# DV



DV 160-1000



DV 160-1000/P



Drainage pumps for charged liquids with set-back Vortex type impeller for civil and industrial applications; specifically designed for very heavy use; available in the mobile or permanent versions with coupling feet.



Grey water

Black water

## Construction features

| | |
|---|---|
| **Painting** | cataphoresis |
| **Pump body** | cast iron |
| **Impeller** | cast iron |
| **Mechanical seal** | double seal with oil barrier: silicon carbide on pump side, ceramic-graphite on motor side |
| **Motor shaft** | stainless steel AISI 304 |
| **Free passage** | Ø max 50 mm (160÷310; 750-1000)<br>Ø max 45 mm (400-550) |
| **Max submergence** | 20 m |
| **Liquid temperature** | 0 - 40 °C |
| **Cable** | H07 RN8F, 10 m |
| **Bolts** | A2 stainless steel |
| **Foot support** | galvanized iron |
| **Gaskets** | NBR rubber |

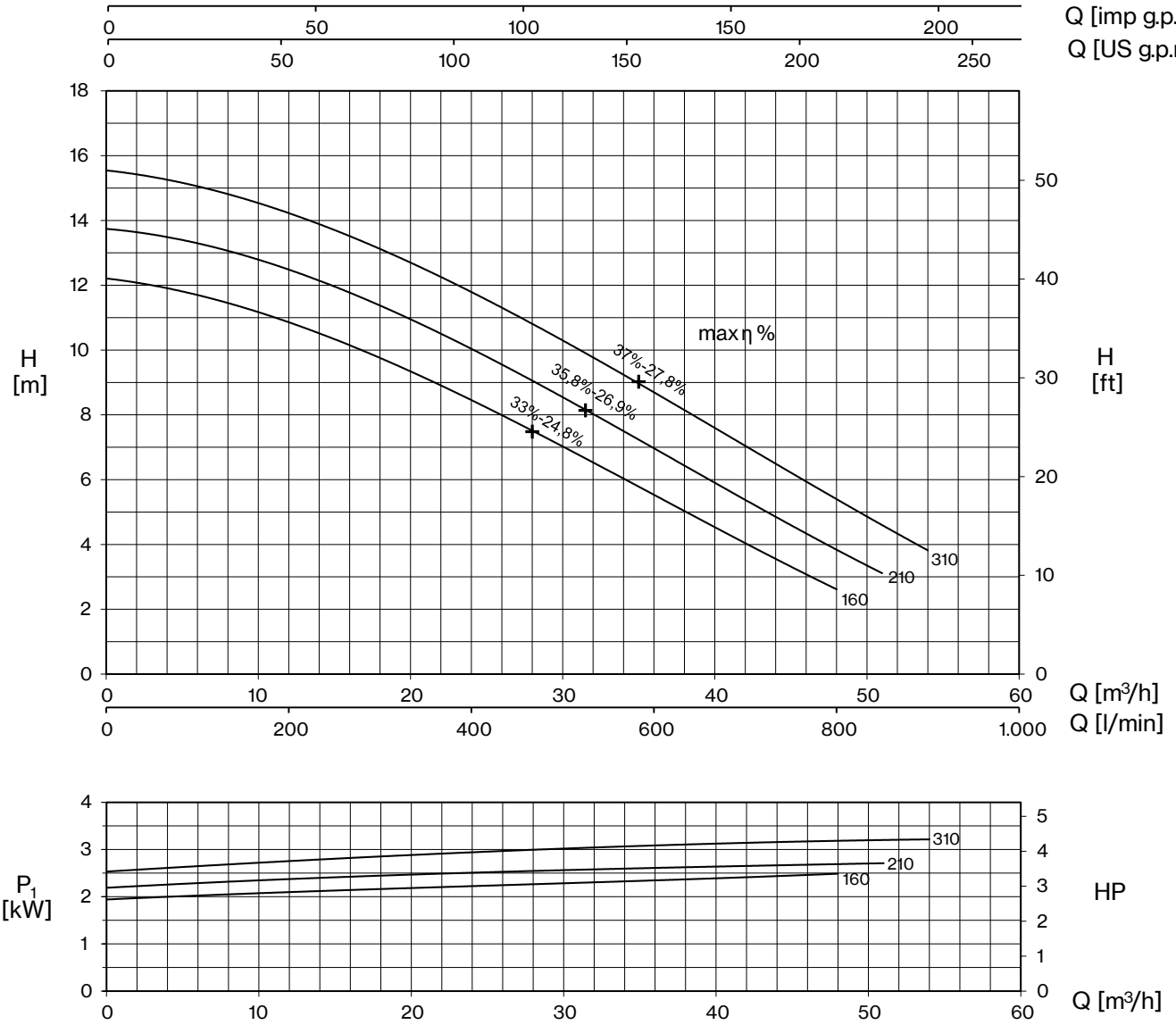
## Motor

| | |
|---|---|
