

# CIRCULATORS FOR HEATING AND AIR CONDITIONING SYSTEMS



VB



VD



VA



## GENERAL INFORMATION

### Applications

Pump for circulating hot water in closed and pressurised or open tank centralised home heating and air conditioning systems.

Also suitable for solar power systems.

### Construction characteristics

Single body comprising cast iron hydraulic unit and wet rotor motor

Die-cast aluminium motor casing.

Technopolymer impeller. Tempered stainless steel driving shaft mounted on graphite bearings lubricated by the pumped liquid.

Stainless steel protective rotor sleeve, stator sleeve and closing flange.

Ceramic thrust bearing, E.P.D.M. O-rings and brass air outlet cap.

Two-pole asynchronous motor with squirrel cage rotor designed to work at three speeds, by means of a special selector located on the terminal board, in order to adapt the operation of the circulator to the characteristics of the system.

An automatic clapet type valve is incorporated into the delivery mouth of the twin version in order to prevent water recirculating while the unit is not working.

Motor self-protected against resistance.

### No overload protection required.

Protection level: IP 44

Insulating class: F

Cable grommet: PG 11

Standard voltage: single-phase 230 V / 50 Hz

This product complies with EN 60335-2-51 European standard

– Denomination index:  
(example)

VA = circulator with threaded mouths

VB = circulator with  
DN 25 oval flanges

VD = twin circulator

maximum head (dm) \_\_\_\_\_

centre distance (mm) \_\_\_\_\_

Standard (no ref.) = threaded mouths measuring 1" 1/2

1/2" = threaded mouths measuring 1"

X = threaded mouths 2"

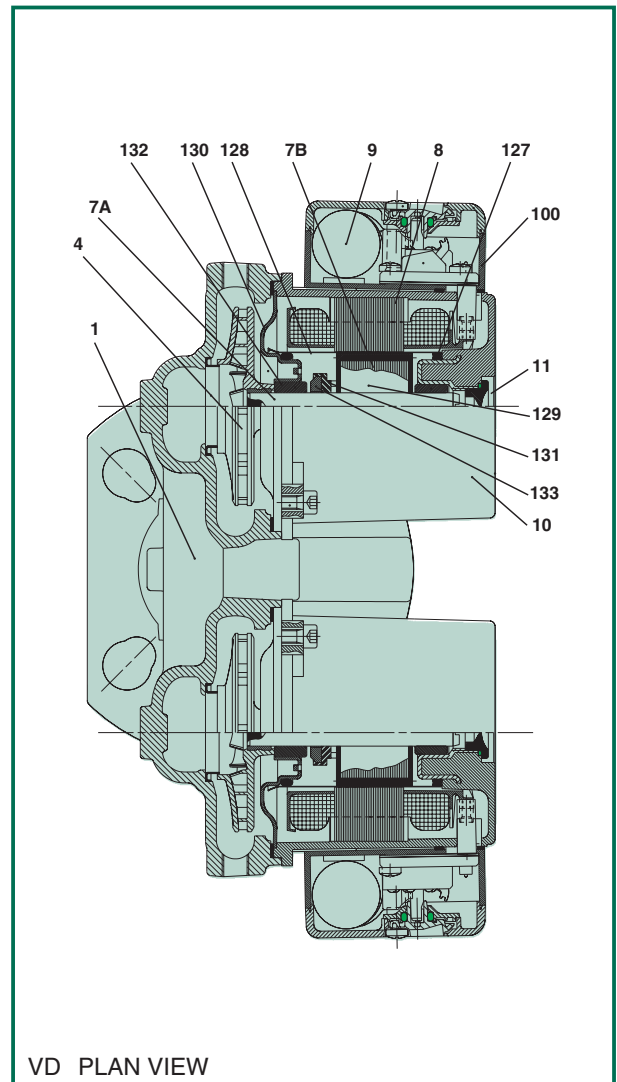
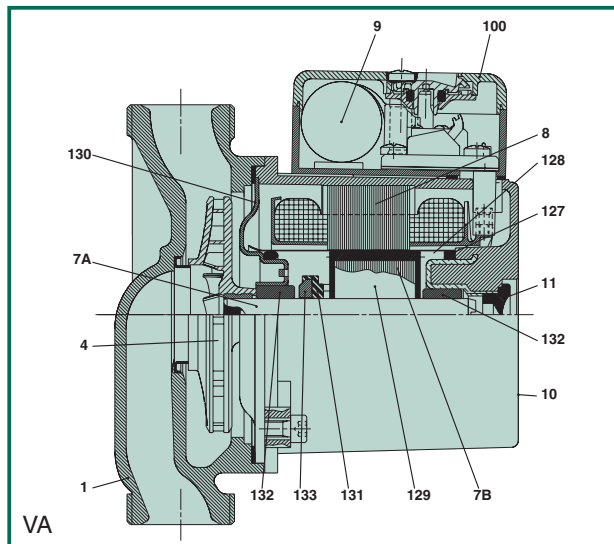
32 = flanged mouths DN32/PN6

VA 55 / 180 X

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

## TECHNICAL DATA

| N.  | PARTS              | MATERIALS          |
|-----|--------------------|--------------------|
| 1   | PUMP BODY          | CAST IRON          |
| 4   | IMPELLER           | TECHNOPOLYMER      |
| 7A  | DRIVE SHAFT        | STAINLESS STEEL    |
| 7B  | ROTOR              | -                  |
| 8   | STATOR             | -                  |
| 9   | CAPACITOR          | -                  |
| 10  | MOTOR CASING       | DIE CAST ALUMINIUM |
| 11  | AIR OUTLET CAP     | BRASS              |
| 100 | TERMINAL BOARD BOX | -                  |
| 127 | O-RING             | E.P.D.M.           |
| 128 | STATOR SLEEVE      | STAINLESS STEEL    |
| 129 | ROTOR SLEEVE       | STAINLESS STEEL    |
| 130 | CLOSING FLANGE     | STAINLESS STEEL    |
| 131 | THRUST BOX SUPPORT | E.P.D.M.           |
| 132 | BEARINGS           | GRAPHITE           |
| 133 | THRUST BOX         | CERAMICS           |



Operating range:

from 0.5 to 4 m<sup>3</sup>/h with head up to 6,3 metres.

Liquid temperature range:

from -10°C to +110°C.

To prevent condensation from forming inside the motor, the pumped liquid temperature must always be over the room temperature.

Characteristics of pumped liquid:

clean, free from solids and mineral oils, non viscous, chemically neutral, close to the characteristics of water (max. glycol 30%).

Maximum operating pressure:

10 bar (1000 kPa).

Minimum head pressure:

values are shown in the relative tables.

Installation:

with MOTOR AXIS HORIZONTAL on the delivery or return piping, with intake mouth as near as possible to the expansion tank, higher than the maximum level of the boiler and as far away as possible from bends, elbows and unions, in order to prevent water turbulence and consequent noisiness.

Special versions on request:

other voltages and/or frequencies.

