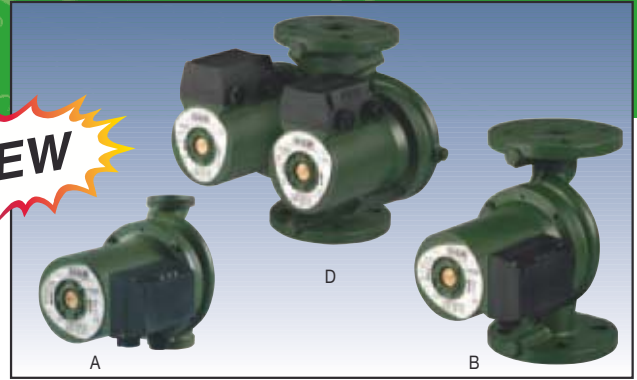


# CIRCULATORS

## FOR HEATING AND AIR CONDITIONING SYSTEMS



Pump body in cast iron and motor casing in die-cast aluminium. Technopolymer impeller and tempered stainless steel driving shaft mounted on graphite brushings lubricated by the pumped liquid itself. Flanged vents, (threaded series A), provided with threaded connectors for controlling gauges. Stainless steel protective rotor sleeve, stator sleeve and closing flange. Ceramic thrust bearing, E.P.D.M. "O" rings and brass air outlet cap. The two-pole asynchronous motor with wet rotors designed for **three-speed** operation, single-phase version, for **two-speed** operation, for three-phase version. Thermal overload protection incorporated in the single phase version. In the twin version an automatic clapet type valve and blank flange are provided.

**Operating range:** from 1 to 12 m<sup>3</sup>/h with head up to 8 metres.  
**Liquid temperature range:** from -10°C to +110°C.  
**Pumped liquid characteristics:** 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.

| MODEL        | VOLTAGE 50Hz | CENTRE DISTANCE mm | UNIONS ON REQUEST | SPEED | ELECTRICAL DATA |          |      |           |     | MINIMUM HEAD PRESSURE  |
|--------------|--------------|--------------------|-------------------|-------|-----------------|----------|------|-----------|-----|------------------------|
|              |              |                    |                   |       | N r.p.m.        | P1 MAX W | In A | CAPACITOR |     |                        |
| A 50/180 XM  | 1x230 V ~    | 180                | 2"G               | 3     | 2791            | 184      | 0,92 | 4         | 400 | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 2     | 2651            | 189      | 0,92 |           |     |                        |
|              |              |                    |                   | 1     | 2297            | 168      | 0,80 |           |     |                        |
| A 50/180 M   | 1x230 V ~    | 180                | 1 1/2"G           | 3     | 2766            | 195      | 0,95 | 4         | 400 | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 2     | 2616            | 194      | 0,95 |           |     |                        |
|              |              |                    |                   | 1     | 2215            | 180      | 0,85 |           |     |                        |
| A 50/180 XT  | 3x400 V ~    | 180                | 2"G               | 2     | 2838            | 201      | 0,50 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 1     | 2520            | 129      | 0,23 |           |     |                        |
|              |              |                    |                   | 2     | 2827            | 197      | 0,52 |           |     |                        |
| A 50/180 T   | 3x400 V ~    | 180                | 1 1/2"G           | 1     | 2502            | 139      | 0,25 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 3     | 2658            | 271      | 1,18 |           |     |                        |
|              |              |                    |                   | 2     | 2117            | 294      | 1,32 |           |     |                        |
| A 56/180 XM  | 1x230 V ~    | 180                | 2"G               | 3     | 2836            | 282      | 1,23 | 7         | 400 | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 2     | 2226            | 287      | 1,30 |           |     |                        |
|              |              |                    |                   | 1     | 1485            | 228      | 1,06 |           |     |                        |
| A 56/180 M   | 1x230 V ~    | 180                | 1 1/2"G           | 2     | 2708            | 291      | 0,60 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 1     | 2178            | 200      | 0,32 |           |     |                        |
|              |              |                    |                   | 2     | 2704            | 297      | 0,60 |           |     |                        |
| A 56/180 XT  | 3x400 V ~    | 180                | 2"G               | 2     | 2178            | 200      | 0,33 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 1     | 2178            | 200      | 0,33 |           |     |                        |
|              |              |                    |                   | 3     | 2669            | 256      | 1,12 |           |     |                        |
| A 56/180 T   | 3x400 V ~    | 180                | 1 1/2"G           | 2     | 2704            | 297      | 0,60 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|              |              |                    |                   | 1     | 2178            | 200      | 0,33 |           |     |                        |
|              |              |                    |                   | 3     | 2669            | 256      | 1,12 |           |     |                        |
| A 80/180 XM  | 1x230 V ~    | 180                | 2"G               | 2     | 2374            | 260      | 1,17 | 7         | 400 | t° +90°C<br>m.c.a. 2,5 |
|              |              |                    |                   | 1     | 1688            | 218      | 1,00 |           |     |                        |
|              |              |                    |                   | 3     | 2674            | 264      | 1,15 |           |     |                        |
| A 80/180 M   | 1x230 V ~    | 180                | 1 1/2"G           | 2     | 2356            | 262      | 1,20 | 7         | 400 | t° +90°C<br>m.c.a. 2,5 |
|              |              |                    |                   | 1     | 1615            | 223      | 1,00 |           |     |                        |
|              |              |                    |                   | 2     | 2727            | 272      | 0,57 |           |     |                        |
| A 80/180 XT  | 3x400 V ~    | 180                | 2"G               | 2     | 2227            | 186      | 0,30 | -         | -   | t° +90°C<br>m.c.a. 2,5 |
|              |              |                    |                   | 1     | 2227            | 186      | 0,30 |           |     |                        |
|              |              |                    |                   | 2     | 2724            | 271      | 0,57 |           |     |                        |
| A 80/180 T   | 3x400 V ~    | 180                | 1 1/2"G           | 1     | 2226            | 187      | 0,31 | -         | -   | t° +90°C<br>m.c.a. 2,5 |
|              |              |                    |                   | 2     | 2724            | 271      | 0,57 |           |     |                        |
|              |              |                    |                   | 3     | 2746            | 410      | 1,77 |           |     |                        |
| A 110/180 M  | 1x230 V ~    | 180                | 1 1/2"G           | 2     | 2552            | 393      | 1,78 | 12        | 450 | t° +90°C<br>m.c.a. 2,5 |
|              |              |                    |                   | 1     | 2052            | 361      | 1,64 |           |     |                        |
|              |              |                    |                   | 3     | 2746            | 410      | 1,77 |           |     |                        |
| A 110/180 XM | 1x230 V ~    | 180                | 2"G               | 2     | 2552            | 393      | 1,78 | 12        | 450 | t° +90°C<br>m.c.a. 2,5 |
|              |              |                    |                   | 1     | 2052            | 361      | 1,64 |           |     |                        |
|              |              |                    |                   | 3     | 2746            | 410      | 1,77 |           |     |                        |
| A 110/180 T  | 3x400 V ~    | 180                | 1 1/2"G           | 2     | 2759            | 403      | 0,88 | -         | -   | t° +90°C<br>m.c.a. 2,5 |
|              |              |                    |                   | 1     | 2341            | 289      | 0,48 |           |     |                        |
|              |              |                    |                   | 2     | 2759            | 403      | 0,90 |           |     |                        |
| A 110/180 XT | 3x400 V ~    | 180                | 2"G               | 1     | 2341            | 289      | 0,48 | -         | -   | t° +90°C<br>m.c.a. 2,5 |