| **2 poles induction motor** | 3~ 230V - 50Hz<br>3~ 400V - 50Hz<br>3~ 230/400V - 50Hz<br>3~ 400/690V - 50Hz<br><br>1~ 230V - 50Hz<br>required run capacitor (35µF for 1,5HP model, 50µF for 2HP model) |
| **Insulation class** | F |
| **Protection degree** | IPX8 |

| LOTS | | | | |
|---|---|---|---|---|
| TYPE | TRUCK | | CONTAINER | |
| | PALLET (cm) | N° pumps | PALLET (cm) | N° pumps |
| **DV(T) 160÷310** | 85×110×145 | 18 | 85×110×190 | 27 |
| **DVT 400-550** | 85×110×170 | 12 | 85×110×170 | 12 |
| **DVT 750-1000** | 100×120×190 | 12 | 100×120×190 | 12 |

**DV T 160 -CF**

- pump type
- motor: 1~ **T** 3~
- counter-flange: not included / **CF** included







| TYPE - 50 Hz | | CURRENT | | | | |
|---|---|---|---|---|---|---|
| 1~ | 3~ | 230V | 3~ 230V (*) | 3~ 400V | 230/400 V ⅄ / △ (*) | 400/690 V ⅄ / △ |
| **DV 160** | **DVT 160** | 11,3 | 7,1 | 4,1 | - | - |
| **DV 210** | **DVT 210** | 12,6 | 8,7 | 5 | - | - |
| **-** | **DVT 310** | - | 9,9 | 5,7 | - | - |

