


## TECHNICAL DATA

**Operating range:** from 1 to 12 m3/h with head up to 11 metres.
**Pumped liquid temperature range:** from -10°C to +110°C.
**Pumped liquid:** clean, free from solids and mineral oils, not viscous, chemically neutral, close to the characteristics of water (max 30% glycol).
**Maximum working pressure:** 10 bar (1000 kPa).
**Protection level:** IP 44
**Insulation class:** F
**Cable grommet:** PG 11
**Installation:** with motor axis horizontal.
**Standard voltage input:** single-phase 230 V / 50 Hz
three-phase 400 V/ 50 Hz
**This product complies with European standard EN 60335-2-51**

## APPLICATIONS

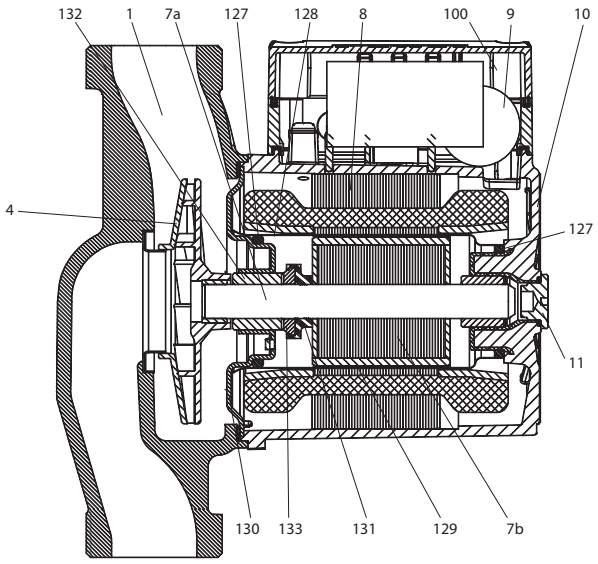
Pump for hot or cold water circulation in small community central heating and air conditioning systems for both civil and industrial applications, of the closed circuit pressurized or open circuit type.

## CONSTRUCTION FEATURES

Pump body in cast iron and motor in die cast aluminium.
Impeller in technopolymer, motor shaft in hardened stainless steel held in graphite bearings lubricated by the pumping medium.
Pump body with threaded ports.
Rotor protective jacket, stator jacket, and closing flange in stainless steel.
The two-pole asynchronous wet rotor motor features three-speed operation.
Integral thermal probe in single-phase version.

## MATERIALS

| N. | PARTS | MATERIALS |
|---|---|---|
| 1 | PUMP BODY | CAST IRON |
| 4 | IMPELLER | TECHNOPOLYMER |
| 7A | MOTOR SHAFT | STAINLESS STEEL |
| 7B | ROTOR | – |
| 8 | STATOR | – |
| 9 | CAPACITOR | – |
| 10 | MOTOR CASING | DIE CAST ALUMINIUM |
| 11 | BREATHER PLUG | BRASS |
| 100 | TERMINAL BOX | – |
| 127 | SEAL RING | ETHYLENE PROPYLENE |
| 128 | STATOR JACKET | STAINLESS STEEL |
| 129 | ROTOR JACKET | STAINLESS STEEL |
| 130 | CLOSING FLANGE | STAINLESS STEEL |
| 131 | THRUST RING SUPPORT | ETHYLENE PROPYLENE |
| 132 | BUSHINGS | GRAPHITE |
| 133 | THRUST RING | CERAMIC |




**– Legend:**
**(example)**

**D 50 / 250 (.40) M**

A = circulator with threaded ports
B = flanged circulator
D = twin circulator

maximum head (dm)

centre distance (mm)

