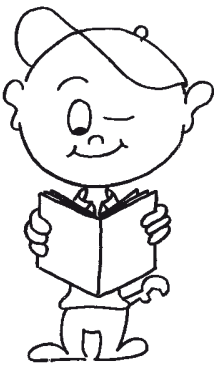
DANFOSS
BURNER COMPONENTS

Dear Danfoss partner,

In the field of components for burners and boilers, Danfoss offers a complete range for most oil burners on the market, right from the smallest domestic burners to the largest industrial burners. The construction of burners available today varies widely; therefore a high degree of adaptability is demanded from the individual components.

An example: The new series of BFP service pumps from Danfoss give the greatest possible flexibility where the range of functions and connections is concerned. These pumps are therefore ideal as replacement units for both older Danfoss pumps and pumps from other makers. If you would like precise details of how pump replacement can be simplified - please read on.

Danfoss will of course be pleased to help with the conversions outlined in this service manual and make the work of finding an alternative easier.
In other words, we will make it as easy as possible for you to find the most suitable components and service from the comprehensive Danfoss range.



The service manual is intended as an aid in the daily routine. We therefore hope that the manual will make your work with Danfoss burner components easier so that we will be able to look forward to your continued custom.

Your Danfoss Team

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## Oil pump conversion

The tables below give the following pump conversions:

- Danfoss RS pumps to RSA pumps
- Danfoss RSL/MSL/MS/BFP pumps to BFP service pumps
- Suntec pumps to BFP service pumps
- Eckerle pumps to BFP service pumps
- Delta pumps to BFP service pumps

Using Danfoss service pumps BFP 21 L3 and BFP 21 R3 it is possible to maintain 90% of existing small burners. In other cases it can be difficult to find the correct Danfoss service pump. The main purpose of the conversion tables is to make the replacement of such pumps easier.

The tables are compiled as follows:

- Column 1 always gives the pump type to be replaced.

- Column 2 gives the code number of the pump to be replaced.

  Note: Where Eckerle UNI-pumps are concerned, column 1 gives the old and column 2 the new designation.

- Column 3 states whether the pump is for 1-pipe or 2-pipe operation.

  Note: With the MS pump, the numbers „1 + 2“ are added because this particular unit has automatic changeover. Eckerle pumps have no suffixes.

- Column 5 gives the Danfoss pump type able to replace the existing pump.

- Column 6 gives the corresponding Danfoss code number.

- The last column, ”Comments/accessories“, refers to special characteristics and features. Please note that in some cases accessories are necessary.

Explanation - code number and comments:

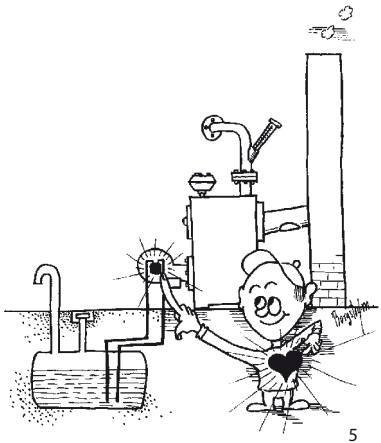
When changing over from pumps with hydraulic shut-off valve (RSL and MSLC) to BFP with electric shut-off valve (BFP 11, 21 and 41) a cable must be ordered for connection to the motor terminals in the oil burner control.

Some pump types carry the comment „No repl.". There are several possible explanations, among them:

- The BFP service pump cannot supply the required nozzle capacity.
- The BFP service pump does not have the required coil voltage. BFP coils are only available for 220-240 V a.c., 110-120 V a.c. and 24 V a.c.
- The shaft of the BFP service pump is not of a suitable diameter.
- With the BFP service pump it is possible that a hydraulic cylinder might be connected to the pressure gauge port on the front.

The position of connections and clockwise/ counterclockwise indication are always given when looking on the shaft end. See ill. on page 54-65).

**Before fitting a service pump, a check must be made of whether it is set for 1-pipe or 2-pipe operation**. If necessary, the pump must be reset to suit the system in which it is being installed.



## Oil pumps – Danfoss RS

| Danfoss oil pumps - older series | | | ➨ | Relevant Danfoss types | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| RS 28 | 070-5300 | 1 | ➨ | RSA 28 | 070-5370 | |
| RS 28 | 070L5300 | 1 | ➨ | RSA 28 | 070L5370 | |
| RS 28 | 070-5302 | 2 | ➨ | RSA 28 | 070-5372 | |
| RS 28 | 070L5302 | 2 | ➨ | RSA 28 | 070L5372 | |
| RS 28 | 070-5310 | 1 | ➨ | RSA 28 | 070-5380 | |
| RS 28 | 070L5310 | 1 | ➨ | RSA 28 | 070L5380 | |
| RS 28 | 070-5312 | 2 | ➨ | RSA 28 | 070-5382 | |
| RS 28 | 070L5312 | 2 | ➨ | RSA 28 | 070L5382 | |
| RS 28 | 070-5322 | 2 | ➨ | RSA 28 | 070-5382 | |
| RS 28 | 070L5322 | 2 | ➨ | RSA 28 | 070L5382 | |
| RS 40 | 070-3200 | 1 | ➨ | RSA 40 | 070-3230 | |
| RS 40 | 070L3200 | 1 | ➨ | RSA 40 | 070L3230 | |
| RS 40 | 070-3202 | 2 | ➨ | RSA 40 | 070-3232 | |
| RS 40 | 070L3202 | 2 | ➨ | RSA 40 | 070L3232 | |
| RS 40 | 070-3210 | 1 | ➨ | RSA 40 | 070-3240 | |
| RS 40 | 070L3210 | 1 | ➨ | RSA 40 | 070L3240 | |
| RS 40 | 070-3212 | 2 | ➨ | RSA 40 | 070-3242 | |
| RS 40 | 070L3212 | 2 | ➨ | RSA 40 | 070L3242 | |
| RS 40 | 070-3222 | 2 | ➨ | RSA 40 | 070-3249 | |
| RS 40 | 070L3222 | 2 | ➨ | RSA 40 | 070L3249 | |
| RS 60 | 070-3300 | 1 | ➨ | RSA 60 | 070-3350 | |
| RS 60 | 070L3300 | 1 | ➨ | RSA 60 | 070L3350 | |
| RS 60 | 070-3302 | 2 | ➨ | RSA 60 | 070-3352 | |
| RS 60 | 070L3302 | 2 | ➨ | RSA 60 | 070L3352 | |

## Oil pumps – Danfoss RS

| Danfoss oil pumps – older series | | | ➨ | Relevant Danfoss types | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| RS 60 | 070-3310 | 1 | ➨ | RSA 60 | 070-3360 | |
| RS 60 | 070L3310 | 1 | ➨ | RSA 60 | 070L3360 | |
| RS 60 | 070-3312 | 2 | ➨ | RSA 60 | 070-3362 | |
| RS 60 | 070L3312 | 2 | ➨ | RSA 60 | 070L3362 | |

## Oil pumps – Danfoss RSL

| Danfoss oil pumps – older series | | | ➨ | Relevant Danfoss types | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| RSL 028 | 070-4330 | 1 | ➨ | BFP 21 R3 | 071N0157[1)] | |
| RSL 028 | 070L4330 | 1 | ➨ | BFP 21 L3 | 071N0156[1)6)] | + cable, L = 710 mm: 071G0204 |
| RSL 028 | 070-4332 | 2 | ➨ | BFP 21 R3 | 071N0157[1)7)] | |
| RSL 028 | 070L4332 | 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| RSL 028 | 070-4340 | 1 | ➨ | BFP 21 R3 | 071N0157[1)] | |
| RSL 028 | 070L4340 | 1 | ➨ | BFP 21 L3 | 071N0156[1)6)] | + cable, L = 710 mm: 071G0204 |
| RSL 028 | 070-4342 | 2 | ➨ | BFP 21 R3 | 071N0157[1)7)] | + bush ∅54: 071B0011 |
| RSL 028 | 070L4342 | 2 | ➨ | BFP 21 L3 | 071N0156[1)6)7)] | |
| RSL 050 | 070-3130 | 1 | ➨ | BFP 21 R5 | 071N0173[1)2)] | |
| RSL 050 | 070L3130 | 1 | ➨ | BFP 21 L5 | 071N0172[1)2)] | + cable, L = 710 mm: 071G0204 |
| RSL 050 | 070-3132 | 2 | ➨ | BFP 21 R5 | 071N0173[1)] | |
| RSL 050 | 070L3132 | 2 | ➨ | BFP 21 L5 | 071N0172[1)] | |

1) The solenoid coil must be connected in parallel with the burner motor.
2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss RSL

| Danfoss oil pumps – older series | | | ➡ | Relevant Danfoss types | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➡ | **Type** | **Code no.** | **Comments/accessories** |
| RSL 050 | 070-3140 | 1 | ➡ | BFP 21 R5 | 071N0173[1)2)] | |
| RSL 050 | 070L3140 | 1 | ➡ | RFP 21 L5 | 071N0172[1)2)] | + cable, L = 710 mm: 071G0204 |
| RSL 050 | 070-3142 | 2 | ➡ | BFP 21 R5 | 071N0173[1)] | + bush ∅54: 071B0011 |
| RSL 050 | 070L3142 | 2 | ➡ | BFP 21 L5 | 071N0172[1)] | |

## Oil pumps – Danfoss RSLB

| Danfoss oil pumps – older series | | | ➡ | Relevant Danfoss types | | | |
|---|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➡ | **Type** | **Code no.** | **Comments/accessories** | |
| RSLB 028 | 070-4030 | 1 | ➡ | BFP 20 R3 | 071N0169[2)] | | Please note:<br>If a BFP 20 is used on a gravity feed installation, a solenoid valve (if not existing) must be fitted in the nozzle line to ensure "shut off" on burner stop.<br><br>If a valve is not fitted, then use a BFP 21 and wire the pump's solenoid valve into the control box. |
| RSLB 028 | 070L4030 | 1 | ➡ | BFP 20 L3 | 071N0168[2)] | | |
| RSLB 028 | 070-4032 | 2 | ➡ | BFP 20 R3 | 071N0169 | | |
| RSLB 028 | 070L4032 | 2 | ➡ | BFP 20 L3 | 071N0168 | | |
| RSLB 028 | 070-4040 | 1 | ➡ | BFP 20 R3 | 071N0169[2)] | | |
| RSLB 028 | 070L4040 | 1 | ➡ | BFP 20 L3 | 071N0168[2)] | + bush ∅54: 071B0011 | |
| RSLB 028 | 070-4042 | 2 | ➡ | BFP 20 R3 | 071N0169 | | |
| RSLB 028 | 070L4042 | 2 | ➡ | BFP 20 L3 | 071N0168 | | |
| RSLB 050 | 070-4130 | 1 | ➡ | BFP 20 R5 | 071N0129[2)] | | |
| RSLB 050 | 070L4130 | 1 | ➡ | BFP 20 L5 | 071N0126[2)] | | |
| RSLB 050 | 070-4132 | 2 | ➡ | BFP 20 R5 | 071N0129[2)] | | |
| RSLB 050 | 070L4132 | 2 | ➡ | BFP 20 L5 | 071N0126 | | |
| RSLB 050 | 070-4140 | 1 | ➡ | BFP 20 R5 | 071N0129[2)] | | |
| RSLB 050 | 070L4140 | 1 | ➡ | BFP 20 L5 | 071N0126[2)] | + bush ∅54: 071B0011 | |
| RSLB 050 | 070-4142 | 2 | ➡ | BFP 20 R5 | 071N0129 | | |
| RSLB 050 | 070L4142 | 2 | ➡ | BFP 20 L5 | 071N0126 | | |

1) The solenoid coil must be connected in parallel with the burner motor.
2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss MSLA

| Danfoss oil pumps – older series | | | ➡ | Relevant Danfoss types | | | | |
|---|---|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➡ | **Type** | **Code no.** | **Comments/accessories** | | |
| MSLA 032 | 071B0101 | 1 | ➡ | BFP 21 R3 | 071N0157 | | | |
| MSLA 032 | 071B0102 | 2 | ➡ | BFP 21 R3 | 071N0157[7] | | | |
| MSLA 032 | 071B0103 | 1 | ➡ | BFP 21 R3 | 071N0157 | MSLA = 100 V a.c. | + coil 110-120 V a.c.: 071N0061 | |
| MSLA 032 | 071B0104 | 2 | ➡ | BFP 21 R3 | 071N0157[7] | | | |
| MSLA 032 | 071B0105 | 1 | ➡ | BFP 21 R3 | 071N0157 | + coil 110-120 V a.c.: 071N0061 | | |
| MSLA 032 | 071B0108 | 2 | ➡ | BFP 21 R3 | 071N0157[7] | MSLA = 200 V a.c. | | |
| MSLA 032 | 071B0112 | 2 | ➡ | BFP 21 R3 | 071N0157[7] | | | |
| MSLA 032 | 071B0113 | 1 | ➡ | BFP 21 R3 | 071N0157 | | | |
| MSLA 032 | 071B0132 | 2 | ➡ | BFP 21 R3 | 071N0157[7] | + coil 24 V a.c.: 071N0062 | | |
| MSLA 032 | 071B1101 | 1 | ➡ | BFP 21 L3 | 071N0156[6] | | | + cable, L = 710 mm: 071G0204 |
| MSLA 032 | 071B1102 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1103 | 1 | ➡ | BFP 21 L3 | 071N0156[6] | MSLA = 100 V a.c. | + coil 110-120 V a.c.: 071N0061 | |
| MSLA 032 | 071B1104 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1105 | 1 | ➡ | BFP 21 L3 | 071N0156[6] | + coil 110-120 V a.c.: 071N0061 | | |
| MSLA 032 | 071B1111 | 1 | ➡ | BFP 21 L3 | 071N0156[6] | | | |
| MSLA 032 | 071B1112 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1114 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1118 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1120 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7]) | | | |
| MSLA 032 | 071B1126 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1128 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1132 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | + coil 24 V a.c.: 071N0062 | | |
| MSLA 032 | 071B1134 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1136 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |
| MSLA 032 | 071B1138 | 2 | ➡ | BFP 21 L3 | 071N0156[6][7] | | | |

6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss MSLA/MSLB

| Danfoss oil pumps – older series | | | ➨ | Relevant Danfoss types | | | | |
|---|---|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** | | |
| MSLA 050 | 071B0201 | 1 | ➨ | BFP 21 R5 | 071N0173[2)] | | | |
| MSLA 050 | 071B0202 | 2 | ➨ | BFP 21 R5 | 071N0173 | | | |
| MSLA 050 | 071B0203 | 1 | ➨ | BFP 21 R5 | 071N0173[2)] | MSLA = 100 V a.c. | + coil 110-120 V a.c.: 071N0061 | |
| MSLA 050 | 071B0204 | 2 | ➨ | BFP 21 R5 | 071N0173 | | | |
| MSLA 050 | 071B0205 | 1 | ➨ | BFP 21 R5 | 071N0173[2)] | + coil 110-120 V a.c.: 071N0061 | | + cable, L = 710 mm, 071G0204 |
| MSLA 050 | 071B0208 | 2 | ➨ | BFP 21 R5 | 071N0173 | MSLA = 200 V a.c. | | |
| MSLA 050 | 071B1201 | 1 | ➨ | BFP 21 L5 | 071N0172[2)] | | | |
| MSLA 050 | 071B1202 | 2 | ➨ | BFP 21 L5 | 071N0172 | | | |
| MSLA 050 | 071B1203 | 1 | ➨ | BFP 21 L5 | 071N0172[2)] | MSLA = 100 V a.c. | + coil 110-120 V a.c.: 071N0061 | |
| MSLA 050 | 071B1204 | 2 | ➨ | BFP 21 L5 | 071N0172 | | | |
| MSLB 032 | 071B2101 | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | Please note:<br>If a BFP 20 is used on a gravity feed installation, a solenoid valve (if not existing) must be fitted in the nozzle line to ensure "shut off" on burner stop.<br><br>If a valve is not fitted, then use a BFP 21 and wire the pump's solenoid valve into the control box. | | |
| MSLB 032 | 071B3101 | 1 | ➨ | BFP 20 L3 | 071N0168[2)] | | | |
| MSLB 032 | 071B2102 | 2 | ➨ | BFP 20 R3 | 071N0169 | | | |
| MSLB 032 | 071B2104 | 2 | ➨ | BFP 20 R3 | 071N0169 | | | |
| MSLB 032 | 071B3102 | 2 | ➨ | BFP 20 L3 | 071N0168 | | | |
| MSLB 050 | 071B2201 | 1 | ➨ | BFP 20 R5 | 071N0129[2)] | | | |
| MSLB 050 | 071B3201 | 1 | ➨ | BFP 20 L5 | 071N0126[2)] | | | |
| MSLB 050 | 071B2202 | 2 | ➨ | BFP 20 R5 | 071N0129 | | | |
| MSLB 050 | 071B2203 | 1 | ➨ | BFP 20 R5 | 071N0129[2)] | | | |
| MSLB 050 | 071B3202 | 2 | ➨ | BFP 20 L5 | 071N0126 | | | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.

## Oil pumps – MSLC/MSLD

| Danfoss oil pumps – older series | | | ➨ | Relevant Danfoss types | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| MSLC 032 | 071B4101 | 1 | ➨ | BFP 21 R3 | 071N0157[1)] | |
| MSLC 032 | 071B5101 | 1 | ➨ | BFP 21 L3 | 071N0156[1)6)] | + cable, L = 710 mm: 071G0204 |
| MSLC 032 | 071B4102 | 2 | ➨ | BFP 21 R3 | 071N0157[1) 7)] | |
| MSLC 032 | 071B5102 | 2 | ➨ | BFP 21 L3 | 071N0156[1) 6)7)] | |
| MSLC 032 | 071B4103 | 1 | ➨ | BFP 21 R3 | 071N0157[1)] | |
| MSLC 032 | 071B4105 | 1 | ➨ | BFP 21 R3 | 071N0157[1)] | |
| MSLC 050 | 071B4201 | 1 | ➨ | BFP 21 R5 | 071N0173[1)2)] | + cable, L = 710 mm: 071G0204 |
| MSLC 050 | 071B5201 | 1 | ➨ | BFP 21 L5 | 071N0172[1)2)] | |
| MSLC 050 | 071B4202 | 2 | ➨ | BFP 21 R5 | 071N0173[1)] | |
| MSLC 050 | 071B5202 | 2 | ➨ | BFP 21 L5 | 071N0172[1)] | |
| MSLD 032 | 071B6101 | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| MSLD 032 | 071B6102 | 2 | ➨ | BFP 20 R3 | 071N0169 | |
| MSLD 032 | 071B7101 | 1 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| MSLD 032 | 071B7102 | 2 | ➨ | BFP 20 L3 | 071N0168 | |
| MSLD 032 | 071B6201 | 1 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| MSLD 050 | 071B6202 | 2 | ➨ | BFP 20 R5 | 071N0129 | |
| MSLD 050 | 071B7201 | 1 | ➨ | BFP 20 L5 | 071N0126[2)] | |
| MSLD 050 | 071B7202 | 2 | ➨ | BFP 20 L5 | 071N0126 | |