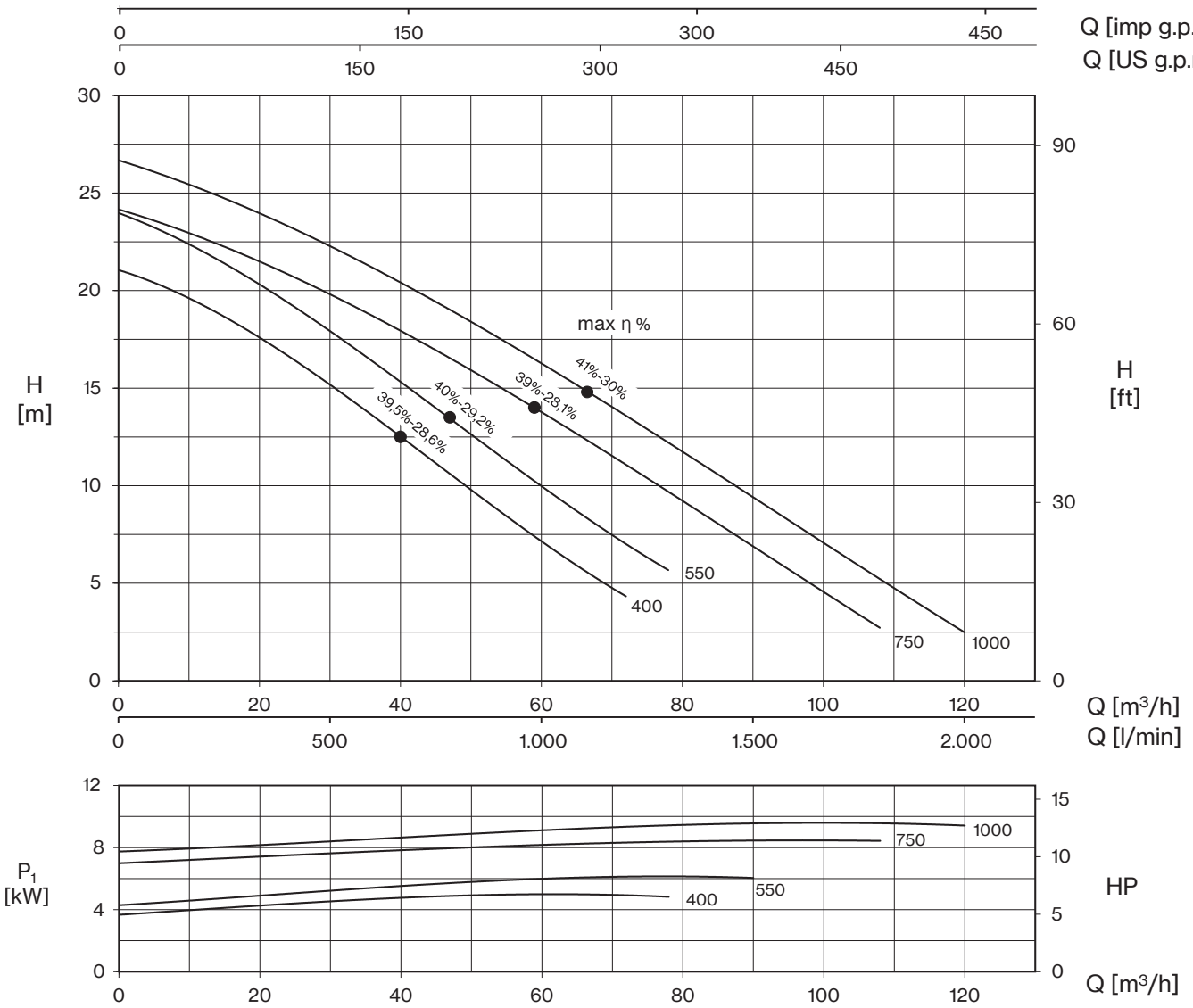
(*) no standard execution

+ max η %

max hydraulic efficiency and respective total efficiency

| TYPE - 50 Hz | | P2 | | P1 | | Q (m³/h - l/min) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1~ | 3~ | | | 1~ | 3~ | 0 | 12 | 24 | 36 | 42 | 48 | 51 | 54 |
| | | | | | | 0 | 200 | 400 | 600 | 700 | 800 | 850 | 900 |
| | | HP | kW | kW | | H (m) | | | | | | | |
| **DV 160** | **DVT 160** | 1,5 | 1,1 | 2,5 | 2,3 | 12,2 | 10,9 | 8,4 | 5,6 | 4,1 | 2,6 | | |
| **DV 210** | **DVT 210** | 2 | 1,5 | 2,8 | 2,7 | 13,7 | 12,6 | 9,9 | 7,0 | 5,4 | 3,8 | 3,1 | |
| **-** | **DVT 310** | 3 | 2,2 | - | 3,3 | 15,5 | 14,4 | 11,6 | 8,8 | 7,1 | 5,4 | 4,5 | 3,8 |

# DV



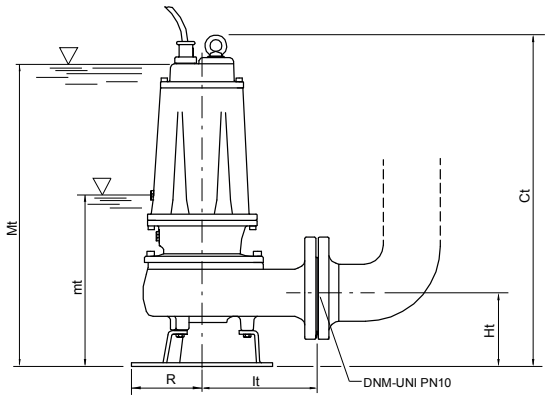

| TYPE - 50 Hz | CURRENT | | | |
|---|---|---|---|---|
| 3~ | 3~ 230V (*) | 3~ 400V | 230/400 V ⅄ / △ (*) | 400/690 V ⅄ / △ |
| **DVT 400** | 14,1 | 8,1 | - | - |
| **DVT 550** | 18,1 | 10,4 | - | - |
| **DVT 750** | - | 14,4 | 25 | 14,4 |
| **DVT 1000** | - | 16,4 | 28,5 | 16,4 |