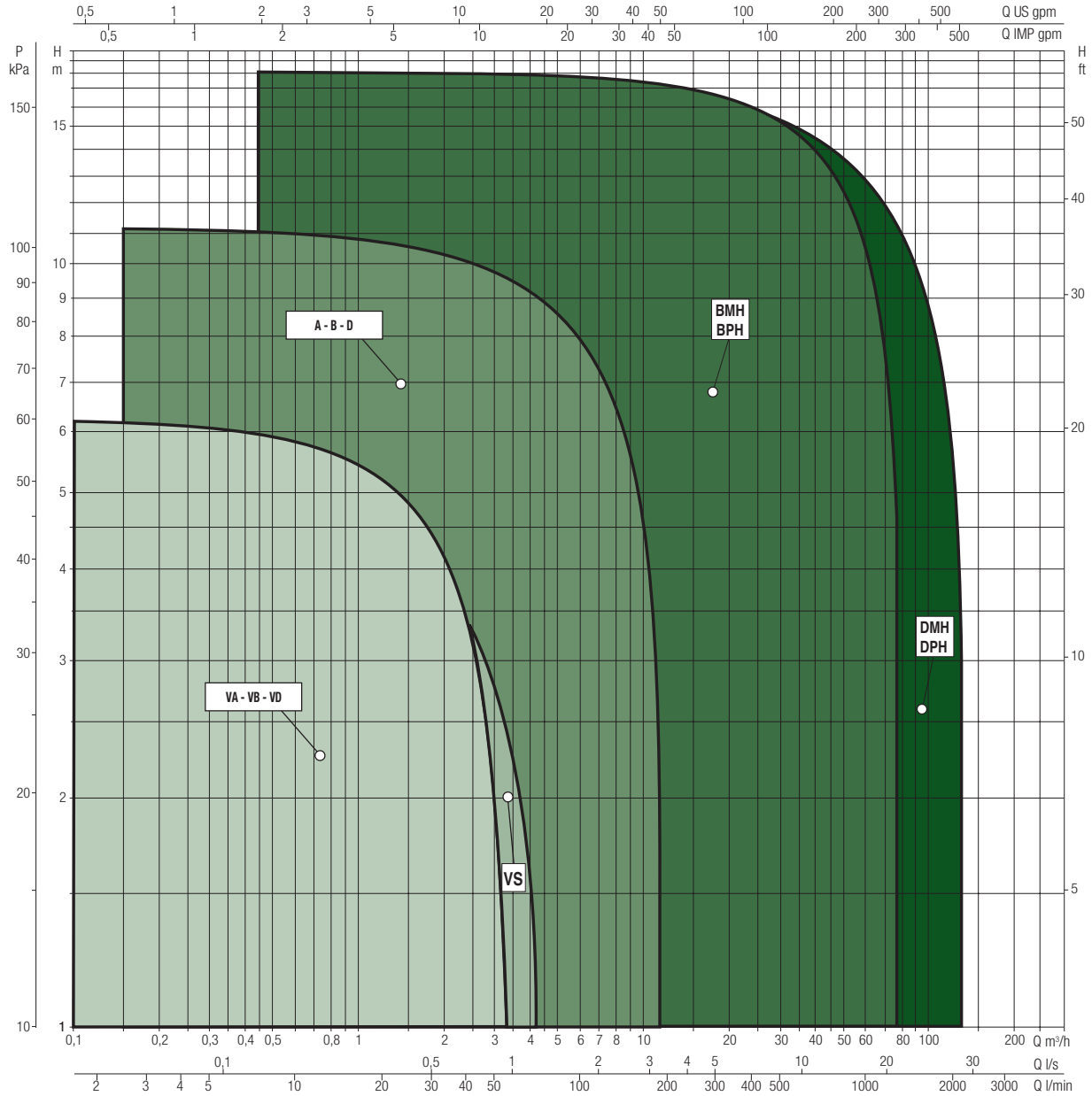
( ) = 1" 1/2 threaded ports
(X) = 2" threaded ports
(.40) = DN40/PN10 flanged ports

M = single-phase motor
T = three-phase motor

# PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

## GRAPHIC SELECTION TABLE






DAB PUMPS reserves the right to make modifications without notice.