1) The solenoid coil must be connected in parallel with the burner motor.
2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss MS

| Danfoss oil pumps – older series | | | ➨ | Relevant Danfoss types | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Comments/accessories |
| MS 10 L3 | 071G0125 | 1 + 2 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| MS 10 R3 | 071G0123 | 1 + 2 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| MS 10 L3 | 071G0153 | 1 + 2 | ➨ | | No repl. | |
| MS 10 R3 | 071G0175 | 1 + 2 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| MS 10 R5 | 071G0176 | 1 + 2 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| MS 10 L5 | 071G0128 | 1 + 2 | ➨ | BFP 20 L5 | 071N0126[2)] | |
| MS 10 R5 | 071G0124 | 1 + 2 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| MS 11 L3 | 071G0117 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 11 R3 | 071G0118 | 1 + 2 | ➨ | BFP 21 R3 | 071N0157[7)] | |
| MS 11 L3 | 071G0121 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 11 L3 | 071G0134 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 11 L3 | 071G0137 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 11 L3 | 071G0139 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 11 L3 | 071G0154 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | + coupling with single flat in hole (D-shaped) |
| MS 11 L3 | 071G0156 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | + coil 24 V a.c.: 071N0062 |
| MS 11 L3 | 071G0158 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 11 R3 | 071G0160 | 1 + 2 | ➨ | BFP 21 R3 | 071N0157[7)] | + coil 24 V a.c.: 071N0062 |
| MS 11 L3 | 071G0162 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 11 L3 | 071G0163 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | + coil 24 V a.c.: 071N0062 |
| MS 11 L3 | 071G0165 | 1 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| MS 11 R3 | 071G0173 | 1 + 2 | ➨ | BFP 21 R3 | 071N0157[7)] | |
| MS 11 R5 | 071G0174 | 1 + 2 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| MS 11 R3 | 071G0177 | 1 + 2 | ➨ | BFP 21 R3 | 071N0157[7)] | |
| MS 11 L3 | 071G0178 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss MS

| Danfoss oil pumps – older series | | | ➨ | Relevant Danfoss types | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| MS 11 L3 | 071G0179 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | Any hydraulic cylinder must be connected to the pressure gauge port on the front. |
| MS 11 L5 | 071G0127 | 1 + 2 | ➨ | BFP 21 L5 | 071N0172[2)] | |
| MS 11 R5 | 071G0126 | 1 + 2 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| MS 12 L3 | 071G0115 | 1 + 2 | ➨ | BFP 53 L6 | 071N6213[2)] | MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar |
| MS 12 R3 | 071G0113 | 1 + 2 | ➨ | BFP 53 R6 | 071N6228[2)] | MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar |
| MS 12 L5 | 071G0116 | 1 + 2 | ➨ | BFP 53 L6 | 071N6213[2)] | MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar |
| MS 12 R5 | 071G0114 | 1 + 2 | ➨ | BFP 53 R6 | 071N6228[2)] | MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar |
| MS 12 L3 | 071G0161 | 1 + 2 | ➨ | BFP 53 L6 | 071N6213[2)] | MS 12: 24 l/h, BFP 53: 60 l/h at 10 bar |
| MS 12E L3 | 071G0130 | 1 + 2 | ➨ | BFP 52E L3 | 071N2201[2)] | |
| MS 12E R3 | 071G0129 | 1 + 2 | ➨ | BFP 52E R3 | 071N2203[2)] | |
| MS 12E L5 | 071G0120 | 1 + 2 | ➨ | BFP 52E L5 | 071N2202[2)] | |
| MS 12E R5 | 071G0119 | 1 + 2 | ➨ | BFP 52E R5 | 071N2204[2)] | |
| MS 12E L3 | 071G0140 | 1 + 2 | ➨ | BFP 52E L3 | 071N2201[2)] | |
| MS 12E L5 | 071G0181 | 1 + 2 | ➨ | BFP 52E L5 | 071N2202[2)] | |
| MS 21 L3 | 071G0157 | 1 + 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | |
| MS 21 R3 | 071G0167 | 1 + 2 | ➨ | BFP 21 R3 | 071N0157[7)] | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss BFP

| BFP | | | | BFP-Service pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | | Type | Code no. | Comments/accessories |
| BFP 11 L3 | 071N0101 | 2 | ➡ | BFP 11 L3 | 071N0141[3)] | |
| BFP 21 L3 | 071N0102 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| BFP 11 L3 | 071N0103 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| BFP 21 L3 | 071N0104 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| BFP 11 L5 | 071N0105 | 2 | ➡ | BFP 21 L5 | 071N0172 | |
| BFP 21 L3 | 071N0107 | 2 | ➡ | BFP 21 L3 | 071N0156[7)] | |
| BFP 20 L3 | 071N0108 | 1 | ➡ | BFP 20 L3 | 071N0168[2)] | |
| BFP 21 R3 | 071N0109 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | Any hydraulic cylinder must be connected to the pressure gauge port on the front. |
| BFP 21 L3 | 071N0111 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| BFP 21 R3 | 071N0112 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| BFP 21 L3 | 071N0113 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| BFP 11 L3 | 071N0114 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | + coupling with single flat hole (D-shaped) |
| BFP 31 L3 | 071N0115 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| BFP 21 L5 | 071N0116 | 2 | ➡ | BFP 21 L5 | 071N0172[2)] | Any hydraulic cylinder must be connected to the pressure gauge port on the front. |
| BFP 20 R3 | 071N0118 | 1 | ➡ | BFP 20 R3 | 071N0169[2)] | |
| BFP 21 L3 | 071N0119 | 2 | ➡ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 R5 | 071N0120 | 1 | ➡ | BFP 21 R5 | 071N0173[2)] | |
| BFP 21 L3 | 071N0122 | 1 | ➡ | BFP 21 L3 | 071N0156[6)] | |
| BFP 21 L3 | 071N0123 | 2 | ➡ | BFP 21 L3 | 071N0156[7)] | + coil 110 V: 071N0061 |
| BFP 20 L3 | 071N0125 | 2 | ➡ | BFP 20 L3 | 071N0168 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
3) A screw for 2-pipe operation is fitted under the cover of these pumps. Without horseshoe washer:
Pump set for 2-pipe operation. With horseshoe washer: pump set for 1-pipe operation (see page 54-55).
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss BFP

| BFP | | | ➨ | BFP-Service pumps | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| BFP 20 L5 | 071N0126 | 2 | ➨ | BFP 20 L5 | 071N0126 | |
| BFP 20 L3 | 071N0127 | 1 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| BFP 20 R3 | 071N0128 | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| BFP 20 R5 | 071N0129 | 2 | ➨ | BFP 20 R5 | 071N0129 | |
| BFP 21 L3 | 071N0130 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 L3 | 071N0132 | 1 | ➨ | BFP 21 L3 | 071N0156 | |
| BFP 31 L3 | 071N0133 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | + coupling with single flat in hole (D-shaped) |
| BFP 41 L3 | 071N0135 | 2 | ➨ | BFP 41 L3 | 071N1213[7)] | |
| BFP 21 R3 | 071N0136 | 1 | ➨ | BFP 21 R3 | 071N0157 | |
| BFP 41 R3 | 071N0137 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | |
| BFP 11 L3 | 071N0141[3)] | 1 | ➨ | BFP 11 L3 | 071N0141[3)] | |
| BFP 11 L3 | 071N0142[3)] | 1 | ➨ | BFP 11 L3 | 071N0141[3)] | |
| BFP 11 R3 | 071N0143[3)] | 1 | ➨ | BFP 11 R3 | 071N0155[3)] | |
| BFP 11 L3 | 071N0144[3)] | 2 | ➨ | BFP 11 L3 | 071N0141[3)] | |
| BFP 11 R3 | 071N0145[3)] | 2 | ➨ | BFP 11 R3 | 071N0155[3)] | |
| BFP 11 L3 | 071N0146[3)] | 2 | ➨ | BFP 11 L3 | 071N0141[3)] | Old coil might be usable |
| BFP 21 L3 | 071N0147 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 L3 | 071N0148 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 31 L3 | 071N0149 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 L3 | 071N0150 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 L3 | 071N0151 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 11 L3 | 071N0152[3)] | 2 | ➨ | BFP 11 L3 | 071N0141[3)] | |
| BFP 11 L3 | 071N0153[3)] | 2 | ➨ | BFP 11 L3 | 071N0141[3)] | + coil 24 V a.c.: 071N0062 |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
3) A screw for 2-pipe operation is fitted under the cover of these pumps. Without horseshoe washer:
Pump set for 2-pipe operation. With horseshoe washer: pump set for 1-pipe operation (see page 54-55).
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss BFP

| BFP | | | ➡ | BFP-Service pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➡ | Type | Code no. | Comments/accessories |
| BFP 21 R3 | 071N0154 | 1 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| BFP 11 R3 | 071N0155[3)] | 1 | ➡ | BFP 11 R3 | 071N0155[3)] | |
| BFP 21 L3 | 071N0156 | 1 | ➡ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 R3 | 071N0157 | 1 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| BFP 21 L5 | 071N0158 | 1 | ➡ | BFP 21 L5 | 071N0172[2)] | |
| BFP 21 R5 | 071N0159 | 1 | ➡ | BFP 21 R5 | 071N0173[2)] | |
| BFP 41 L3 | 071N0160 | 1 | ➡ | BFP 41 L3 | 071N1213[7)] | |
| BFP 20 L3 | 071N0161 | 1 | ➡ | BFP 20 L3 | 071N0168[2)] | |
| BFP 20 R3 | 071N0162 | 1 | ➡ | BFP 20 R3 | 071N0169[2)] | |
| BFP 11 R5 | 071N0163 | 2 | ➡ | BFP 21 R5 | 071N0173[2)] | |
| BFP 21 L3 | 071N0164 | 2 | ➡ | BFP 21 L3 | 071N0156[7)] | |
| BFP 11 R5 | 071N0165 | 2 | ➡ | BFP 21 R5 | 071N0173[2)] | |
| BFP 10 R5 | 071N0166 | 2 | ➡ | BFP 20 R5 | 071N0129 | |
| BFP 21 R3 | 071N0167 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| BFP 20 L3 | 071N0168 | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| BFP 20 R3 | 071N0169 | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| BFP 21 L3 | 071N0170 | 2 | ➡ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 R3 | 071N0171 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| BFP 21 L5 | 071N0172 | 2 | ➡ | BFP 21 L5 | 071N0172 | |
| BFP 21 R5 | 071N0173 | 2 | ➡ | BFP 21 R5 | 071N0173 | |
| BFP 41 L3 | 071N0174 | 2 | ➡ | BFP 41 L3 | 071N1213[7)] | |
| BFP 21 L3 | 071N0175 | 1 | ➡ | BFP 21 L3 | 071N0156 | |
| BFP 21 L3 | 071N0176 | 1 | ➡ | BFP 21 L3 | 071N0156 | + coil: 071N0061 |
| BFP 10 R3 | 071N0177 | 2 | ➡ | BFP 20 R3 | 071N0169 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss BFP

| BFP | | | | BFP-Service pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Comments/accessories |
| BFP 11 L5 | 071N0178 | 2 | ➨ | BFP 21 L5 | 071N0172 | |
| BFP 21 L3 | 071N0179 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 20 R5 | 071N0180 | 2 | ➨ | BFP 20 R5 | 071N0129 | |
| BFP 11 R3 | 071N0181 | 2 | ➨ | BFP 11 R3 | 071N0155[7)] | |
| BFP 21 L3 | 071N0182 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 11 R3 | 071N0183 | 2 | ➨ | BFP 11 R3 | 071N0155[7)] | |
| BFP 11 L3 | 071N0184 | 2 | ➨ | BFP 11 L3 | 071N0141[7)] | |
| BFP 11 R3 | 071N0183 | 2 | ➨ | BFP 11 R3 | 071N0155[7)] | |
| BFP 11 L3 | 071N0184 | 2 | ➨ | BFP 11 L3 | 071N0141[7)] | |
| BFP 21 L3 | 071N0185 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 41 L3 | 071N0188 | 2 | ➨ | BFP 41 L3 | 071N1213[7)] | |
| BFP 21 L3 | 071N0189 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | + coil: 071N0062 |
| BFP 31 L3 | 071N0190 | 2 | ➨ | BFP 11 L3 | 071N0141[7)] | |
| BFP 31 L3 | 071N0191 | 2 | ➨ | BFP 11 R3 | 071N0155[7)] | |
| BFP 31 L3 | 071N0192 | 1 | ➨ | BFP 11 L3 | 071N0141 | |
| BFP 21 L3 | 071N0193 | 1 | ➨ | BFP 21 L3 | 071N0156 | |
| BFP 21 L5 | 071N0194 | 1 | ➨ | BFP 21 L5 | 071N0172[2)] | |
| BFP 21 R5 | 071N0195 | 1 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| BFP 41 R3 | 071N0196 | 1 | ➨ | BFP 21 R3 | 071N0157[7)] | |
| BFP 21 L3 | 071N0197 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 R3 | 071N0198 | 1 | ➨ | BFP 21 R3 | 071N0157 | |
| BFP 21 L5 | 071N0202 | 2 | ➨ | BFP 21 L5 | 071N0172 | |
| BFP 21 L3 | 071N0204 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 21 R5 | 071N0207 | 2 | ➨ | BFP 21 R5 | 071N0173 | |
| BFP 21 R3 | 071N0208 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | |
| BFP 11 L3 | 071N0210[3)] | 1 | ➨ | BFP 11 L3 | 071N0141[1)] | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss BFP

| BFP | | | ➨ | Danfoss service pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Comments/accessories |
| BFP 20 L3 | 071N0212 | 2 | ➨ | BFP 20 L3 | 071N0168 | + coupling with single flat in hole (D-shaped) |
| BFP 11 L3 | 071N0213[3)] | 1 | ➨ | BFP 11 L3 | 071N0141 | |
| BFP 21 R3 | 071N0214 | 1 | ➨ | BFP 21 R3 | 071N0157 | |
| BFP 21 R3 | 071N0215 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | 071N0215 has G 1/8 in S+R |
| BFP 21 L3 | 071N0217 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 41 L3 | 071N0225 | 2 | ➨ | BFP 41 L3 | 071N1213[7)] | |
| BFP 21 L3 | 071N0228 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 20 R3 | 071N0229 | 2 | ➨ | BFP 20 R3 | 071N0169 | |
| BFP 21 R3 | 071N0231 | 1 | ➨ | BFP 21 R3 | 071N0157 | |
| BFP 41 R3 | 071N0235 | 2 | ➨ | BFP 41 R3 | 071N0137 | |
| BFPC 21 L5 | 071N0237 | 2 | ➨ | BFP 21 L5 | 071N0172 | |
| BFPC 21 L3 | 071N0238 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFPC 21 L3 | 071N0240 | 1 | ➨ | BFP 21 L3 | 071N0156 | |
| BFPC 21 L3 | 071N0241 | 1 | ➨ | BFP 21 L3 | 071N0156 | + 24 V a.c. coil 071N0062 |
| BFPC 21 L3 | 071N0242 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFPC 21 L3 | 071N0243 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | + 24 V a.c. coil 071N0062 |
| BFPC 21 R3 | 071N0245 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | |
| BFPC 21 R5 | 071N0248 | 2 | ➨ | BFP 21 R5 | 071N0173 | |
| BFP 20 L3 | 071N0267 | 2 | ➨ | BFP 20 L3 | 071N0168 | |
| BFP 11 L6 | 071N0270[3)] | 2 | ➨ | BFP 11 L6 | 071N0274[2)] | |
| BFP 11 R6 | 071N0271[3)] | 2 | ➨ | BFP 11 R6 | 071N0275[7)] | |
| BFP 10 L6 | 071N0272[3)] | 2 | ➨ | BFP 10 L6 | 071N0276[7)] | |
| BFP 10 R6 | 071N0273[3)] | 2 | ➨ | BFP 10 R6 | 071N0277[7)] | |
| BFP 11 L6 | 071N0274[3)] | 1 | ➨ | BFP 11 L6 | 071N0274 | |
| BFP 11 R6 | 071N0275[3)] | 1 | ➨ | BFP 11 R6 | 071N0275 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – BFP

| BFP | | | ➨ | Danfoss service pumps | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| BFPC 21 R3 | 071N0279 | 1 | ➨ | BFP 21 R3 | 071N0157 | + 24 V a.c. coil 071N0062 |
| BFPC 21 R3 | 071N0280 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | 071N0280/0157 are suitable for Kerosene |
| BFPC 21 R5 | 071N0281 | 2 | ➨ | BFP 21 R5 | 071N0173 | 071N0281 are suitable for Kerosene |
| BFPC 21 L3 | 071N0282 | 1 | ➨ | BFP 21 L3 | 071N0156 | Old coil might be usable |
| BFPC 21 R3 | 071N0283 | 1 | ➨ | BFP 21 R3 | 071N0157 | |
| BFPC 21 L3 | 071N0284 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | Old coil might be usable |
| BFPC 21 R3 | 071N0285 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | + 24 V a.c. coil 071N0062 |
| BFPC 21 R3 | 071N0286 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | + 24 V a.c. coil 071N0062<br>071N0286 and 071N0157 are suitable for Kerosene |
| BFPC 21 R3 | 071N0287 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | + 24 V a.c. coil 071N0062 |
| BFP 10 R3 | 071N0288 | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | 071N0288 are suitable for Kerosene |
| BFPC 21 L3 | 071N0289 | 1 | ➨ | BFP 21 L3 | 071N0156 | Old coil might be usable |
| BFP 21 L3 | 071N0295 | 2 | ➨ | BFP 21 L3 | 071N0156[7)] | |
| BFP 31 L3 | 071N1201 | 2 | ➨ | | No repl. | |
| BFP21 L3-LE | 071N2103 | 2 | ➨ | BFP 21 L3-LE | 071N2113 | |
| BFP21 L3-LE | 071N2104 | 2 | ➨ | BFP 21 L3-LE | 071N2113 | |
| BFP21 R3-LE | 071N2107 | 2 | ➨ | BFP 21 R3-LE | 071N2107 | |
| BFP31 L3-LE | 071N2109 | 2 | ➨ | BFP 21 L3-LE | 071N2113 | |
| BFP21 L3-LE | 071N2110 | 2 | ➨ | BFP 21 L3-LE | 071N2118 | |
| BFP21 L3-LE | 071N2113 | 2 | ➨ | BFP 21 L3-LE | 071N2113 | |
| BFP21 L3-LE | 071N2114 | 2 | ➨ | BFP 21 L3-LE | 071N2113 | |
| BFP21 L3-LE-S | 071N2116 | 2 | ➨ | BFP 21 L3-LE | 071N2118 | |
| BFP 52E L3 | 071N2201 | 2 | ➨ | BFP 52E-L3 | 071N2201 | |
| BFP 52E L5 | 071N2202 | 2 | ➨ | BFP 52E-L5 | 071N2202 | |
| BFP 52E R3 | 071N2203 | 2 | ➨ | BFP 52E R3 | 071N2203 | |
| BFP 52 L6 | 071N6206 | 2 | ➨ | BFP 52 L6 | 071N6206 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Danfoss BFP

| BFP | | | ➡ | Danfoss service pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➡ | Type | Code no. | Comments/accessories |
| BFP 52E R5 | 071N2204 | 2 | ➡ | BFP 52E R5 | 071N2204 | |
| BFP 52E L5 | 071N2205 | 2 | ➡ | BFP 52E L5 | 071N2202 | |
| BFP 52E R5 | 071N2206 | 2 | ➡ | BFP 52E R5 | 071N2204 | |
| BFP 52E L3 | 071N2211 | 2 | ➡ | BFP 52E L3 | 071N2201 | + coupling with single flat (D-shaped) |
| BFP 52E L5 | 071N2212 | 2 | ➡ | BFP 52E L5 | 071N2202 | + coupling with single flat (D-shaped) |
| BFP 52E L3 | 071N2213 | 2 | ➡ | BFP 52E L3 | 071N2201 | |
| BFP 52E L5 | 071N2217 | 1 | ➡ | BFP 52E L5 | 071N2202 | |
| BFP 52E L3 | 071N2264 | 2 | ➡ | BFP 52E L3 | 071N2201 | |
| BFP 52E L5 | 071N2265 | 2 | ➡ | BFP 52E L5 | 071N2202 | |
| BFP 11 L13 | 071N6101 | 2 | ➡ | BFP 11 L13 | 071N6101 | |
| BFP 11 R13 | 071N6102 | 2 | ➡ | BFP 11 R13 | 071N6102 | |
| BFP 10 L13 | 071N6103 | 2 | ➡ | BFP 10 L13 | 071N6103 | |
| BFP 10 R13 | 071N6104 | 2 | ➡ | BFP 10 R13 | 071N6104 | |
| BFP 11 L11 | 071N6105 | 2 | ➡ | BFP 11 L11 | 071N6105 | |
| BFP 11 R11 | 071N6106 | 2 | ➡ | BFP 11 R11 | 071N6106 | |
| BFP 10 L11 | 071N6107 | 2 | ➡ | BFP 10 L11 | 071N6107 | |
| BFP 10 R11 | 071N6108 | 2 | ➡ | BFP 10 R11 | 071N6108 | |
| BFP 11 L8 | 071N6109 | 2 | ➡ | BFP 11 L8 | 071N6109 | |
| BFP 11 R8 | 071N6110 | 2 | ➡ | BFP 11 R8 | 071N6110 | |
| BFP 10 L8 | 071N6111 | 2 | ➡ | BFP 10 L8 | 071N6111 | |
| BFP 10 R8 | 071N6112 | 2 | ➡ | BFP 10 R8 | 071N6112 | |
| BFP 12 L8 | 071N6201 | 2 | ➡ | BFP 12 L8 | 071N6201 | |
| BFP 12 L11 | 071N6202 | 2 | ➡ | BFP 12 L11 | 071N6202 | |
| BFP 12 L13 | 071N6203 | 2 | ➡ | BFP 12 L13 | 071N6203 | |
| BFP 51 L6 | 071N6204 | 2 | ➡ | BFP 51 L6 | 071N6204 | |
| BFP 51 L11 | 071N6205 | 2 | ➡ | BFP 51 L11 | 071N6205 | |

## Oil pumps – BFP

| BFP | | | ➡ | Danfoss Service pumps | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➡ | **Type** | **Code no.** | **Comments/accessories** |
| BFP 52 L8 | 071N6207 | 2 | ➡ | BFP 52 L8 | 071N6207 | |
| BFP 52 R8 | 071N6208 | 2 | ➡ | BFP 52 R8 | 071N6208 | |
| BFP 52 L11 | 071N6209 | 2 | ➡ | BFP 52 L11 | 071N6209 | |
| BFP 52 R11 | 071N6210 | 2 | ➡ | BFP 52 R11 | 071N6210 | |
| BFP 52 L13 | 071N6211 | 2 | ➡ | BFP 52 L13 | 071N6211 | |
| BFP 52 R13 | 071N6212 | 2 | ➡ | BFP 52 R 13 | 071N6212 | |
| BFP 53 L6 | 071N6213 | 2 | ➡ | BFP 53 L6 | 071N6213 | |
| BFP 12 R11 | 071N6214 | 2 | ➡ | BFP 12 R11 | 071N6214 | |
| BFP 53 L11 | 071N6216 | 2 | ➡ | BFP 53 L11 | 071N6216 | |
| BFP 12 L6 | 071N6217 | 2 | ➡ | BFP 12 L6 | 071N6217 | |
| BFP 12 R6 | 071N6218 | 2 | ➡ | BFP 12 R6 | 071N6218 | |
| BFP 12 R8 | 071N6219 | 2 | ➡ | BFP 12 R8 | 071N6219 | |
| BFP 12 R13 | 071N6220 | 2 | ➡ | BFP 12 R13 | 071N6220 | |
| BFP 51 R6 | 071N6221 | 2 | ➡ | BFP 51 R6 | 071N6221 | |
| BFP 51 L8 | 071N6222 | 2 | ➡ | BFP 51 L8 | 071N6222 | |
| BFP 51 R8 | 071N6223 | 2 | ➡ | BFP 51 R8 | 071N6223 | |
| BFP 51 R11 | 071N6224 | 2 | ➡ | BFP 51 R11 | 071N6224 | |
| BFP 51 L13 | 071N6225 | 2 | ➡ | BFP 51 L13 | 071N6225 | |
| BFP 51 R13 | 071N6226 | 2 | ➡ | BFP 51 R13 | 071N6226 | |
| BFP 52 R6 | 071N6227 | 2 | ➡ | BFP 52 R6 | 071N6227 | |
| BFP 53 R6 | 071N6228 | 2 | ➡ | BFP 53 R6 | 071N6228 | |
| BFP 53 L8 | 071N6229 | 2 | ➡ | BFP 53 L8 | 071N6229 | |
| BFP 53 R8 | 071N6230 | 2 | ➡ | BFP 53 R8 | 071N6230 | |
| BFP 53 R11 | 071N6231 | 2 | ➡ | BFP 53 R11 | 071N6231 | |
| BFP 53 L13 | 071N6232 | 2 | ➡ | BFP 53 L13 | 071N6232 | |
| BFP 53 R13 | 071N6233 | 2 | ➡ | BFP 53 R13 | 071N6233 | |

