# VSP2 Grupos de presión de velocidad variable

Aguas limpias

Uso doméstico

Uso civil




## USOS E INSTALACIONES

**VSP2** es un sistema premontado que se conecta a la red de suministro de agua o a un depósito de recogida primaria para el suministro y la presurización de agua en edificios residenciales, comerciales y públicos, en hoteles, para el riego de jardines, parques y campos deportivos, y para la movilización y el tratamiento de agua en la industria.

**VSP2** es adecuado para bombear agua limpia y soluciones acuosas que no dañen química o mecánicamente los materiales utilizados y no contengan sustancias abrasivas o fibrosas.

## DESCRIPCIÓN DEL PRODUCTO

**VSP2** es un sistema de presurización compuesto por dos unidades de bombeo conectadas en paralelo que, gracias a los dispositivos variadores integrados, modulan automáticamente su funcionamiento en función de las distintas demandas de agua del sistema, manteniendo una presión constante.

Cuando la presión del sistema disminuye debido a la extracción de agua, la primera unidad **VSP** se pone en marcha para satisfacer el caudal de agua necesario, manteniendo la presión constante; cuando se alcanza la velocidad de rotación máxima, la segunda unidad **VSP** también se pone en marcha para satisfacer la demanda de agua del sistema.

## CARACTERÍSTICAS CONSTRUCTIVAS

※ **DOS UNIDADES DE BOMBEO VSP** conectadas en paralelo mediante colectores de aspiración y envío. Cada unidad está equipada con válvulas de bola en envío y aspiración, válvulas antirretorno en aspiración (FCR, PLURIJET, MK) o en envío (HT-PRO). La electrónica integrada en los **VSP** puede gestionar el funcionamiento alterno de cada una de las unidades.

**VSP2 está diseñado para proteger el sistema de:**

※ marcha en seco
※ sobretensión e baja tensión
※ sobretemperatura

※ **BASE** de perfil metálico y provista de pies antivibratorios regulables.

※ **TRANSDUCTOR DE PRESIÓN** (4-20 mA) instalado en el colector de alimentación, que permite el mando y control del grupo de presurización.

※ **CUADRO ELÉCTRICO** con interruptores automáticos magnetotérmicos de protección del motor para las versiones trifásicas e interruptores automáticos magnetotérmicos para las versiones monofásicas.



## VSP2 – FCR

Grupos de presurización compuestos por dos electrobombas centrífugas multicelulares con un variador integrado en el motor capaz de mantener una presión constante en el sistema. Son adecuados para el suministro de agua residencial, comercial y público, para el riego de jardines y la movilización de agua limpia en general.

### DATOS TÉCNICOS

- Temperatura del líquido de **-10 °C** hasta **+60 °C**
- Temperatura ambiente de **-5 °C** a **+40 °C**
- Presión máx en el cuerpo de la bomba **11 bar**
- Servicio continuo **S1**



## VSP2 – PLURIJET

Grupos de presurización compuestos por dos electrobombas centrífugas multicelulares autocebantes con un variador integrado en el motor capaz de mantener una presión constante en el sistema. Se utilizan para el abastecimiento de agua, incluida la procedente de depósitos subterráneos, en edificios residenciales, comerciales y públicos, para el riego de jardines y para mover agua limpia en general.

### DATOS TÉCNICOS

- Temperatura del líquido de **-10 °C** hasta **+40 °C**
- Temperatura ambiente de **-5 °C** a **+40 °C**
- Presión máx en el cuerpo de la bomba **10 bar**
- Servicio continuo **S1**



## VSP2 – MK

Grupos de presurización compuestos por dos electrobombas multicelulares verticales con un variador integrado en el motor capaz de mantener una presión constante en el sistema. Son adecuados para el suministro de agua residencial, comercial y público, para la movilización de agua limpia en general.

### DATOS TÉCNICOS

- Temperatura del líquido de **-10 °C** hasta **+60 °C**
- Temperatura ambiente de **-5 °C** a **+40 °C**
- Presión máx en el cuerpo de la bomba **11 bar**
- Servicio continuo **S1**



## VSP2 – HT PRO

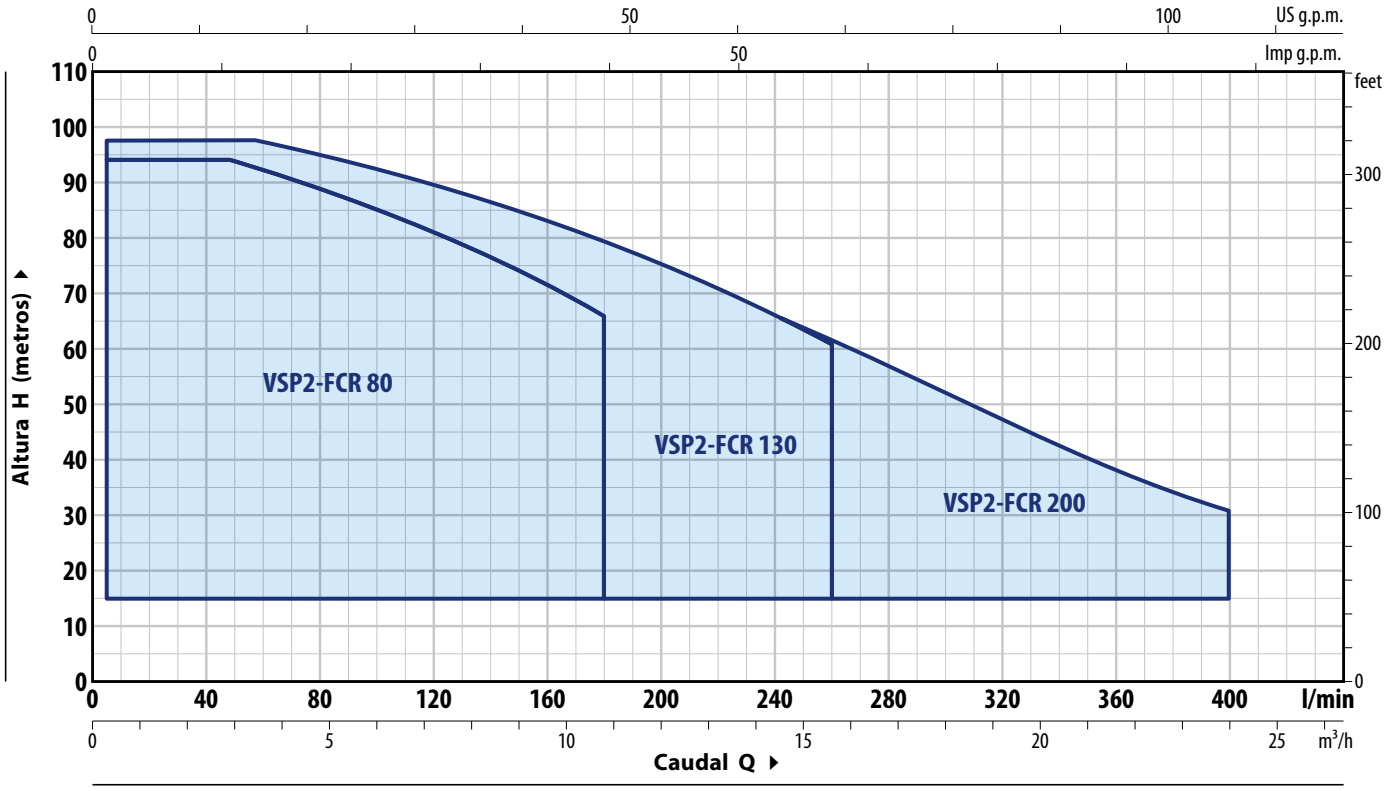
Grupos de presurización compuestos por dos electrobombas multicelulares verticales con un variador integrado en el motor capaz de mantener una presión constante en el sistema. Se utilizan para el suministro de agua en edificios comerciales y públicos, para el riego de parques y campos deportivos, y para la movilización y el tratamiento del agua en la industria.