### ELECTRICAL DATA

#### SINGLE WITH UNIONS

| MODEL          | VOLTAGE 50Hz | CENTRE DISTANCE mm | UNIONS ON REQUEST | SPEED | ELECTRICAL DATA |          |      |           |     | MINIMUM HEAD PRESSURE  |
|----------------|--------------|--------------------|-------------------|-------|-----------------|----------|------|-----------|-----|------------------------|
|                |              |                    |                   |       | N r.p.m.        | P1 MAX W | In A | CAPACITOR |     |                        |
| B 50/250.40 M  | 1x230 V~     | 250                | DN 40             | 3     | 2766            | 195      | 0,95 | 2,5       | 400 | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 2     | 2616            | 194      | 0,95 |           |     |                        |
|                |              |                    |                   | 1     | 2215            | 180      | 0,85 |           |     |                        |
| B 50/250.40 T  | 3x400 V~     | 250                | DN 40             | 2     | 2827            | 197      | 0,52 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 1     | 2502            | 139      | 0,25 |           |     |                        |
|                |              |                    |                   | 3     | 2636            | 282      | 1,23 |           |     |                        |
| B 56/250.40 M  | 1x230 V~     | 250                | DN 40             | 2     | 2226            | 287      | 1,30 | 7         | 400 | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 1     | 1485            | 228      | 1,06 |           |     |                        |
|                |              |                    |                   | 2     | 2704            | 297      | 0,60 |           |     |                        |
| B 56/250.40 T  | 3x400 V~     | 250                | DN 40             | 1     | 2178            | 200      | 0,33 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 3     | 2674            | 264      | 1,15 |           |     |                        |
|                |              |                    |                   | 2     | 2356            | 262      | 1,20 |           |     |                        |
| B 80/250.40 M  | 1x230 V~     | 250                | DN 40             | 1     | 1615            | 223      | 1,00 | 7         | 400 | t° +90°C<br>m.c.a. 2,5 |
|                |              |                    |                   | 2     | 2724            | 271      | 0,57 |           |     |                        |
|                |              |                    |                   | 1     | 2226            | 187      | 0,31 |           |     |                        |
| B 80/250.40 T  | 3x400 V~     | 250                | DN 40             | 2     | 2724            | 271      | 0,57 | -         | -   | t° +90°C<br>m.c.a. 2,5 |
|                |              |                    |                   | 1     | 2226            | 187      | 0,31 |           |     |                        |
|                |              |                    |                   | 3     | 2746            | 410      | 1,77 |           |     |                        |
| B 110/250.40 M | 1x230 V~     | 250                | DN 40             | 2     | 2552            | 393      | 1,78 | 12        | 450 | t° +90°C<br>m.c.a. 2,5 |
|                |              |                    |                   | 1     | 2052            | 361      | 1,64 |           |     |                        |
|                |              |                    |                   | 3     | 2759            | 403      | 0,90 |           |     |                        |
| B 110/250.40 T | 3x400 V~     | 250                | DN 40             | 1     | 2341            | 289      | 0,48 | -         | -   | t° +90°C<br>m.c.a. 2,5 |