## Oil pumps – Suntec

| Suntec | | | ➡ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➡ | Type | Code no. | Comments/accessories |
| AN47A | 13261 P | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| AN47D | 13391 P | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| AN47C | 13421 P | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| AN47B | 13951 P | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| AN47A | 72163 P | 2 | ➡ | BFP 20 R3 | 071N0169 | + flange and bush Ø54: 071N0047 |
| AN47B | 72173 P | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| AN47C | 72183 P | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| AN47D | 72193 P | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| AN47A | 72263 P | 2 | ➡ | BFP 20 R3 | 071N0169 | + bush Ø54: 071B0011 |
| AN47B | 72273 P | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| AN47C | 72283 P | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| AN47D | 72293 P | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| AN47C | 72473 M | 1 | ➡ | BFP 20 L3 | 071N0168[2)] | + 071N0047, possible changeover to 1-pipe operation |
| AN47A | 72832 M | 1 | ➡ | BFP 20 R3 | 071N0169[2)] | |
| AN47A | 73263 P | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| AN47B | 73273 P | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| AN47C | 73283 P | 2 | ➡ | BFP 20 L3 | 071N0168 | |
| AN47A | 73443 P | 2 | ➡ | BFP 20 R3 | 071N0169 | |
| AN57B | 13301 P | 2 | ➡ | BFP 20 R5 | 071N0129 | |
| AN57A | 72433 P | 2 | ➡ | BFP 20 R5 | 071N0129 | + flange and bush Ø54: 071N0047 |
| AN57C | 72823 P | 2 | ➡ | BFP 20 L5 | 071N0126 | |
| AN57C | 7882 3E6 | 2 | ➡ | BFP 10 L6 | 071N0276 | |
| AN67B | 13351 P | 2 | ➡ | BFP 20 R5 | 071N0129 | Suntec: 80 l/h, BFP: 40 l/h at 10 bar |
| AN67C | 13361 P | 2 | ➡ | BFP 10 L8 | 071N6111 | |
| AN67D | 13571 P | 2 | ➡ | BFP 20 L5 | 071N0126 | Suntec: 80 l/h, BFP: 40 l/h at 10 bar |
| AN67C | 13381 P | 2 | ➡ | BFP 10 L8 | 071N6111 | + flange and bush Ø54: 071N0047 |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Suntec

| Suntec | | | ➡ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➡ | **Type** | **Code no.** | **Comments/accessories** |
| AN67C | 84102 E1 | 2 | ➡ | BFP 10 L8 | 071N6111[2)] | + flange and bush ∅54: 071N0047 |
| AN67C | 72333 P | 2 | ➡ | BFP 10 L8 | 070L6111[2)] | |
| AN67A | 72383 P | 2 | ➡ | BFP 10 R8 | 071N6112 | |
| AN67C | 72423 P | 2 | ➡ | BFP 10 L8 | 070N6111 | |
| AN67B | 72513 P | 2 | ➡ | RSA 40 | 070-3240[2)] | + flange: 070-0211 |
| AN67D | 72523 P | 2 | ➡ | BFP 20 L5 | 071N0126[2)] | + flange and bush: 071N0047<br>Suntec: 80 l/h, BFP: 40 l/h at 12 bar |
| AN67B | 73353 P | 2 | ➡ | BFP 20 R5 | 071N0129[2)] | Suntec: 80 l/h, BFP: 40 l/h at 12 bar |
| AN67A | 73453 P | 2 | ➡ | BFP 10 R8 | 071N6112 | |
| AN77C | 72752 P | 2 | | BFP 11 L11 | 071N6105[3)] | |
| AN97C | 94212E1 | 2 | | BFP 10 L11 | 07106107[3)] | |
| AN77A | 72752L1 | | | BFP 10R11 | 071N6108[3)] | |
| AN97A | 94122E1 | | | BFP 10 R13 | 071N6104[3)] | |
| AL35B | 95202 P0200 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | + 24 V a.c. coil: 071N0062 |
| AL35B | 95202 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AL35C | 95212 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AL35C | 95242 M0500 | 1 | ➡ | BFP 21 L3 | 071N0156[6)] | |
| AL35A | 95262 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AL35C | 95282 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AL35D | 95292 P0200 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | + 24 V a.c. coil: 071N0062 |
| AL35C | 95402 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | Suntec: G 1/8 in S+R |
| AL35C | 95652 M0500 | 1 | ➡ | BFP 21 L3 | 071N0156[6)] | |
| AL35A | 95702 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AL35C | 95782 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Suntec

| Suntec | | | ➡ | Danfoss Oil pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➡ | Type | Code no. | Comments/accessories |
| AL35B | 95802 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AL35C | 95402 P0500R | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AL55B | 95312 P0500 | 2 | ➡ | BFP 21 R5 | 071N0173 | |
| AL65C | - | 2 | ➡ | BFP 11 L8 | 071N6109 | + flange and bush ∅54: 071N0047 |
| AL95C | - | 2 | ➡ | BFP 11 L13 | 071N6101 | |
| ALE 35C | 93242 P0500 | 2 | ➡ | BFP 21 L3-LE | 071N2119 | |
| AS47A | 15361 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AS47B | 15371 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AS47C | 15381 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 15391 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 15501 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47B | 15511 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AS47C | 15541 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 15571 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | + coupling with single flat in hole (D-shaped) |
| AS47D | 15621 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 15681 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47C | 15691 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 15721 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 15801 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47A | 74323 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AS47C | 74343 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | + flange and bush ∅54: 071N0047 |
| AS47D | 74353 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47A | 74363 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AS47C | 74383 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 74393 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | + bush ∅54: 071B0011 |

6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Suntec

| Suntec | | | ➡ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➡ | **Type** | **Code no.** | **Comments/accessories** |
| AS47C | 74443 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47B | 74453 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | + flange and bush Ø54: 071N0047 |
| AS47C | 74513 M0500 | 1 | ➡ | BFP 21 L3 | 071N0156[6)] | |
| AS47C | 74613 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | + flange and bush Ø54: 071N0047 |
| AS47C | 75543 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47D | 75623 P0500 | 2 | ➡ | BFP 21 L3 | 071N0156[6)7)] | |
| AS47A | 75643 P0500 | 2 | ➡ | BFP 21 R3 | 071N0157[7)] | |
| AS57C | 15441 P0500 | 2 | ➡ | BFP 21 L5 | 071N0172[2)7)] | |
| AS57C | 74413 P0500 | 2 | ➡ | BFP 21 L5 | 071N0172[2)] | + flange and bush Ø54: 071N0047 |
| AS57B | 74423 P0500 | 2 | ➡ | BFP 21 R5 | 071N0173[2)] | |
| AS57C | 75443 P0500 | 2 | ➡ | BFP 21 L5 | 071N0172[2)] | |
| AS67C | - | | ➡ | BFP 11 L8 | 071N6109 | |
| AE47C | 13601 P | 2 | ➡ | BFP 20 L5 | 071N0126[2)] | |
| AE47C | 13701 M | 1 | ➡ | BFP 20 L5 | 071N0126[2)] | Possible changeover to 1-pipe operation<br>Suntec: $^1/_8$ NPTF in nozzle outlet |
| AE47B | 13661 P | 2 | ➡ | BFP 20 R5 | 071N0129 | |
| AE47D | 13781 M | 1 | ➡ | BFP 20 L5 | 071N0126[2)] | Possible changeover to 1-pipe operation |
| AE47A | 13841 M | 1 | ➡ | BFP 20 R5 | 071N0129[2)] | |
| AE47D | 13851 P | 2 | ➡ | BFP 20 L5 | 071N0126 | |
| AE47C | 13861 P | 2 | ➡ | BFP 20 L5 | 071N0126 | |
| AE47C | 13871 P | 2 | ➡ | BFP 20 L5 | 071N0126 | |
| AE47B | 72673 P | 2 | ➡ | BFP 20 R5 | 071N0129 | + flange and bush Ø54: 071B0011 |
| AE47C | 72743 M | 1 | ➡ | BFP 20 L5 | 071N0126[2)] | + flange and bush Ø54: 071N0047,<br>Possible changeover to 1-pipe operation |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Suntec

| Suntec | | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Comments/accessories |
| AE47C | 73683 P | 2 | ➨ | BFP 20 L5 | 071N0126 | |
| AE57B | 13641 M | 1 | ➨ | BFP 20 R5 | 071N0129[2)] | Possible changeover to 1-pipe operation |
| AE57C | 73733 P | 2 | ➨ | BFP 20 L5 | 071N0126 | |
| AE67D | 72783 P | 2 | ➨ | BFP 20 L5 | 071N0126 | + flange: 071N0047<br>Suntec: 80 l/h, BFP: 40 l/h at 12 $ba_r$ |
| AE67C | 73613 P | 2 | ➨ | BFP 10 L6 | 071N0276 | |
| AE77C | 72702 P | 2 | ➨ | BFP 10 L8 | 071N6111 | + flange and bush ∅54: 071N0047 |
| AE77C | 73802 P | 2 | ➨ | BFP 10 L8 | 071N6111 | |
| AE97C | 73902 P | 2 | ➨ | BFP 10 L11 | 071N6107 | |
| AP47A | 75553 P0500 | 2 | ➨ | | No repl. | Suntec: nozzle outlet to the right |
| AP47C | 75563 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | |
| AP47B | 75613 P0500 | 2 | ➨ | BFP 51 R6 | 071N6221 | |
| AP47C | 74603 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | + flange and bush ∅54: 071N0047 |
| AP57C | 74433 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | |
| AP57C | 75453 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | |
| AP57A | 75493 P0500 | 2 | ➨ | | No repl. | Suntec: nozzle outlet to the right |
| AP67C | 74583 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | + flange and bush ∅54: 071N0047 |
| AP67C | 75593 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | |
| AP245C | 95541 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | |
| AP245C | 95601 P0500 | 2 | ➨ | BFP 51 L6 | 071N6204 | |
| AP255C | - | 2 | ➨ | BFP 51 L6 | 071N6204 | + flange and bush ∅54: 071N0047 |
| AP275C | - | 2 | ➨ | BFP 51 L8 | 071N6222 | |
| AP265C | 95111 P0500 | 2 | ➨ | BFP 51 L8 | 071N6222 | |
| AP295C | - | 2 | ➨ | BFP 51 L11 | 071N6205 | + flange and bush ∅54: 071N0047 |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Suntec

| Suntec | | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Comments/accessories** |
| AP345C | 95101 P0500 | 2 | ➨ | BFP 53 L6 | 071N6213[4)] | |
| AT245C | 95412 P0500 | 2 | ➨ | BFP 52E L5 | 071N2202 | |
| AT245D | 95442 P0500 | 2 | ➨ | | No repl. | |
| AT245A | 95472 P0500 | 2 | ➨ | | No repl. | Suntec: Nozzle outlet to the right |
| AT245D | 95482 M0500 | 1 | ➨ | | No repl. | |
| AT255C | 95492 P0500 | 2 | ➨ | BFP 52 L6 | 071N6206 | |
| AT255A | 95522 P0500 | 2 | ➨ | | No repl. | Suntec: Nozzle outlet to the right |
| AT265C | 95562 P0500 | 2 | ➨ | BFP 52 L8 | 071N6207 | |
| AT275C | 95832 P0500 | 2 | ➨ | BFP 52 L11 | 071N6209 | |
| AT355D | 95642 P0500 | 2 | ➨ | | No repl. | Suntec: Nozzle outlet to the right |
| AT355C | 9550 | 2 | ➨ | BFP 53 L6 | 071N6213 | |
| A2L95D | 9702 2P 0500 | 2 | ➨ | BFP 12 L13 | 071N6203 | |

4) The pump NC valve must be connected in parallel to the NC valve in nozzle line.

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 1.1 L5 L64W | UNI-E 2.1 L1 L64 | ➨ | BFP 20 L3 | 071N0168[2)] | Eckerle: G 1/8 in S+R |
| UNI 1.2 L1 L64-50 | UNI 2.12 L1 L64 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 1.2 L5 L14 | UNI 2.12 L1 L14 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 1.2 L5 L64-M1 | UNI-E 2.1 L1 L64-21 | ➨ | BFP 21 L3 | 071N0156[6)] | Eckerle: G 1/8 in S+R |
| UNI 1.2 L5 L64-50 | UNI 2.12 L1 L64 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 1.2 L5 M14-50 | UNI 2.12 L1 M14 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 1.2 L5 M64-50-W | UNI 2.12 L1 M64-65 | ➨ | BFP 21 L3 | 071N0156[6)] | Eckerle: G 1/8 in S+R |
| UNI 1.2 L62 M14-01-W | UNI 2.12 L6 M14-65 | ➨ | BFP 11 L8 | 071N6109 | |
| UNI 1.2 L62 L14W | | ➨ | BFP 21 L5 | 071N0172[2)] | Eckerle: max. 75 l/h, BFP: max 40 l/h at 12 bar |
| UNI 1.42 L5 A64-W | UNI 2.42 L5 L64-65 | ➨ | BFP 52E L5 | 071N2202[2)] | |
| UNI 1.42 L5 L64W | | ➨ | BFP 52E L5 | 071N2202[2)] | Eckerle: G 1/8 in S+R |
| UNI 1.42 L6 L64W | | ➨ | BFP 52 L8 | 071N6207[2)] | |
| UNI 1.72 L62 L14-W | UNI 2.17 L6 M14-65 | ➨ | BFP 10 L8 | 071N6111[2)] | |
| UNI 2.1 L1 L40 | UNI-E 2.1 L1 L10 (-22,-30) | ➨ | BFP 20 L3 | 071N0168[2)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.1 L1 L44 | UNI-E 2.1 L1 L14 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| UNI 2.1 L1 L44H | UNI-E 2.1 L14 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| UNI 2.1 R1 L40 | UNI-E 2.1 R1 L10 | ➨ | BFP 20 R3 | 071N0169[2)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.1 R1 L44-21 | UNI-E 2.1 R1 L14 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| UNI 2.1 L5 L40-21 | UNI-E 2.1 L5 L10 | ➨ | BFP 20 L5 | 071N0126[2)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.1 L5 L42 | UNI-E 2.1 L5 L12 | ➨ | BFP 20 L5 | 071N0126[2)] | + coupling with single flat + 071B0011 |
| UNI 2.1 L5 L44 | UNI-E 2.1 L5 L14 (-13) | ➨ | BFP 20 L5 | 071N0126[2)] | |
| UNI 2.1 L5 L50 | UNI-E 2.1 L5 L10 | ➨ | BFP 20 L5 | 071N0126[2)] | Eckerle: 10-25 bar, BFP max. 20 bar<br>+ coupling with single flat in hole (D-shaped) |
| UNI 2.1 L5 R44 | UNI-E 2.1 L5 R14 (-13) | ➨ | BFP 20 L5 | 071N0126[2)] | |
| UNI 2.1 L5 R94 | UNI-E 2.1 L5 R74 | ➨ | BFP 20 L5 | 071N0126[2)] | Eckerle: G 1/8 in S+R |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss Oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 2.1 R5 L42-UI-21 | UNI-E 2.1 R5 L12-80 | ➨ | BFP 20 R5 | 071N0129[2)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.1 R5 L43-UI-21 | UNI-E 2.1 R5 L13-80 | ➨ | BFP 20 R5 | 071N0129[2)] | + flange: 071N0047 |
| UNI 2.1 R5 L43 | | ➨ | BFP 20 R5 | 071N0129[2)] | |
| UNI 2.1 R5 L44 | UNI-E 2.1 R5 L14 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| UNI 2.1 R5 L54 | UNI-E 2.1 R5 L24 | ➨ | BFP 20 R5 | 071N0129[2)] | Eckerle: max 25 bar |
| UNI 2.1 R5 R42 | | ➨ | BFP 20 R5 | 071N0129[2)] | |
| UNI 2.1 R5 R44 | UNI-E 2.1 R5 R14 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| UNI 2.1 R5 R45-21 | UNI-E 2.1 R5 R15 | ➨ | BFP 20 R5 | 071N0129[2)] | + bush: 071B0011 |
| | UNI-E 2.1 R5 R60 | ➨ | BFP 20 R5 | 071N0129[2)] | G 1/8 in S+R + coupling with single flat in hole |
| UNI 2.1 R5 R80 | UNI-E 2.1 R5 R40 | ➨ | BFP 20 R5 | 071N0129[2)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.1 L6 L54 | UNI-E 2.1 L6 L24 | ➨ | BFP 10 L8 | 071N6111[2)] | |
| UNI 2.1 L6 L54-06 | UNI-E 2.1 L6 L24 | ➨ | BFP 10 L8 | 071N6111[2)] | |
| UNI 2.1 R6 L25 | UNI-E 2.1 R6 L25 | ➨ | RSA 40 | 070-3240 | |
| UNI 2.1 R6 R54 | UNI-E 2.1 R6 L24 | ➨ | BFP 20 R5 | 071N0129 | Eckerle: 75 l/h, BFP: 40 l/h at 10 bar |
| UNI 2.1 L7 L55 | UNI-E 2.1 L7 L15 | ➨ | BFP 10 L13 | 071N6103 | |
| UNI 2.1 L7 L55-05 | UNI-E 2.1 L7 L25 | ➨ | BFP 10 L13 | 071N6103 | + bush 071B0011 |
| UNI 2.1 R7 L55 | UNI-E 2.1 R7 L15 | ➨ | BFP 10 R13 | 071N6104[2)] | |
| UNI 2.1 G22 L1 L10/L40 | UNI-E 2.1 G22 | ➨ | BFP 20 L3 | 071N0168[2)] | + coupling with single flat in hole (D-shaped) |
| | UNI-E 2.1 L1 L64 (-21) | ➨ | BFP 20 L3 | 071N0168[2)] | G 1/8 in S+R |
| | UNI-E 2.1 L5 R74 | ➨ | BFP 20 L5 | 071N0172[2)] | |
| UNI 2.1 G41-21 L1 L10 | UNI-E 2.1 G41 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| | UNI-E 2.1 G41-13 | ➨ | BFP 20 L3 | 071N0168[2)] | + coupling with single flat in hole (D-shaped) |
| | UNI- E 2.2 L1 L10 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 2.2 L1 L14 | UNI-E 2.2 L1 L14 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 2.2 L1 L16W | UNI-E 2.2 L1 L16-10 | ➨ | BFP 21 L3 | 071N0156[6)] | + flange: 071N0047 |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss Oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 2.2 L1 L44 | UNI-E 2.2 L1 L14 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 2.2 L1 R14 | UNI-E 2.2 L1 R14-12 | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 2.2 R1 L40 | UNI-E 2.2 R1 L10 | ➨ | BFP 21 R3 | 071N0157 | + coupling with single flat in hole (D-shaped) |
| UNI 2.2 R1 M14 | UNI-E 2.2 R1 M14 | ➨ | BFP 21 R3 | 071N0157 | |
| UNI 2.2 R1 R24 | UNI-E 2.2 R1 R24 | ➨ | BFP 21 R3 | 071N0157 | Eckerle: max 25 bar |
| | UNI-E 2.2 R1 S14 | ➨ | BFP 21 R3 | 071N0157 | |
| UNI 2.2 L5 L14 | UNI-E 2.2 L5 L14-92 | ➨ | BFP 21 L5 | 071N0172[2)] | Eckerle: G 1/8 in S+R<br>Eckerle: 10-25 bar, BFP: max. 20 bar |
| UNI 2.2 L5 L15-21-05 | UNI-E 2.2 L5 L15 | ➨ | BFP 21 L5 | 071N0172[2)] | + bush: 071B0011 |
| UNI 2.2 L5 L40-X | UNI-E 2.2 L5 L10-50 | ➨ | BFP 21 L5 | 071N0172[2)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.2 L5 L42 | UNI-E 2.2 L5 L12 | ➨ | BFP 21 L5 | 071N0172[2)] | + bush: 071B0011<br>+ coupling with single flat in hole (D-shaped) |
| UNI 2.2 L5 L60 | | ➨ | BFP 21 L5 | 071N0172[2)] | + coupling with single flat in hole (D-shaped) |
| | UNI-E 2.2 L5 L60 | ➨ | BFP 21 L5 | 071N0172[2)] | Eckerle: G 1/8 in S+R<br>+ coupling with single flat in hole (D-shaped) |
| UNI 2.2 L5 L62 | | ➨ | BFP 21 L5 | 071N0172[2)] | |
| UNI 2.2 L5 M14-C1 | UNI.E 2.2 L5 M14-12 | ➨ | BFP 21 L5 | 071N0172[2)] | |
| UNI 2.2 L5 S20 | UNI-E 2.2 L5 S20 | ➨ | BFP 21 L5 | 071N0172[2)] | Eckerle: 10-25 bar, BFP: max. 20 bar<br>+ coupling with single flat in hole (D-shaped) |
| UNI 2.2 L5 S20-21-BUD | UNI-E 2.2 L5 S20 BUD | ➨ | BFP 21 L5 | 071N0172[2)] | Eckerle: max 25 bar, BFP: max. 20 bar<br>+ coupling with single flat in hole (D-shaped) |
| UNI 2.2 L5 S74 | UNI-E 2.2 L5 L14 | ➨ | BFP 21 L5 | 071N0172[2)] | Eckerle: 10-25 bar, BFP: max. 20 bar<br>+ coupling with single flat in hole (D-shaped) |
| | UNI-E 2.2 L5 S74 | ➨ | BFP 21 L5 | 071N0172[2)] | G 1/8 in S+R. Eckerle: max 25 bar |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss Oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 2.2 R5 L14 | UNI-E 2.2 R5 L14 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| | UNI-E 22 R5 M14 | ➨ | BFP 21 R5 | 071N0173[2] | |
| UNI 2.2 R5 M45 | UNI-E 2.2 R5 M15 | ➨ | BFP 21 R5 | 071N0173[2)] | + bush: 071B0011 |
| UNI 2.2 R5 R14 | UNI-E 2.2 R5 R14 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| UNI 2.2 R5 R60-21 | UNI-E 2.2 R5 R60 | ➨ | BFP 21 R5 | 071N0173[2)] | Eckerle: G 1/8 in S+R |
| UNI 2.2 R5 R80B | UNI-E 2.2 R5 R60 | ➨ | BFP 21 R5 | 071N0173[2)] | + coupling with single flat in hole (D-shaped) |
| | UNI-E 2.2 R5 S14 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| UNI 2.2 R5 S60 | UNI-E 2.2 R5 S60 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| | UNI-E 2.2 L6 L14 | ➨ | BFP 11 L8 | 071N6109[2)] | |
| UNI 2.2 L6 L16W | UNI-E 2.2 L6 L16-10 | ➨ | BFP 11 L8 | 071N6109[2)] | + flange and bush ∅54: 071N0047 |
| UNI 2.2 L6 L24 | UNI-E 2.2 L6 L24 | ➨ | BFP 11 L8 | 071N6109[2)] | |
| | UNI-E 2.2 L6 LR14-81 | ➨ | BFP 21 L5 | 071N0172[2)] | Eckerle: 75 l/h, BFP: 40 l/h at 12 bar |
| UNI 2.2 R6 M24 | UNI-E 2.2 R6 M24 | ➨ | BFP 21 R5 | 071N0173[2)] | |
| UNI 2.2 R6 S24-ET | UNI-E 2.2 R6 S24 (-40) | ➨ | BFP 11 R8 | 071N6110[2)] | |
| UNI 2.2 R6 S24 ET(R1) | UNI-E 2.2 R6 S24-40 | ➨ | BFP 11 R8 | 071N6110[2)] | |
| UNI 2.2 L7 L26 | | ➨ | BFP 11 L11 | 071N6105[2)] | + flange and bush ∅54: 071N0047 |
| UNI 2.2 L7 L24 | | ➨ | BFP 11 L11 | 071N6105[2)] | |
| | UNI-E 2.2 L7 L28 | ➨ | BFP 11 L11 | 071N6105[2)] | |
| | UNI-E 2.2 L7 LR14-61 | ➨ | BFP 11 R11 | 071N6106[2)] | BFP only nozzle outlet to the right |
| UNI 2.2 R7 L24-05 | UNI-E 2.2 R7 L24 | ➨ | | No repl. | Eckerle: nozzle outlet to the left |
| UNI 2.2 R7 R 24-R1(-ET) | UNI-E 2.2 R7 R24-40 | ➨ | BFP 11 R11 | 071N6106[4)] | |
| UNI 2.2 R7 R54-5 (-ET) | UNI-E 2.2 R7 R24 | ➨ | BFP 11 R11 | 071N6106[4)] | |
| UNI 2.2 R7 R56-H-ET | UNI-E 2.2 R7 R24 | ➨ | BFP 11 R11 | 071N6106[2)] | |
| UNI 2.3 L1 L56 (W-1-05) | UNI-E 2.3 L1 L26-80 | ➨ | BFP 20 L3 | 071N0168[2)] | Eckerle: 10-25 bar<br>BFP: max. 20 bar + flange: 071N0047 |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 2.3 L1 R54 | UNI-E 2.3 L1 R24-13 | ➨ | BFP 20 L3 | 071N0168[2)] | Eckerle: 10-25 bar, BFP: max 20 bar |
| UNI 2.3 L5 L54 | UNI-E 2.3 L5 L24-13 | ➨ | BFP 20 L5 | 071N0126[2)] | |
| UNI 2.3 L5 L56-I (W-06) | UNI-E 2.3 L5 L26-80 | ➨ | BFP 20 L5 | 071N0126[2)] | Eckerle: 10-25 bar, BFP: max 20 bar + flange: 071N0047 |
| | UNI-E 2.3 L5 L64 | ➨ | BFP 20 L5 | 071N0126[2)] | Eckerle: G 1/8 in S+R |
| UNI 2.3 L5 R54-S | UNI-E 2.3 L5 R24-13 | ➨ | BFP 20 L5 | 071N0126[2)] | Eckerle: max 25 bar, BFP: max 20 bar |
| UNI 2.3 R5 L54-05 | UNI-E 2.3 R5 L24 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| | UNI-E 2.3 R5 R24-13 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| UNI 2.3 R5 R54 | | ➨ | BFP 20 R5 | 071N0129[2)] | Eckerle: 10-25 bar, BFP: max 20 bar |
| UNI 2.3 R5 R64-I | UNI-E 2.3 R5 R24-93 | ➨ | BFP 20 R5 | 071N0129[2)] | Eckerle: max 25 bar, BFP: max 20 bar |
| UNI 2.3 R6 L55-05 | UNI-E 2.3 R6 L25 | ➨ | BFP 20 R5 | 071N0129[2)] | + bush 071B0011 |
| UNI 2.4 L1 M10-VO | UNI-E 2.4 L1 M10-22 | ➨ | BFP 52E L3 | 071N2201[2)4)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.4 L1 M14-C1 | UNI-E 2.4 L1 M14-12 | ➨ | BFP 52E L3 | 071N2201[2)4)] | |
| UNI 2.4 L1 R14-C | | ➨ | | No repl. | Righthand nozzle outlet on Eckerle |
| UNI 2.4 L1 R14-V1-21 | UNI-E 2.4 L1 R14-12 | ➨ | | No repl. | |
| UNI 2.4 L1 R44 | UNI-E 2.4 L1 R14 | ➨ | | No repl. | |
| | UNI-E 2.4 L5 L20 | ➨ | BFP 52E L5 | 071N2202[2)4)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.4 L5 L24 | UNI-E 2.4 L5 L24 | ➨ | BFP 52E L5 | 071N2202[2)4)] | |
| | UNI-E 2.4 L5 M20 | ➨ | BFP 52E L5 | 071N2202[2)4)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.4 L5 M24 | | ➨ | BFP 52E L5 | 071N2202[2)4)] | |
| UNI 2.4 L5 M20-21 | UNI-E 2.4 L5 M20 | ➨ | BFP 52E L5 | 071N2202[2)4)] | + coupling with single flat in hole (D-shaped) |
| UNI 2.4 L5 R24 | | ➨ | | No repl. | Righthand nozzle outlet on Eckerle |
| UNI 2.4 L5 R24 | | ➨ | | No repl. | |
| UNI 2.4 L5 S24 | UNI-E 2.4 L5 S24 | ➨ | | No repl. | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
4) The pump NC valve must be connected in parallel to the NC valve in nozzle line.