Accessories on request:

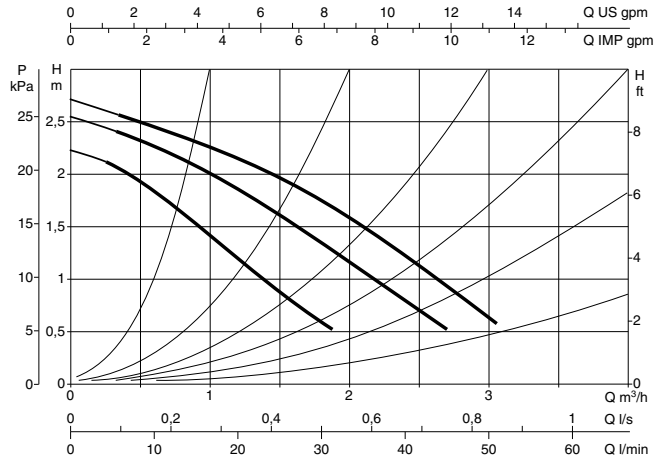
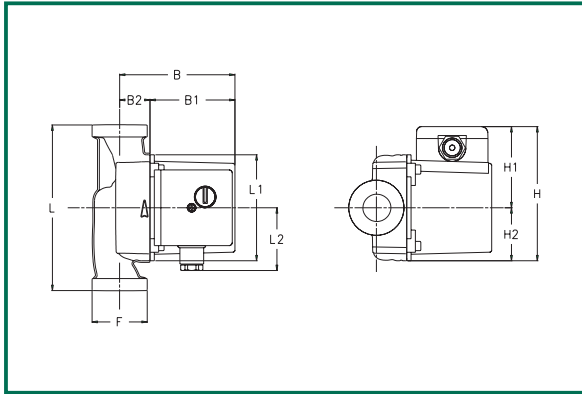
unions measuring 3/4" F - 1" F - 1 1/4" F - 1 1/4" M  
oval counter flanges measuring DN20-DN25-DN32  
round counter flanges measuring DN32/PN6

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

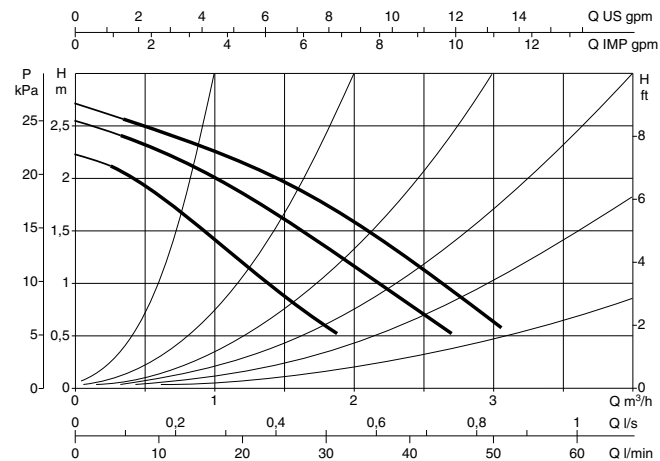
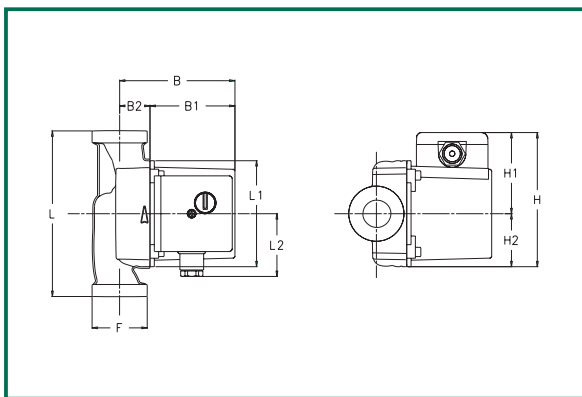
## VA 25/130 SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 130 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 138                | 140 | 135 | 0,0026         | 2,65   |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |         |           |     | MINIMUM<br>HEAD<br>PRESSURE |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------|-----------|-----|-----------------------------|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |     |                             |
|           |                  |                          |                   |                   |                 |             |             |         | μF        | Vc  |                             |
| VA 25/130 | 1x230 V ~        | 130                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2590        | 57          | 0,26    | 1,5       | 450 | t° +90°C<br>mt. 1,5         |
|           |                  |                          |                   |                   | 2               | 2320        | 50          | 0,24    |           |     |                             |
|           |                  |                          |                   |                   | 1               | 1895        | 38          | 0,18    |           |     |                             |

## VA 25/180 SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 138                | 140 | 135 | 0,0036         | 2,8    |

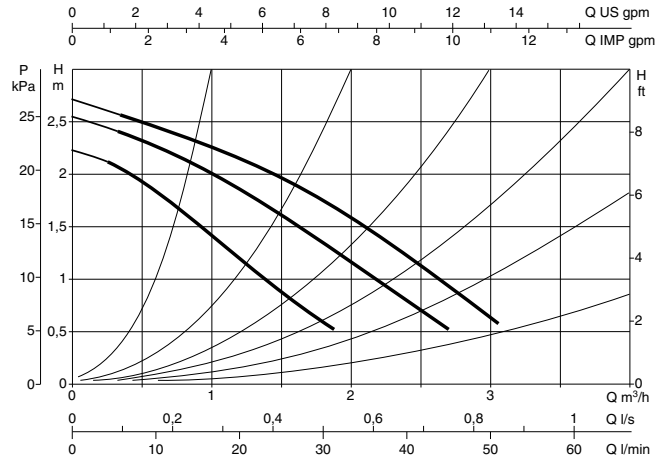
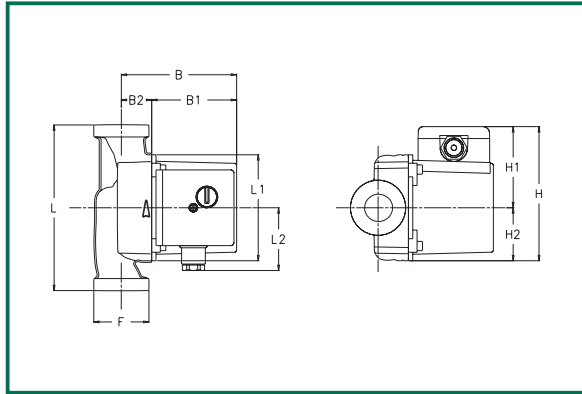
| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |         |           |     | MINIMUM<br>HEAD<br>PRESSURE |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------|-----------|-----|-----------------------------|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |     |                             |
|           |                  |                          |                   |                   |                 |             |             |         | μF        | Vc  |                             |
| VA 25/180 | 1x230 V ~        | 180                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2590        | 57          | 0,26    | 1,5       | 450 | t° +90°C<br>mt. 1,5         |
|           |                  |                          |                   |                   | 2               | 2320        | 50          | 0,24    |           |     |                             |
|           |                  |                          |                   |                   | 1               | 1895        | 38          | 0,18    |           |     |                             |

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

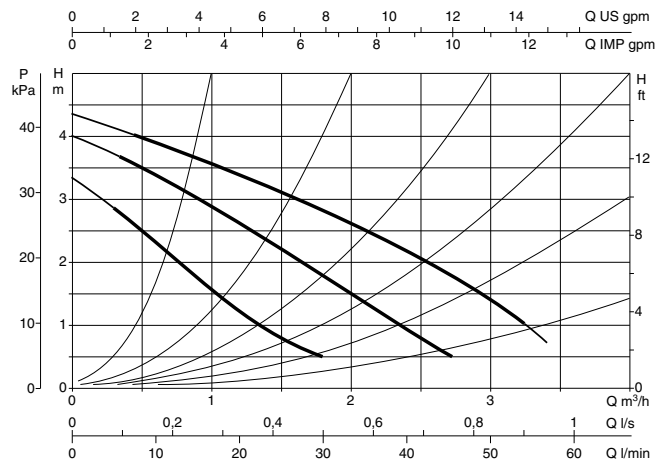
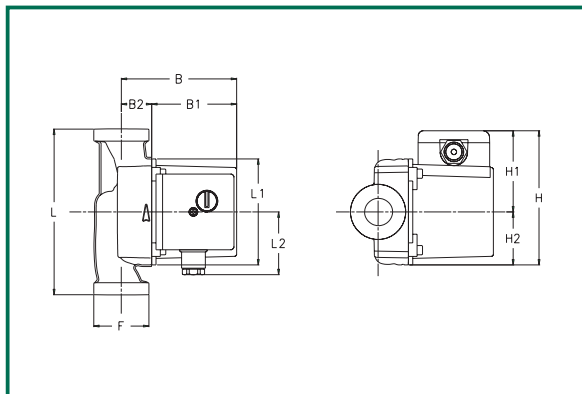
## VA 25/180X SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F    | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |      | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 2" G | 138                | 190 | 140 | 0,0036         | 2,8    |

| MODEL      | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST | ELECTRICAL DATA |             |             |                     | MINIMUM<br>HEAD<br>PRESSURE |           |
|------------|------------------|--------------------------|-------------------|-----------------|-------------|-------------|---------------------|-----------------------------|-----------|
|            |                  |                          |                   | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A |                             | CAPACITOR |
|            |                  |                          |                   |                 |             | μF          | V <sub>c</sub>      |                             |           |
| VA 25/180X | 1x230 V ~        | 180                      | 1" 1/4 F          | 3               | 2590        | 57          | 0,26                | 1,5                         | 450       |
|            |                  |                          |                   | 2               | 2320        | 50          | 0,24                |                             |           |
|            |                  |                          |                   | 1               | 1895        | 38          | 0,18                |                             |           |