### DATOS TÉCNICOS

- Temperatura del líquido de **-10 °C** hasta **+60 °C**
- Temperatura ambiente de **-5 °C** a **+40 °C**
- Presión máx en el cuerpo de la bomba **16 bar**
- Servicio continuo **S1**

# VSP2 – FCR

## CAMPO Y DATOS DE PRESTACIONES

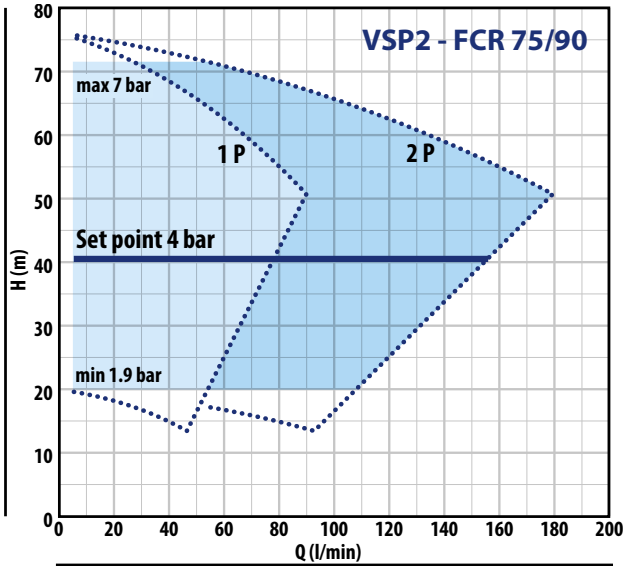


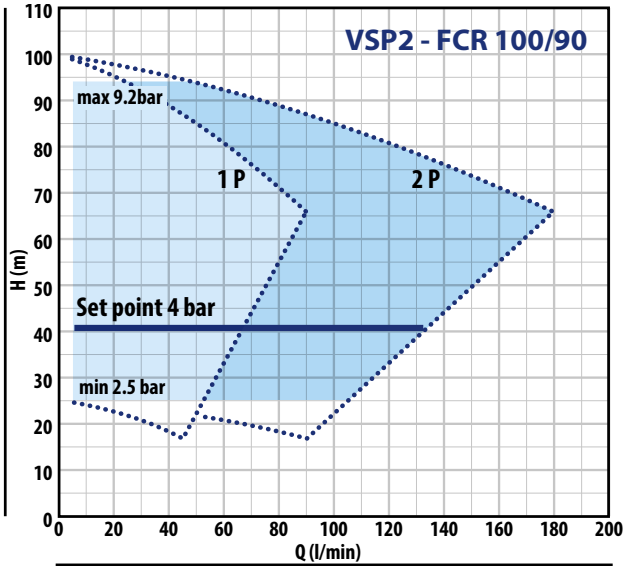

| TIPO | | POTENCIA P2 | | Q m³/h | 0 | 0.3 | 2.4 | 4.8 | 6 | 7.2 | 9.6 | 10.8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **kW** | **HP** | l/min | **0** | **5** | **40** | **80** | **100** | **120** | **160** | **180** |
| **VSP2m - FCR 75/90** | **VSP2 - FCR 75/90** | 2×1.5 | 2×2 | **H** m | 71.5 | 71.5 | 71.5 | 68.5 | 66 | 63 | 55.5 | 50.5 |
| – | **VSP2 - FCR 100/90** | 2×2.2 | 2×3 | | 94 | 94 | 94 | 89 | 85 | 80.5 | 71 | 66 |

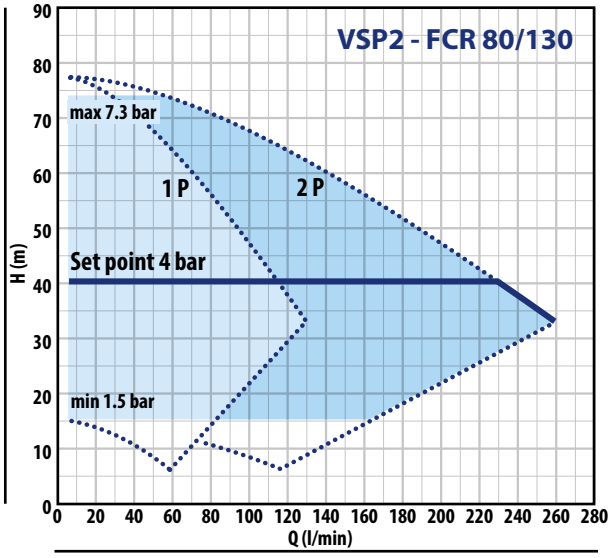
| TIPO | | POTENCIA P2 | | Q m³/h | 0 | 0.3 | 2.4 | 4.8 | 7.2 | 9.6 | 12 | 14.4 | 15.6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **kW** | **HP** | l/min | **0** | **5** | **40** | **80** | **120** | **160** | **200** | **240** | **260** |
| **VSP2m - FCR 80/130** | **VSP2 - FCR 80/130** | 2×1.5 | 2×2 | **H** m | 74.5 | 74.5 | 74.5 | 71 | 64.5 | 56 | 47 | 38 | 33.5 |
| – | **VSP2 - FCR 105/130** | 2×2.2 | 2×3 | | 98 | 98 | 98 | 95.5 | 90 | 83.5 | 75.5 | 66 | 61 |

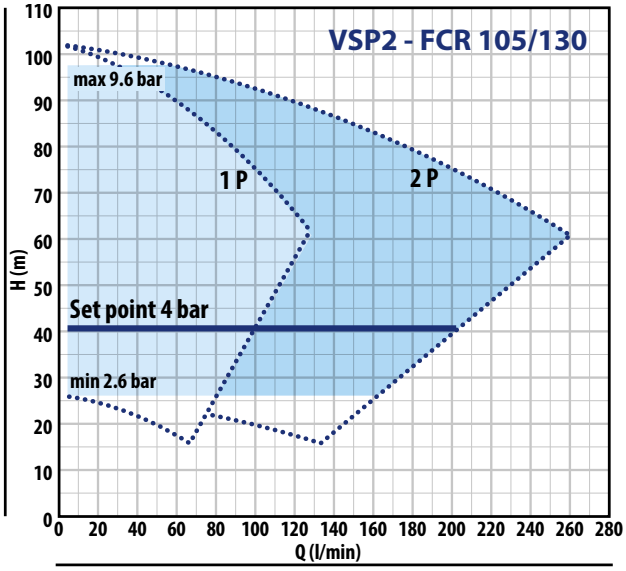
| TIPO | | POTENCIA P2 | | Q m³/h | 0 | 0.3 | 2.4 | 4.8 | 7.2 | 9.6 | 12 | 14.4 | 18 | 20.4 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **kW** | **HP** | l/min | **0** | **5** | **40** | **80** | **120** | **160** | **200** | **240** | **300** | **340** | **400** |
| **VSP2m - FCR 70/200** | **VSP2 - FCR 70/200** | 2×1.5 | 2×2 | **H** m | 67.5 | 67.5 | 67.5 | 67.5 | 64 | 58.5 | 51.5 | 44 | 31.5 | 23.5 | 14 |
| – | **VSP2 - FCR 95/200** | 2×2.2 | 2×3 | | 87.5 | 87.5 | 87.5 | 87.5 | 85 | 80.5 | 74 | 66 | 52.5 | 43 | 31 |