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 2.4 R5 L24 | | ➨ | BFP 52E R5 | 071N2204[4)] | |
| UNI 2.4 R5 L24-05 | UNI-E 2.4 R5 L24 | ➨ | BFP 52E R5 | 071N2204[4)] | |
| UNI 2.4 R5 R24 | UNI-E 2.4 R5 R24 | ➨ | | No repl. | Righthand nozzle outlet on Eckerle |
| UNI 2.4 R5 S70 | | ➨ | | No repl. | |
| UNI 2.4 R5 S70-ET | UNI-E 2.4 R5 S70 | ➨ | | No repl. | |
| UNI 2.4 R5 5 L24 | UNI-E 2.4 R5.5 L24 | ➨ | BFP 51 R6 | 071N6221[2)] | |
| UNI 2.4 L6 L22 | UNI-E 2.4 L6 L22 | ➨ | BFP 51 L8 | 071N6222[2)] | + coupling with single flat in hole (D-shaped)<br>+ bush: 071B0011 |
| UNI 2.4 L6 L24 | | ➨ | BFP 51 L8 | 071N6222[2)] | |
| UNI 2.4 L6 L24-05 | UNI-E 2.4 L6 L24 | ➨ | BFP 51 L8 | 071N6222[2)] | |
| UNI 2.4 L6 M24-C1 | UNI-E 2.4 L6 M24-12 | ➨ | BFP 51 L8 | 071N6222[2)] | |
| UNI 2.4 R6 S24 | | ➨ | | No repl. | Righthand nozzle outlet on Eckerle |
| UNI 2.4 R6 S24 ET | UNI-E 2.4 R6 S24 | ➨ | | No repl. | |
| UNI 2.4 L7 L23 | UNI-E 2.4 L7 L22 | ➨ | BFP 51 L11 | 071N6205[2)] | + bush: 071B0011<br>+ coupling with single flat in hole (D-shaped) |
| UNI 2.4 L7 L24 | | ➨ | BFP 51 L11 | 071N6205[2)] | |
| UNI 2.4 L7 L24-05 | UNI-E 2.4 L7 L24 | ➨ | BFP 51 L11 | 071N6205[2)] | |
| UNI 2.4 L7 L25-K | UNI-E 2.4 L7 L25-20 | ➨ | BFP 51 L11 | 071N6205[2)] | + bush: ∅ 54: 071B0011 |
| UNI 2.4 L7 L26 | | ➨ | BFP 51 L11 | 071N6205[2)] | + flange and bush: 071N0047 |
| UNI 2.4 L7 L58 | UNI-E 2.4 L7 L26 (-05) | ➨ | BFP 51 L11 | 071N6205 | |
| UNI 2.4 L7 M26 | UNI-E 2.4 L7 M25 | ➨ | BFP 51 L11 | 071N6205 | + bush ∅ 54: 071N0011 |
| UNI 2.4 R7 R54-06 | UNI-E 2.4 R7 R24 | ➨ | | No repl. | Righthand nozzle outlet on Eckerle |
| UNI 2.42 R5 R70-ET | UNI-E 2.42 R5 R70 | ➨ | | No repl. | |
| | UNI-E 2.42 L5 L64-65 | ➨ | BFP 52E L5 | 071N2202 | Eckerle: G $^{1}/_{8}$ in S+R |
| | UNI-E 2.6 L5 L14 | ➨ | BFP 20 L5 | 071N0126[2)] | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
4) The pump NC valve must be connected in parallel to the NC valve in nozzle line.

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 2.6 L5 L44 | | ➨ | BFP 20 L5 | 071N0126[2)] | Possible changeover to 1-pipe operation |
| | UNI-E 2.6 L6 L14 | ➨ | BFP 10 L6 | 071N0276 | |
| UNI 2.6 L6 L44 | UNI-E 2.6 L6 L14 | ➨ | BFP 10 L6 | 071N0276 | |
| UNI 2.6 Stage 6 | | ➨ | | No repl. | |
| UNI 2.6 Stage 7 | | ➨ | | No repl. | |
| UNI 2.7 L5 L44 | | ➨ | BFP 20 L5 | 071N0126[2)] | |
| UNI 2.7 R5 R44 | UNI-E 2.7 R5 R14 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| UNI 2.8 L5 L16 | | ➨ | BFP 21 L5 | 071N0172[2)] | BFP without remote setting + flange: 071N0047 |
| UNI 2.91 L5 L44 | UNI-E 2.91 L5 L14 | ➨ | | No repl. | |
| UNI 2.91 L7 L44-05 | UNI-E 2.91 L7 L14 | ➨ | | No repl. | |
| UNI 2.91 R7 L44 | UNI-E 2.91 R7 L14 | ➨ | | No repl. | |
| UNI 2.93 L1 R44 | UNI-E 2.93 L1 R14 | ➨ | | No repl. | |
| UNI 2.96 L5 L44-05 | UNI-E 2.96 L5 L14 | ➨ | | No repl. | |
| UNI 2.96 L7 L44 | UNI-E 2.96 L7 L14 | ➨ | | No repl. | |
| UNI 2.10 L7 L56-S-W | UNI-E 2.10 L7 L26-11 | ➨ | RSA 60 | 070L3362 | |
| UNI 2.10 L7 L56-W1-05 | UNI-E 2.10 L7 L26-11 | ➨ | RSA 60 | 070L3362 | + flange: 070-0211 |
| UNI 2.10 L8 L56-S-W | UNI-E 2.10 L8 L26-11 | ➨ | RSA 95 | 070L3482 | |
| UNI 2.10 L8 L56-W1-05 | UNI-E 2.10 L8 L26-11 | ➨ | RSA 95 | 070L3482 | + flange: 070-0211 |
| UNI 2.12 L1 L14 | | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 2.12 L1 L64 | | ➨ | BFP 21 L3 | 071N0156[6)] | Eckerle: G $^1/_8$ in S+R |
| UNI 2.12 L1 M14 | | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 2.12 L1 M64 | | ➨ | BFP 21 L3 | 071N0156[6)] | Eckerle: G $^1/_8$ in S+R |
| UNI 2.12 L1 M64-65 | | ➨ | BFP 21 L3 | 071N0156[6)] | |
| UNI 2.12 L6 M14 | | ➨ | BFP 11 L8 | 071N6109[2)] | |
| UNI 2.12 L6 M14-65 | | ➨ | BFP 11 L8 | 071N6109[2)] | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132

## Oil pumps – Eckerle

| Eckerle | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|
| Old designation | New designation | ➨ | Type | Code no. | Comments/accessories |
| UNI 2.13 L8 L56-S | UNI-E 2.13 L8 L26-11 | ➨ | | No repl. | |
| UNI 2.17 L6 M14-65 | | ➨ | | No repl. | |
| UNI 2.20 11L7 L26-W-01 | UNI-E 2.20 L7 L26 | ➨ | | No repl. | Eckerle: $^{7}/_{16}$" shaft; BFP: no NC-valve |
| BPC | BPC-40 1.1 LL 11 | ➨ | BFP 20 L3 | 071N0168 | |
| BPC | BPC-40 1.1 LL 21 | ➨ | BFP 20 L3 | 071N0168 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 1.1 LR 11 | ➨ | BFP 20 L3 | 071N0168 | |
| BPC | BPC-40 1.1 LR 21 | ➨ | BFP 20 L3 | 071N0168 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 1.1 RL 11 | ➨ | BFP 20 R3 | 071N0169 | |
| BPC | BPC-40 1.1 RL 21 | ➨ | BFP 20 R3 | 071N0169 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 1.1 RR 11 | ➨ | BFP 20 R3 | 071N0169 | |
| BPC | BPC-40 1.1 RR 21 | ➨ | BFP 20 R3 | 071N0169 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 1.1 RR 11(+) | ➨ | BFP 20 R3 | 071N0169 | + flange and bush ∅54: 071N0047 |
| BPC | BPC-40 2.1 LL 11 | ➨ | BFP 21 L3 | 071N0156 | |
| BPC | BPC-40 2.1 LL 21 | ➨ | BFP 21 L3 | 071N0156 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 2.1 RL 11 | ➨ | BFP 21 R3 | 071N0157 | |
| BPC | BPC-40 2.1 RR 11 | ➨ | BFP 21 R3 | 071N0157 | |
| BPC | BPC-40 2.1 RR 21 | ➨ | BFP 21 R3 | 071N0157 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 2.1 LL 11(+) | ➨ | BFP 21 L3 | 071N0156 | + flange and bush ∅54: 071N0047 |
| BPC | BPC-40 2.1 LR 11 | ➨ | BFP 21 L3 | 071N0156 | |
| BPC | BPC-40 2.1 LR 21 | ➨ | BFP 21 L3 | 071N0156 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 2.1 RL 21 | ➨ | BFP 21 R3 | 071N0157 | Eckerle: G $^{1}/_{8}$ in S+R |
| BPC | BPC-40 2.3 LL 11 | ➨ | BFP 52E L3 | 071N2201[1] | |
| BPC | BPC-40 2.3 LR 11 | ➨ | | No repl. | Righthand nozzle outlet on Eckerle |
| BPC | BPC-40 2.3 RL 11 | ➨ | BFP 52E R3 | 071N2203[1)] | |
| BPC | BPC-40 2.3 RR 21 | ➨ | | No repl. | Righthand nozzle outlet on Eckerle |

1) The solenoid coil must be connected in parallel with the burner motor.

## Oil pumps – Delta

| Delta | | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Remarks/accessories |
| V | V1LR2 4 (or 5) | 2 | ➨ | BFP 20 L3 | 071N0168 | |
| V | V1LR1 4 (or 5) | 1 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| V | V1LL2 4 (or 5) | 2 | ➨ | BFP 20 L3 | 071N0168 | |
| V | V1LL1 4 (or 5) | 1 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| V | V1RL2 4 (or 5) | 2 | ➨ | BFP 20 R3 | 071N0169 | |
| V | V1RL1 4 (or 5) | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| V | V1RR2 4 (or 5) | 2 | ➨ | BFP 20 R3 | 071N0169 | |
| V | V1RR1 4 (or 5) | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| V | V2LR2 4 (or 5) | 2 | ➨ | BFP 10 L6 | 071N0276[7)] | |
| V | V2LR1 4 (or 5) | 1 | ➨ | BFP 10 L6 | 071N0276 | |
| V | V2LL2 4 (or 5) | 2 | ➨ | BFP 20 L5 | 071N0126 | Delta: 57 l/h; BFP: 40 l/h at 10 bar |
| V | V2LL1 4 (or 5) | 1 | ➨ | BFP 20 L5 | 071N0126[2)] | |
| V | V2RL2 4 (or 5) | 2 | ➨ | BFP 10 R6 | 071N0277[7)] | |
| V | V2RL1 4 (or 5) | 1 | ➨ | BFP 10 R6 | 071N0277 | |
| V | V2RR2 4 (or 5) | 2 | ➨ | BFP 20 R5 | 071N0129 | Delta: 57 l/h; BFP: 40 l/h at 10 bar |
| V | V2RR1 4 (or 5) | 1 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| VU | VU3LR 1 4 (or 5) | 1 | ➨ | BFP 10 L8 | 071N6111[2)] | |
| VU | VU3LR 2 4 (or 5) | 2 | ➨ | BFP 10 L8 | 071N6111 | |
| VU | VU3RL 1 4 (or 5) | 1 | ➨ | BFP 10 R8 | 071N6112 | |
| VU | VU3RL 2 4 (or 5) | 2 | ➨ | BFP 10 R8 | 071N6112 | |
| VU | VU4LR 1 4 (or 5) | 1 | ➨ | BFP 10 L11 | 071N6107 | |
| VU | VU4LR 2 4 (or 5) | 2 | ➨ | BFP 10 L11 | 071N6107 | |
| VU | VU4RL 1 4 (or 5) | 1 | ➨ | BFP 10 R11 | 071N6108 | |
| VU | VU4RL 2 4 (or 5)) | 2 | ➨ | BFP 10 R11 | 071N6108 | |
| VU | VU5LR 1 4 (or 5) | 1 | ➨ | BFP 10 L11 | 071N6107 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Delta

| Delta | | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Remarks/accessories |
| VU | VU5LR 2 4 (or 5) | 2 | ➨ | BFP 10 L11 | 071N6107 | |
| VU | VU5RL1 4 (or 5) | 1 | ➨ | BFP 10 R11 | 071N6108[2)] | |
| VU | VU5RL2 4 (or 5) | 2 | ➨ | BFP 10 R11 | 071N6108 | |
| VD | VD1LR2 4 (or 5) | 2 | ➨ | BFP 20 L3 | 071N0168 | |
| VD | VD1LR 1 4 (or 5) | 1 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| VD | VD1LL 2 4 (or 5) | 2 | ➨ | BFP 20 L3 | 071N0168 | |
| VD | VD1LL 1 4 (or 5) | 1 | ➨ | BFP 20 L3 | 071N0168[2)] | |
| VD | VD1RL 2 4 (or 5) | 2 | ➨ | BFP 20 R3 | 071N0169 | |
| VD | VD1RL 1 4 (or 5) | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| VD | VD1RR 2 4 (or 5) | 2 | ➨ | BFP 20 R3 | 071N0169 | |
| VD | VD1RR 1 4 (or 5) | 1 | ➨ | BFP 20 R3 | 071N0169[2)] | |
| VD | VD2LR 2 4 (or 5) | 2 | ➨ | BFP 10 L6 | 071N0276[7)] | |
| VD | VD2LR 1 4 (or 5) | 1 | ➨ | BFP 10 L6 | 071N0276 | |
| VD | VD2LL 2 4 (or 5) | 2 | ➨ | BFP 20 L5 | 071N0126[2)] | Delta: 57 l/h; BFP: 40 l/h at 10 bar |
| VD | VD2LL 1 4 (or 5) | 1 | ➨ | BFP 20 L5 | 071N0126[2)] | |
| VD | VD2RL 2 4 (or 5) | 2 | ➨ | BFP 10 R6 | 071N0277[7)] | |
| VD | VD2RL 1 4 (or 5) | 1 | ➨ | BFP 10 R6 | 071N0277 | |
| VD | VD2RR 2 4 (or 5) | 2 | ➨ | BFP 20 R5 | 071N0129 | Delta: 57 l/h; BFP: 40 l/h at 10 bar |
| VD | VD2RR 1 4 (or 5) | 1 | ➨ | BFP 20 R5 | 071N0129[2)] | |
| VD | VD3LR 1 4 (or 5) | 1 | ➨ | BFP 10 L8 | 071N6111[2)] | |
| VD | VD3LR 2 4 (or 5) | 2 | ➨ | BFP 10 L8 | 071N6111 | |
| VD | VD3RL 1 4 (or 5) | 1 | ➨ | BFP 10 R8 | 071N6112[2)] | |
| VD | VD3RL 2 4 (or 5) | 2 | ➨ | BFP 10 R8 | 071N6112 | |
| VD | VD4LR 1 4 (or 5) | 1 | ➨ | BFP 10 L11 | 071N6107[2)] | |
| VD | VD4LR 2 4 (or 5) | 2 | ➨ | BFP 10 L11 | 071N6107 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Delta