## VA 35/130 SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 130 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 138                | 140 | 135 | 0,0026         | 2,65   |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |                     | MINIMUM<br>HEAD<br>PRESSURE |           |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------------------|-----------------------------|-----------|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A |                             | CAPACITOR |
|           |                  |                          |                   |                   |                 |             |             | μF                  | V <sub>c</sub>              |           |
| VA 35/130 | 1x230 V ~        | 130                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2370        | 71          | 0,31                | 2                           | 450       |
|           |                  |                          |                   |                   | 2               | 1910        | 60          | 0,28                |                             |           |
|           |                  |                          |                   |                   | 1               | 1440        | 44          | 0,2                 |                             |           |

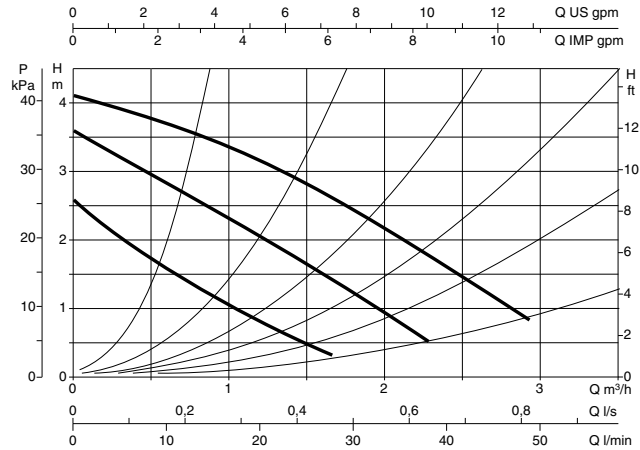
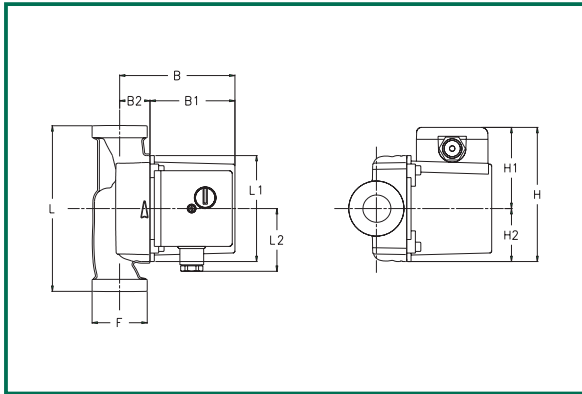
Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

## VA 35/130 - 1/2"

SINGLE WITH UNIONS

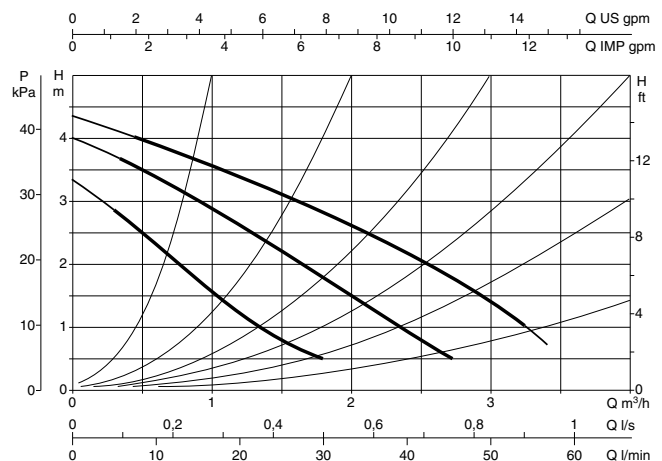
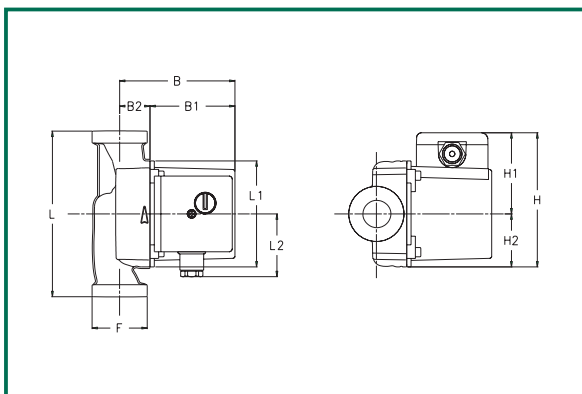


| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F    | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |      | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 130 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1" G | 138                | 140 | 135 | 0,0026         | 2,65   |

| MODEL          | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |         | ELECTRICAL DATA |             |             |                     |           |                | MINIMUM<br>HEAD<br>PRESSURE |
|----------------|------------------|--------------------------|-------------------|---------|-----------------|-------------|-------------|---------------------|-----------|----------------|-----------------------------|
|                |                  |                          | STANDARD          | SPECIAL | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |                |                             |
|                |                  |                          |                   |         |                 |             |             |                     | μF        | V <sub>c</sub> |                             |
| VA 35/130 1/2" | 1x230 V ~        | 130                      | -                 | -       | 3               | 2370        | 71          | 0,31                | 2         | 450            | t° +90°C<br>mt. 1,5         |
|                |                  |                          |                   |         | 2               | 1910        | 60          | 0,28                |           |                |                             |
|                |                  |                          |                   |         | 1               | 1440        | 44          | 0,2                 |           |                |                             |

## VA 35/180

SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 138                | 190 | 140 | 0,0036         | 2,8    |

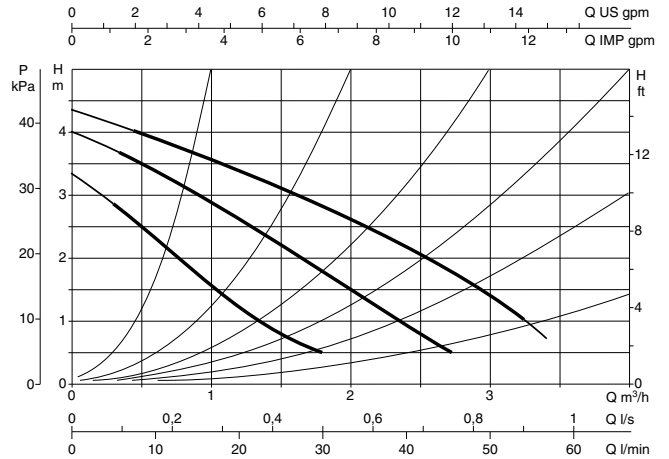
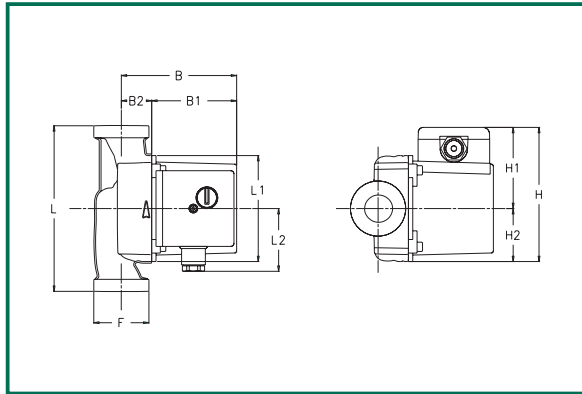
| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |                     |           |                | MINIMUM<br>HEAD<br>PRESSURE |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------------------|-----------|----------------|-----------------------------|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |                |                             |
|           |                  |                          |                   |                   |                 |             |             |                     | μF        | V <sub>c</sub> |                             |
| VA 35/180 | 1x230 V ~        | 180                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2370        | 71          | 0,31                | 2         | 450            | t° +90°C<br>mt. 1,5         |
|           |                  |                          |                   |                   | 2               | 1910        | 60          | 0,28                |           |                |                             |
|           |                  |                          |                   |                   | 1               | 1440        | 44          | 0,2                 |           |                |                             |