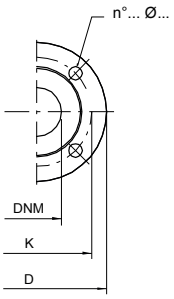
(*) no standard execution

+ max η %

max hydraulic efficiency and respective total efficiency

| TYPE - 50 Hz | P2 | | P1 | Q (m³/h - l/min) | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3~ | | | | 0 | 12 | 24 | 36 | 42 | 48 | 51 | 54 | 60 | 72 | 78 | 84 | 90 | 96 | 108 | 114 | 120 |
| | | | | 0 | 200 | 400 | 600 | 700 | 800 | 850 | 900 | 1000 | 1200 | 1300 | 1400 | 1500 | 1600 | 1800 | 1900 | 2000 |
| | HP | kW | kW | H (m) | | | | | | | | | | | | | | | | |
| **DVT 400** | 4 | 3 | 4,9 | 21,0 | 19,4 | 16,6 | 13,5 | 12,0 | 10,4 | 9,6 | 8,8 | 7,2 | 4,3 | 2,8 | | | | | | |
| **DVT 550** | 5,5 | 4 | 6,1 | 23,9 | 22,2 | 19,3 | 16,3 | 14,8 | 13,2 | 12,4 | 11,6 | 10 | 7,1 | 5,6 | 4,1 | 2,6 | | | | |
| **DVT 750** | 7,5 | 5,5 | 8,5 | 24,2 | 22,7 | 20,7 | 18,7 | 17,6 | 16,4 | 15,8 | 15,2 | 13,9 | 11,1 | 9,7 | 8,2 | 6,8 | 5,4 | 2,8 | | |
| **DVT 1000** | 10 | 7,5 | 9,6 | 26,7 | 25,2 | 23,2 | 21,2 | 20,0 | 18,8 | 18,2 | 17,6 | 16,3 | 13,7 | 12,3 | 10,8 | 9,4 | 8,0 | 5,1 | 3,8 | 2,6 |

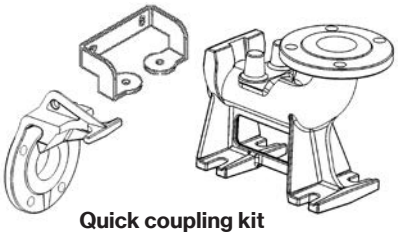


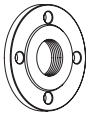

mt: minimum working level

Mt: minimum submengence level for continuos duty

## ACCESSORIES

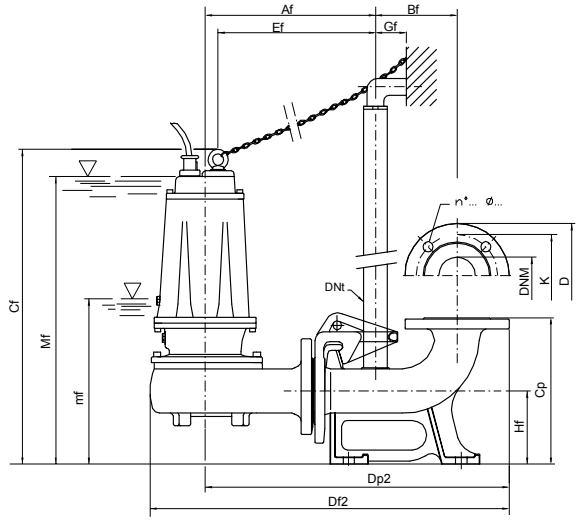


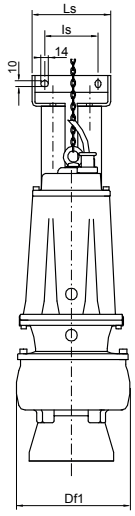
**Quick coupling kit**

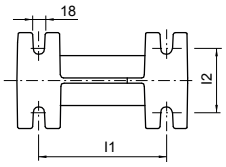


**Counterflange**

| TYPE | | DIMENSIONS (mm) | | | | | | | Kg | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1~ | 3~ | Ct | Ht | R | It | mt | Mt | DNM | 1~ | 3~ |
| **DV 160** | **DVT 160** | 551 | 123 | 117 | 191 | 243 | 513 | 65 | 40,5 | 39,5 |
| **DV 210** | **DVT 210** | 551 | 123 | 117 | 191 | 243 | 513 | 65 | 41,5 | 40,5 |
| **-** | **DVT 310** | 551 | 123 | 117 | 191 | 243 | 513 | 65 | - | 41,5 |
| **-** | **DVT 400** | 645 | 148 | 160 | 210 | 285 | 600 | 80 | - | 68 |
| **-** | **DVT 550** | 645 | 148 | 160 | 210 | 285 | 600 | 80 | - | 71 |
| **-** | **DVT 750** | 725 | 178 | 180 | 232 | 358 | 670 | 80 | - | 90 |
| **-** | **DVT 1000** | 725 | 178 | 180 | 232 | 358 | 670 | 80 | - | 92,5 |