| Delta | | | ➨ | Danfoss oil pumps | | | |
|---|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Remarks | |
| VD | VD4RL1 4 (or 5) | 1 | ➨ | BFP 10 R11 | 071N6108[2)] | | F84-220: Indicates coil with loose cable and for 220 V, 50 Hz. If using other voltages the following must be ordered extra: Coil no. 071N0061 for 110/120 V a.c. or Coil no. 071N0062 for 24 V a.c. |
| VD | VD4RL2 4 (or 5) | 2 | ➨ | BFP 10 R11 | 071N6108 | | |
| VM | VM1LR2 4 (or 5) F84-220 | 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | | |
| VM | VM1LR1 4 (or 5) F84-220 | 1 | ➨ | BFP 21 L3 | 071N0156[6)] | | |
| VM | VM1LL2 4 (or 5) F84-220 | 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | | |
| VM | VM1LL1 4 (or 5) F84-220 | 1 | ➨ | BFP 21 L3 | 071N0156[6)] | | |
| VM | VM1RL2 4 (or 5) F84-220 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | | |
| VM | VM1RL1 4 (or 5) F84-220 | 1 | ➨ | BFP 21 R3 | 071N0157 | | |
| VM | VD1RR2 4 (or 5) F84-220 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | | |
| VM | VM1RR1 4 (or 5) F84-220 | 1 | ➨ | BFP 21 R3 | 071N0157 | | |
| VM | VM2LR2 4 (or 5) F84-220 | 2 | ➨ | BFP 11 L6 | 071N0274[7)] | | |
| VM | VM2LR1 4 (or 5) F84-220 | 1 | ➨ | BFP 11 L6 | 071N0274 | | |
| VM | VM2LL2 4 (or 5) F84-220 | 2 | ➨ | BFP 21 L5 | 071N0172 | Delta: 57 l/h; BFP: 40 l/h at 10 bar | |
| VM | VM2LL1 4 (or 5) F84-220 | 1 | ➨ | BFP 21 L5 | 071N0172[2)] | | |
| VM | VM2RL2 4 (or 5) F84-220 | 2 | ➨ | BFP 11 R6 | 071N0275[7)] | | |
| VM | VM2RL1 4 (or 5) F84-220 | 1 | ➨ | BFP 11 R6 | 071N0275 | | |
| VM | VM2RR2 4 (or 5) F84-220 | 2 | ➨ | BFP 21 R5 | 071N0173 | Delta: 57 l/h; BFP: 40 l/h at 10 bar | |
| VM | VM2RR1 4 (or 5) F84-220 | 1 | ➨ | BFP 21 R5 | 071N0173[2)] | | |
| VM | VM3LR1 4 (or 5) F84-220 | 1 | ➨ | BFP 11 L8 | 071N6109[2)] | | |
| VM | VM3LR2 4 (or 5) F84-220 | 2 | ➨ | BFP 11 L8 | 071N6109 | | |
| VM | VM3RL1 4 (or 5) F84-220 | 1 | ➨ | BFP 11 R8 | 071N6110[2)] | | |
| VM | VM3RL2 4 (or 5) F84-220 | 2 | ➨ | BFP 11 R8 | 071N6110 | | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Delta

| Delta | | | ➨ | Aktuelle Danfoss Typen | | | |
|---|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Remarks** | |
| VM | VM1LR2 4 (or 5) M8-220 | 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | | M8-220: Indicates coil with fixed cable and for 220 V, 50 Hz. Generally the following cable should be ordered here: Cable no. 071G0200 L = 500 mm, or Cable no. 071G0204 L = 710 mm Cable no. 071G0202 L = 280 mm If using other voltages the following must be ordered extra (only for BFP21): Coil no. 071N0061 for 110/120 V a.c. or Coil no. 071N0062 for 24 V a.c. |
| VM | VM1LR1 4 (or 5) M8-220 | 1 | ➨ | BFP 21 L3 | 071N0156[6)] | | |
| VM | VM1LL2 4 (or 5) M8-220 | 2 | ➨ | BFP 21 L3 | 071N0156[6)7)] | | |
| VM | VM1LL1 4 (or 5) M8-220 | 1 | ➨ | BFP 21 L3 | 071N0156[6)] | | |
| VM | VM1RL2 4 (or 5) M8-220 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | | |
| VM | VM1RL1 4 (or 5) M8-220 | 1 | ➨ | BFP 21 R3 | 071N0157 | | |
| VM | VD1RR2 4 (or 5) M8-220 | 2 | ➨ | BFP 21 R3 | 071N0157[7)] | | |
| VM | VM1RR1 4 (or 5) M8-220 | 1 | ➨ | BFP 21 R3 | 071N0157 | | |
| VM | VM2LR2 4 (or 5) M8-220 | 2 | ➨ | BFP 11 L6 | 071N0274[7)] | | |
| VM | VM2LR1 4 (or 5) M8-220 | 1 | ➨ | BFP 11 L6 | 071N0274 | | |
| VM | VM2LL2 4 (or 5) M8-220 | 2 | ➨ | BFP 21 L5 | 071N0172 | Delta: 57 l/h, BFP: 40 l/h at 10 bar | |
| VM | VM2LL1 4 (or 5) M8-220 | 1 | ➨ | BFP 21 L5 | 071N0172[2)] | | |
| VM | VM2RL2 4 (or 5) M8-220 | 2 | ➨ | BFP 11 R6 | 071N0275[7)] | | |
| VM | VM2RL1 4 (or 5) M8-220 | 1 | ➨ | BFP 11 R6 | 071N0275 | | |
| VM | VM2RR2 4 (or 5) M8-220 | 2 | ➨ | BFP 21 R5 | 071N0173 | Delta: 57 l/h, BFP: 40 l/h at 10 bar | |
| VM | VM2RR1 4 (or 5) M8-220 | 1 | ➨ | BFP 21 R5 | 071N0173[2)] | | |
| VM | VM3LR1 4 (or 5) M8-220 | 1 | ➨ | BFP 11 L8 | 071N6109[7)] | | |
| VM | VM3LR2 4 (or 5) M8-220 | 2 | ➨ | BFP 11 L8 | 071N6109 | | |
| VM | VM3RL1 4 (or 5) M8-220 | 1 | ➨ | BFP 11 R8 | 071N6110[7)] | | |
| VM | VM3RL2 4 (or 5) M8-220 | 2 | ➨ | BFP 11 R8 | 071N6110 | | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
6) If the pump is wanted delivered incl. cable, bush and flange, please order 071N0132
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

## Oil pumps – Delta

| Delta | | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| Type | Code no. | 1-2 pipe | ➨ | Type | Code no. | Remarks |
| VMK | VMK1LR2 4-6 / F84-220 | 2 | ➨ | BFP 52E L3 | 071N02201[4)] | F84-220: Indicates coil with loose cable and for 220 V, 50Hz. BFP 52E/51 are not delivered for other voltages. *No replace: Delta has nozzles outlet to the right |
| VMK | VMK1LR1 4-6 / F84-220 | 1 | ➨ | BFP 52E L3 | 071N02201[4)7)] | |
| VMK | VMK1LL2 4-6 / F84-220 | 2 | ➨ | | No repl.* | |
| VMK | VMK1LL1 4-6 / F84-220 | 1 | ➨ | | No repl.* | |
| VMK | VMK1RL2 4-6 / F84-220 | 2 | ➨ | | No repl.* | |
| VMK | VMK1RL1 4-6 / F84-220 | 1 | ➨ | | No repl.* | |
| VMK | VMK1RR2 4-6 / F84-220 | 2 | ➨ | BFP 52E R3 | 071N2203[4)] | |
| VMK | VMK1RR1 4-6 / F84-220 | 1 | ➨ | BFP 52E R3 | 071N2203[2)4)] | |
| VMK | VMK2LR2 4-6 / F84-220 | 2 | ➨ | BFP 51 L6 | 071N6204 | |
| VMK | VMK2LR1 4-6 / F84-220 | 1 | ➨ | BFP 51 L6 | 071N6204[2)] | |
| VMK | VMK2LL2 4-6 / F84-220 | 2 | ➨ | | No repl.* | |
| VMK | VMK2LL1 4-6 / F84-220 | 1 | ➨ | | No repl.* | |
| VMK | VMK2RL2 4-6 / F84-220 | 2 | ➨ | | No repl.* | |
| VMK | VMK2RL1 4-6 / F84-220 | 1 | ➨ | | No rep. | |
| VMK | VMK2RR2 4-6 / F84-220 | 2 | ➨ | BFP 51 R6 | 071N6221 | |
| VMK | VMK2RR1 4-6 / F84-220 | 1 | ➨ | BFP 51 R6 | 071N6221[2)] | |
| VMK | VMK3LR1 4 (or 5) M8-220 | 1 | ➨ | BFP 51 L8 | 071N6222[2)] | |
| VMK | VMK3LR2 4 (odr 5) M8-220 | 2 | ➨ | BFP 51 L8 | 071N6222 | |
| VMK | VMK3RR1 4 (or 5) M8-220 | 1 | ➨ | BFP 51 R8 | 071N6223[2)] | |
| VMK | VMK3RR2 4 (oder 5) M8-220 | 2 | ➨ | BFP 51 R8 | 071N6223 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
4) The pump NC valve must be connected in parallel with the burner motor.
7) This pump is delivered for 1-pipe operation. A changeover of the pump to 2-pipe operation is possible, see details on pages 54-55.

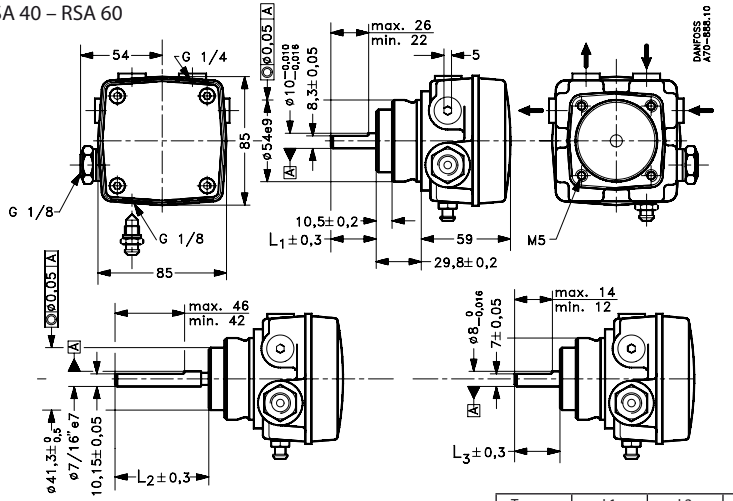
## Oil pumps – Delta

| Delta | | | ➨ | Danfoss oil pumps | | |
|---|---|---|---|---|---|---|
| **Type** | **Code no.** | **1-2 pipe** | ➨ | **Type** | **Code no.** | **Remarks** |
| VMK | VMK1LR2 4-6 / M8-220 | 2 | ➨ | BFP 52E L3 | 071N02201[4)] | M8-220: |
| VMK | VMK1LR1 4-6 / M8-220 | 1 | ➨ | BFP 52E L3 | 071N02201[2)4)] | Indicates coil with fixed cable and for 220 V, 50 Hz. |
| VMK | VMK1LL2 4-6 / M8-220 | 2 | ➨ | | No repl.* | |
| VMK | VMK1LL1 4-6 / M8-220 | 1 | ➨ | | No repl.* | Generally the following cable should be ordered here: |
| VMK | VMK1RL2 4-6 / M8-220 | 2 | ➨ | | No repl.* | |
| VMK | VMK1RL1 4-6 / M8-220 | 1 | ➨ | | No repl.* | For NC: |
| VMK | VMK1RR2 4-6 / M8-220 | 2 | ➨ | BFP 52E R3 | 071N2203[4)] | Cable no. 071G0200 L = 500 mm, or |
| VMK | VMK1RR1 4-6 / M8-220 | 1 | ➨ | BFP 52E R3 | 071N2203[2)4)] | Cable no. 071G0202 L = 280 mm, or |
| VMK | VMK2LR2 4-6 / M8-220 | 2 | ➨ | BFP 51 L6 | 071N6204 | Cable no. 071G0204 L = 710 mm VMK |
| VMK2LR1 | 4-6 / M8-220 | 1 | ➨ | BFP 51 L6 | 071N6204 | For NO: |
| VMK | VMK2LL2 4-6 / M8-220 | 2 | ➨ | | No repl.* | Cable no. 071G0201 L = 500 mm, or |
| VMK | VMK2LL1 4-6 / M8-220 | 1 | ➨ | | No repl.* | Cable no. 071G0203 L = 280 mm, or |
| VMK | VMK2RL2 4-6 / M8-220 | 2 | ➨ | | No repl.* | Cable no. 071G0205 L = 710 mm |
| VMK | VMK2RL1 4-6 / M8-220 | 1 | ➨ | | No repl.* | BFP 52E/51 are not delivered for |
| VMK | VMK2RR2 4-6 / M8-220 | 2 | ➨ | BFP 51 R6 | 071N6221 | other voltages. |
| VMK | VMK2RR1 4-6 / M8-220 | 1 | ➨ | BFP 51 R6 | 071N6221[2)] | *No replace: Delta has nozzle outlet to the right |
| VMK | VMK3LR1 4 (or 5) M8-220 | 1 | ➨ | BFP 51 L8 | 071N6222[2)] | |
| VMK | VMK3LR2 4 (or 5) M8-220 | 2 | ➨ | BFP 51 L8 | 071N6222 | |
| VMK | VMK3RR1 4 (or 5) M8-220 | 1 | ➨ | BFP 51 R8 | 071N6223[2)] | |
| VMK | VMK3RR2 4 (or 5) M8-220 | 2 | ➨ | BFP 51 R8 | 071N6223 | |

2) This pump is delivered for 2-pipe operation. A changeover of the pump to 1-pipe operation is possible, see details on pages 54-55.
4) The pump NC valve must be connected in parallel with the burner motor.

## Dimensions – RSA

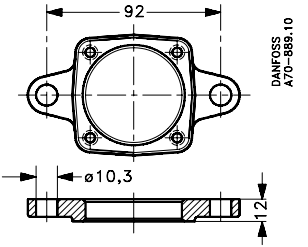
RSA 28 – RSA 40 – RSA 60




| Type | L1 | L2 | L3 |
|---|---|---|---|
| RSA 28 | 30.0 | 62.0 | 11.4 |
| RSA 40 | 28.8 | 60.8 | 10.2 |
| RSA 60 | 26.8 | 58.8 | – |