## SELECTION TABLE - A *SINGLE WITH UNIONS*

| MODEL | Q=m³/h | 0 | 0,6 | 1,2 | 1,8 | 2,4 | 3 | 4,2 | 7,2 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 70 | 120 | 200 |
| A 50/180 M | H (m) | 5,7 | 5,6 | 5,4 | 5,3 | 5,1 | 4,8 | 4,2 | 2,6 | |
| A 50/180 XM | | 5,7 | 5,6 | 5,4 | 5,3 | 5,1 | 4,8 | 4,2 | 2,6 | |
| A 50/180 T | | 5,6 | 5,6 | 5,6 | 5,5 | 5,43 | 5,4 | 4,9 | 2,8 | |
| A 50/180 XT | | 5,9 | 5,85 | 5,8 | 5,6 | 5,5 | 5,2 | 4,6 | 2,9 | |
| A 56/180 M | | 6,35 | 6,3 | 6,2 | 6,18 | 6 | 5,9 | 5,5 | 4,2 | 1,2 |
| A 56/180 XM | | 6,35 | 6,3 | 6,2 | 6,18 | 6 | 5,9 | 5,5 | 4,2 | 1,2 |
| A 56/180 T | | 6,42 | 6,42 | 6,41 | 6,4 | 6,4 | 6,4 | 6,1 | 4,8 | |
| A 56/180 XT | | 6,4 | 6,3 | 6,2 | 6,1 | 6 | 5,9 | 5,7 | 4,4 | |
| A 80/180 M | | 8,25 | 8 | 7,6 | 7,4 | 7,2 | 6,9 | 6,3 | 3,8 | |
| A 80/180 XM | | 8,25 | 8 | 7,6 | 7,4 | 7,2 | 6,9 | 6,3 | 3,8 | |
| A 80/180 T | | 8,2 | 7,9 | 7,6 | 7,3 | 7 | 6,8 | 6,1 | 3,7 | |
| A 80/180 XT | | 8,2 | 7,9 | 7,6 | 7,3 | 7 | 6,8 | 6,1 | 3,7 | |
| A 110/180 M | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 8,9 | 6,7 | |
| A 110/180 XM | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 9,2 | 7 | 1,7 |
| A 110/180 T | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 8,9 | 6,6 | |
| A 110/180 XT | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 9,2 | 7 | 1,6 |

## SELECTION TABLE - B *SINGLE WITH FLANGES*

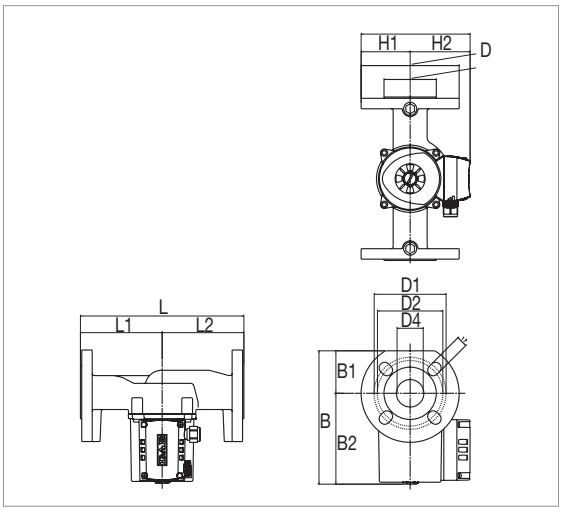
| MODEL | Q=m³/h | 0 | 0,6 | 1,2 | 1,8 | 2,4 | 3 | 4,2 | 7,2 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 70 | 120 | 200 |
| B 50/250.40 M | H (m) | 5,7 | 5,6 | 5,4 | 5,3 | 5,1 | 4,8 | 4,2 | 2,6 | |
| B 50/250.40 T | | 5,9 | 5,85 | 5,8 | 5,6 | 5,5 | 5,2 | 4,6 | 2,9 | |
| B 56/250.40 M | | 6,35 | 6,3 | 6,2 | 6,18 | 6 | 5,9 | 5,5 | 4,2 | 1,2 |
| B 56/250.40 T | | 6,4 | 6,3 | 6,2 | 6,1 | 6 | 5,9 | 5,7 | 4,4 | |
| B 80/250.40 M | | 8,25 | 8 | 7,6 | 7,4 | 7,2 | 6,9 | 6,3 | 3,8 | |
| B 80/250.40 T | | 8,2 | 7,9 | 7,6 | 7,3 | 7 | 6,8 | 6,1 | 3,7 | |
| B 110/250.40 M | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 9,2 | 7 | 1,7 |
| B 110/250.40 T | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 9,2 | 7 | 1,6 |

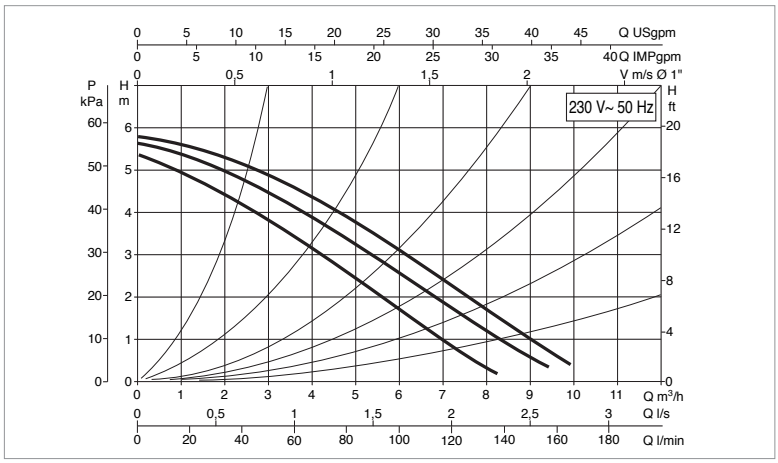
## SELECTION TABLE - D *TWIN WITH FLANGES*