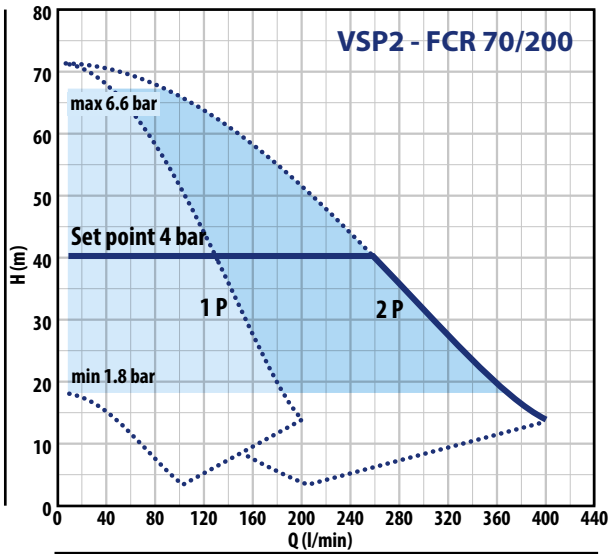
## CURVAS DE PRESTACIONES

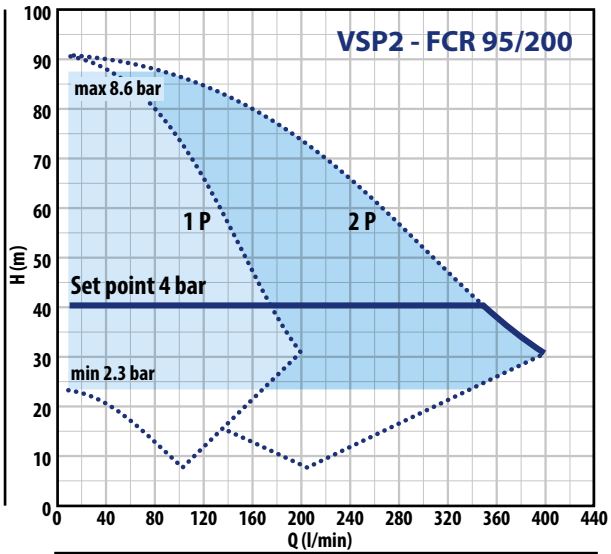


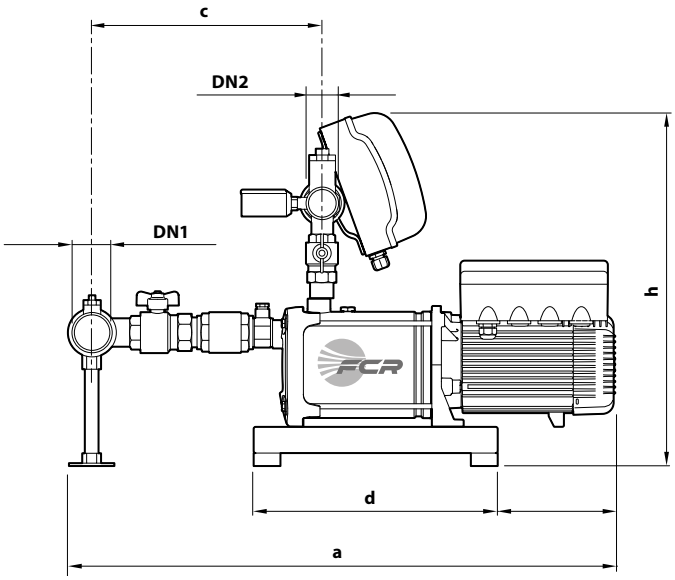



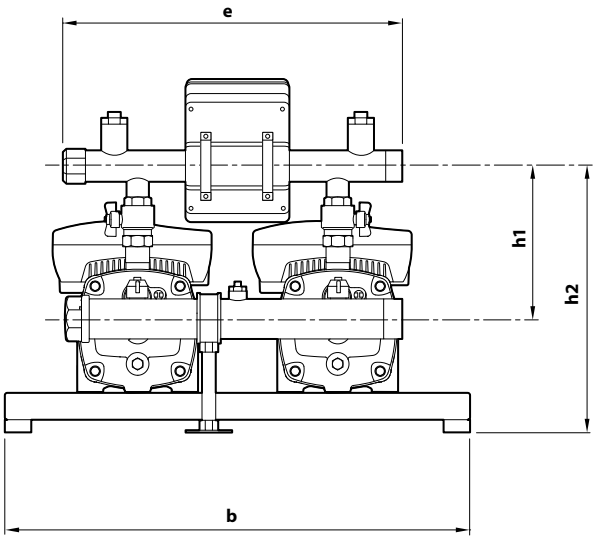



# VSP2 – FCR

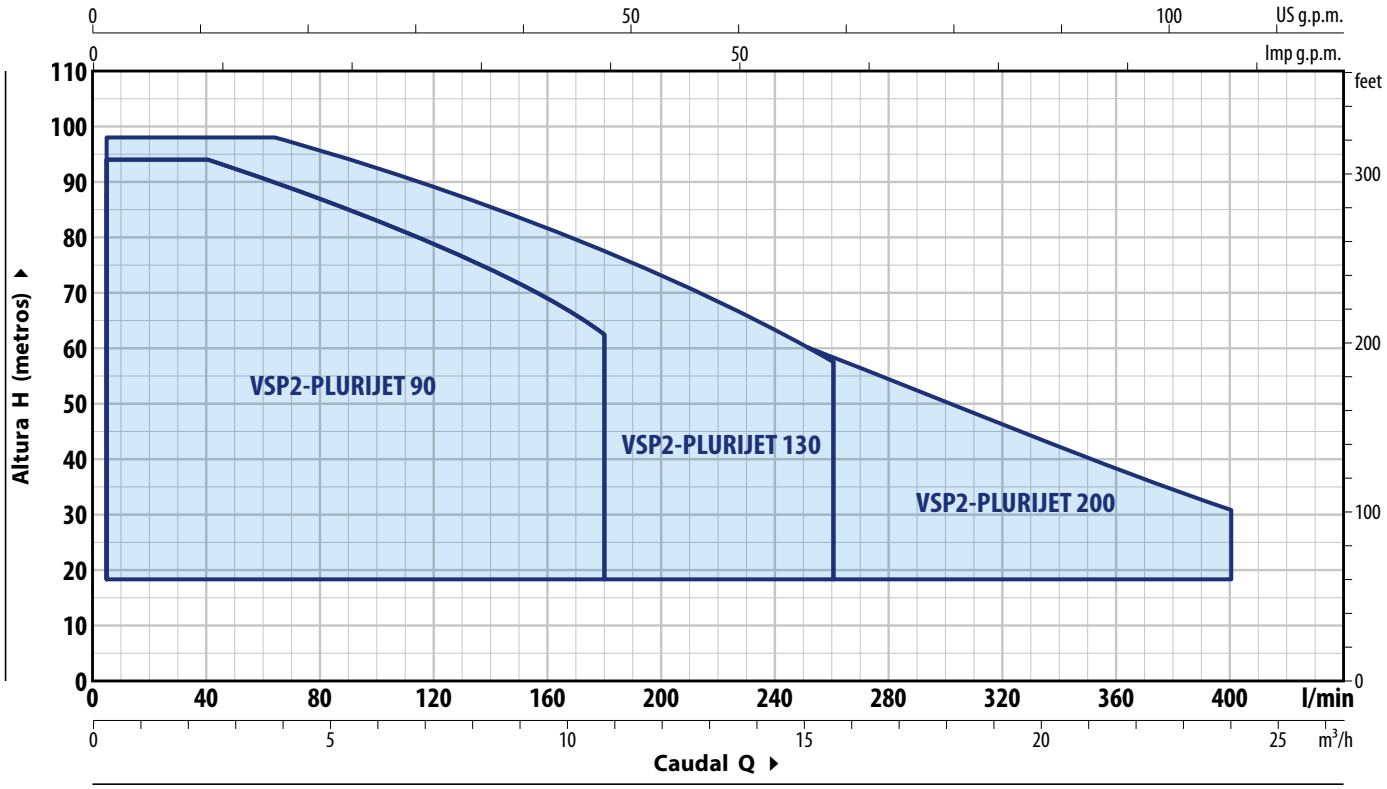
## DIMENSIONES Y PESOS




| TIPO | | BOCAS | | DIMENSIONES mm | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **DN1** | **DN2** | a | b | c | d | e | h | h1 | h2 | 1~ | 3~ |
| **VSP2m - FCR 75/90** | **VSP2 - FCR 75/90** | **2"** | **1½"** | 760 | 700 | 339 | 370 | 510 | 560 | 205 | 394 | 80 | 80 |
| – | **VSP2 - FCR 100/90** | | | 786 | | | | | | | | – | 81 |
| **VSP2m - FCR 80/130** | **VSP2 - FCR 80/130** | | | 760 | | | | | | | | 81 | 81 |
| – | **VSP2 - FCR 105/130** | | | 786 | | | | | | | | – | 81 |
| **VSP2m - FCR 70/200** | **VSP2 - FCR 70/200** | **2½"** | **1½"** | 803 | | 375 | | | | | | 87 | 87 |
| – | **VSP2 - FCR 95/200** | | | 829 | | | | | | | | – | 87 |

## CAMPO Y DATOS DE PRESTACIONES



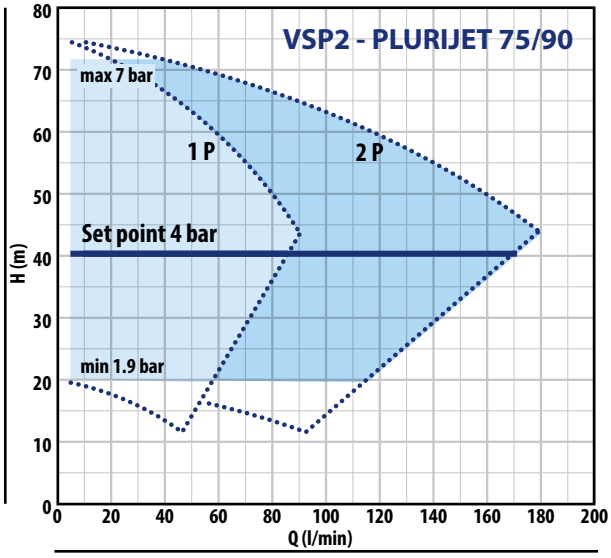

| TIPO | | POTENCIA P2 | | Q m³/h | 0 | 0.3 | 2.4 | 4.8 | 6 | 7.2 | 9.6 | 10.8 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monofásico | Trifásico | kW | HP | l/min | **0** | **5** | **40** | **80** | **100** | **120** | **160** | **180** |
| **VSP2m - PJ 75/90** | **VSP2 - PJ 75/90** | 2×1.5 | 2×2 | **H** m | 71.5 | 71.5 | 71 | 66 | 63 | 59.5 | 49.5 | 43.5 |
| – | **VSP2 - PJ 100/90** | 2×2.2 | 2×3 | | 94 | 94 | 94 | 87.5 | 83 | 78.5 | 68 | 62.5 |