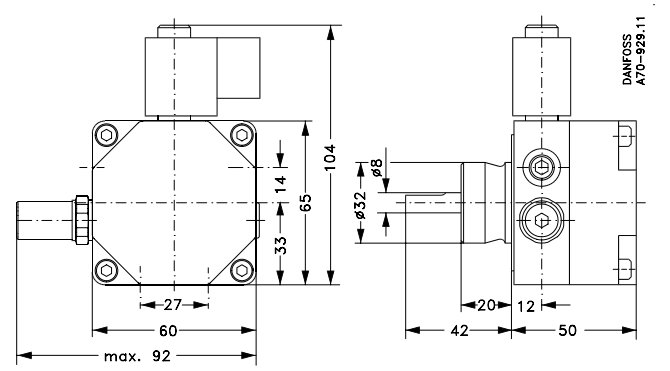
G 1/4 = R 1/4 =1/4RG =1/4 in BSPF

RSA 28 – RSA 40 – RSA 60
Flange 070-0211



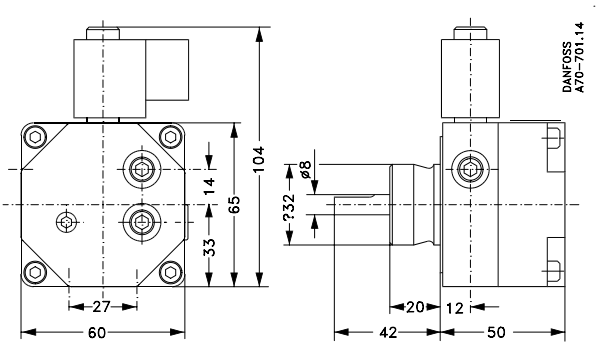
## Dimensions – BFP 10/11

Type 3, 5, 6



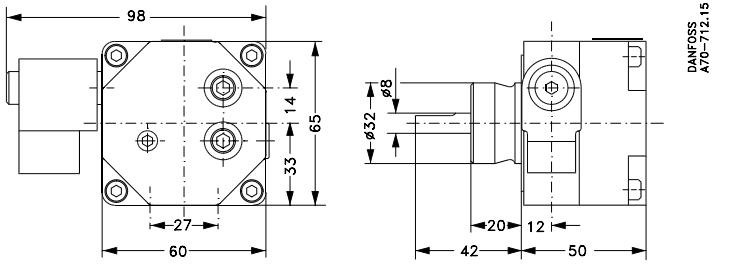
## Dimensions – BFP 20/21

Type 3 and 5



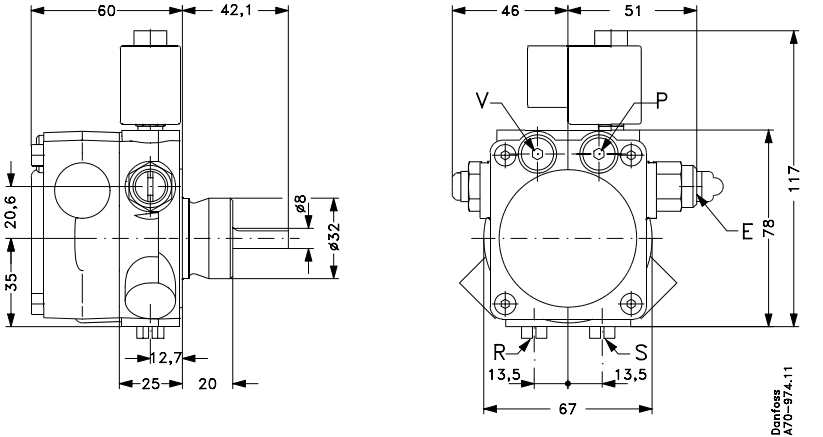
## Dimensions – BFP 41

Type 3 and 5



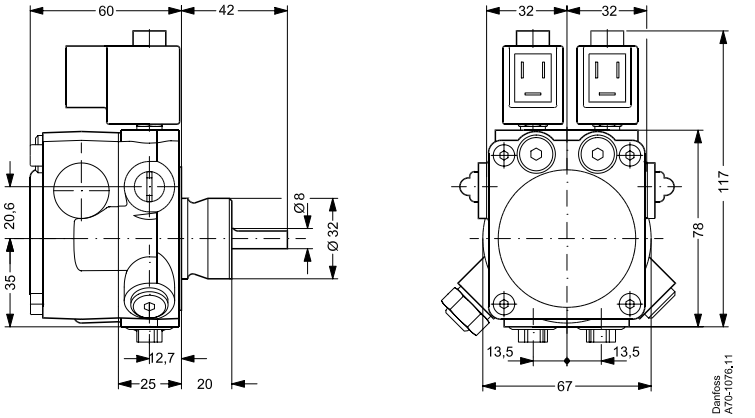
## Dimensions – BFP 10/11

Type 8, 11 and 13



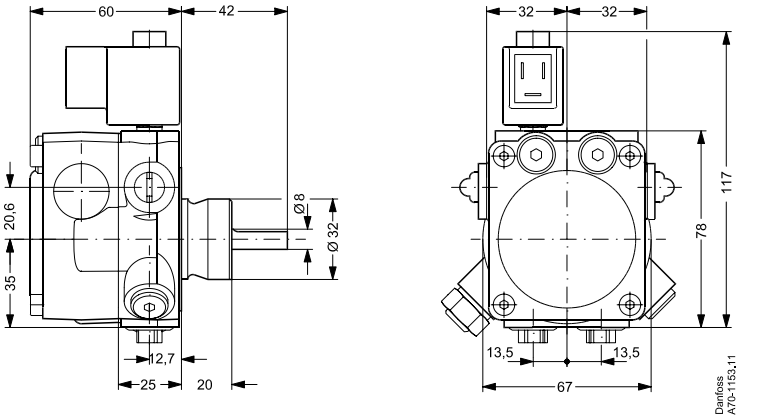
## Dimensions – BFP 12

Type 8, 11 and 13



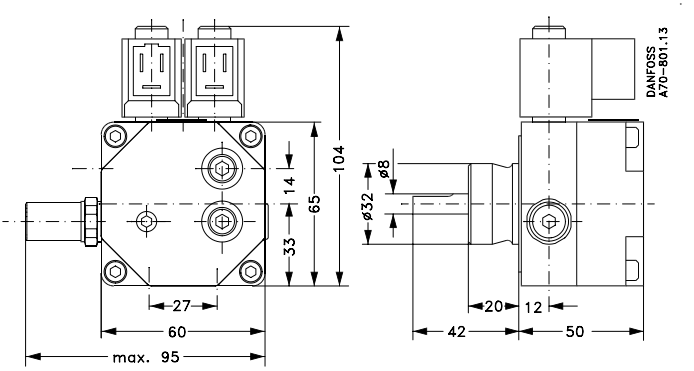
## Dimensions – BFP 51

Type 6, 8, 11 and 13



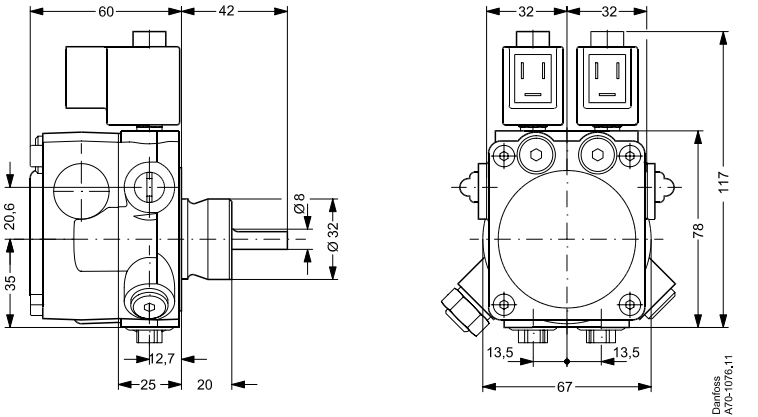
## Dimensions – BFP 52 E

Type 3 and 5



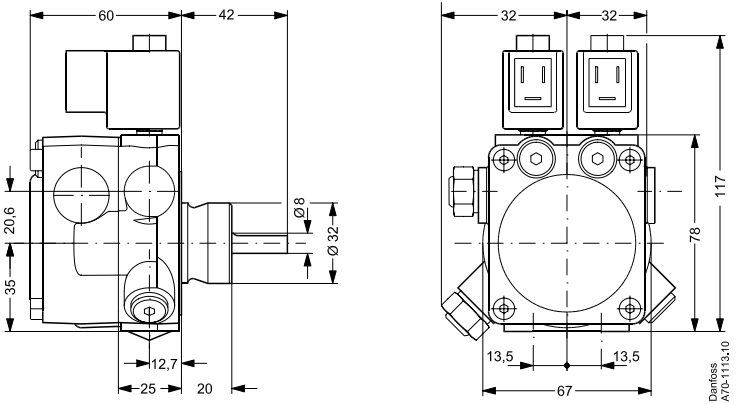
## Dimensions – BFP 52

Type 6, 8, 11 and 13

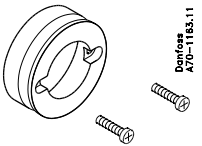


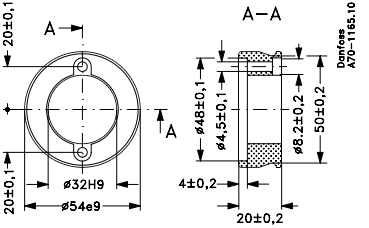
## Dimensions – BFP 53

Type 6, 8, 11 and 13

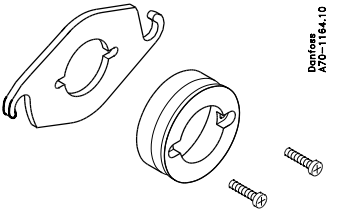


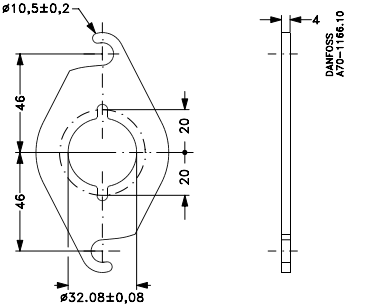
Screws and bush
Code no. 071B0011



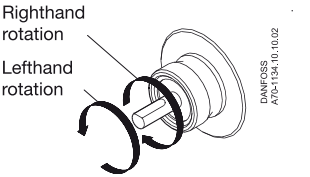

Screws, bush and flange
Code no. 071N0047



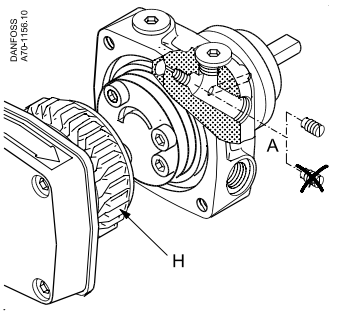



**Changeover between 1- and 2-pipe operation. Filter replacement (H)**

**Note !**
Shaft rotation, location of nozzle outlet and other connections are seen from shaft end.



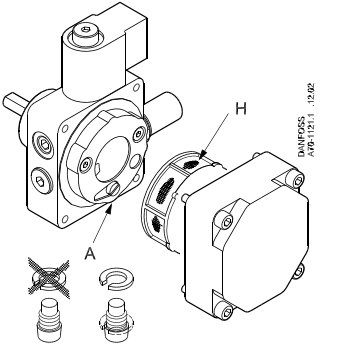

**RSA**




2-pipe operation:
Screw (A) fitted

1-pipe operation:
Without screw (A)

**BFP 10/11 Type 3, 5, 6**

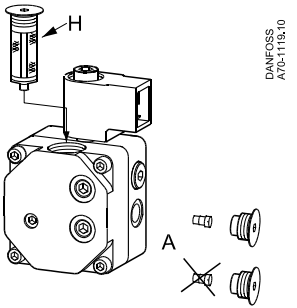



2-pipe operation:
Screw (A) without bypass washer

1-pipe operation:
Bypass washer fitted on screw (A)

**Changeover between 1- and 2-pipe operation.**
**Filter replacement (H)**

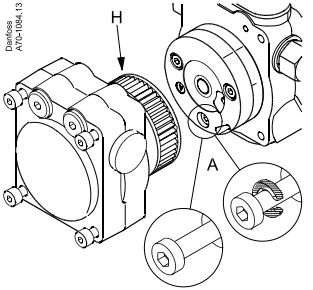
**BFP 20/21 Type 3, 5, 6**
**BFP 41 Type 3, 5**
**BFP 52E Type 3, 5**




2-pipe operation:
Screw (A) fitted

1-pipe operation:
Without screw (A)

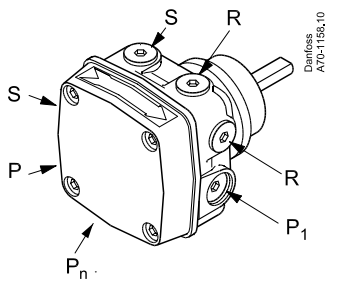
**BFP 10/11 Type 8, 11, 13**
**BFP 12 Type 8, 11, 13**
**BFP 51 Type 6, 8, 11, 13**
**BFP 52 Type 6, 8, 11, 13**
**BFP 53 Type 6, 8, 11, 13**




2-pipe operation:
Screw (A) without
bypass washer

1-pipe operation:
Bypass washer
fitted on screw (A)

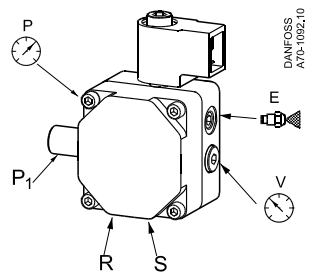
## Connections – RSA




| | |
|---|---|
| $P_1$ | Pressure adjustment |
| **S** | Suction inlet G 1/4 |
| **R** | Return outlet G 1/4 |
| P | Pressure outlet G 1/8 |
| $\mathbf{P_n}$ | Pressure gauge port G 1/8 |

## Connections – BFP 10/11

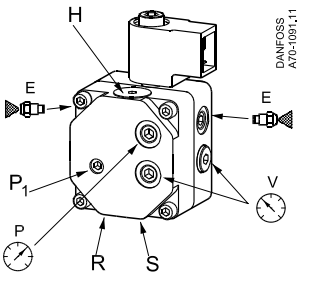
Type 3, 5 and 6




| | |
|---|---|
| **$P_1$** | Pressure adjustment |
| **S** | Suction inlet G 1/4 |
| R | Return outlet G 1/4 |
| **E** | Nozzle outlet G 1/8 |
| **P** | Pressure gauge port G 1/8 |
| V | Vacuum gauge port G 1/8 |

## Connections – BFP 20/21

Type 3 and 5




**$P_1$** Pressure adjustment

**S** Suction inlet G 1/4

R Return outlet G 1/4

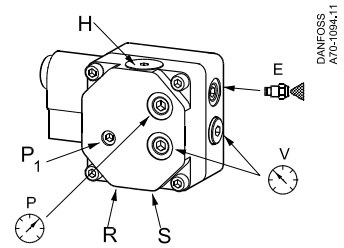
**E** Nozzle outlet G 1/8

**P** Pressure gauge port G 1/8

**V** Vacuum gauge port G 1/8

H Filter

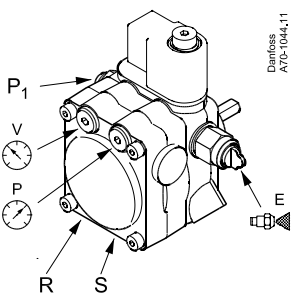
Type 3 and 5




| | |
|---|---|
| **$P_1$** | Pressure adjustment |
| S | Suction inlet G 1/4 |
| **R** | Return outlet G 1/4 |
| **E** | Nozzle outlet G 1/8 |
| P | Pressure gauge port G 1/8 |
| **V** | Vacuum gauge port G 1/8 |
| **H** | Filter |

## Connections – BFP 10/11

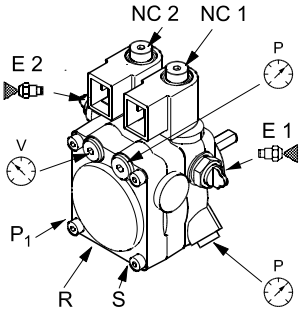
Typ 8, 11 and 13




| | |
|---|---|
| **$P_1$** | Pressure adjustment |
| S | Suction inlet G 1/4 |
| **R** | Return outlet G 1/4 |
| E | Nozzle outlet G 1/8 |
| **P** | Pressure gauge port G 1/8 |
| **V** | Vacuum gauge port G 1/8 |

## Connections – BFP 12

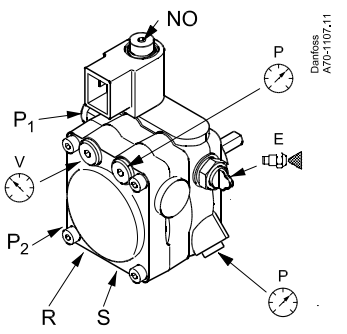
Type 8, 11 and 13




| | |
|---|---|
| **$P_1$** | Pressure adjustment, stage 1 |
| **S** | Suction inlet G 1/4 |
| R | Return outlet G 1/4 |
| **E** | Nozzle outlet G 1/8 |
| **P** | Pressure gauge port G 1/8 |
| **V** | Vacuum gauge port G 1/8 |

## Connections – BFP 51

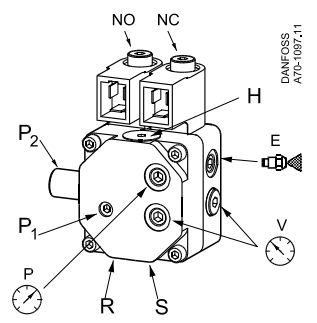
Type 6, 8, 11 and 13




| | |
|---|---|
| **$P_1$** | Pressure adjustment |
| **$P_1$** | Pressure adjustment |
| S | Suction inlet G 1/4 |
| **R** | Return outlet G 1/4 |
| **E** | Nozzle outlet G 1/8 |
| P | Pressure gauge port G 1/8 |
| **V** | Vacuum gauge port G 1/8 |

## Connections – BFP 52E

Type 3 and 5




**$P_1$** Pressure adjustment stage 1

**$P_1$** Pressure adjustment, stage 2

**S** Suction inlet G 1/4

**R** Return outlet G 1/4

E Nozzle outlet G 1/8

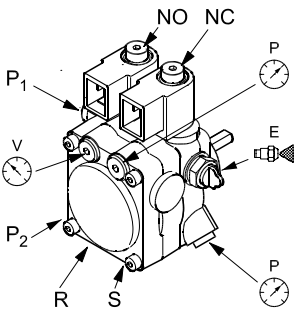
**P** Pressure gauge port G 1/8

**V** Vacuum gauge port G 1/8

**H** Filter

## Connections – BFP 52

Type 6, 8, 11 and 13




Danfoss
A70-1073.12

**$P_1$** Pressure adjustment, stage 1

**$P_2$** Pressure adjustment, stage 2

S Suction inlet G 1/4

**R** Return outlet G 1/4

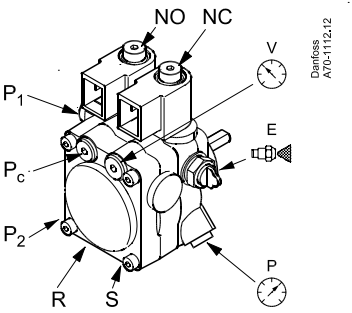
**E** Nozzle outlet G 1/8

**P** Pressure gauge port G 1/8

**V** Vacuum gauge port G 1/8

## Connections – BFP 53

Type 6, 8, 11 and 13

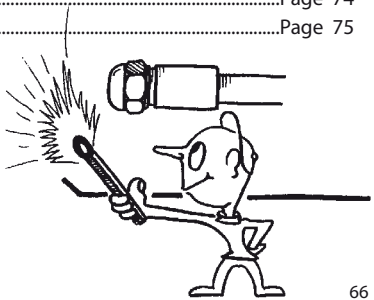



| | |
|---|---|
| **$P_1$** | Pressure adjustment, stage 1 |
| **$P_2$** | Pressure adjustment, stage 2 |
| **$P_c$** | Dumping pressure outlet |
| **S** | Suction inlet G 1/4 |
| **R** | Return outlet G 1/4 |
| **E** | Nozzle outlet G 1/8 |
| **P** | Pressure gauge port G 1/8 |
| **V** | Vacuum gauge port G 1/8 |

## 2. Oil burner controls

### Contents





**Oil burner controls**

Oil burner control conversions are given in the tables as follows:

The following old Danfoss oil burner controls can be replaced: types 57F, 57H, 57L and BHO.

According to the European standard EN 230: 2005, oil burner controls must in future have undervoltage protection. BHO 70 series does incorporate this protection.

Therefore it is this oil burner control that most often replaces the old Danfoss types.

The overview is built up as follows:

- Column 1 always gives the old oil burner control types that are to be replaced.
- Column 2 gives the code numbers of the oil burner controls that are to be replaced.
- Column 4 gives the new types of Danfoss oil burner controls.
- Column 5 gives the corresponding code numbers.
- The last column gives the code numbers of the corresponding accessories.

## Oil burner controls

| Older Danfoss series | | ➡ | Relevant Danfoss oil burner controls | | |
|---|---|---|---|---|---|
| **Type** | **Code no.** | ➡ | **Type** | **Code no.** | **Comments/Accessories** |
| 57F1 | 057F0001 | ➡ | BHO 72.10 | 057H6102 | + 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272 |
| 57F3 | 057F0003 | ➡ | BHO 72.10 | 057H6102 | |
| 57H1 | 057H0062 | ➡ | BHO 72.10 | 057H6102 | + 057H7022 (see page 74) |
| 57H1 | 057H0072 | ➡ | BHO 72.10 | 057H6102 | |
| 57H1 | 057H1002 | ➡ | BHO 72.10 | 057H6102 | |
| 57H3 | 057H1003 | ➡ | BHO 72.10 | No repl. | |
| 57H1 WLE | 057H0042 | ➡ | BHO 74.10 | 057H6105 | + 057H7022 (see page 74) |
| 57H1 | 057H0052 | ➡ | BHO 72.10 | 057H6102 | |
| 57H2 | 057H0053 | ➡ | BHO 72.10 | 057H6102 | |
| 57H2 | 057H0063 | ➡ | BHO 72.10 | 057H6102 | |
| 57H3 | 057H1005 | ➡ | | No repl. | 120 V |
| 57H3 | 057H0054 | ➡ | BHO 72.10 | 057H6102 | + 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272 |
| 57H3 | 057H0064 | ➡ | BHO 72.10 | 057H6102 | |
| 57H5 | 057H0045 | ➡ | BHO 74.10 | 057H6105 | + 057H7022 (see page 74) |
| 57H5 | 057H0055 | ➡ | BHO 72.10 | 057H6102 | |
| 57H5 | 057H0065 | ➡ | BHO 72.10 | 057H6102 | |
| 57H6 | 057H0032 | ➡ | | No repl. | |
| 57L 1 | 057L0001 | ➡ | BHO 72.10 | 057H6102 | + 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272 Use motor starter on 380 V |
| 57L 1d | 057L0002 | ➡ | BHO 72.10 | 057H6102 | |
| 57L 3 | 057L0003 | ➡ | BHO 72.10 | 057H6102 | |
| 57L 3d | 057L0004 | ➡ | BHO 72.10 | 057H6102 | |
| BCG 1d | 057L1001 | ➡ | | No repl. | |
| BCG 1d | 057L1002 | ➡ | | No repl. | |
| BCG 1d | 057L1003 | ➡ | | No repl. | |
| BCG 3,3d | 057L1004 | ➡ | | No repl. | |

## Oil burner controls

| Older Danfoss series | | ➡ | Relevant Danfoss oil burner controls | | |
|---|---|---|---|---|---|
| **Type** | **Code no.** | ➡ | **Type** | **Code no.** | **Comments/Accessories** |
| BCG 3.5d | 057L1005 | ➡ | | No repl. | |
| BHO 1A | 057H3013 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 1B | 057H3014 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 1 | 057H3011 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 1 WLE | 057H3010 | ➡ | BHO 74.10 | 057H6105 | |
| BHO 1 WLE | 057H3054 | ➡ | BHO 74.10 | 057H6105 | |
| BHO 3B | 057H3018 | ➡ | BHO 72.11 | 057H6103 | |
| BHO 3B | 057H3020 | ➡ | BHO 72.11 | 057H6103 | + 057H7022 (see page 74) |
| BHO 4 | 057H4104 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 4B | 057H4144 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 4 WLE | 057H4110 | ➡ | BHO 74.10 | 057H6105 | |
| BHO 4.1 | 057H3012 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 4.1B | 057H3039 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 4.1B | 057H3044 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 5 | 057H4105 | ➡ | BHO 72.10 | 057H6102 | + 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272 |
| BHO 5.1 | 057H3015 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 6 | 057H3032 | ➡ | | No repl. | |
| BHO 11 | 057H2011 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 11.1 | 057H2011 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 11.1 | 057H2013 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 11.1 | 057H2014 | ➡ | BHO 72.10 | 057H6102 | + 057H7022 (see page 74) |
| BHO 12 | 057H2031 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 12 | 057H2012 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 12.1 | 057H2005 | ➡ | BHO 72.10 | 057H6102 | |
| BHO 12.1 | 057H2012 | ➡ | BHO 72.10 | 057H6102 | |

## Oil burner controls

| Older Danfoss series | | ➡ | Relevant Danfoss oil burner controls | | |
|---|---|---|---|---|---|
| **Type** | **Code no.** | ➡ | **Type** | **Code no.** | **Comments/Accessories** |
| BHO 15 | 057H2015 | ➡ | BHO 72.10 | 057H6102 | + 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272 |
| BHO 21 | 057H2042 | ➡ | BHO 74.10 | 057H6105 | + 057H7022 (see page 74) |
| BHO 25 | 057H2045 | ➡ | BHO 74.10 | 057H6105 | + 057H7210 + 057H7211 + 057H7279 + 057H7271 + 057H7272 |
| BHOV 1 | 057H3016 | ➡ | BHO 72.10 | 057H6102 | |
| BHOV 4 | 057H3030 | ➡ | BHO 72.10 | 057H6102 | |
| BHOV 4A | 057H3033 | ➡ | BHO 72.10 | 057H6102 | |
| BHOV 4B | 057H3034 | ➡ | BHO 72.10 | 057H6102 | + 057H7022 (see page 74) |
| BHOV 12.2 | 057H2030 | ➡ | BHO 72.10 | 057H6102 | |
| BHOV 12.2 | 057H2033 | ➡ | BHO 72.10 | 057H6102 | |
| BHOV 12.2 | 057H2034 | ➡ | BHO 72.10 | 057H6102 | |
| BHOV 22 | 057H2054 | ➡ | BHO 74.10 | 057H6105 | |
| FRA | 086B0090 | ➡ | LAE 10<br>LFE 10 | Landis & Stäfa[1)] | Not supplied by Danfoss |
| FRU | 086B0091 | ➡ | LFE | Landis & Stäfa | Not supplied by Danfoss |

1) Ionisation

## Oil burner controls

| Landis & Stäfa | | ➡ | Relevant Danfoss oil burner controls | | |
|---|---|---|---|---|---|
| Type | Code no, | ➡ | Type | Code no, | Comments/accessories |
| LOA 21.171B27 | | ➡ | BHO 72.10 | 057H6102 | |
| LOA 21.171B17 | | ➡ | | No repl. | 110 V |
| LOA 21.173A27 | | ➡ | BHO 73.10 | 057H6104 | |
| LOA 22.171B27 | | ➡ | BHO 72.10 | 057H6102 | |
| LOA 22"DF" | | ➡ | BHO 72.10 | 057H6102 | |
| LOA 24.171B27 | | ➡ | BHO 72.10 | 057H6102 | |
| LOA 24.571C27 | | ➡ | BHO 71.11 | 057H6103 | |
| LOA 44.252A27 | | ➡ | BHO 74.10 | 057H6105 | |
| LMO 14.111B2 | | ➡ | BHO 71.10 | 057H6101 | |
| LMO 24.111B2 | | ➡ | BHO 72.10 | 057H6102 | |
| LMO 24.011B2 | | ➡ | BHO 72.11 | 057H6103 | |
| LMO 24.113B2 | | ➡ | BHO 73.10 | 057H6104 | |
| LMO 44.255C2 | | ➡ | BHO 74.10 | 057H6105 | |

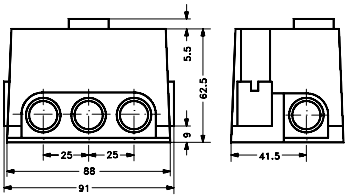
## Oil burner controls

| BHO | | | ➡ | BHO | | |
|---|---|---|---|---|---|---|
| Type | Code no. | Comments/ accessories | ➡ | Type | Code no. | Comments/Accessories |
| BHO 61A | 057H7031 | | ➡ | BHO 73.10 | 057H6104 | |
| BHO 61 | 057H7032 | | ➡ | BHO 72.10 | 057H6102 | |
| BHO 62 | 057H7034 | | ➡ | BHO 72.10 | 057H6102 | |
| BHO 62D | 057H7035 | | ➡ | BHO 72.10 | 057H6102 | |
| BHO 61 | 057H7033 | 110 V | ➡ | | No repl. | |
| BHO 64 | 057H7036 | | ➡ | BHO 72.10 | 057H6102 | |
| BHO 64A | 057H7030 | | ➡ | BHO 73.10 | 057H6104 | |
| BHO 64.1 | 057H7037 | | ➡ | BHO 72.11 | 057H6103 | |

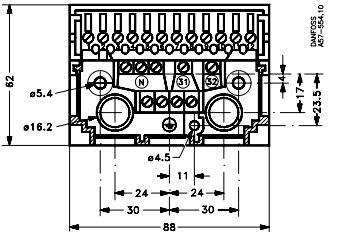
| Defective components | Replacement components |
|---|---|
| Older oil burner controls | BHO 70 series + photo unit |
| BHO 60-Series | BHO 70 series only |
| Old LD/LDS<br>057H0020 etc.<br>057H2000 seriers | BHO 70 series + photo unit |
| New LD/LDS<br>057H7000 series | Photo unit only |

In burners without solenoid valve the motor must be connnected to the solenoid valve terminals so that instead of prepurge, only pre-ignition takes place.
E.g. during maintenance work on the burner, if the oil burner control or photo unit shows defects it must be noted that there are different series of these components.
In some circumstances both components must be replaced even though only one of them is defective. See table.
Units supplied with L&G (Stäfa) button placing only.