| MODEL | Q=m³/h | 0 | 0,6 | 1,2 | 1,8 | 2,4 | 3 | 4,2 | 7,2 | 12 |
|---|---|---|---|---|---|---|---|---|---|---|
| | Q=l/min | 0 | 10 | 20 | 30 | 40 | 50 | 70 | 120 | 200 |
| D 50/250.40 M | H (m) | 5,7 | 5,6 | 5,4 | 5,3 | 5,1 | 4,8 | 4,2 | 2,6 | |
| D 50/250.40 T | | 5,9 | 5,85 | 5,8 | 5,6 | 5,5 | 5,2 | 4,6 | 2,9 | |
| D 56/250.40 M | | 6,35 | 6,3 | 6,2 | 6,18 | 6 | 5,9 | 5,5 | 4,2 | 1,2 |
| D 56/250.40 T | | 5,9 | 5,85 | 5,8 | 5,6 | 5,5 | 5,2 | 4,6 | 2,9 | |
| D 80/250.40 M | | 8,25 | 8 | 7,6 | 7,4 | 7,2 | 6,9 | 6,3 | 3,8 | |
| D 80/250.40 T | | 8,2 | 7,9 | 7,6 | 7,3 | 7 | 6,8 | 6,1 | 3,7 | |
| D 110/250.40 M | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 9,2 | 7 | 1,7 |
| D 110/250.40 T | | 11,3 | 11 | 10,8 | 10,5 | 10 | 9,8 | 9,2 | 7 | 1,6 |

## **B 50/250.40 M -** HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - **Maximum operating pressure:** 10 bar (1000 kPa)



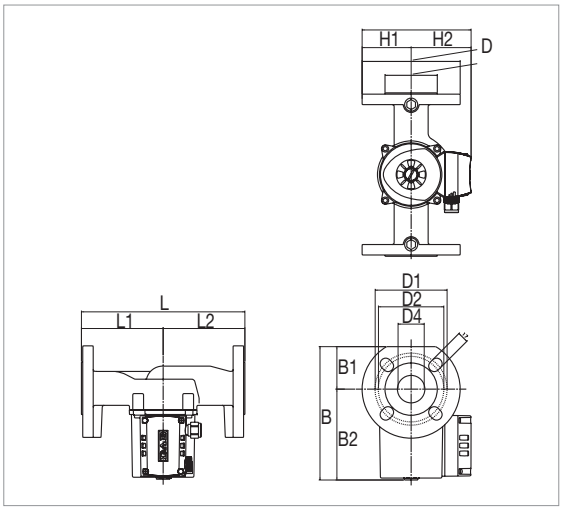

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

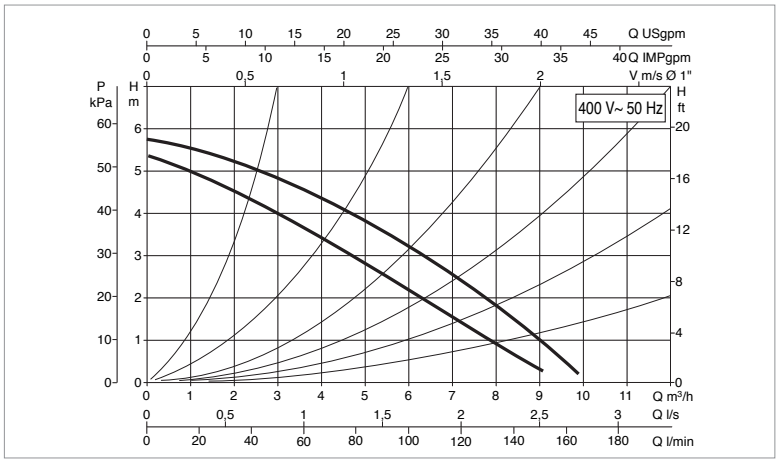
| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| **B 50/250.40 M** | 250 | 1x230 V ~ | DN 40 | 3<br>2<br>1 | 2766<br>2616<br>2215 | 195<br>194<br>180 | 0,95<br>0,95<br>0,85 | 4 | 400 | m.c.a. | 1,5 |

| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| **B 50/250.40 M** | 250 | 125 | 125 | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,1 |