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

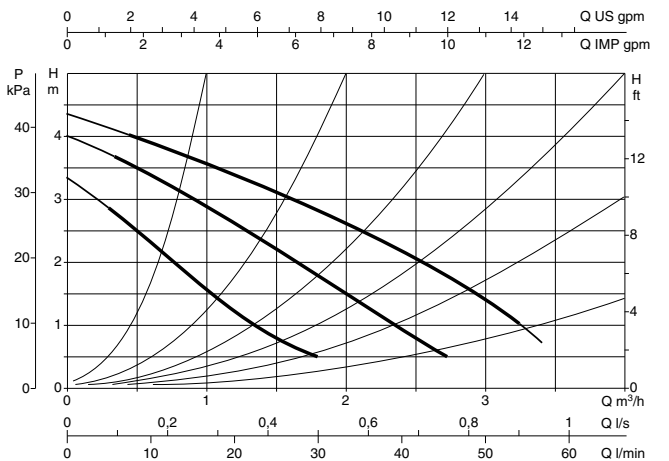
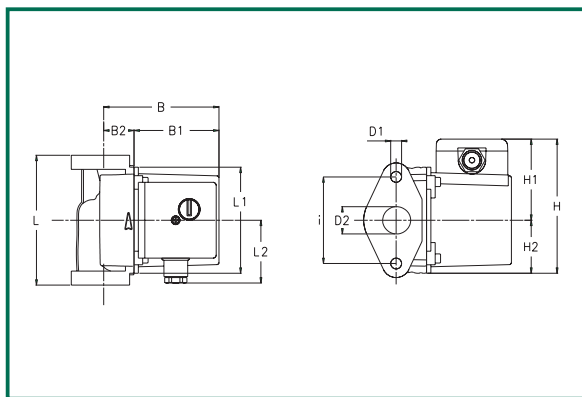
## VA 35/180X SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F    | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |      | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 2" G | 138                | 190 | 140 | 0,0036         | 2,8    |

| MODEL      | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST | ELECTRICAL DATA |             |             |                     |           |                | MINIMUM<br>HEAD<br>PRESSURE |
|------------|------------------|--------------------------|-------------------|-----------------|-------------|-------------|---------------------|-----------|----------------|-----------------------------|
|            |                  |                          |                   | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |                |                             |
|            |                  |                          |                   |                 |             |             |                     | μF        | V <sub>c</sub> |                             |
| VA 35/180X | 1x230 V ~        | 180                      | 1 1/4" F          | 3               | 2370        | 71          | 0,31                | 2         | 450            | t° +90°C<br>mt. 1,5         |
|            |                  |                          |                   | 2               | 1910        | 60          | 0,28                |           |                |                             |
|            |                  |                          |                   | 1               | 1440        | 44          | 0,2                 |           |                |                             |

## VB 35/120 SINGLE WITH OVAL FLANGES



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | D2 | D1  | I  | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----|-----|----|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |    |     |    | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 120 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 25 | M10 | 78 | 138                | 130 | 145 | 0,0026         | 3,15   |

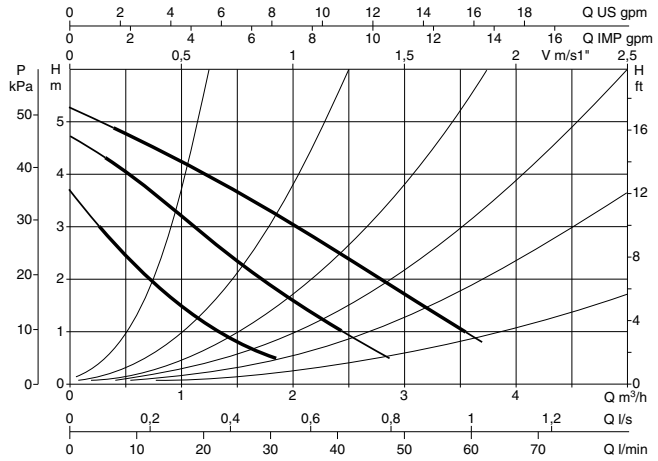
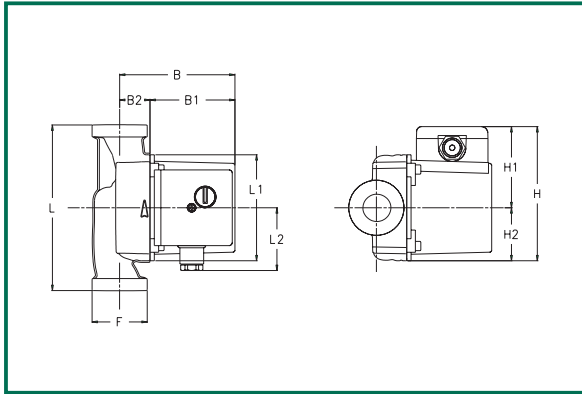
| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | OVAL FLANGES ON REQUEST |                | ELECTRICAL DATA |             |             |                     |           |                | MINIMUM<br>HEAD<br>PRESSURE |
|-----------|------------------|--------------------------|-------------------------|----------------|-----------------|-------------|-------------|---------------------|-----------|----------------|-----------------------------|
|           |                  |                          | STANDARD                | SPECIAL        | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |                |                             |
|           |                  |                          |                         |                |                 |             |             |                     | μF        | V <sub>c</sub> |                             |
| VB 35/120 | 1x230 V ~        | 120                      | DN 25                   | DN 20<br>DN 32 | 3               | 2370        | 71          | 0,31                | 2         | 450            | t° +90°C<br>mt. 1,5         |
|           |                  |                          |                         |                | 2               | 1910        | 60          | 0,28                |           |                |                             |
|           |                  |                          |                         |                | 1               | 1440        | 44          | 0,2                 |           |                |                             |

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

## VA 55/130 SINGLE WITH UNIONS

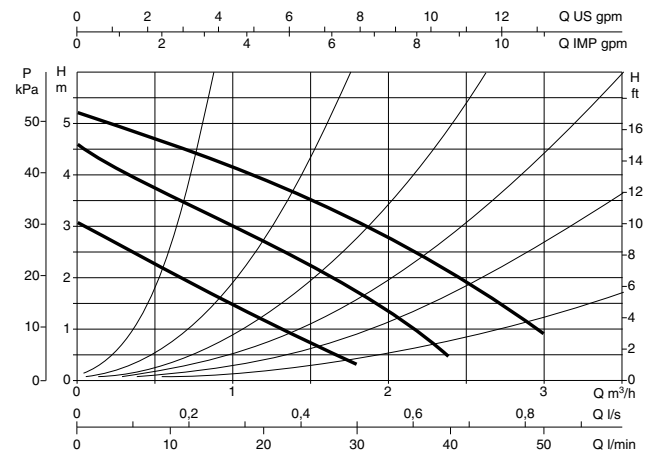
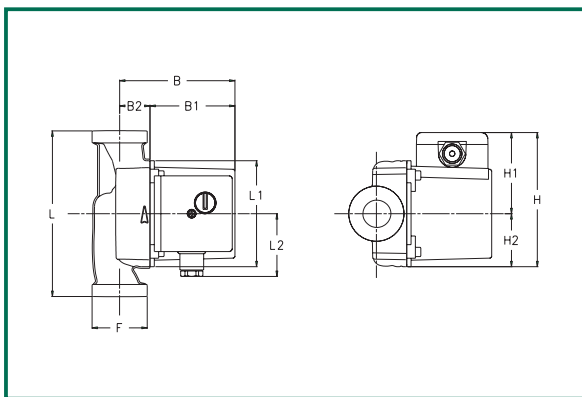


| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 130 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 138                | 140 | 135 | 0,0026         | 2,65   |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |         |           |     | MINIMUM<br>HEAD<br>PRESSURE |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------|-----------|-----|-----------------------------|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |     |                             |
|           |                  |                          |                   |                   |                 |             |             |         | μF        | Vc  |                             |
| VA 55/130 | 1x230 V ~        | 130                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2330        | 82          | 0,36    | 2,5       | 450 | t° +90°C<br>mt. 1,5         |
|           |                  |                          |                   |                   | 2               | 1815        | 64          | 0,29    |           |     |                             |
|           |                  |                          |                   |                   | 1               | 1330        | 45          | 0,2     |           |     |                             |