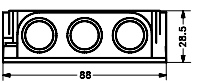
## Dimensions



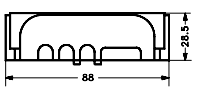

Oil burner control with base
Cable entry 057H7011




Base 057H7010.
The cross-hatched part can be replaced.



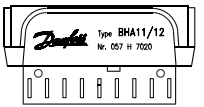

Cable entry 057H7011

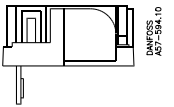


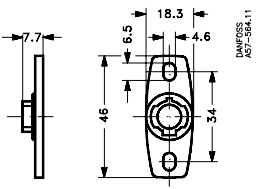

Cable entry 57H7012

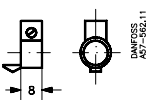
## Dimensions – service pack A

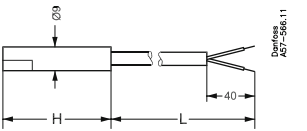
Code no. 057H7022




| Type | Colour | H | L | Code no. |
|---|---|---|---|---|
| LD | Black | 65.5 | 2000 | 057H7278 |
| LD | Black | 65.5 | 780 | 057H7279 |
| LD | Black | 50 | 500 | 057H7281 |
| LDS | Red | 50 | 500 | 057H7285 |
| LDS | Red | 65.5 | 520 | 057H7287 |
| LDS | Red | 105 | 350 | 057H7291 |
| LDS | Red | 65.5 | 800 | 057H7292 |
| LDS | Light blue | 50 | 500 | 057H7293 |
| LDS | Light blue | 65.5 | 600 | 057H7294 |

## Accessories

Service pack A - code no. 057H7022 - contains the following components:

| Designation | Code no. | Comments |
|---|---|---|
| BHA 11/12 | 057H7020 | Adapter |
| Photo unit | 057H7087 | Elongated housing and high light sensitivity |
| Flange | 057H7071 | As the old LD unit |
| Clamping ring | 057H7072 | |

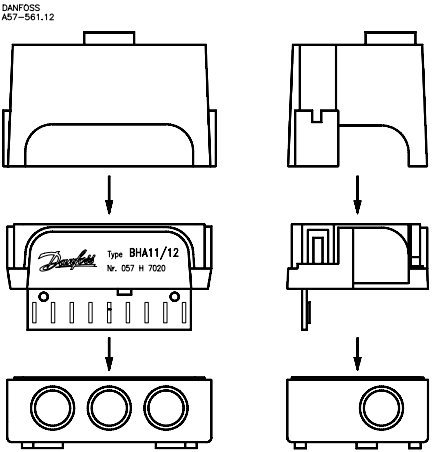
## Accessories

When replacing, the photo unit must also be replaced if reliable operation is to continue.

Top cover with 12 connections

Adapter BHA 11/12

Base with 9 connections




Adapter + BHO 61, BHO 62, BHO 62D and BHO 64 have together the same height as BHO 11/12.

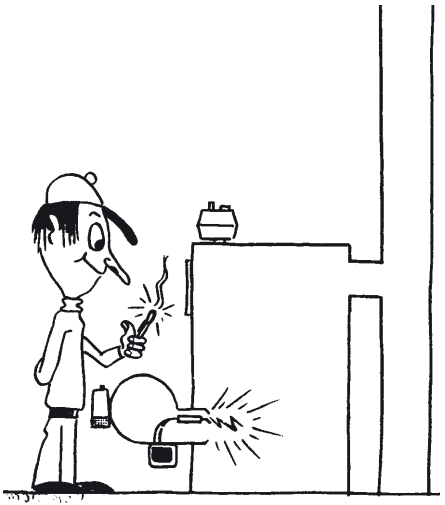
# 3. Ignition units

## Contents

## Ignition transformers/units

### Introduction

When a Danfoss ignition transformer or an electronic ignition unit must be replaced, please proceed according to the following table.



Ignition transformers are stated to the left and ignition unit EBI, which must be used, to the right.

When replacing an ignition unit from a competitor, please take the below into consideration:

In order to choose the right ignition unit, make sure that the ignition unit is designed for a supply voltage (primary voltage) of 220/230 V and that the ED of 33% at 60ºC in 3 minutes is not exceeded.

## Ignition transformers/units

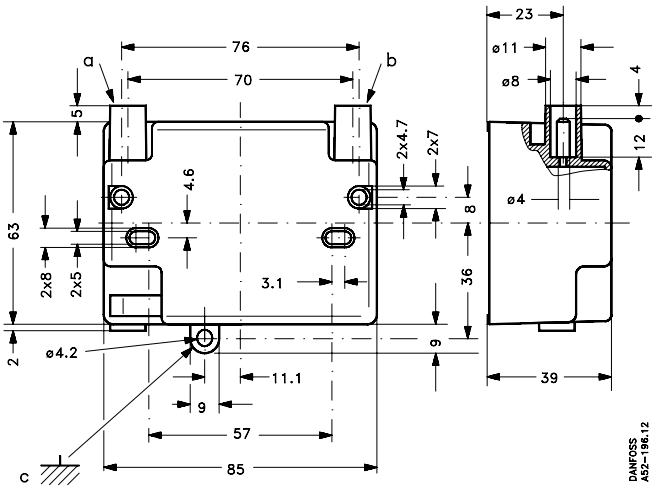
| 052L | | | ➨ | EBI | | |
|---|---|---|---|---|---|---|
| Code no. | Primary voltage | Secondary voltage | ➨ | Type | Code no. | Comments/accessories |
| 052L0000 to 052L0003 | 220 | 2-Pole | ➨ | EBI | 052F0030 | Primary cable 052F0102 and accessory 052F0061 |
| 052L0005 | | | | | | |
| 052L0007 to 052L0009 | | | | | | |
| 052L0014 to 052L0015 | | | | | | |
| 052L0017 | | | | | | |
| 052L0019 to 052L0020 | | | | | | |
| 052L0023 | | | | | | |
| 052L0028 to 052L0029 | | | | | | |
| 052L0034 | | | | | | |
| 052L0036 to 052L0039 | | | | | | |
| 052L0041 to 052L0042 | | | | | | |
| 052L0045 to 052L0048 | | | | | | |
| 052L0050 to 052L0056 | | | | | | |
| 052L0058 to 052L0061 | | | | | | |
| 052L0064 | | | | | | |
| 052L0066 to 052L0079 | | | | | | |
| 052L0082 | | | | | | |
| 052L0086 to 052L0087 | | | | | | |
| 052L0089 to 052L0093 | | | | | | |
| 052L0095 to 052L0098 | | | | | | |
| 052L1003 | | | | | | |
| 052L1011 | | | | | | |
| 052L1050 to 052L1052 | | | | | | |
| 052L1054 to 052L1057 | | | | | | |
| 052L1075 to 052L1076 | | | | | | |
| 052L1080 | | | | | | |

## Ignition transformers/units

| 052L | | | ➨ | EBI | | |
|---|---|---|---|---|---|---|
| Code no | Primary voltage | Secondary voltage | ➨ | Type | Code no. | Comments/accessories |
| 052L1085 | 220 | 2-Pole | ➨ | EBI | 052F0030 | Primary cable 052F0102 and accessory 052F0061 |
| 052L0018 | 220 | 1-Pole | ➨ | EBI1P | 052F0040 | Primary cable 052F0102 and accessory 052F0061 |
| 052L0026 | | | | | | |
| 052L0030 | | | | | | |
| 052L0040 | | | | | | |
| 052L0049 | | | | | | |
| 052L0065 | | | | | | |
| 052L0088 | | | | | | |
| 052L1058 | | | | | | |
| 052L0016 | 100 | 2-Pole | ➨ | No repl. | | |
| 052L0044 | 100 | | | | | |
| 052L0006 | 110 | | | | | |
| 052L0062 | 110 | | | | | |
| 052L0013 | 115 | | | | | |
| 052L0021 | 115 | | | | | |
| 052L0099 | 120 | | | | | |
| 052L1001 to 052L1002 | 120 | | | | | |
| 052L1007 to 052L1008 | 120 | | | | | |
| 052L1010 | 120 | 1-Pole | ➨ | No repl. | | |
| 052L1012 | 120 | | | | | |
| 052L1019 | 120 | | | | | |
| 052L1021 to 052L1022 | 120 | | | | | |
| 052L0010 | 220 | 2-Pole + Ionisation | ➨ | No repl. | | |
| 052L0027 | 220 | | | | | |

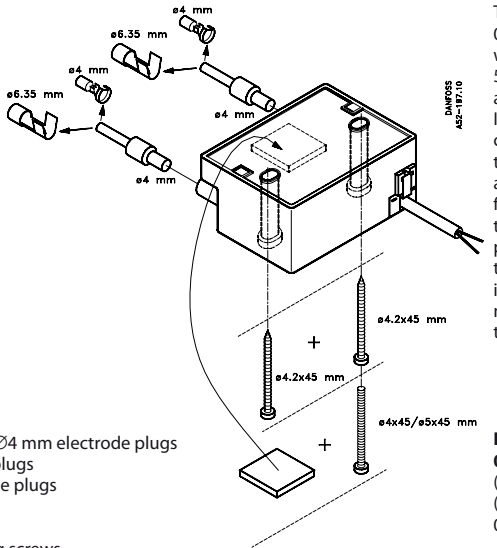
## Dimensions

| EBI | EBI M | EBI 1P | |
|---|---|---|---|
| a + b | a + b + c | b + c | a: Lefthand secondary connection<br>b: Righthand secondary connection<br>c: Earth terminal |



**Accessories**

EBI service packs
Code no. 052F0061




*Accessory set 052F0061*

2 ignition cables with ∅4 mm electrode plugs
2 x ∅4 mm electrode plugs
2 x ∅6.35 mm electrode plugs
2 x M4 screws
2 x M5 screws
2 x 4.2 mm self-tapping screws
1 x double-sided adhesive pad

The EBI accessory set 052F0061 is used, for example, when replacing a Danfoss type 52L ignition transformer or another make.
In addition to the high-voltage cables and electrode plugs, the accessory set also contains an assortment of screws. When fitting EBI only one screw and the double-sided adhesive pad are necessary. EBI can thus be used in most existing installations without it being necessary to drill new holes in the burner.

**EBI accessory set**
**052F0063** contains an EBI (052F0030) with primary cable (052F0102) and accessory set 052F0061.

**EH and ES nozzles**

**Contents**




## EH and ES nozzles

### Introduction

Danfoss series of oil nozzles types EH and ES are developed for the optimum combustion of kerosene in domestic oil burners.
The standard oil nozzles type OD can also be used for the atomizing and dosing of kerosene - however, these oil nozzles have been calibrated and defined for the operation of standard fuel oil (3.4 cSt, density 840 kg/m$^3$ and 10 bar).

Our existing oil nozzles e.g. 60°S and 80°H can directly be replaced by our 60°ES -80°EH.
If standard oil nozzles OD are used in media with essentially changed specifications
as e.g. kerosene, the tolerances of the oil nozzle will be increased. With the EH and ES nozzles the tolerance for throughput is improved to ±5% for kerosene.

### Reference Test Conditions

The EH and ES nozzles are tested under the following reference conditions:
Viscosity 1.65 sCt - density 790kg/m$^3$,
atomizing pressure 8 bar. Before leaving the production department, each nozzle is tested for:

- capacity
- spray angle
- atomizing characteristics and uniformity

## Conversion

| Conversion to Danfoss EH/ES nozzles | | |
|---|---|---|
| Hago H.SS | ➨ | Danfoss EH |
| Hago P, ES | ➨ | Danfoss ES |
| Delavan A | ➨ | Danfoss EH |
| Delevan B, W | ➨ | Danfoss ES |
| Monarch NS | ➨ | Danfoss EH |
| Monarch PLP, AR, R | ➨ | Danfoss ES |
| Steinen H, PH □ | ➨ | Danfoss EH |
| Steinen SS, Q □ | ➨ | Danfoss ES |

## Ordering tables – EH nozzles – hollow spray pattern

| Marking USgal/h | 60° | 80° | kg/h | Nominal (rounded) | l/h | Filter type |
|---|---|---|---|---|---|---|
| 0.40 | | 030H8304 | 1.20 | 1.50 | 45 | Sinter |
| 0.45 | 030H6306 | 030H8306 | 1.35 | 1.70 | 45 | Sinter |
| 0.50 | 030H6308 | 030H8308 | 1.50 | 1.90 | 75 | Sinter |
| 0.55 | 030H6310 | 030H8310 | 1.65 | 2.10 | 75 | Sinter |
| 0.60 | 030H6312 | 030H8312 | 1.80 | 2.25 | 75 | Sinter |
| 0.65 | 030H6314 | 030H8314 | 1.95 | 2.45 | 75 | Sinter |
| 0.75 | 030H6316 | 030H8316 | 2.25 | 2.85 | 75 | Sinter |
| 0.85 | 030H6318 | 030H8318 | 2.55 | 3.20 | 75 | Sinter |
| 1.00 | 030H6320 | 030H8320 | 3.00 | 3.80 | 75 | Sinter |
| 1.10 | 030H6322 | 030H8322 | 3.30 | 4.15 | 120 | Sinter |

Test specification (kg/h): 1.65 cST
790 kg/m³
8 bar (115 psi)

$$l/h - \frac{Kg/h}{0.79}$$

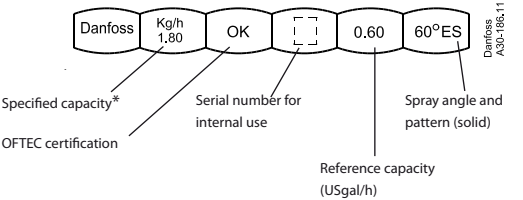
## Ordering tables – ES nozzles – solid spray pattern

| Marking USgal/h | 60° | 80° | kg/h | Nominal (rounded) | l/h | Filter type |
|---|---|---|---|---|---|---|
| 0.40 | 030F6304 | 030F8304 | 1.20 | 1.50 | 45 | Sinter |
| 0.45 | 030F6306 | 030F8306 | 1.35 | 1.70 | 45 | Sinter |
| 0.50 | 030F6308 | 030F8308 | 1.50 | 1.90 | 75 | Sinter |
| 0.55 | 030F6310 | 030F8310 | 1.65 | 2.10 | 75 | Sinter |
| 0.60 | 030F6312 | 030F8312 | 1.80 | 2.25 | 75 | Sinter |
| 0.65 | 030F6314 | 030F8314 | 1.95 | 2.45 | 75 | Sinter |
| 0.75 | 030F6316 | 030F8316 | 2.25 | 2.85 | 75 | Sinter |
| 0.85 | 030F6318 | 030F8318 | 2.55 | 3.20 | 75 | Sinter |
| 1.00 | 030F6320 | 030F8320 | 3.00 | 3.80 | 75 | Sinter |
| 1.10 | 030F6322 | 030F8322 | 3.00 | 4.15 | 120 | Sinter |

Test specification (kg/h): 1.65 cST
790 kg/m³
8 bar (115 psi)

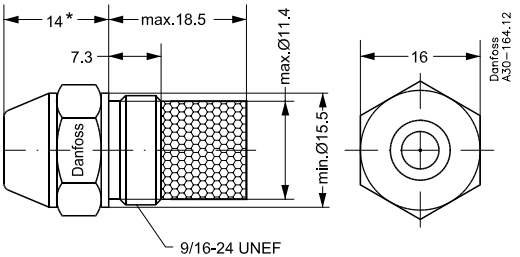
$$l/h - \frac{Kg/h}{0.79}$$

## Marking – EH and ES nozzles




** The nominal kg/h throughputs are at a test pressure of 8 bar with permisable tolerance of ± 5%*

**Dimension**




*EN standard

## EH and ES nozzle capacities as function of pressure

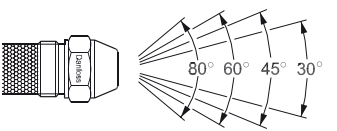
| Nozzle size | 6 bar GPH | 7 bar GPH | 8 bar GPH | 9 bar GPH | 10 bar GPH |
|---|---|---|---|---|---|
| 0.40 | 0.35 | 0.37 | **0.40** | 0.42 | 0.45 |
| 0.50 | 0.43 | 0.47 | **0.50** | 0.53 | 0.56 |
| 0.55 | 0.48 | 0.51 | **0.55** | 0.58 | 0.61 |
| 0.60 | 0.52 | 0.56 | **0.60** | 0.64 | 0.67 |
| 0.65 | 0.56 | 0.61 | **0.65** | 0.69 | 0.73 |
| 0.75 | 0.65 | 0.70 | **0.75** | 0.80 | 0.84 |
| 0.85 | 0.74 | 0.80 | **0.85** | 0.90 | 0.95 |
| 1.00 | 0.87 | 0.94 | **1.00** | 1.06 | 1.12 |
| 1.10 | 0.95 | 1.03 | **1.10** | 1.17 | 1.23 |

Nozzle Reference Test conditions

**OFTEC Reference Conditions**

Viscosity 1.65 cSt – density 790 kg/m$^3$ atomizing pressure 8 bar

Capacity kg/h.




DANFOSS
A30-178.12

$$Q2 \sim Q1\sqrt{\frac{P2}{P1}}$$

## EH and ES nozzles. Capacities, net calorific values*# (rounded figs.)

| Nozzle Size | | 6 bar | | 7 bar | | 8 bar | | 9 bar | | 10 bar | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| kg/h** | USgal*** | kW | Btu's | kW | Btu's | kW | Btu's | kW | Btu's | kW | Btu's |
| 1.20 | 0.40 | 12.50 | 42500 | 13.50 | 46000 | 14.45 | 49250 | 15.30 | 52250 | 16.15 | 55000 |
| 1.35 | 0.45 | 14.99 | 48000 | 15.20 | 51750 | 16.25 | 55500 | 17.25 | 58750 | 18.15 | 62000 |
| 1.50 | 0.50 | 15.65 | 53250 | 16,85 | 57500 | 18.00 | 61500 | 19.15 | 65250 | 20.15 | 68750 |
| 1.65 | 0.55 | 17.20 | 58500 | 18.50 | 63250 | 19.85 | 67750 | 21.00 | 71750 | 22.20 | 75750 |
| 1.80 | 0.60 | 18.75 | 64000 | 20.25 | 69000 | 21.65 | 73750 | 23.00 | 78250 | 24.20 | 82500 |
| 1.95 | 0.65 | 20.30 | 69250 | 22.20 | 74750 | 23.45 | 80000 | 24.85 | 84750 | 26.20 | 89500 |
| 2.25 | 0.75 | 23.45 | 80000 | 25.30 | 86250 | 27.00 | 92250 | 28.65 | 97750 | 30.25 | 103000 |
| 2.55 | 0.85 | 26.50 | 90500 | 28.65 | 97750 | 30.65 | 104500 | 32.50 | 111000 | 34.25 | 117000 |
| 3.00 | 1.00 | 31.25 | 117250 | 33.75 | 115000 | 36.00 | 123000 | 38.25 | 130500 | 40.30 | 137500 |
| 3.30 | 1.10 | 34.35 | 117250 | 37.00 | 126500 | 39.70 | 135250 | 42.00 | 143500 | 44.35 | 151250 |

* Nett value 43.30 MJ/kg

** Approx 12.00 kW/kg

*** Approx 123.000 Btu's/USgal/h

# For gross calorific values multiply by 1.069.

The above information gives a quick guide to nozzle output at different pump pressures.
Remember to take into account boiler efficiency.
Example: Boiler rating 19.00 kW (65000 Btu's) input req'd.
*Nozzle selection*: 1.80 kg/h (0.60 USgal/h) Nozzle at approx 8.54 bar

## OD nozzles

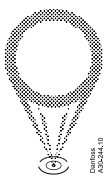
### Contents



**Type OD – oil nozzles for virtually all burner types in the market.**

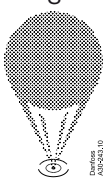
- Capacities from 0.3 to 35 USgal/h
- EN standardised from 1.46 to 6.55 kg/h
- 30°/45°/60°/80°spray angles
- H/S/B spray patterns
- Sinter bronze filter up to 1.75 USgal. Monel mesh filter up to 12 USgal/h. Larger capacities without filter.