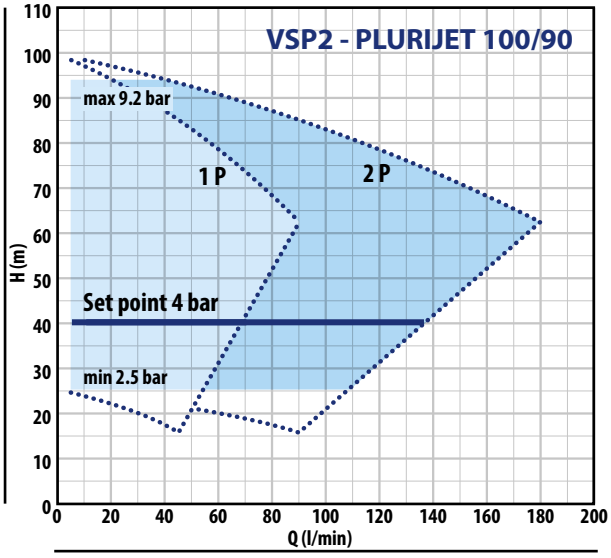
| TIPO | | POTENCIA P2 | | Q m³/h | 0 | 0.3 | 2.4 | 4.8 | 7.2 | 9.6 | 12 | 14.4 | 15.6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monofásico | Trifásico | kW | HP | l/min | **0** | **5** | **40** | **80** | **120** | **160** | **200** | **240** | **260** |
| **VSP2m - PJ 80/130** | **VSP2 - PJ 80/130** | 2×1.5 | 2×2 | **H** m | 74.5 | 74.5 | 74.5 | 69.5 | 62 | 52.5 | 43 | 34 | 30 |
| – | **VSP2 - PJ 105/130** | 2×2.2 | 2×3 | | 98 | 98 | 98 | 96 | 89.5 | 81 | 72 | 62 | 57.5 |

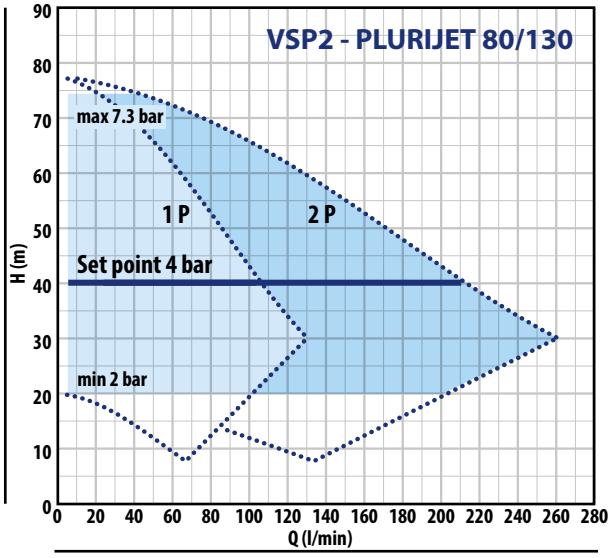
| TIPO | | POTENCIA P2 | | Q m³/h | 0 | 0.3 | 2.4 | 4.8 | 7.2 | 9.6 | 12 | 14.4 | 18 | 20.4 | 24 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Monofásico | Trifásico | kW | HP | l/min | **0** | **5** | **40** | **80** | **120** | **160** | **200** | **240** | **300** | **340** | **400** |
| **VSP2m - PJ 70/200** | **VSP2 - PJ 70/200** | 2×1.5 | 2×2 | **H** m | 65.5 | 65.5 | 65.5 | 65 | 60 | 53.5 | 46 | 38.5 | 27.5 | 21 | 14 |
| – | **VSP2 - PJ 95/200** | 2×2.2 | 2×3 | | 87.5 | 87.5 | 87.5 | 87 | 82.5 | 76.5 | 70 | 62.5 | 50.5 | 42 | 31 |