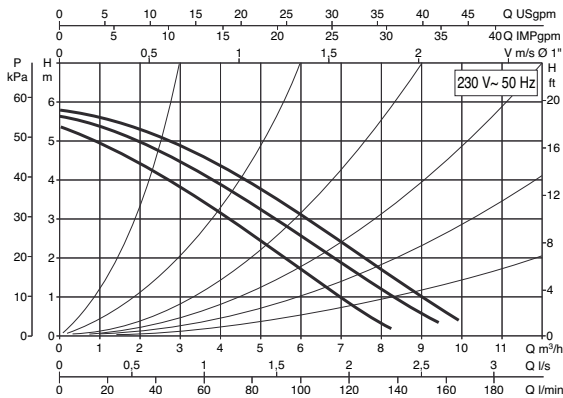
#### SINGLE WITH FLANGES

| MODEL          | VOLTAGE 50Hz | CENTRE DISTANCE mm | UNIONS ON REQUEST | SPEED | ELECTRICAL DATA |          |      |           |     | MINIMUM HEAD PRESSURE  |
|----------------|--------------|--------------------|-------------------|-------|-----------------|----------|------|-----------|-----|------------------------|
|                |              |                    |                   |       | N r.p.m.        | P1 MAX W | In A | CAPACITOR |     |                        |
| D 50/250.40 M  | 1x230 V~     | 250                | DN 40 - PN 10     | 3     | 2766            | 195      | 0,95 | 2,5       | 400 | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 2     | 2616            | 194      | 0,95 |           |     |                        |
|                |              |                    |                   | 1     | 2215            | 180      | 0,85 |           |     |                        |
| D 50/250.40 T  | 3x400 V~     | 250                | DN 40 - PN 10     | 2     | 2827            | 197      | 0,52 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 1     | 2502            | 139      | 0,25 |           |     |                        |
|                |              |                    |                   | 3     | 2636            | 282      | 1,23 |           |     |                        |
| D 56/250.40 M  | 1x230 V~     | 250                | DN 40 - PN 10     | 2     | 2226            | 287      | 1,30 | 7         | 400 | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 1     | 1485            | 228      | 1,06 |           |     |                        |
|                |              |                    |                   | 2     | 2704            | 297      | 0,60 |           |     |                        |
| D 56/250.40 T  | 3x400 V~     | 250                | DN 40 - PN 10     | 1     | 2178            | 200      | 0,33 | -         | -   | t° +90°C<br>m.c.a. 1,5 |
|                |              |                    |                   | 3     | 2674            | 264      | 1,15 |           |     |                        |
|                |              |                    |                   | 2     | 2356            | 262      | 1,20 |           |     |                        |
| D 80/250.40 M  | 1x230 V~     | 250                | DN 40 - PN 10     | 1     | 1615            | 223      | 1,00 | 7         | 400 | t° +90°C<br>m.c.a. 2,5 |
|                |              |                    |                   | 2     | 2724            | 271      | 0,57 |           |     |                        |
|                |              |                    |                   | 1     | 2226            | 187      | 0,31 |           |     |                        |
| D 80/250.40 T  | 3x400 V~     | 250                | DN 40 - PN 10     | 2     | 2724            | 271      | 0,57 | -         | -   | t° +90°C<br>m.c.a. 2,5 |
|                |              |                    |                   | 1     | 2226            | 187      | 0,31 |           |     |                        |
|                |              |                    |                   | 3     | 2746            | 410      | 1,77 |           |     |                        |
| D 110/250.40 M | 1x230 V~     | 250                | DN 40 - PN 10     | 2     | 2552            | 393      | 1,78 | 12        | 450 | t° +90°C<br>m.c.a. 2,5 |
|                |              |                    |                   | 1     | 2052            | 361      | 1,64 |           |     |                        |
|                |              |                    |                   | 3     | 2759            | 403      | 0,90 |           |     |                        |
| D 110/250.40 T | 3x400 V~     | 250                | DN 40 - PN 10     | 1     | 2341            | 289      | 0,48 | -         | -   | t° +90°C<br>m.c.a. 2,5 |