H



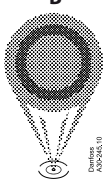

**Hollow Spray Pattern**
The hollow spray pattern is, represented in six nozzle types:
OD-H, HR, LE, EH, AH, KH

S



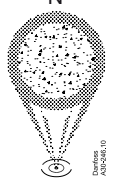

**Solid Spray Pattern**
The solid spray pattern is represented within the following nozzle types:
OD-S, SR, LE, ES, AS

B




**Semi-Solid Spray Pattern**
The semi-solid spray pattern is found in types:
OD-B and AB

N




**Special Hollow Spray Pattern**
This special hollow spray pattern,with slightly larger droplets in the middle, is only found in types LN and LN-LE.

## Oil nozzles OD-H/-S/-B

| USgal/h | 30° | 45° | 60° | 80° | EN kg/h |
|---|---|---|---|---|---|
| 0.30 | | | H S | H S | 1.15 |
| 0.35 | | | H S | H S | 1.35 |
| 0.40 | | S | S | H S | 1.46 |
| 0.45 | | S | H S | H S | 1.66 |
| 0.50 | H S | H S | H S | H S | 1.87 |
| 0.55 | H S | H S | H S | H S | 2.11 |
| 0.60 | H S | H S | H S B | H S B | 2.37 |
| 0.65 | H S B | H S B | H S B | H S B | 2.67 |
| 0.75 | H S B | H S B | H S B | H S B | 2.94 |
| 0.85 | H S B | H S B | H S B | H S B | 3.31 |
| 1.00 | H S B | H S B | H S B | H S B | 3.72 |
| 1.10 | H S | H S | H S | H S | 4.24 |
| 1.20 | H S | H S | H S | H S | 4.45 |
| 1.25 | H S B | H S B | H S B | H S B | 4.71 |
| 1.35 | H S B | H S B | H S B | H S B | 5.17 |
| 1.50 | H S B | H S B | H S B | H S B | 5.84 |
| 1.65 | H S | H S | H S | H S | 6.08 |
| 1.75 | H S | H S | H S | H S | 6.55 |
| 2.00 | H S B | H S B | H S B | H S B | 7.42 |
| 2.25 | H S B | H S B | H S B | H S B | 8.35 |
| 2.50 | H S B | H S B | H S B | H S B | 9.29 |
| 2.75 | H S B | H S B | H S B | H S B | 10.5 |
| 3.00 | H S B | H S B | H S B | H S B | 11.6 |

These oil nozzles are manufactured in accordance with European standard EN 293

| USgal/h | 30° | 45° | 60° | 80° | kg/h |
|---|---|---|---|---|---|
| 3.50 | S | S | S | S | 12.9 |
| 3.75 | B | S B | B | B | 13.8 |
| 4.00 | | S | S | S | 14.2 |
| 4.50 | | S B | S B | S B | 16.1 |
| 5.00 | | S B | S B | S B | 18.5 |
| 5.50 | | S B | S B | S B | 20.9 |
| 6.00 | | S B | S B | S B | 23.4 |
| 6.50 | | B | B | B | 26.1 |
| 7.00 | | | S | | 27.9 |
| 7.50 | | B | B | B | 29.8 |
| 8.00 | | | S | | 31.5 |
| 8.50 | | B | B | B | 33.1 |
| 9.00 | | | S | | 35.4 |
| 10.00 | | B | B | B | 37.7 |
| 11.00 | | B | B | B | 42.5 |
| 12.00 | | B | B | B | 47.7 |
| 13.50 | | B | B | B | 54.3 |
| 15.00 | | B | B | B | 60.4 |
| 17.00 | | | B | B | 67.4 |
| 19.50 | | | B | B | 76.2 |
| 22.00 | | | B | B | 86.4 |
| 25.00 | | | B | B | 96.7 |
| 28.00 | | | B | B | 109.5 |
| 31.50 | | B | B | B | 122.5 |
| 35.00 | | B | | | 133.5 |

**OD – H/-S/-B can be used to replace the following nozzles of other makes:**

| Conversion to Danfoss OD nozzles | | |
|---|---|---|
| Delavan A | ➨ | Danfoss H |
| Delavan B | ➨ | Danfoss S |
| Delavan W | ➨ | Danfoss B |
| Fluidics SF | ➨ | Danfoss S |
| Fluidics HF | ➨ | Danfoss H |
| Fluidics S | ➨ | Danfoss S |
| Fluidics H | ➨ | Danfoss H |
| Monarch PL | ➨ | Danfoss H/B |
| Monarch NS | ➨ | Danfoss H |
| Monarch PLP | ➨ | Danfoss B |
| Monarch AR | ➨ | Danfoss S |
| Monarch R | ➨ | Danfoss S |
| Hago B | ➨ | Danfoss S |
| Hago H | ➨ | Danfoss H |
| Hago SS | ➨ | Danfoss H/B |
| Hago P | ➨ | Danfoss S |
| Hago ES | ➨ | Danfoss S |
| Steinen PH | ➨ | Danfoss H/B |
| Steinen H, HT | ➨ | Danfoss H |
| Steinen SS | ➨ | Danfoss B |
| Steinen Q | ➨ | Danfoss S |
| Steinen S, ST | ➨ | Danfoss S |

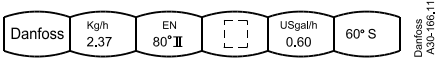
The values given are based on experience and should therefore only be considered as a guide

## Nozzle markings

### Easy to identify

Danfoss oil nozzles are imprinted with information, ensuring easy identification of capacity, spray pattern and angle.

Some types also carry normative information about the properties of the nozzle according to the norm concerned, e.g. EN or OK.




*Imprinting on an oil nozzle, type OD, with an EN defined capacity of 2.37 kg/h [2)]*

- EN indicates that the nozzle meets the requirements of the EN 293 and EN 299 norm.
- 80° II states the characteristics of the nozzle, i.e. atomising index and angle index according to the norm.
- The figures in the square brackets [ ] are a serial number for internal use.
- The USgal/h-value states the capacity of the nozzle according to another definition point[1)], which was earlier widespread in the industry worldwide – and is still in use, especially in the service trade. To meet the requirements of this market,this imprint is maintained on all Danfoss oil nozzles.

[1)] Definition point: 7 bar, 3.4 cSt., 820 kg/m$^3$

[2)] Definition point: 10 bar, 3.4 cSt., 840 kg/m$^3$

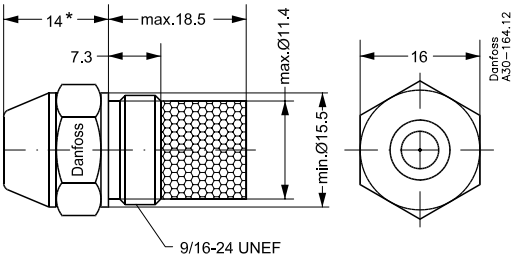
**Note:**

Danfoss oil nozzles are available with the: following filters:

- Capacity range 0.30 to 0.35 USgal/h, 30 µm sinterbronze filter
- Capacity range 0.40 to 0.85 USgal/h, 45 µm sinterbronze filter
- Capacity range 1.00 to 1.75 USgal/h, 75 µm sinterbronze filter
- Capacity range 2.00 to 11.00 USgal/h, 140 µm sinterbronze filter
- Capacity range 12.0 USgal/h, and above without filter

## Dimensions

OD-H / -S / -B




*EN standard

## Nozzle capacities

Nozzle capacities in USgal/h as a function of the atomising pressure with an oil of viscosity 3.4 $mm^2/s$ and density 820 $kg/m^3$.

| | | Reference pressure | | | |
|---|---|---|---|---|---|
| 6 bar | **7 bar** | 8 bar | 10 bar | 12 bar | 14 bar |
| GPH | **GPH** | GPH | GPH | GPH | GPH |
| 0.28 | **0.30** | 0.32 | 0.36 | 0.39 | 0.42 |
| 0.32 | **0.35** | 0.37 | 0.42 | 0.46 | 0.49 |
| 0.37 | **0.40** | 0.43 | 0.48 | 0.52 | 0.56 |
| 0.42 | **0.45** | 0.48 | 0.54 | 0.59 | 0.64 |
| 0.46 | **0.50** | 0.53 | 0.60 | 0.65 | 0.71 |
| 0.51 | **0.55** | 0.59 | 0.66 | 0.72 | 0.78 |
| 0.55 | **0.60** | 0.64 | 0.72 | 0.78 | 0.85 |
| 0.60 | 0.65 | 0.69 | 0.78 | 0.85 | 0.92 |
| 0.69 | **0.75** | 0.80 | 0.90 | 0.98 | 1.06 |
| 0.79 | **0.85** | 0.91 | 1.02 | 1.11 | 1.20 |
| 0.92 | **1.00** | 1.07 | 1.19 | 1.31 | 1.41 |
| 1.01 | **1.10** | 1.17 | 1.31 | 1.44 | 1.55 |
| 1.11 | **1.20** | 1.28 | 1.43 | 1.57 | 1.70 |
| 1.16 | **1.25** | 1.34 | 1.49 | 1.64 | 1.77 |
| 1.25 | **1.35** | 1.44 | 1.61 | 1.77 | 1.97 |
| 1.39 | **1.50** | 1.60 | 1.79 | 1.96 | 2.12 |
| 1.52 | **1.65** | 1.76 | 1.97 | 2.16 | 2.33 |
| 1.62 | **1.75** | 1.87 | 2.09 | 2.29 | 2.47 |
| 1.85 | **2.00** | 2.14 | 2.39 | 2.62 | 2.83 |
| 2.08 | **2.25** | 2.41 | 2.69 | 2.95 | 3.18 |
| 2.31 | **2.50** | 2.67 | 2.99 | 3.27 | 3.54 |

**Reference pressure**

| 6 bar | 7 bar | 8 bar | 10 bar | 12 bar | 14 bar |
|---|---|---|---|---|---|
| USgal/h | **USgal/h** | USgal/h | USgal/h | USgal/h | USgal/h |
| 2.54 | **2.75** | 2.92 | 3.29 | 3.60 | 3.89 |
| 2.78 | **3.00** | 3.21 | 3.59 | 3.93 | 4.24 |
| 3.24 | **3.50** | 3.74 | 4.18 | 4.58 | 4.95 |
| 3.47 | **3.75** | 4.01 | 4.48 | 4.91 | 5.30 |
| 3.70 | **4.00** | 4.28 | 4.78 | 5.24 | 5.66 |
| 4.17 | **4.50** | 4.81 | 5.38 | 5.89 | 6.36 |
| 4.64 | **5.00** | 5.35 | 5.98 | 6.55 | 7.07 |
| 5.09 | **5.50** | 5.88 | 6.57 | 7.20 | 7.78 |
| 5.55 | **6.00** | 6.41 | 7.17 | 7.85 | 8.48 |
| 6.02 | **6.50** | 6.95 | 7.77 | 8.51 | 9.19 |
| 6.94 | **7.50** | 8.02 | 8.96 | 9.82 | 10.61 |
| 7.87 | **8.50** | 9.09 | 10.16 | 11.13 | 12.02 |
| 9.26 | **10.00** | 10.69 | 11.95 | 13.09 | 14.14 |
| 10.18 | **11.00** | 11.76 | 13.15 | 14.40 | 15.56 |
| 11.11 | **12.00** | 12.83 | 14.34 | 15.71 | 16.97 |
| 12.50 | **13.50** | 14.43 | 16.14 | 17.67 | 19.09 |
| 13.89 | **15.00** | 16.04 | 17.93 | 19.64 | 21.21 |
| 15.74 | **17.00** | 18.17 | 20.32 | 22.26 | 24.04 |
| 18.05 | **19.50** | 20.85 | 23.31 | 25.53 | 27.58 |
| 20.37 | **22.00** | 23.52 | 26.29 | 28.80 | 31.11 |
| 23.14 | **25.00** | 26.73 | 29.88 | 32.73 | 35.35 |
| 25.92 | **28.00** | 29.93 | 33.47 | 36.66 | 39.60 |
| 29.16 | **31.50** | 33.67 | 37.65 | 41.24 | 44.55 |

$$Q_2 \sim Q_1 \cdot \sqrt{\frac{P_2}{P_1}}$$

1 USgal ~ 3,785 l

## Nozzle capacities

### EN

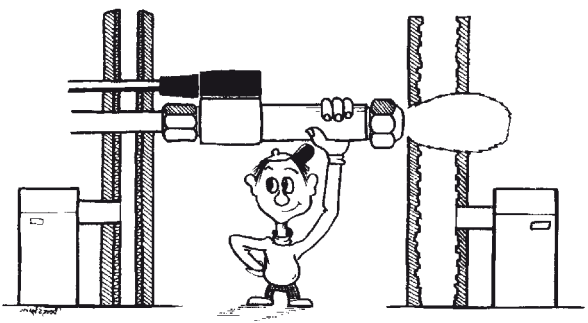
Nozzle capacitities in kg/h as a function of the atomising pressure with an oil of viscosity 3.4 $mm^2/s$ and density 840 $kg/m^3$.

| | | | **Reference pressure** | | |
|---|---|---|---|---|---|
| 6 bar<br>kg/h | 7 bar<br>kg/h | 8 bar<br>kg/h | **10 bar<br>kg/h** | 12 bar<br>kg/h | 14 bar<br>kg/h |
| 1.13 | 1.22 | 1.30 | **1.46** | 1.59 | 1.72 |
| 1.28 | 1.38 | 1.48 | 1.66 | 1.81 | 1,96 |
| 1.44 | 1.56 | 1.67 | **1.87** | 2.04 | 2.21 |
| 1.63 | 1.76 | 1.88 | **2.11** | 2.31 | 2.49 |
| 1.83 | 1.98 | 2.11 | **2.37** | 2.59 | 2.80 |
| 2.06 | 2.23 | 2.38 | **2.67** | 2.92 | 3.15 |
| 2.27 | 2.45 | 2.62 | **2.94** | 3.22 | 3.47 |
| 2.56 | 2.76 | 2.96 | **3.31** | 3.62 | 3.91 |
| 2.88 | 3.11 | 3.32 | **3.72** | 4.07 | 4.40 |
| 3.28 | 3.54 | 3.79 | **4.24** | 4.64 | 5.01 |
| 3.44 | 3.72 | 3.98 | **4.45** | 4.87 | 5.26 |
| 3.64 | 3.94 | 4.21 | **4.71** | 5.15 | 5.57 |
| 4.00 | 4.32 | 4.62 | **5.17** | 5.66 | 6.11 |
| 4.52 | 4.88 | 5.22 | **5.84** | 6.39 | 6.90 |
| 4.70 | 5.08 | 5.43 | 6.08 | 6.66 | 7.19 |
| 5.07 | 5.48 | 5.85 | **6.55** | 7.17 | 7.55 |

## 5. Oil preheaters

### Contents





## Oil preheaters

If the preheater needs replacing, consult the burner manufacturer. If a standard preheater is involved, it can also be purchased from an oil burner stockist or from Danfoss

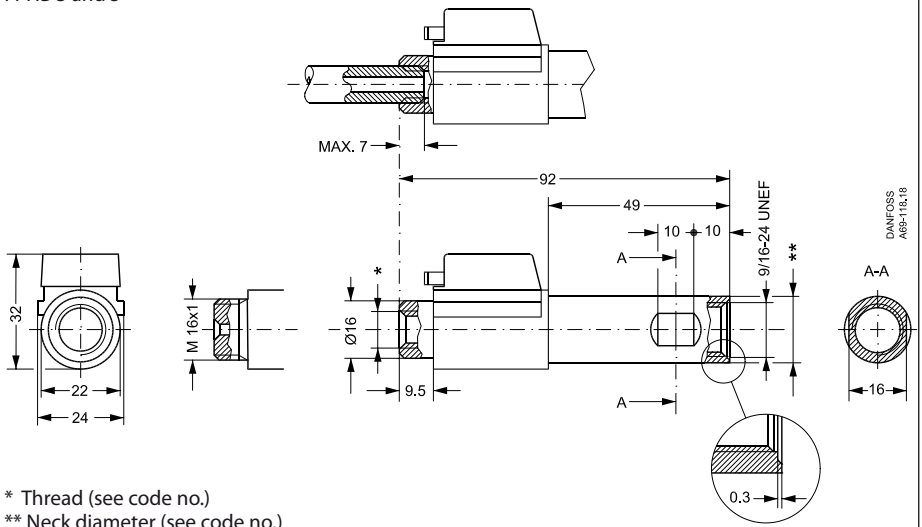
## Danfoss Standard Types

| Multi pack Code no. | Marked on product Code no. | Type | Connection | PTC (°C) | Thermostat | Neck diameter |
|---|---|---|---|---|---|---|
| 030N2302 | 030N6302 | FPHB 3 | G 1/8 | 1 x 90 | 60/32 | 18.5 |
| 030N1201 | 030N6201 | FPHB 5 | M8 x 1 | 1 x 70 | 60/32 | 18.5 |
| 030N1202 | 030N6202 | FPHB 5 | G 1/8 | 1 x 70 | 60/32 | 18.5 |
| 030N1218 | 030N6218 | FPHB 5 | G 1/8 | 1 x 70 | 60/32 | 18.2 |
| 030N1223 | 030N6223 | FPHB 5 | M16 x 1 | 1 x 120 | 60/32 | 18.5 |
| 030N2057 | 030N6057 | FPHB 3 | G 1/8 | 1 x 50 | 60/32 | 18.5 |
| 030N1220 | 030N6220 | FPHB 10 | G 1/8 | 1 x 120 | 60/32 | 18.5 |
| 030N1224 | 030N6224 | FPHB 10 | M8 x 1 | 1 x 120 | 60/32 | 18.2 |
| 030N4101 | 030N6101 | FPHB LE | G 1/8 | 1 x 70 | 60/32 | 18.5 |

| LE valve | Description/Application |
|---|---|
| 030N4013 | For FPHB LE and nozzle holder for build-in LE valve |

## Oil preheaters

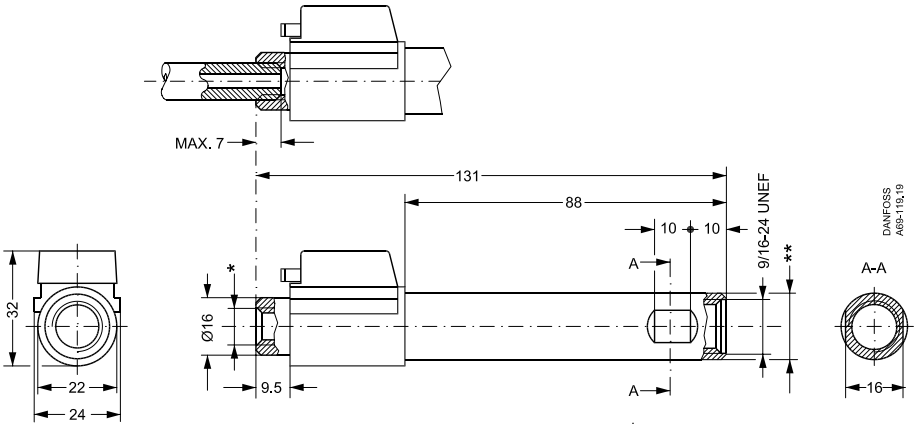
FPHB 3 and 5




* Thread (see code no.)
** Neck diameter (see code no.)

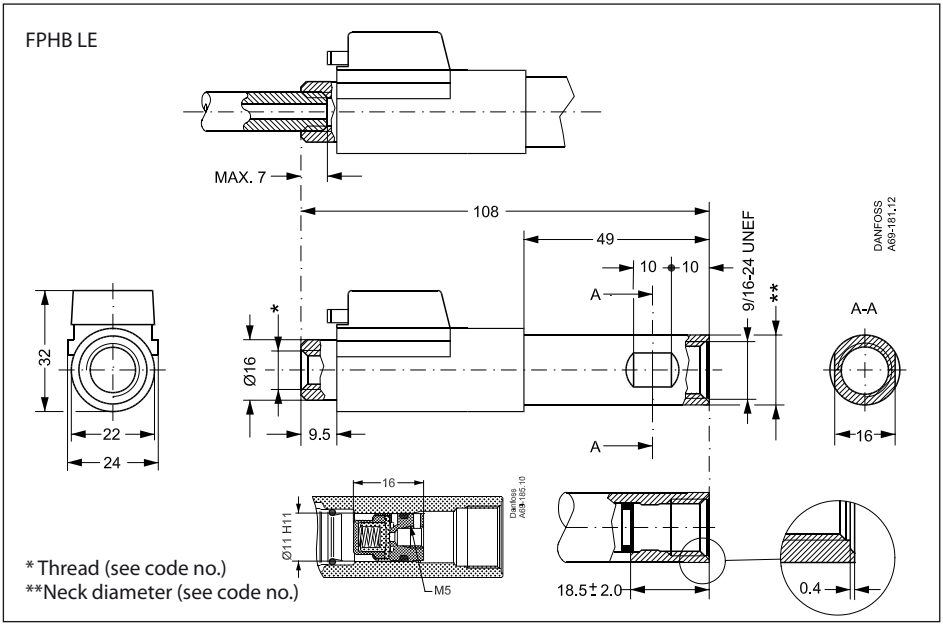
## Dimensions

FPHB 10




* Thread (see code no.)
** Neck diameter (see code no.)

Dimensions


FPHB LE
MAX. 7
108
49
10
10
A
9/16-24 UNEF
**
*
Ø16
9.5
32
22
24
A
A-A
16
DANFOSS
A69-181.12
16
Ø11 H11
M5
Danfoss
A69-185.10
18.5±2.0
0.4
* Thread (see code no.)
**Neck diameter (see code no.)

Danfoss is a leading global manufacturer of components for combustible liquid burners used in domestic, commercial and industrial applications. This position has been achieved by exceeding the expectations of our customers; responding quickly to their requirements; providing high quality in all respects and offering competitive prices – all with due consideration for the environment.

Our product range for oil burners and boilers comprises: oil pumps, oil nozzles, preheaters, ignition units, burner controls and thermostats.

The Heart of Heating