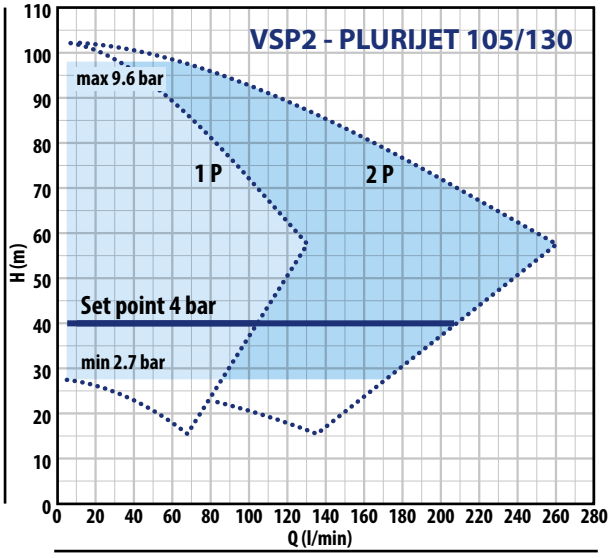
# VSP2 – PLURIJET

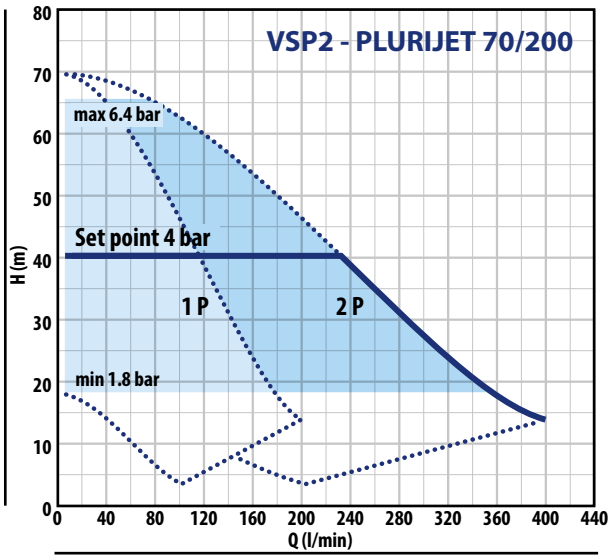
## CURVAS DE PRESTACIONES

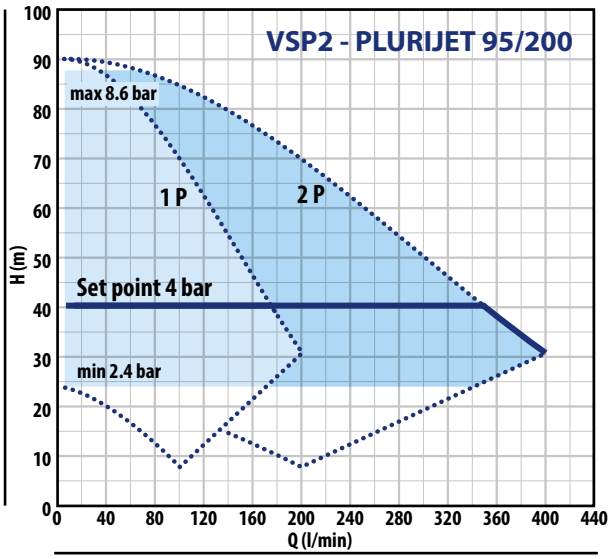


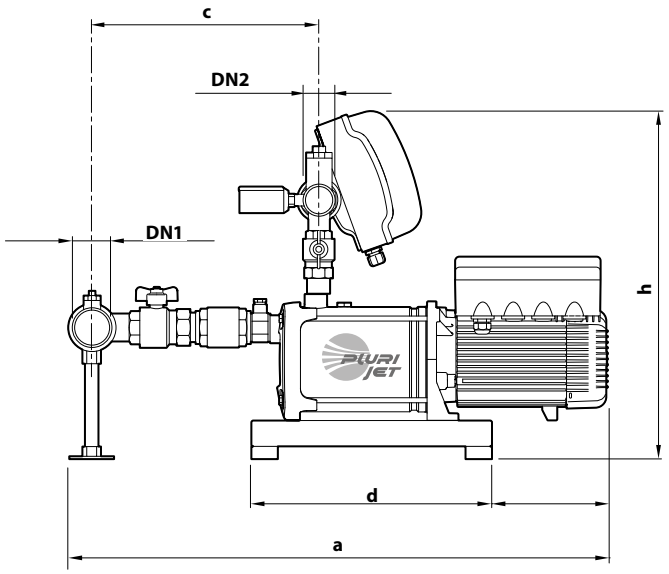



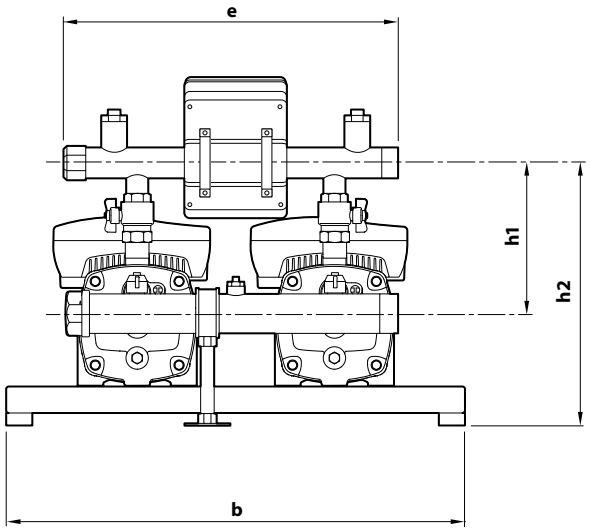



## DIMENSIONES Y PESOS

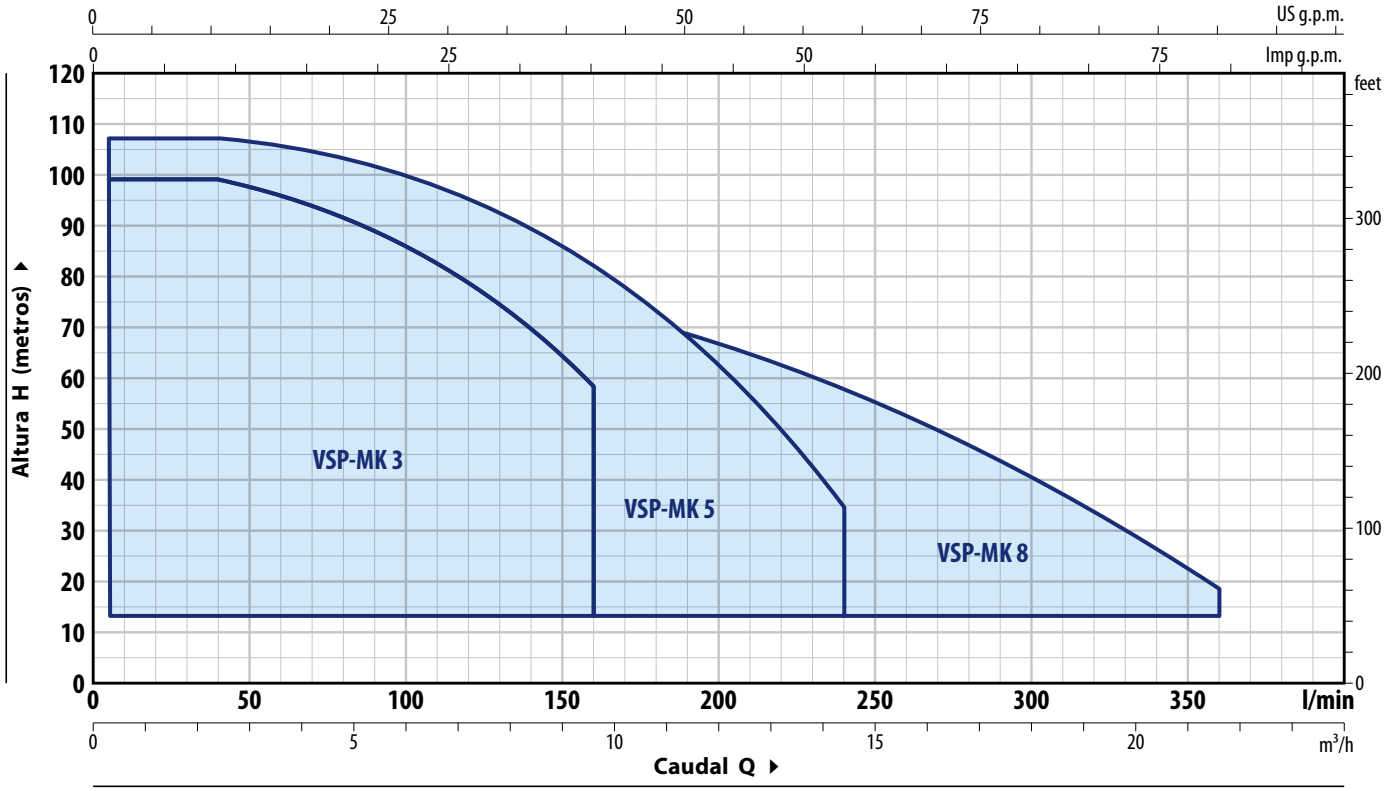



| TIPO | | BOCAS | | DIMENSIONES mm | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **DN1** | **DN2** | a | b | c | d | e | h | h1 | h2 | 1~ | 3~ |
| **VSP2m - PLURIJET 75/90** | **VSP2 - PLURIJET 75/90** | **2"** | **1½"** | 812 | 700 | 339 | 370 | 510 | 560 | 205 | 394 | 80 | 80 |
| – | **VSP2 - PLURIJET 100/90** | | | 838 | | | | | | | | – | 85 |
| **VSP2m - PLURIJET 80/130** | **VSP2 - PLURIJET 80/130** | | | 812 | | | | | | | | 80 | 81 |
| – | **VSP2 - PLURIJET 105/130** | | | 838 | | | | | | | | – | 85 |
| **VSP2m - PLURIJET 70/200** | **VSP2 - PLURIJET 70/200** | **2½"** | **1½"** | 855 | | 375 | | | | | | 83 | 83 |
| – | **VSP2 - PLURIJET 95/200** | | | 881 | | | | | | | | – | 87 |