## **B 50/250.40 T -** HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - **Maximum operating pressure:** 10 bar (1000 kPa)




The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| **B 50/250.40 T** | 250 | 3x400 V ~ | DN 40 | 2<br>1 | 2838<br>2520 | 201<br>129 | 0,5<br>0,23 | – | – | m.c.a. | 1,5 |

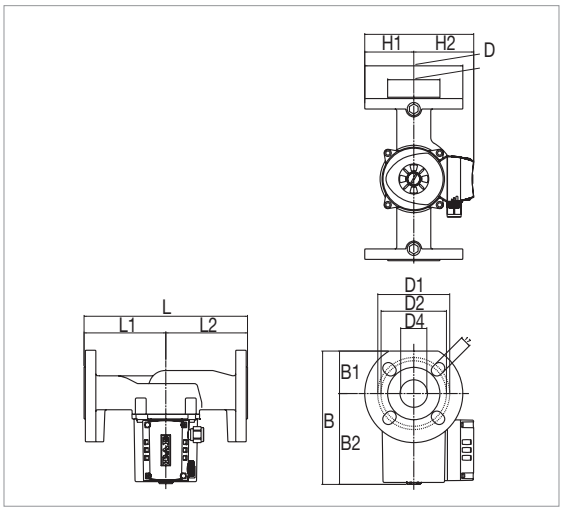
| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| **B 50/250.40 T** | 250 | 125 | 125 | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,3 |

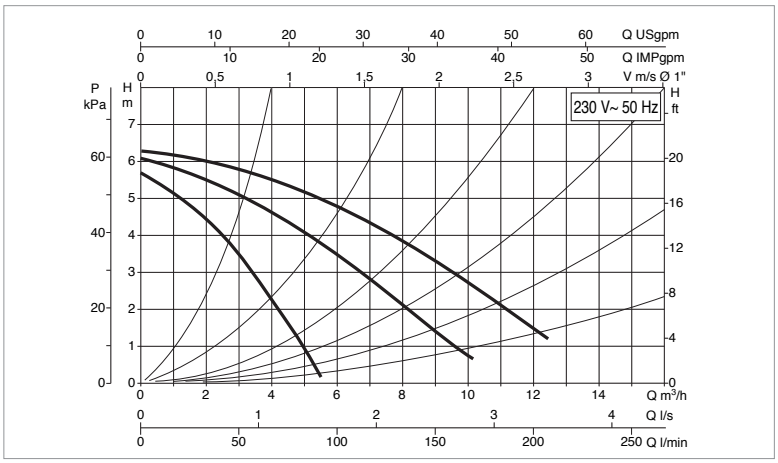


DAB PUMPS reserves the right to make modifications without notice.