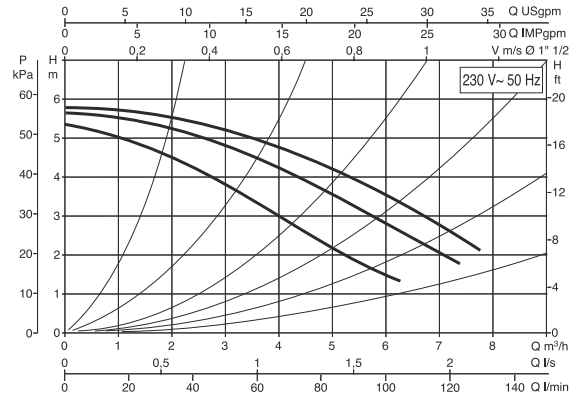
#### TWIN WITH FLANGES

# HYDRAULIC DATA

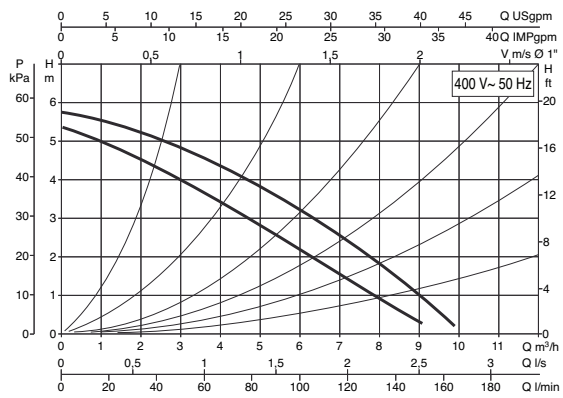
## A 50/180 XM



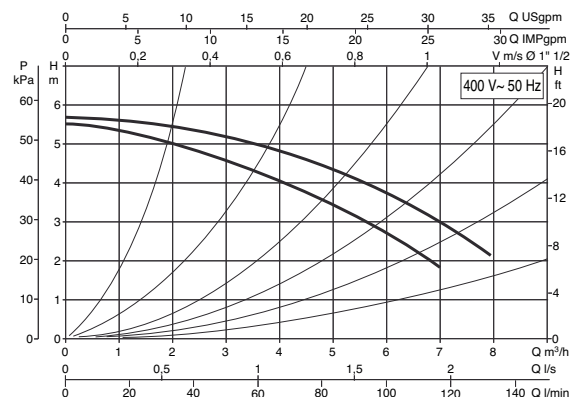
## A 50/180M - B 50/250.40M - D 50/250.40M



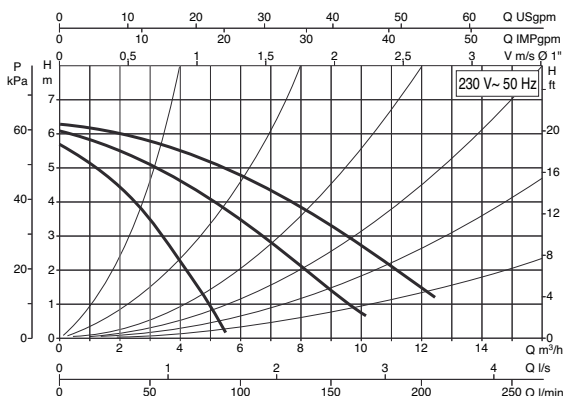
## A 50/180 XT -



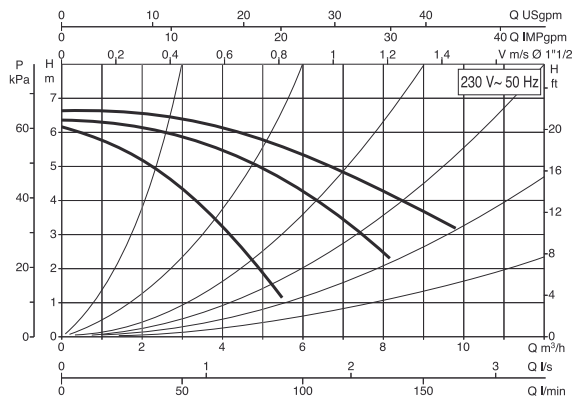
## A 50/180 T - B 50/250.40T - D 50/250.40T