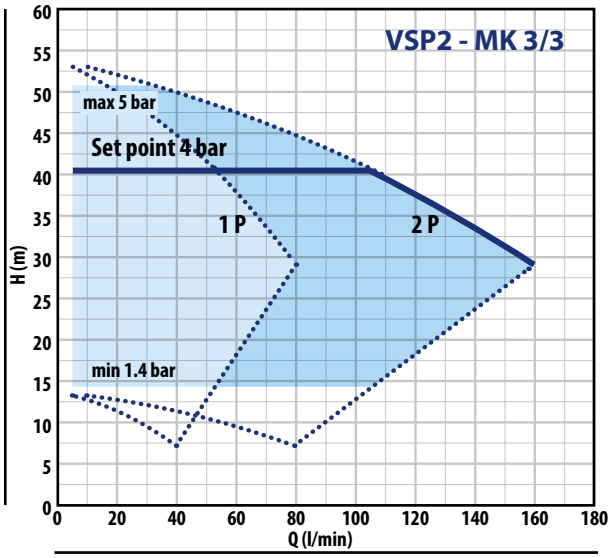
# VSP2 – MK

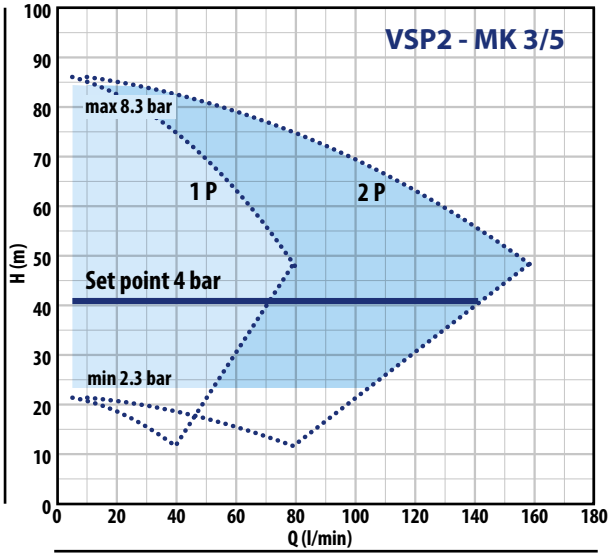
## CAMPO Y DATOS DE PRESTACIONES

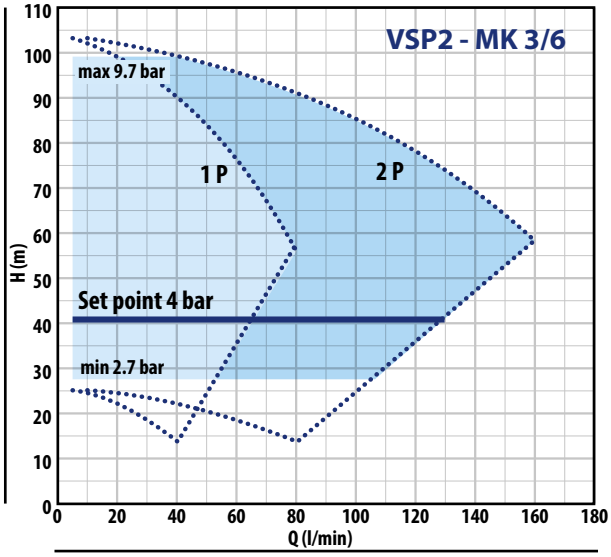


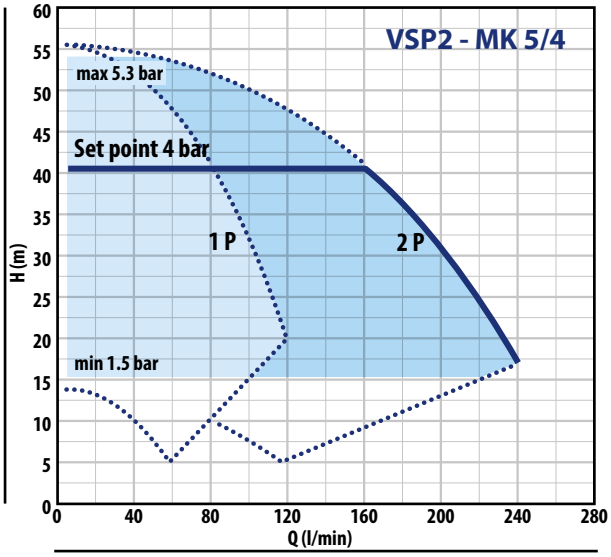

| TIPO | | POTENCIA P2 | | Q m³/h | 0 | 0.6 | 2.4 | 4.8 | 7.2 | 9.6 | 12 | 14.4 | 16.8 | 19.2 | 21.6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **kW** | **HP** | l/min | **0** | **5** | **40** | **80** | **120** | **160** | **200** | **240** | **280** | **320** | **360** |
| **VSP2m - MK 3/3** | **VSP2 - MK 3/3** | 2×0.75 | 2×1 | | 51 | 51 | 50 | 45 | 38.5 | 29 | | | | | |
| **VSP2m - MK 3/5** | **VSP2 - MK 3/5** | 2×1.1 | 2×1.5 | | 84.5 | 84.5 | 83 | 75 | 64 | 48 | | | | | |
| **VSP2m - MK 3/6** | **VSP2 - MK 3/6** | 2×1.5 | 2×2 | | 99 | 99 | 99 | 90 | 77 | 58 | | | | | |
| **VSP2m - MK 5/4** | **VSP2 - MK 5/4** | 2×0.75 | 2×1 | | 54 | 54 | 54 | 50 | 45 | 37.5 | 28.5 | 17 | | | |
| **VSP2m - MK 5/5** | **VSP2 - MK 5/5** | 2×1.1 | 2×1.5 | | 68.5 | 68.5 | 67.5 | 62.5 | 56 | 47 | 35.5 | 21.5 | | | |
| **VSP2m - MK 5/7** | **VSP2 - MK 5/7** | 2×1.5 | 2×2 | **H** m | 95 | 95 | 95 | 88 | 78 | 66 | 50 | 30 | | | |
| – | **VSP2 - MK 5/8** | 2×2.2 | 2×3 | | 108 | 108 | 108 | 100 | 90 | 75 | 57 | 34 | | | |
| **VSP2m - MK 8/4** | **VSP2 - MK 8/4** | 2×1.1 | 2×1.5 | | 53 | 53 | 53 | 53 | 51 | 47.5 | 43 | 37.5 | 30.5 | 22.1 | 12 |
| **VSP2m - MK 8/5** | **VSP2 - MK 8/5** | 2×1.5 | 2×2 | | 67.5 | 67.5 | 67.5 | 67 | 64 | 59.5 | 54 | 47 | 38 | 27.5 | 15.5 |
| – | **VSP2 - MK 8/6** | 2×2.2 | 2×3 | | 81.5 | 81.5 | 81.5 | 80 | 77 | 72 | 64.5 | 56 | 45.5 | 33 | 18.5 |