## VA 55/130 - 1/2"

SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F    | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |      | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 130 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1" G | 138                | 140 | 135 | 0,0026         | 2,65   |

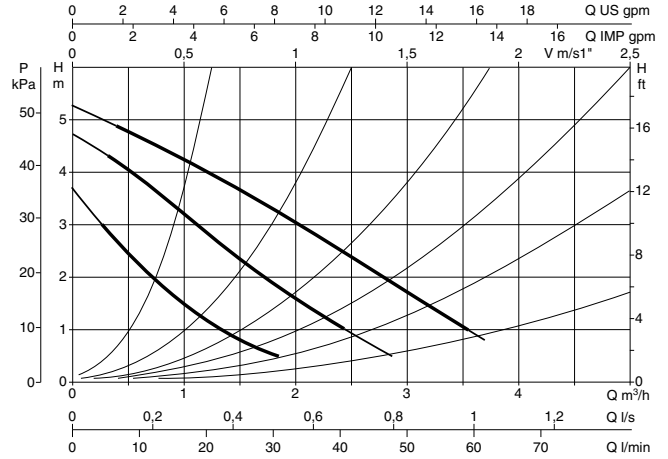
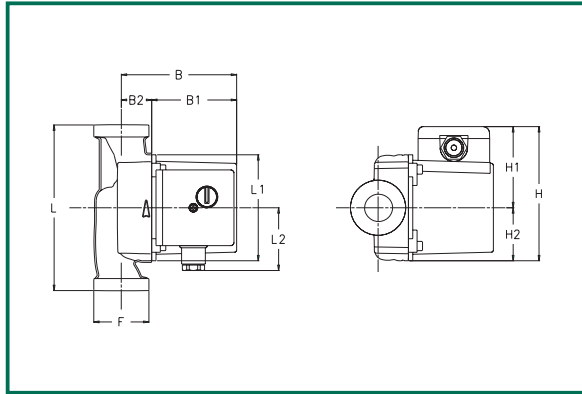
| MODEL          | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |         | ELECTRICAL DATA |             |             |         |           |     | MINIMUM<br>HEAD<br>PRESSURE |
|----------------|------------------|--------------------------|-------------------|---------|-----------------|-------------|-------------|---------|-----------|-----|-----------------------------|
|                |                  |                          | STANDARD          | SPECIAL | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |     |                             |
|                |                  |                          |                   |         |                 |             |             |         | μF        | Vc  |                             |
| VA 55/130 1/2" | 1x230 V ~        | 130                      | -                 | -       | 3               | 2330        | 82          | 0,36    | 2,5       | 450 | t° +90°C<br>mt. 1,5         |
|                |                  |                          |                   |         | 2               | 1815        | 64          | 0,29    |           |     |                             |
|                |                  |                          |                   |         | 1               | 1330        | 45          | 0,2     |           |     |                             |

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

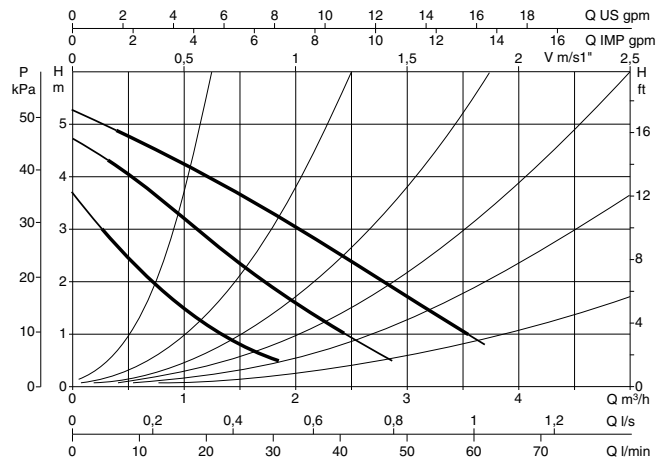
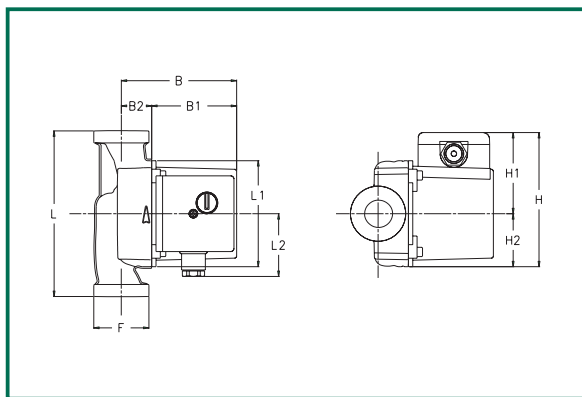
## VA 55/180 SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 130 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 138                | 190 | 140 | 0,0036         | 2,8    |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |                     |           | MINIMUM<br>HEAD<br>PRESSURE |                     |  |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------------------|-----------|-----------------------------|---------------------|--|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |                             |                     |  |
|           |                  |                          |                   |                   |                 |             |             |                     |           | μF                          | V <sub>c</sub>      |  |
| VA 55/180 | 1x230 V ~        | 180                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2330        | 82          | 0,36                | 2,5       | 450                         | t° +90°C<br>mt. 1,5 |  |
|           |                  |                          |                   |                   | 2               | 1815        | 64          | 0,29                |           |                             |                     |  |
|           |                  |                          |                   |                   | 1               | 1330        | 45          | 0,2                 |           |                             |                     |  |

## VA 55/180X SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F    | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |      | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 2" G | 138                | 190 | 140 | 0,0036         | 2,9    |

| MODEL      | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS<br>ON REQUEST | ELECTRICAL DATA |             |             |                     |           | MINIMUM<br>HEAD<br>PRESSURE |                     |                |  |
|------------|------------------|--------------------------|----------------------|-----------------|-------------|-------------|---------------------|-----------|-----------------------------|---------------------|----------------|--|
|            |                  |                          |                      | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |                             |                     |                |  |
|            |                  |                          |                      |                 |             |             |                     |           |                             | μF                  | V <sub>c</sub> |  |
| VA 55/180X | 1x230 V ~        | 180                      | 1 1/4" F             | 3               | 2330        | 82          | 0,36                | 2,5       | 450                         | t° +90°C<br>mt. 1,5 |                |  |
|            |                  |                          |                      | 2               | 1815        | 64          | 0,29                |           |                             |                     |                |  |
|            |                  |                          |                      | 1               | 1330        | 45          | 0,2                 |           |                             |                     |                |  |

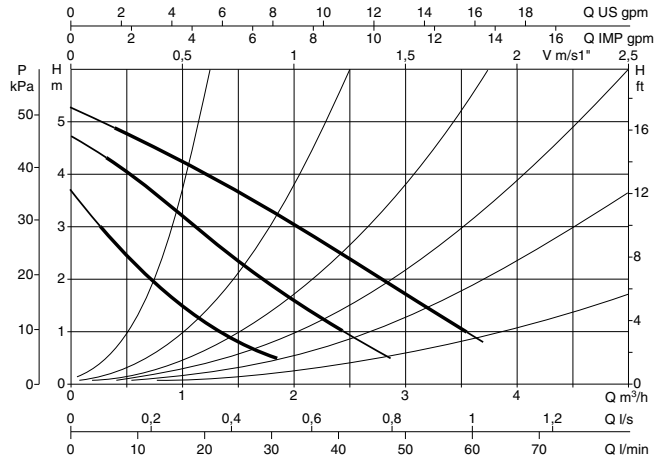
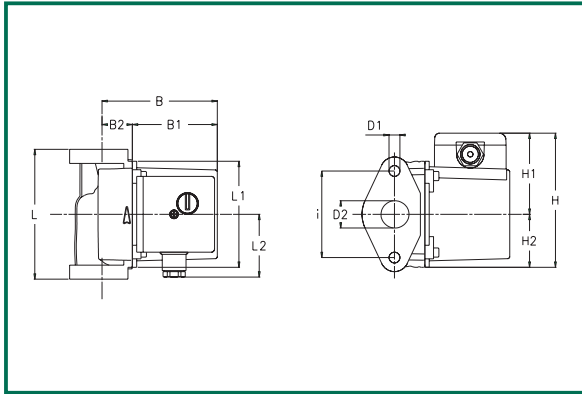


Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

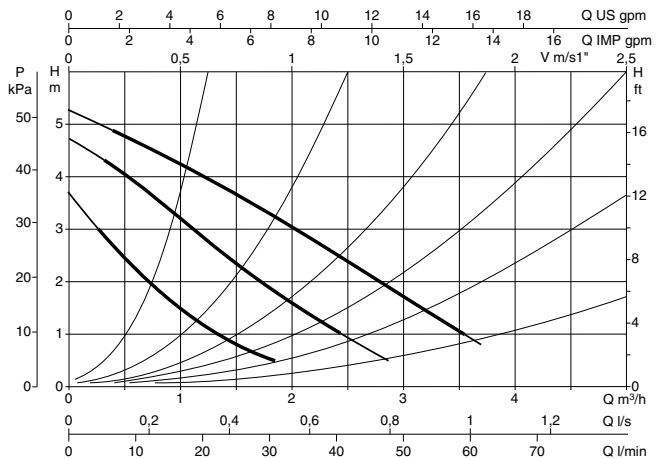
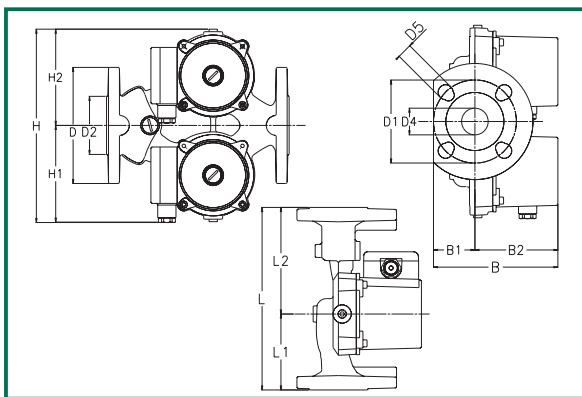
## VB 55/120 SINGLE WITH OVAL FLANGES



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | D2 | D1  | I  | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----|-----|----|--------------------|-----|-----|----------------|--------|
| 120 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 25 | M10 | 80 | L                  | B   | H   | m <sup>3</sup> | Kg     |
|     |    |    |     |    |    |     |    |    |    |     |    | 138                | 130 | 145 | 0,0026         | 3,15   |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | OVAL FLANGES ON REQUEST |                | ELECTRICAL DATA |             |             |         |           | MINIMUM<br>HEAD<br>PRESSURE |                     |
|-----------|------------------|--------------------------|-------------------------|----------------|-----------------|-------------|-------------|---------|-----------|-----------------------------|---------------------|
|           |                  |                          | STANDARD                | SPECIAL        | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |                             |                     |
| VB 55/120 | 1x230 V ~        | 120                      | DN 25                   | DN 20<br>DN 32 | 3               | 2330        | 82          | 0,36    | 2,5       | 450                         | t° +90°C<br>mt. 1,5 |
|           |                  |                          |                         |                | 2               | 1815        | 64          | 0,29    |           |                             |                     |
|           |                  |                          |                         |                | 1               | 1330        | 45          | 0,2     |           |                             |                     |

## VD 55/220.32 TWIN FLANGED



| L   | L1   | L2    | B   | B1 | B2  | D   | D1<br>PN6/PN10 | D2 | D4 | D5<br>PN6/PN10 | H   | H1  | H2  | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|------|-------|-----|----|-----|-----|----------------|----|----|----------------|-----|-----|-----|--------------------|-----|-----|----------------|--------|
| 220 | 91,5 | 128,5 | 150 | 50 | 100 | 140 | 90 100         | 70 | 32 | 14 18          | 230 | 115 | 115 | B                  | L   | H   | m <sup>3</sup> | Kg     |
|     |      |       |     |    |     |     |                |    |    |                |     |     |     | 254                | 161 | 240 | 0,0085         | 8,1    |

| MODEL        | VOLTAGE<br>50 Hz | CENTRE DISTANCE<br>mm | FLANGES<br>ON REQUEST | ELECTRICAL DATA* |             |             |         |           | MINIMUM<br>HEAD<br>PRESSURE |                     |
|--------------|------------------|-----------------------|-----------------------|------------------|-------------|-------------|---------|-----------|-----------------------------|---------------------|
|              |                  |                       |                       | SPEED            | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |                             |                     |
| VD 55/220.32 | 1x230 V ~        | 220                   | DN 32 / PN 6 / PN 10  | 3                | 2330        | 82          | 0,36    | 2,5       | 450                         | t° +90°C<br>mt. 1,5 |
|              |                  |                       |                       | 2                | 1815        | 64          | 0,29    |           |                             |                     |
|              |                  |                       |                       | 1                | 1330        | 45          | 0,2     |           |                             |                     |

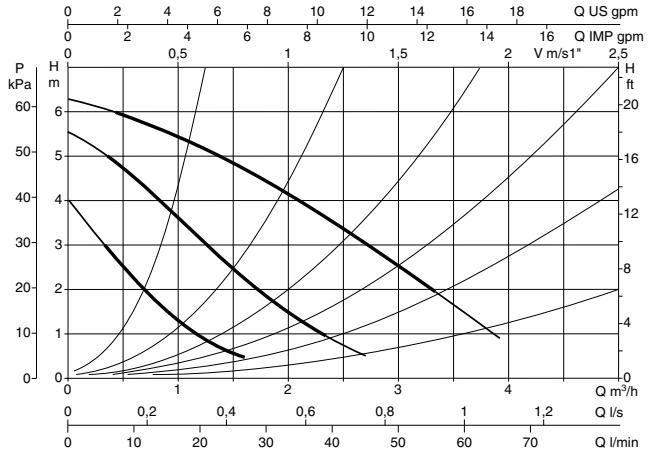
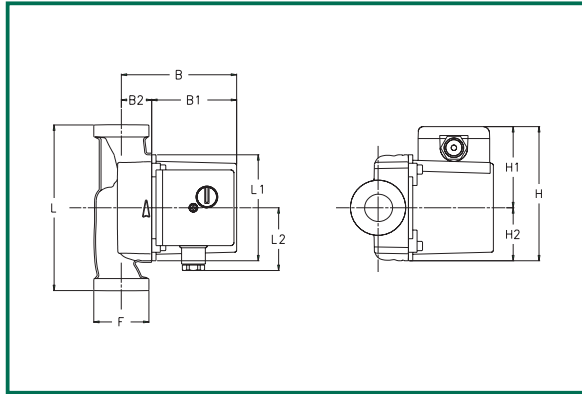
\* Electrical data are related to only one motor in operation.