## B 56/250.40 M - HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - Maximum operating pressure: 10 bar (1000 kPa)



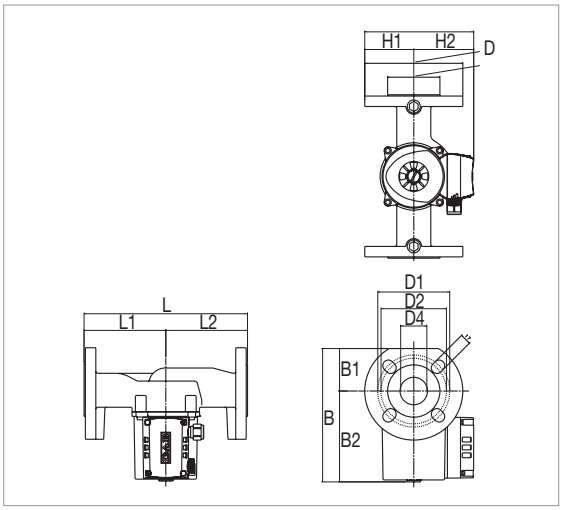

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

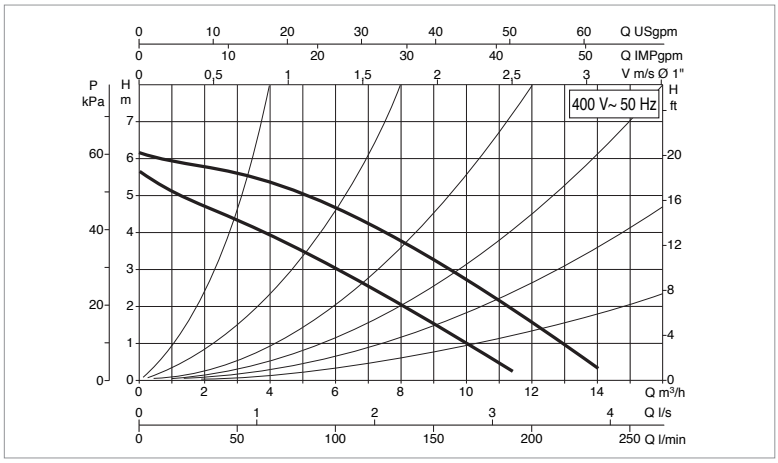
| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| B 56/250.40 M | 250 | 1x230 V ~ | DN 40 | 3<br>2<br>1 | 2658<br>2117<br>1394 | 271<br>294<br>224 | 1,18<br>1,32<br>1 | 7 | 400 | m.c.a. | 1,5 |

| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| B 56/250.40 M | 250 | 125 | 125 | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,3 |

## B 56/250.40 T - HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - Maximum operating pressure: 10 bar (1000 kPa)



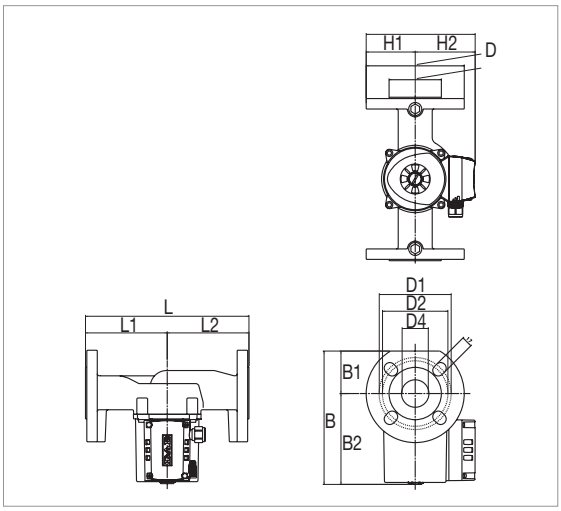

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

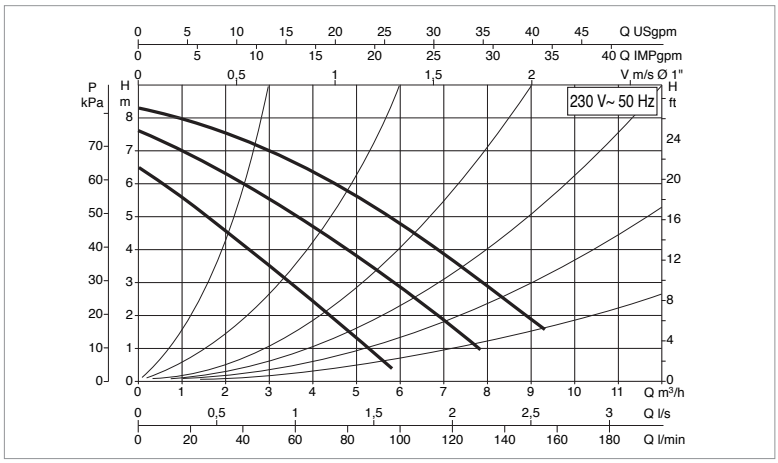
| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| B 56/250.40 T | 250 | 3x400 V ~ | DN 40 | 2<br>1 | 2708<br>2178 | 291<br>200 | 0,6<br>0,32 | – | – | m.c.a. | 1,5 |

| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| B 56/250.40 T | 250 | 125 | 125 | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,2 |

## **B 80/250.40 M -** HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - **Maximum operating pressure:** 10 bar (1000 kPa)