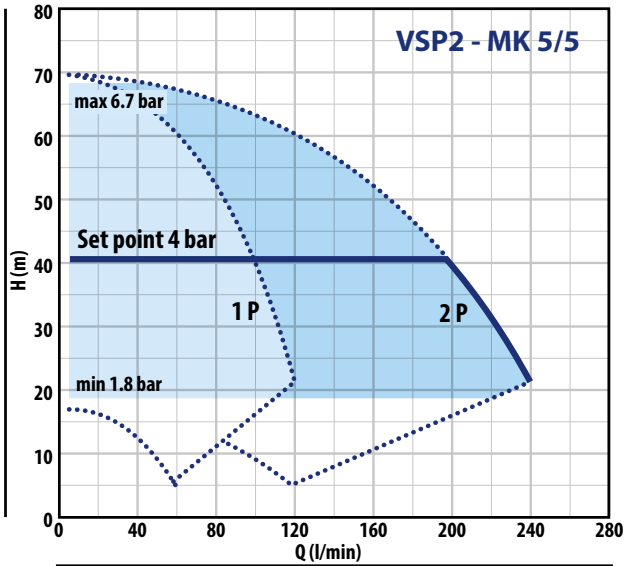
## CURVAS DE PRESTACIONES

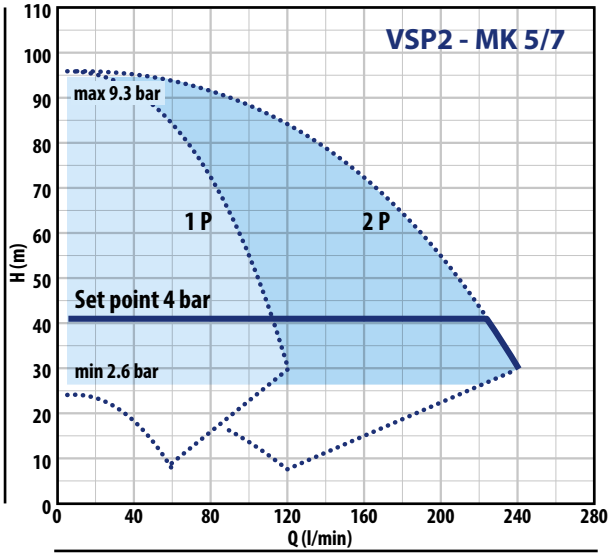


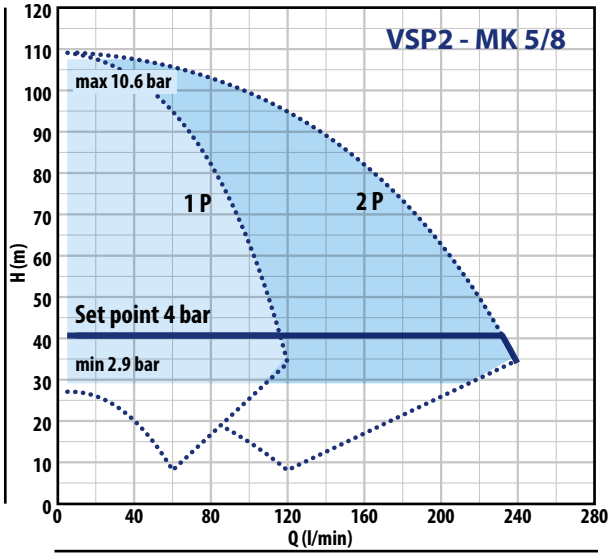



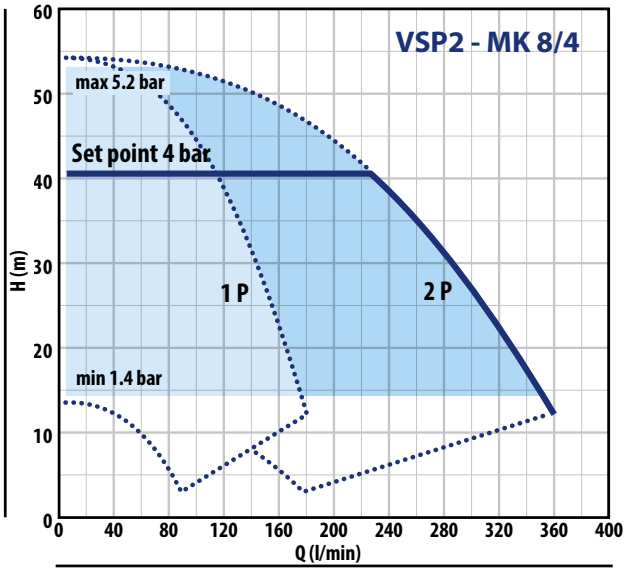



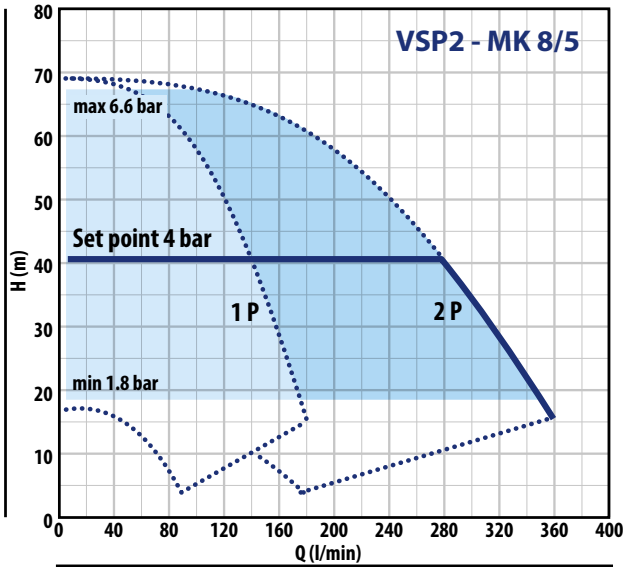



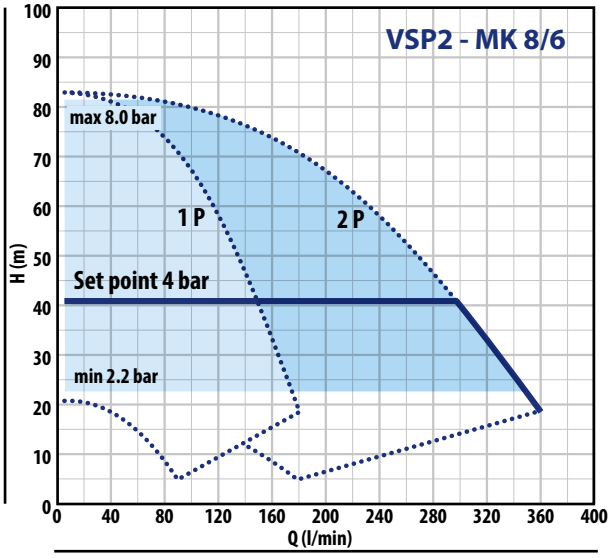
# VSP2 – MK

## CURVAS DE PRESTACIONES

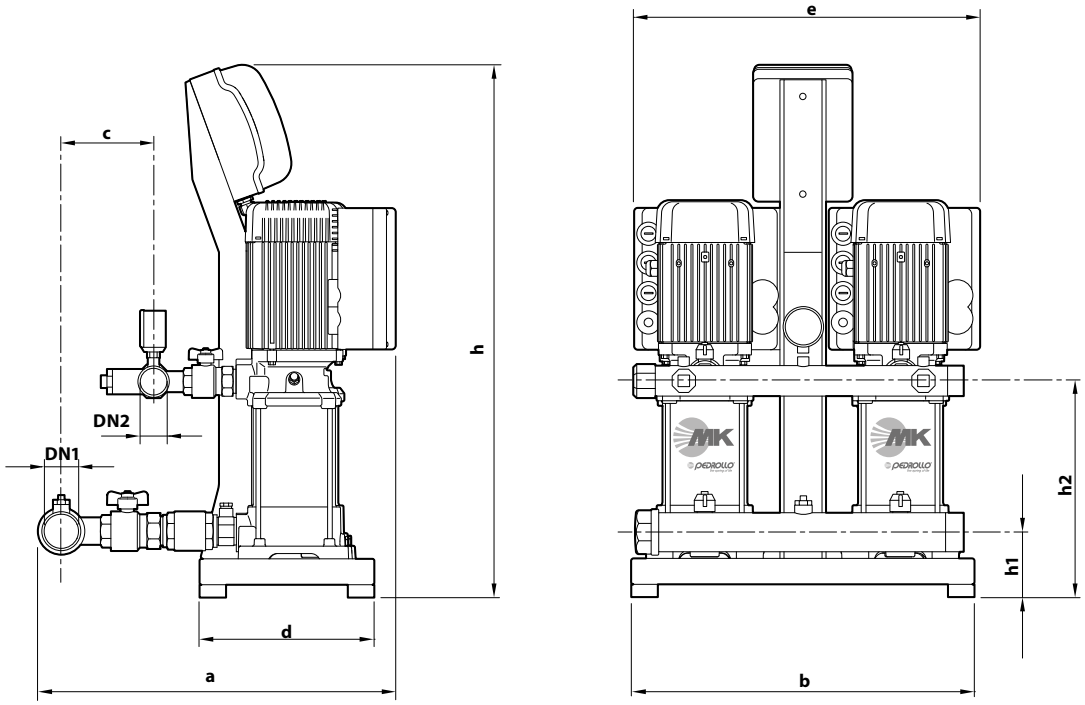


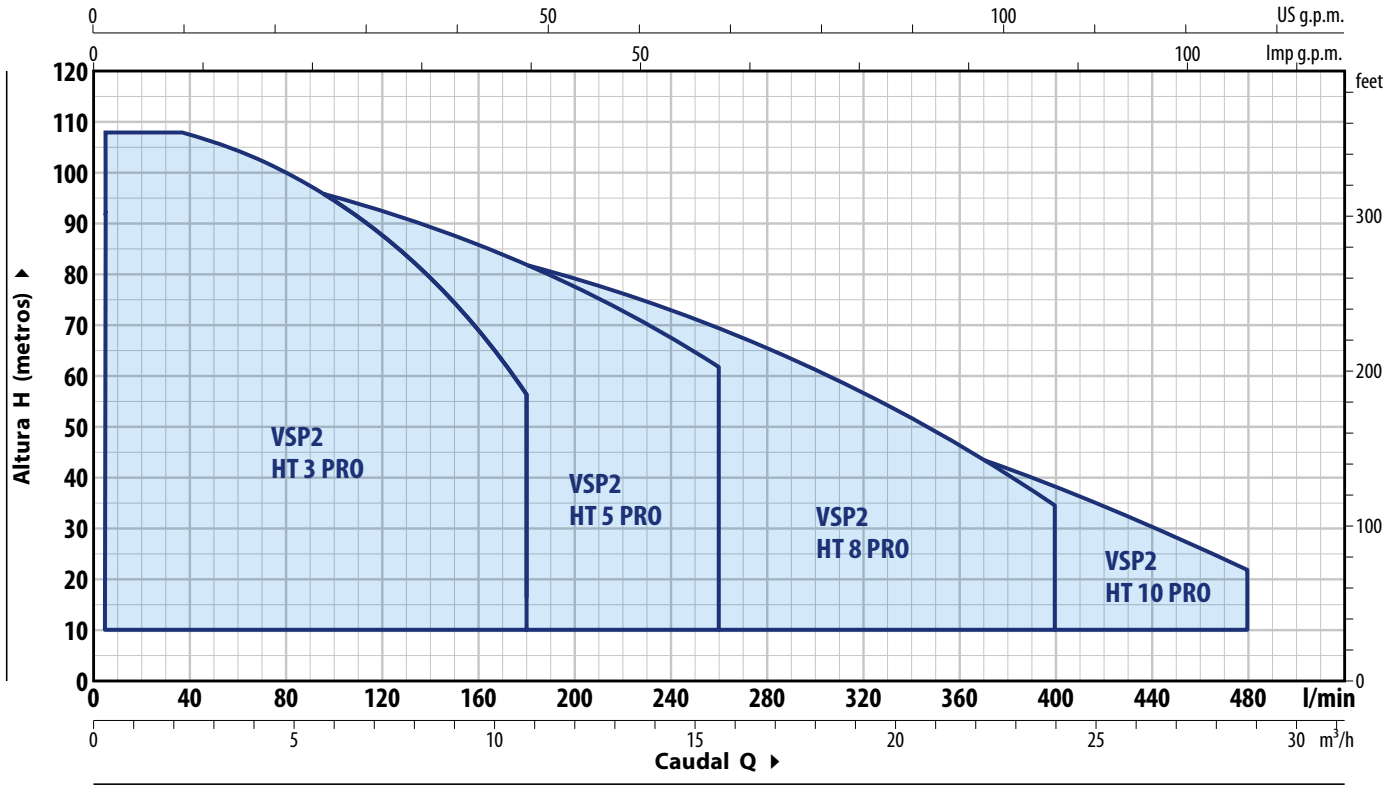
## DIMENSIONES Y PESOS




| TIPO | | BOCAS | | DIMENSIONES mm | | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **DN1** | **DN2** | a | b | c | d | e | h | h1 | h2 | 1~ | 3~ |
| **VSP2m - MK 3/3** | **VSP2 - MK 3/3** | | | | | | | | | | 235 | 75 | 75 |
| **VSP2m - MK 3/5** | **VSP2 - MK 3/5** | | | | | | | | | | 289 | 79 | 79 |
| **VSP2m - MK 3/6** | **VSP2 - MK 3/6** | | | | | | | | | | 316 | 83 | 83 |
| **VSP2m - MK 5/4** | **VSP2 - MK 5/4** | **2"** | **1½"** | 555 | | 135 | | | | | 262 | 76 | 76 |
| **VSP2m - MK 5/5** | **VSP2 - MK 5/5** | | | | | | | | | | 289 | 79 | 79 |
| **VSP2m - MK 5/7** | **VSP2 - MK 5/7** | | | | 530 | | 270 | 510 | 863 | 102 | 343 | 83 | 83 |
| – | **VSP2 - MK 5/8** | | | | | | | | | | 370 | – | 84 |
| **VSP2m - MK 8/4** | **VSP2 - MK 8/4** | | | | | | | | | | 316 | 82 | 82 |
| **VSP2m - MK 8/5** | **VSP2 - MK 8/5** | **2½"** | **1½"** | 600 | | 171 | | | | | 262 | 83 | 83 |
| – | **VSP2 - MK 8/6** | | | | | | | | | | 289 | – | 89 |