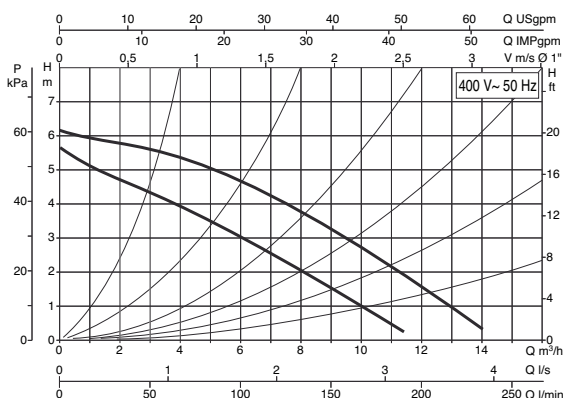
## A 56/180 XM -



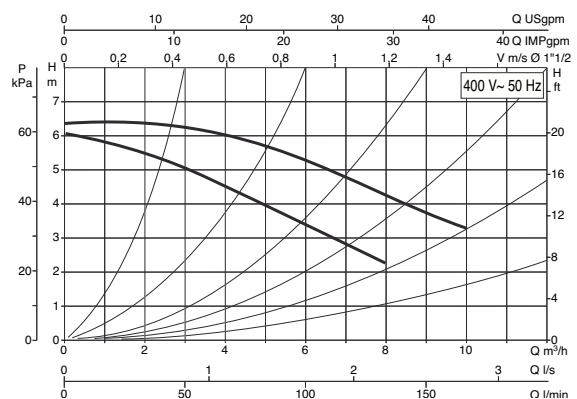
## A 56/180 M - B 56/250.40M - D 56/250.40M



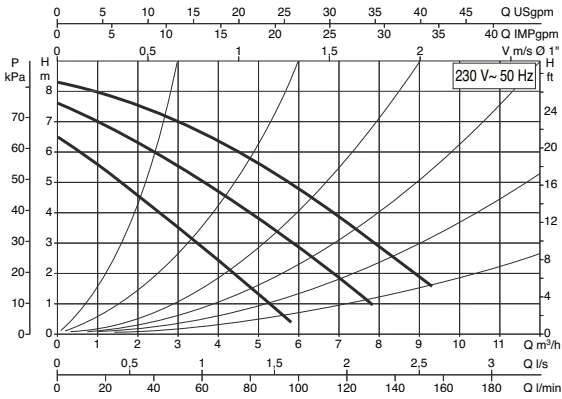
## A 56/180 XT -



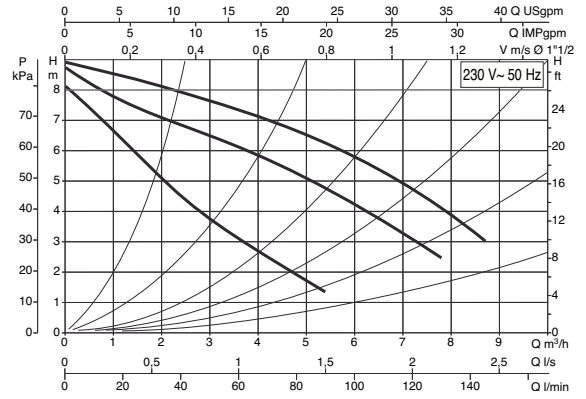
## A 56/180 T - B 56/250.40T - D 56/250.40T



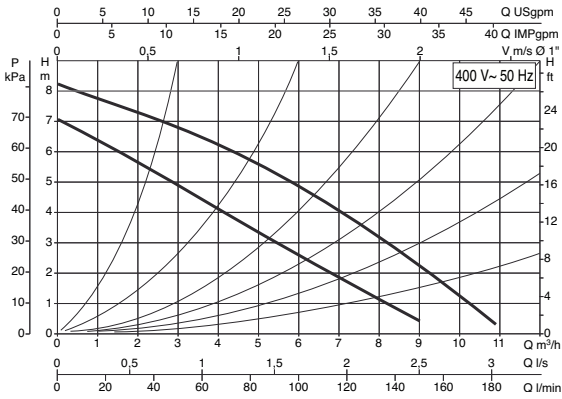
### A 80/180 XM -



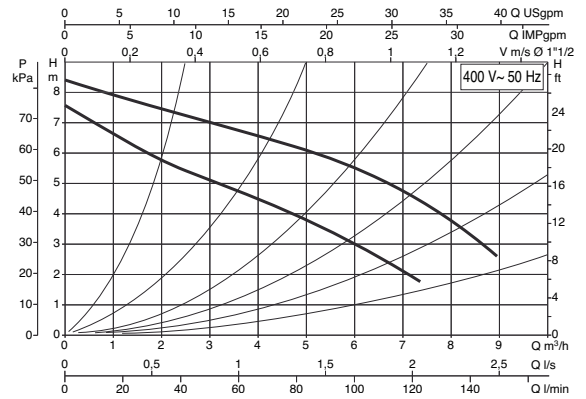
### A 80/180 M - B 80/250.40M - D 80/250.40M