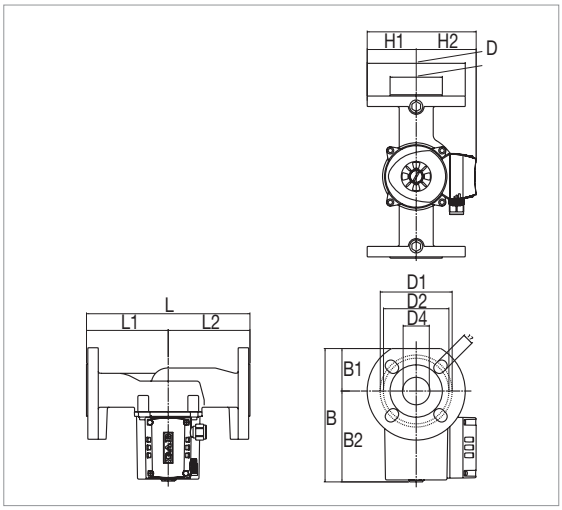

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

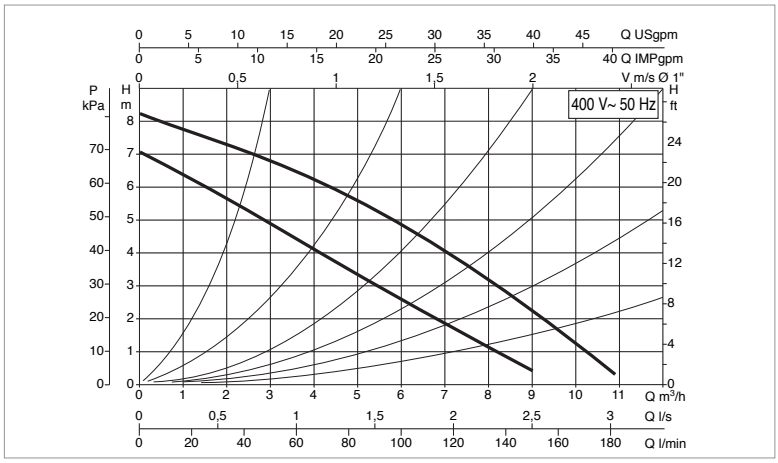
| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| **B 80/250.40 M** | 250 | 1x230 V ~ | DN 40 | 3<br>2<br>1 | 2683<br>2374<br>1688 | 256<br>260<br>218 | 1,12<br>1,17<br>1,00 | 7 | 400 | m.c.a. | 2,5 |

| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| **B 80/250.40 M** | 250 | 125 | 125 | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,3 |

## **B 80/250.40 T -** HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - **Maximum operating pressure:** 10 bar (1000 kPa)




The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| **B 80/250.40 T** | 250 | 3x400 V ~ | DN 40 | 2<br>1 | 2724<br>2226 | 271<br>187 | 0,57<br>0,31 | – | – | m.c.a. | 2,5 |

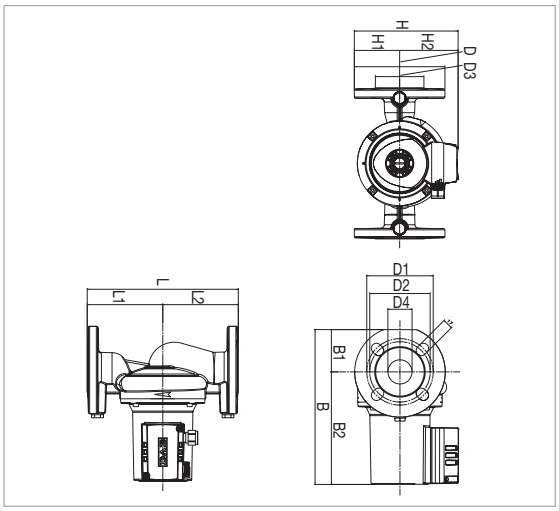
| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| **B 80/250.40 T** | 250 | 125 | 125 | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,3 |

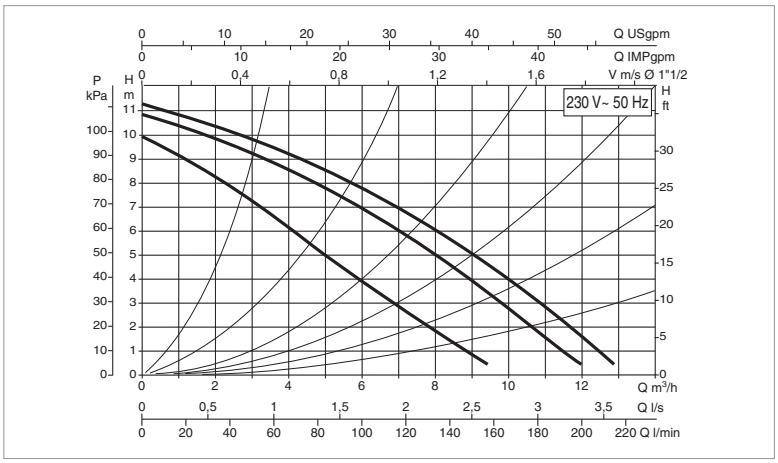


DAB PUMPS reserves the right to make modifications without notice.