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

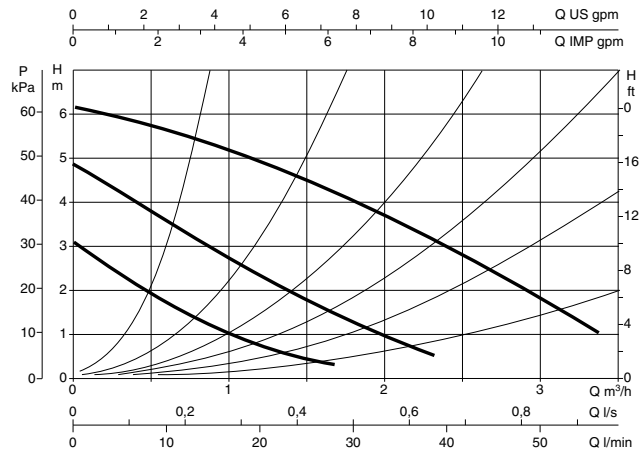
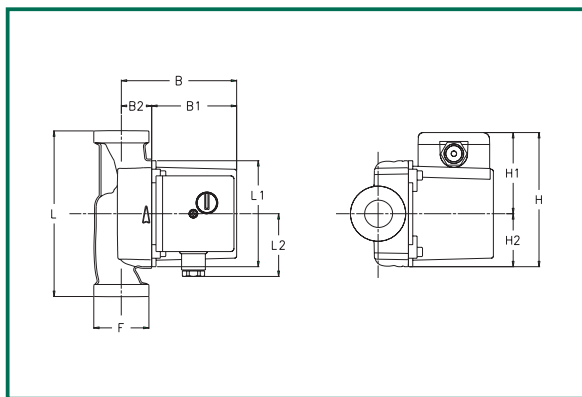
## VA 65/130 SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 138                | 190 | 140 | 0,0036         | 2,65   |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |         |           |     | MINIMUM<br>HEAD<br>PRESSURE |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------|-----------|-----|-----------------------------|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |     |                             |
|           |                  |                          |                   |                   |                 |             |             |         | μF        | Vc  |                             |
| VA 65/130 | 1x230 V ~        | 130                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2100        | 102         | 0,45    | 2,5       | 450 | t° +90°C<br>mt. 2,5         |
|           |                  |                          |                   |                   | 2               | 1460        | 78          | 0,35    |           |     |                             |
|           |                  |                          |                   |                   | 1               | 1050        | 51          | 0,24    |           |     |                             |

## VA 65/130 1/2" SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F    | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |      | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 130 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1" G | 138                | 190 | 140 | 0,0036         | 2,65   |

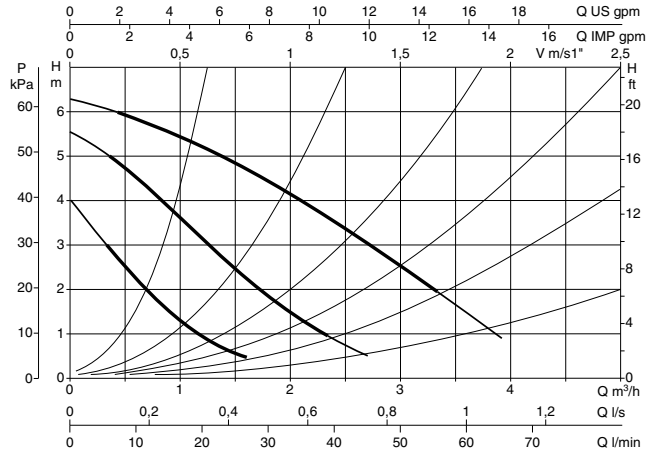
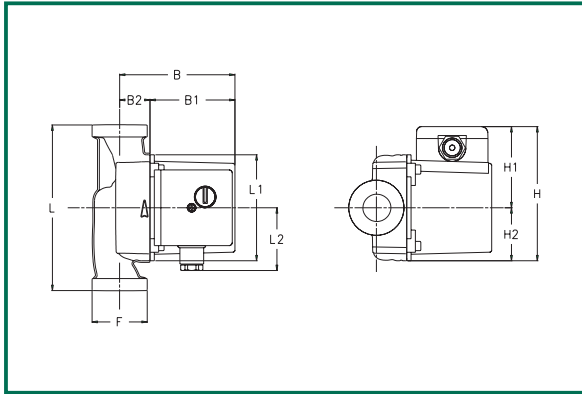
| MODEL          | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |         | ELECTRICAL DATA |             |             |         |           |     | MINIMUM<br>HEAD<br>PRESSURE |
|----------------|------------------|--------------------------|-------------------|---------|-----------------|-------------|-------------|---------|-----------|-----|-----------------------------|
|                |                  |                          | STANDARD          | SPECIAL | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |     |                             |
|                |                  |                          |                   |         |                 |             |             |         | μF        | Vc  |                             |
| VA 65/130 1/2" | 1x230 V ~        | 130                      | -                 | -       | 3               | 2100        | 102         | 0,45    | 2,5       | 450 | t° +90°C<br>mt. 2,5         |
|                |                  |                          |                   |         | 2               | 1460        | 78          | 0,35    |           |     |                             |
|                |                  |                          |                   |         | 1               | 1050        | 51          | 0,24    |           |     |                             |

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

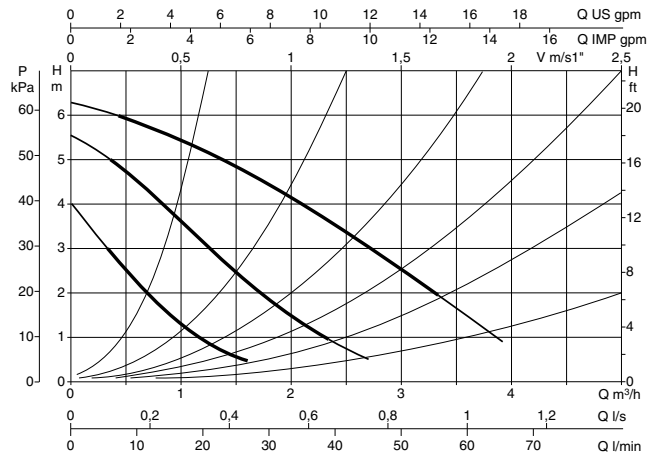
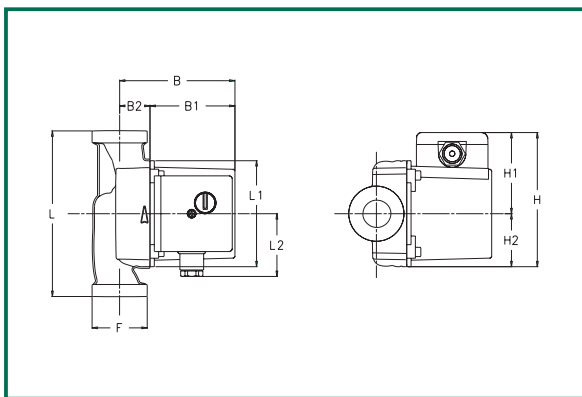
## VA 65/180 SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F        | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|----------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |          | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 1 1/2" G | 185                | 150 | 150 | 0,0036         | 3,15   |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | UNIONS ON REQUEST |                   | ELECTRICAL DATA |             |             |         |           | MINIMUM<br>HEAD<br>PRESSURE |                     |  |
|-----------|------------------|--------------------------|-------------------|-------------------|-----------------|-------------|-------------|---------|-----------|-----------------------------|---------------------|--|
|           |                  |                          | STANDARD          | SPECIAL           | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |                             |                     |  |
|           |                  |                          |                   |                   |                 |             |             |         |           | μF                          | Vc                  |  |
| VA 65/180 | 1x230 V ~        | 180                      | 1" F              | 3/4" F - 1 1/4" M | 3               | 2100        | 102         | 0,45    | 2,5       | 450                         | t° +90°C<br>mt. 2,5 |  |
|           |                  |                          |                   |                   | 2               | 1460        | 78          | 0,35    |           |                             |                     |  |
|           |                  |                          |                   |                   | 1               | 1050        | 51          | 0,24    |           |                             |                     |  |

## VA 65/180X SINGLE WITH UNIONS



| L   | L1 | L2 | B   | B1 | B2 | H   | H1 | H2 | F    | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|-----|----|----|------|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |     |    |    |      | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 180 | 98 | 60 | 104 | 78 | 26 | 124 | 75 | 49 | 2" G | 185                | 150 | 150 | 0,0036         | 3,15   |