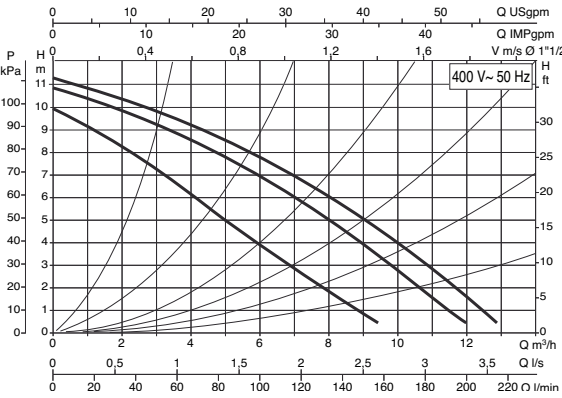
### A 80/180 XT



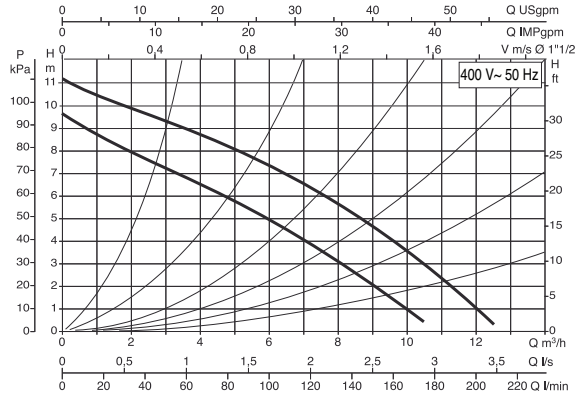
### A 80/180 T - B 80/250.40T - D 80/250.40T