mf: minimum working level

Mf: minimum submengence level for continuos duty

| Flange UNI PN 10 (mm) | | | |
|---|---|---|---|
| DNM | K | D | n°... ø... |
| 65 | 145 | 185 | 4... 18... |
| 80 | 160 | 200 | 8... 18... |

| TYPE | | DIMENSIONS (mm) | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1~ | 3~ | Af | Bf | Cf | Cp | Df1 | Df2 | Dp2 | DNt | Ef | Gf | Hf | l1 | l2 | ls | Ls | mf | Mf | DNM |
| **DV 160/P** | **DVT 160/P** | 303 | 145 | 559 | 260 | 200 | 639 | 541 | 1" ¼ | 280 | 55 | 130 | 200 | 100 | 95 | 140 | 251 | 521 | 65 |
| **DV 210/P** | **DVT 210/P** | 303 | 145 | 559 | 260 | 200 | 639 | 541 | 1" ¼ | 280 | 55 | 130 | 200 | 100 | 95 | 140 | 251 | 521 | 65 |
| **-** | **DVT 310/P** | 303 | 145 | 559 | 260 | 200 | 639 | 541 | 1" ¼ | 280 | 55 | 130 | 200 | 100 | 95 | 140 | 251 | 521 | 65 |
| **-** | **DVT 400/P** | 350 | 165 | 690 | 340 | 220 | 720 | 615 | 2" | 319 | 85 | 190 | 250 | 140 | 130 | 180 | 327 | 642 | 80 |
| **-** | **DVT 550/P** | 350 | 165 | 690 | 340 | 220 | 720 | 615 | 2" | 319 | 85 | 190 | 250 | 140 | 130 | 180 | 327 | 642 | 80 |
| **-** | **DVT 750/P** | 370 | 165 | 745 | 340 | 235 | 750 | 638 | 2" | 338 | 85 | 190 | 250 | 140 | 130 | 180 | 380 | 690 | 80 |
| **-** | **DVT 1000/P** | 370 | 165 | 745 | 340 | 235 | 750 | 638 | 2" | 338 | 85 | 190 | 250 | 140 | 130 | 180 | 380 | 690 | 80 |

| TYPE | PROTECTION | | 1 PUMP CONTROL PANEL | | | 2 PUMPS CONTROL PANEL | | |
|---|---|---|---|---|---|---|---|---|
| | 1~ 230V | 3~ 400V | 1~ 230V | 3~ 400V | 400/690 V | 1~ 230V | 3~ 400V | 400/690 V |
| **DV 160** | PMC 15/35-15 | PT 20-30-40/4.3-6.8 | EQSM + 35µF | EQSMT 10 | - | EQ2SM + 35µF | EQ2SMT 10 | - |
| **DV 210** | PMC 20/50-18 | PT 20-30-40/4.3-6.8 | EQSM + 50µF | EQSMT 10 | - | EQ2SM + 50µF | EQ2SMT 10 | - |
| **DVT 310** | - | PT 40-50/5.7-9.1 | - | EQSMT 10 | - | - | EQ2SMT 10 | - |
| **DVT 400** | - | PT 55-75/8.6-13.5 | - | EQSMT 10 | - | - | EQ2SMT 10 | - |
| **DVT 550** | - | PT 55-75/8.6-13.5 | - | EQSMT 10 | - | - | EQ2SMT 10 | - |
| **DVT 750** | - | PT 100/12.5-16.5 | - | EQSMT 10 | QST 7 | - | EQ2SMT 10 | Q2ST 7 |
| **DVT 1000** | - | PT 125-150/16-21 | - | EQSMT 10 | QST 10 | - | EQ2SMT 15 | Q2ST 10 |