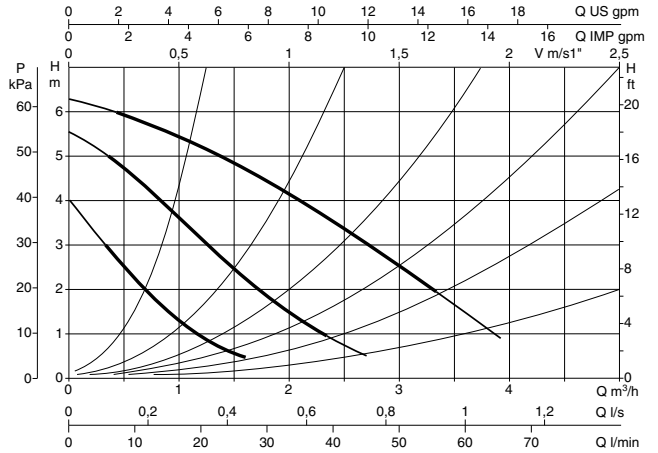
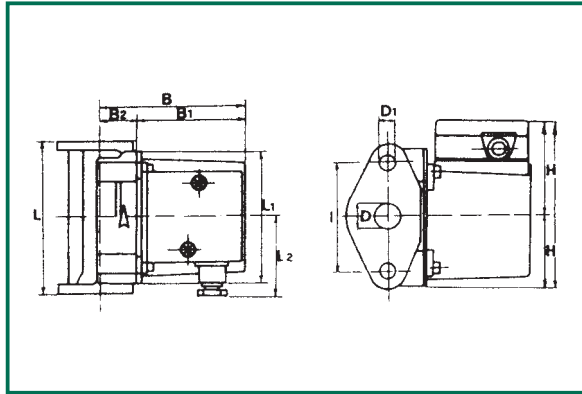
| MODEL      | VOLTAGE<br>50 Hz | CENTRE DISTANCE<br>mm | UNIONS<br>ON REQUEST | ELECTRICAL DATA |             |             |         |           | MINIMUM<br>HEAD<br>PRESSURE |                     |    |  |
|------------|------------------|-----------------------|----------------------|-----------------|-------------|-------------|---------|-----------|-----------------------------|---------------------|----|--|
|            |                  |                       |                      | SPEED           | n<br>r.p.m. | P1 MAX<br>W | In<br>A | CAPACITOR |                             |                     |    |  |
|            |                  |                       |                      |                 |             |             |         |           |                             | μF                  | Vc |  |
| VA 65/180X | 1x230 V ~        | 180                   | 1/4" F               | 3               | 2100        | 102         | 0,45    | 2,5       | 450                         | t° +90°C<br>mt. 2,5 |    |  |
|            |                  |                       |                      | 2               | 1460        | 78          | 0,35    |           |                             |                     |    |  |
|            |                  |                       |                      | 1               | 1050        | 51          | 0,24    |           |                             |                     |    |  |

Performance curves are based on kinematic viscosity values equal to 1mm<sup>2</sup>/s at a density equal to 1000 kg/m<sup>3</sup>. Curve tolerance in accordance with ISO 9906.

# CIRCULATORS FOR HEATING AND AIR-CONDITIONING SYSTEMS

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

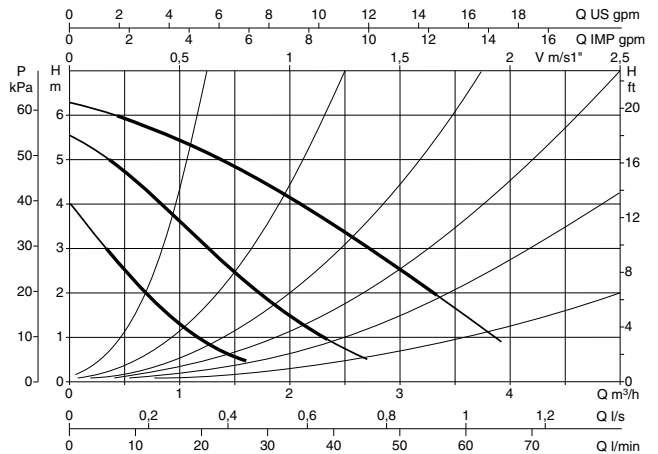
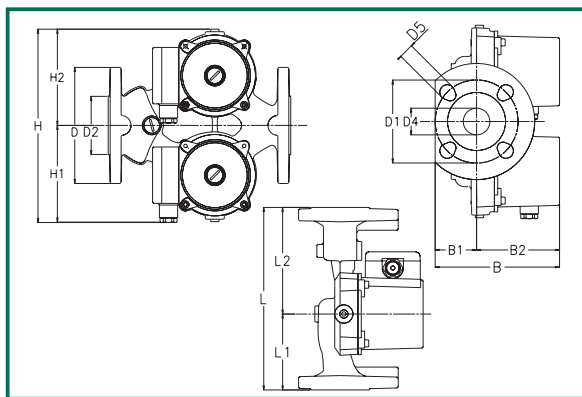
## VB 65/120 SINGLE WITH OVAL FLANGES



| L   | L1 | L2 | B   | B1 | B2 | D2 | D1  | I  | H   | H1 | H2 | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|----|----|-----|----|----|----|-----|----|-----|----|----|--------------------|-----|-----|----------------|--------|
|     |    |    |     |    |    |    |     |    |     |    |    | L                  | B   | H   | m <sup>3</sup> | Kg     |
| 120 | 98 | 60 | 104 | 78 | 26 | 26 | M10 | 80 | 124 | 75 | 49 | 156                | 126 | 150 | 0,0036         | 3,15   |

| MODEL     | VOLTAGE<br>50 Hz | CENTRE<br>DISTANCE<br>mm | OVAL FLANGES ON REQUEST |                | ELECTRICAL DATA |             |             |                     |           |     | MINIMUM<br>HEAD<br>PRESSURE |    |                |  |
|-----------|------------------|--------------------------|-------------------------|----------------|-----------------|-------------|-------------|---------------------|-----------|-----|-----------------------------|----|----------------|--|
|           |                  |                          | STANDARD                | SPECIAL        | SPEED           | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |     |                             |    |                |  |
|           |                  |                          |                         |                |                 |             |             |                     |           |     |                             | μF | V <sub>c</sub> |  |
| VB 65/120 | 1x230 V ~        | 120                      | DN 25                   | DN 20<br>DN 32 | 3               | 2100        | 102         | 0,45                | 2,5       | 450 | t° +90°C<br>mt. 2,5         |    |                |  |
|           |                  |                          |                         |                | 2               | 1460        | 78          | 0,35                |           |     |                             |    |                |  |
|           |                  |                          |                         |                | 1               | 1050        | 51          | 0,24                |           |     |                             |    |                |  |

## VD 65/220.32 TWIN FLANGED



| L   | L1   | L2    | B   | B1 | B2  | D   | D1<br>PN6/PN10 | D2 | D4 | D5<br>PN6/PN10 | H   | H1  | H2  | PACKING DIMENSIONS |     |     | VOLUME         | WEIGHT |
|-----|------|-------|-----|----|-----|-----|----------------|----|----|----------------|-----|-----|-----|--------------------|-----|-----|----------------|--------|
|     |      |       |     |    |     |     |                |    |    |                |     |     |     | B                  | L   | H   | m <sup>3</sup> | Kg     |
| 220 | 91,5 | 128,5 | 150 | 50 | 100 | 140 | 90 100         | 70 | 32 | 14 18          | 230 | 115 | 115 | 254                | 161 | 240 | 0,0036         | 9      |

| MODEL        | VOLTAGE<br>50 Hz | CENTRE DISTANCE<br>mm | FLANGES<br>ON REQUEST | ELECTRICAL DATA* |             |             |                     |           |     | MINIMUM<br>HEAD<br>PRESSURE |    |                |  |
|--------------|------------------|-----------------------|-----------------------|------------------|-------------|-------------|---------------------|-----------|-----|-----------------------------|----|----------------|--|
|              |                  |                       |                       | SPEED            | n<br>r.p.m. | P1 MAX<br>W | I <sub>n</sub><br>A | CAPACITOR |     |                             |    |                |  |
|              |                  |                       |                       |                  |             |             |                     |           |     |                             | μF | V <sub>c</sub> |  |
| VD 65/220.32 | 1x230 V ~        | 220                   | DN 32 / PN 6 / PN 10  | 3                | 2100        | 102         | 0,45                | 2,5       | 450 | t° +90°C<br>mt. 2,5         |    |                |  |
|              |                  |                       |                       | 2                | 1460        | 78          | 0,35                |           |     |                             |    |                |  |
|              |                  |                       |                       | 1                | 1050        | 51          | 0,24                |           |     |                             |    |                |  |

\* Electrical data are related to only one motor in operation.