### A 110/180 XM - B 110/250.40 M - D 110/250.40 M

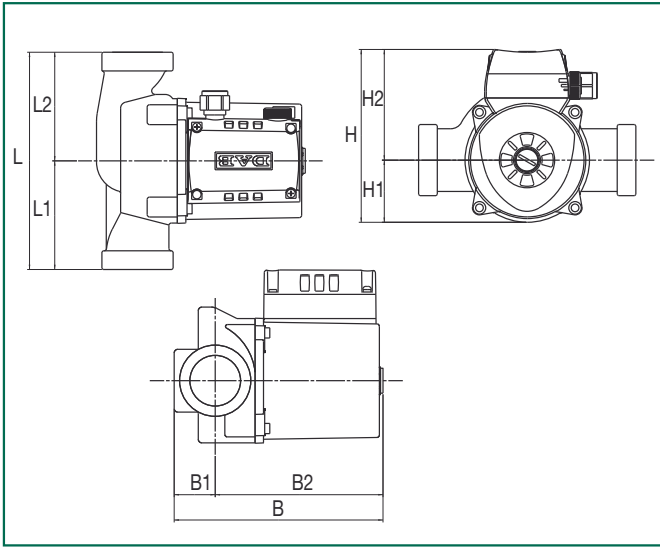


### A 110/180 XT - B 110/250.40 T - D 110/250.40 T

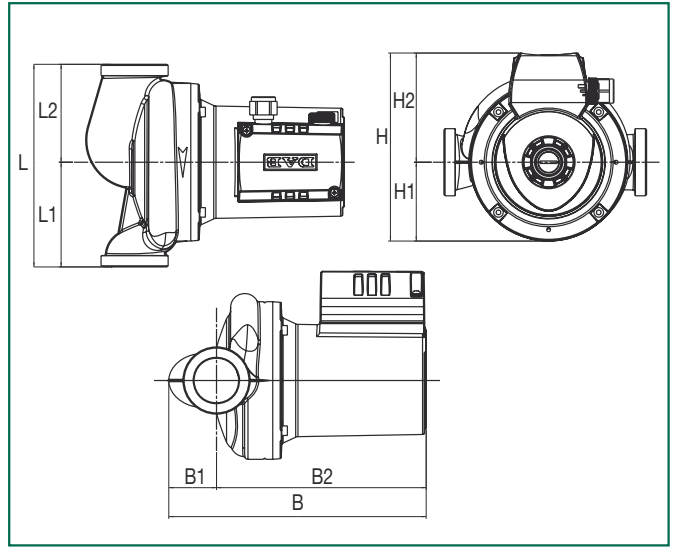


## DIMENSIONS AND WEIGHTS

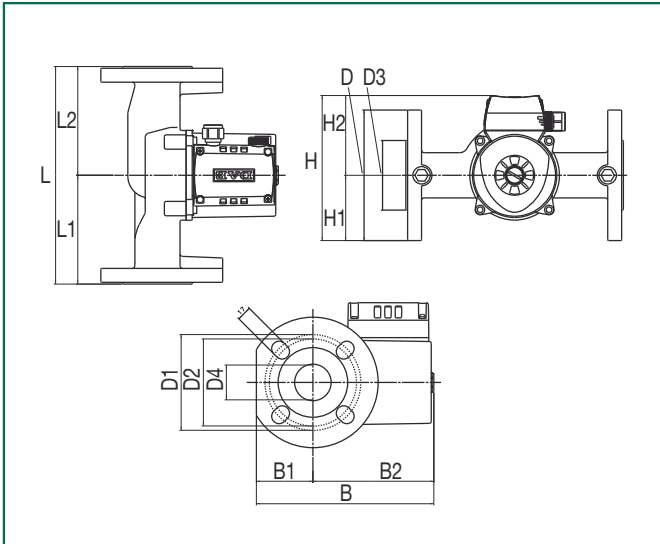
### A 50-56-80/...M-T



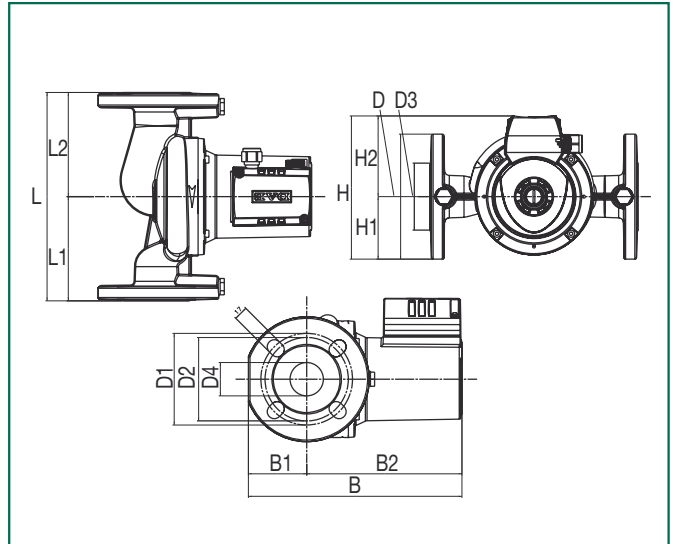
### A 110/...M-T



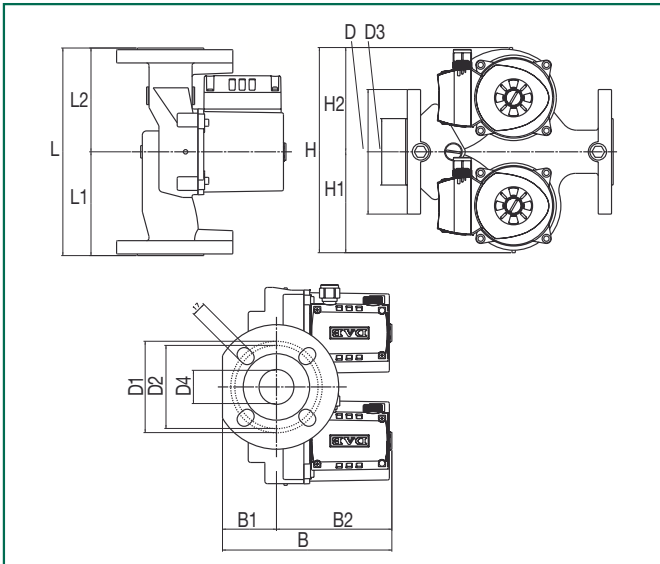
### B 50-56-80/...M-T



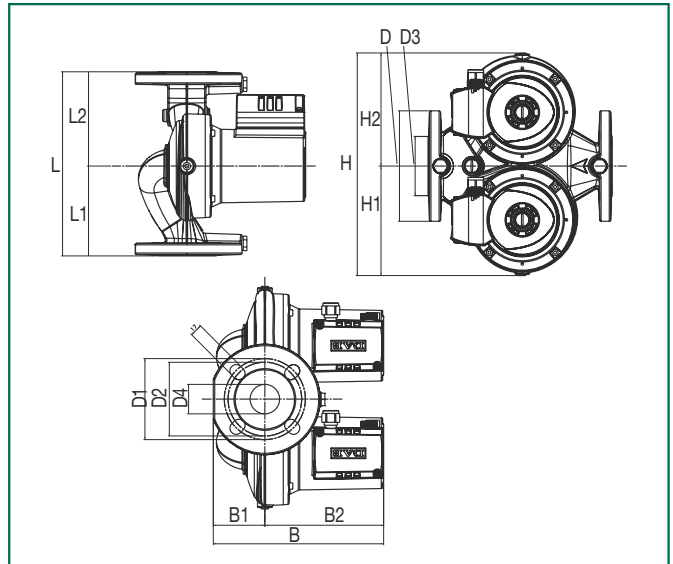
### B 110/...M-T



### D 50-56-80/...M-T



### D 110/...M-T



| MODEL        | L   | L1 | L2 | A | B   | B1  | B2  | D | D1 | D2 | D3 | D4 | H   | H1 | H2 | F      | WEIGHT |
|--------------|-----|----|----|---|-----|-----|-----|---|----|----|----|----|-----|----|----|--------|--------|
| A 50/180 XM  | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 2" G   | 4,8    |
| A 50/180 M   | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 1" 1/2 | 4,8    |
| A 50/180 XT  | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 2" G   | 5      |
| A 50/180 T   | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 1" 1/2 | 5      |
| A 56/180 XM  | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 2" G   | 4,8    |
| A 56/180 M   | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 1" 1/2 | 4,8    |
| A 56/180 XT  | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 2" G   | 5      |
| A 56/180 T   | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 1" 1/2 | 5      |
| A 80/180 XM  | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 2" G   | 4,8    |
| A 80/180 M   | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 1" 1/2 | 4,8    |
| A 80/180 XT  | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 2" G   | 5      |
| A 80/180 T   | 180 | 90 | 90 | — | 173 | 34  | 139 | — | —  | —  | —  | —  | 143 | 52 | 92 | 1" 1/2 | 5      |
| A 110/180 M  | 180 | 93 | 87 | — | 229 | 42  | 186 | — | —  | —  | —  | —  | 167 | 70 | 97 | 1" 1/2 | 7,5    |
| A 110/180 XM | 180 | 93 | 87 | — | 229 | 42  | 186 | — | —  | —  | —  | —  | 167 | 70 | 97 | 2" G   | 7,5    |
| A 110/180 T  | 180 | 93 | 87 | — | 229 | 186 | 42  | — | —  | —  | —  | —  | 163 | 70 | 93 | 1" 1/2 | 7,7    |
| A 110/180 XT | 180 | 93 | 87 | — | 229 | 186 | 42  | — | —  | —  | —  | —  | 163 | 70 | 93 | 2" G   | 7,7    |