## **B 110/250.40 M -** HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - **Maximum operating pressure:** 10 bar (1000 kPa)



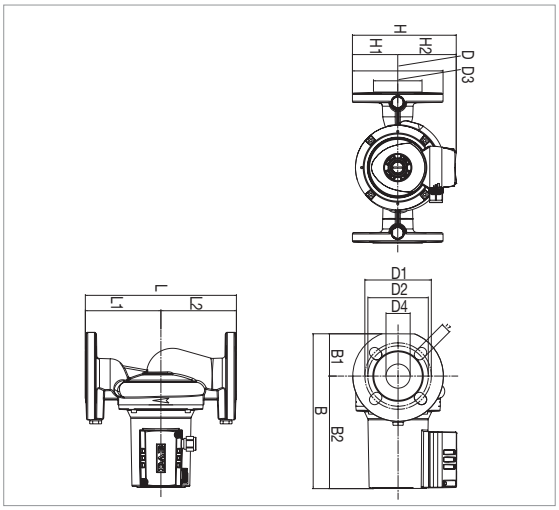

The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

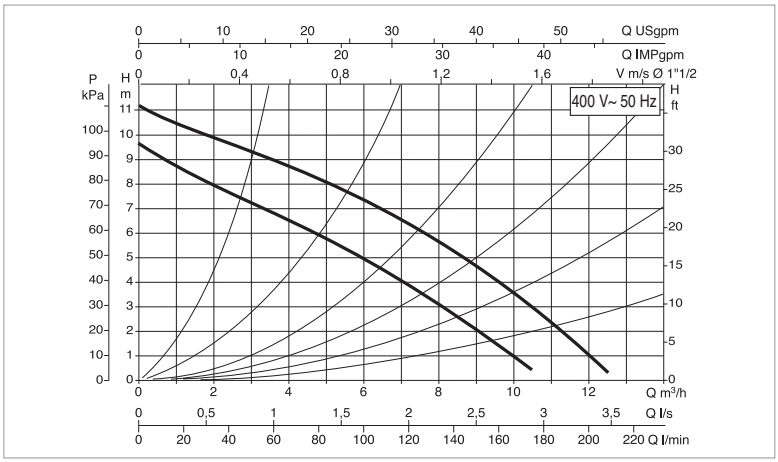
| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| **B 110/250.40 M** | 250 | 1x230 V ~ | DN 40 | 3<br>2<br>1 | 2746<br>2552<br>2052 | 410<br>393<br>361 | 1,77<br>1,78<br>1,64 | 12 | 450 | m.c.a. | 2,5 |

| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| **B 110/250.40 M** | 250 | 125 | 125 | 256 | 70 | 186 | 150 | 110 | 100 | 80 | 40 | 172 | 75 | 97 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,2 |

## **B 110/250.40 T -** HEATING, AIR CONDITIONING

Pumped liquid temperature range: from -10 °C to +110 °C - **Maximum operating pressure:** 10 bar (1000 kPa)




The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

| MODEL | CENTRE DISTANCE mm | POWER INPUT 50 Hz | UNIONS ON REQUEST | ELECTRICAL DATA | | | | | | MINIMUM SUCTION PRESSURE | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | SPEED | REV. 1/min | P1 MAX W | In A | CAPACITOR µF | CAPACITOR Vc | t° | 90 ° |
| **B 110/250.40 T** | 250 | 3x400 V ~ | DN 40 | 2<br>1 | 2759<br>2341 | 403<br>289 | 0,90<br>0,48 | – | – | m.c.a. | 2,5 |

| MODEL | L | L1 | L2 | B | B1 | B2 | D | D1 | D2 | D3 | D4 | H | H1 | H2 | F | PACKING DIMENSIONS | | | VOLUME m³ | WEIGHT kg |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | | | | | | | | L | B | H | | |
| **B 110/250.40 T** | 250 | 125 | 125 | 256 | 70 | 186 | 150 | 110 | 100 | 80 | 40 | 168 | 75 | 93 | DN40/PN10 | 302 | 202 | 283 | 0,013 | 9,3 |