| MODEL          | L   | L1  | L2  | A | B   | B1 | B2  | D   | D1  | D2  | D3 | D4 | H   | H1 | H2 | F             | WEIGHT |
|----------------|-----|-----|-----|---|-----|----|-----|-----|-----|-----|----|----|-----|----|----|---------------|--------|
| B 50/250.40 M  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/<br>PN10 | 8,6    |
| B 50/250.40 T  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/<br>PN10 | 8,8    |
| B 56/250.40 M  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/<br>PN10 | 8,6    |
| B 56/250.40 T  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/<br>PN10 | 8,8    |
| B 80/250.40 M  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/<br>PN10 | 8,6    |
| B 80/250.40 T  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 167 | 75 | 92 | DN40/<br>PN10 | 8,8    |
| B 110/250.40 M | 250 | 125 | 125 | — | 256 | 70 | 186 | 150 | 110 | 100 | 80 | 40 | 172 | 75 | 97 | DN40/<br>PN10 | 9,4    |
| B 110/250.40 T | 250 | 125 | 125 | — | 256 | 70 | 186 | 150 | 110 | 100 | 80 | 40 | 168 | 75 | 93 | DN40/<br>PN10 | 9,6    |

| MODEL          | L   | L1  | L2  | A | B   | B1 | B2  | D   | D1  | D2  | D3 | D4 | H   | H1  | H2  | F             | WEIGHT |
|----------------|-----|-----|-----|---|-----|----|-----|-----|-----|-----|----|----|-----|-----|-----|---------------|--------|
| D 50/250.40 M  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 247 | 122 | 126 | DN40/<br>PN10 | 14,2   |
| D 50/250.40 T  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 247 | 122 | 126 | DN40/<br>PN10 | 14,8   |
| D 56/250.40 M  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 247 | 122 | 126 | DN40/<br>PN10 | 14,2   |
| D 56/250.40 T  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 247 | 122 | 126 | DN40/<br>PN10 | 14,8   |
| D 80/250.40 M  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 247 | 122 | 126 | DN40/<br>PN10 | 14,2   |
| D 80/250.40 T  | 250 | 125 | 125 | — | 204 | 65 | 139 | 150 | 110 | 100 | 80 | 40 | 247 | 122 | 126 | DN40/<br>PN10 | 14,8   |
| D 110/250.40 M | 250 | 122 | 128 | — | 231 | 70 | 161 | 150 | 110 | 100 | 80 | 40 | 302 | 149 | 154 | DN40/<br>PN10 | 17,8   |
| D 110/250.40 T | 250 | 122 | 128 | — | 231 | 70 | 161 | 150 | 110 | 100 | 80 | 40 | 302 | 149 | 154 | DN40/<br>PN10 | 18,0   |