# VSP2 – HT-PRO

## CAMPO Y DATOS DE PRESTACIONES



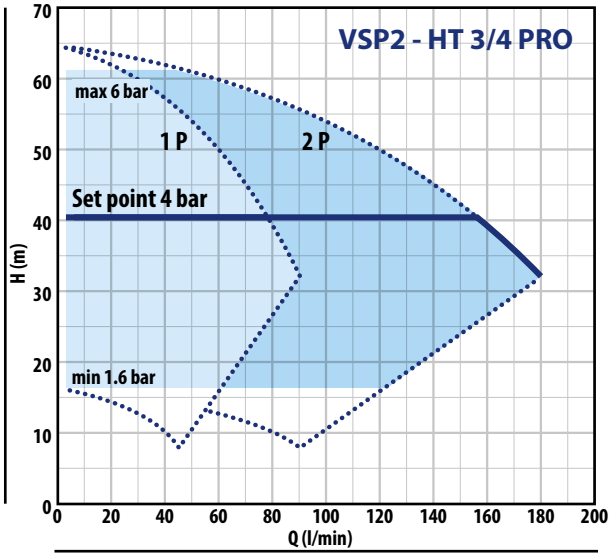

| TIPO | | POTENCIA P2 | | Q | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | m³/h | 0 | 0.3 | 2.4 | 3.6 | 4.8 | 6 | 7.2 | 8.4 | 9.6 | 10.8 |
| Monofásico | Trifásico | kW | HP | l/min | **0** | **5** | **40** | **60** | **80** | **100** | **120** | **140** | **160** | **180** |
| **VSP2m - HT3/4 PRO** | **VSP2 - HT3/4 PRO** | 2×0.75 | 2×1 | | 61 | 61 | 61 | 59.5 | 57 | 54 | 50 | 45.5 | 39.5 | 32 |
| **VSP2m - HT3/5 PRO** | **VSP2 - HT3/5 PRO** | 2×1.1 | 2×1.5 | | 76.5 | 76.5 | 76.5 | 74.5 | 71.5 | 67.5 | 63 | 56.5 | 49.5 | 40 |
| **VSP2m - HT3/6 PRO** | **VSP2 - HT3/6 PRO** | 2×1.5 | 2×2 | **H** m | 92 | 92 | 92 | 89.5 | 85.5 | 81 | 75.5 | 68 | 59 | 48 |
| – | **VSP2 - HT3/7 PRO** | 2×1.8 | 2×2.5 | | 108 | 108 | 107.5 | 104 | 100 | 94.5 | 88 | 79.5 | 69 | 56 |

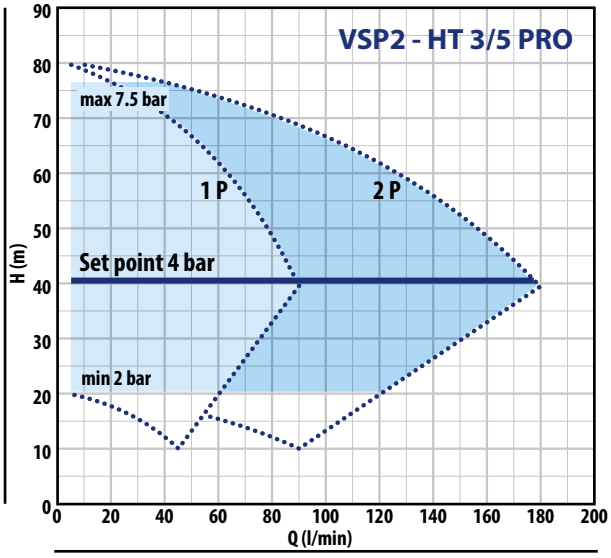
| TIPO | | POTENCIA P2 | | Q | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | m³/h | 0 | 0.3 | 4.8 | 7.2 | 9.6 | 10.8 | 12 | 15.6 |
| Monofásico | Trifásico | kW | HP | l/min | **0** | **5** | **80** | **120** | **160** | **180** | **200** | **260** |
| **VSP2m - HT5/2 PRO** | **VSP2 - HT5/2 PRO** | 2×0.75 | 2×1 | | 32.5 | 32.5 | 32.5 | 31 | 28.5 | 27.5 | 26 | 20.5 |
| **VSP2m - HT5/3 PRO** | **VSP2 - HT5/3 PRO** | 2×1.1 | 2×1.5 | | 49 | 49 | 49 | 46.5 | 43 | 41 | 39 | 31 |
| **VSP2m - HT5/4 PRO** | **VSP2 - HT5/4 PRO** | 2×1.5 | 2×2 | **H** m | 65.5 | 65.5 | 65 | 62 | 57.5 | 55 | 52 | 41 |
| – | **VSP2 - HT5/5 PRO** | 2×1.8 | 2×2.5 | | 81.5 | 81.5 | 81.5 | 77.5 | 72 | 68.5 | 65 | 51.5 |
| – | **VSP2 - HT5/6 PRO** | 2×2.2 | 2×3 | | 97 | 97 | 97 | 92.5 | 86 | 82.5 | 78 | 62 |

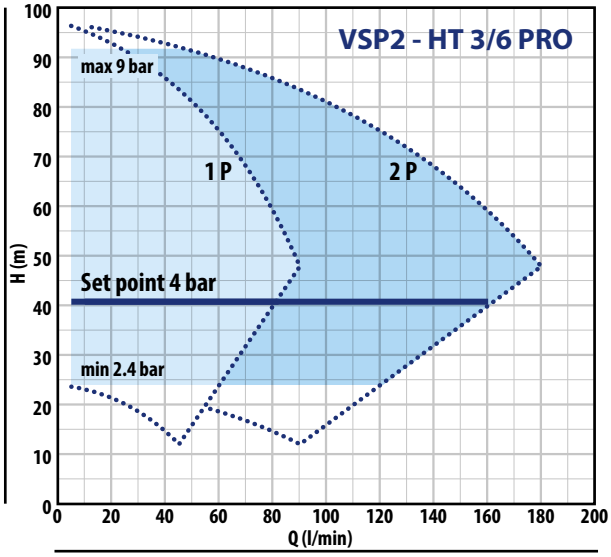
| TIPO | | POTENCIA P2 | | Q | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | m³/h | 0 | 0.3 | 4.8 | 7.2 | 9.6 | 10.8 | 14.4 | 18 | 21.6 | 24 |
| Monofásico | Trifásico | kW | HP | l/min | **0** | **5** | **80** | **120** | **160** | **180** | **240** | **300** | **360** | **400** |
| **VSP2m - HT8/3 PRO** | **VSP2 - HT8/3 PRO** | 2×1.1 | 2×1.5 | | 45 | 45 | 45 | 44 | 42 | 41 | 36.5 | 30.5 | 23 | 17 |
| **VSP2m - HT8/4 PRO** | **VSP2 - HT8/4 PRO** | 2×1.5 | 2×2 | | 60 | 60 | 60 | 58.5 | 56 | 54.5 | 48.5 | 40.5 | 31 | 23 |
| – | **VSP2 - HT8/5 PRO** | 2×1.8 | 2×2.5 | **H** m | 74.5 | 74.5 | 74.5 | 73.5 | 70 | 68 | 61 | 51 | 38.5 | 28.5 |
| – | **VSP2 - HT8/6 PRO** | 2×2.2 | 2×3 | | 91 | 91 | 91 | 88 | 84 | 82 | 73 | 61 | 46 | 34.5 |

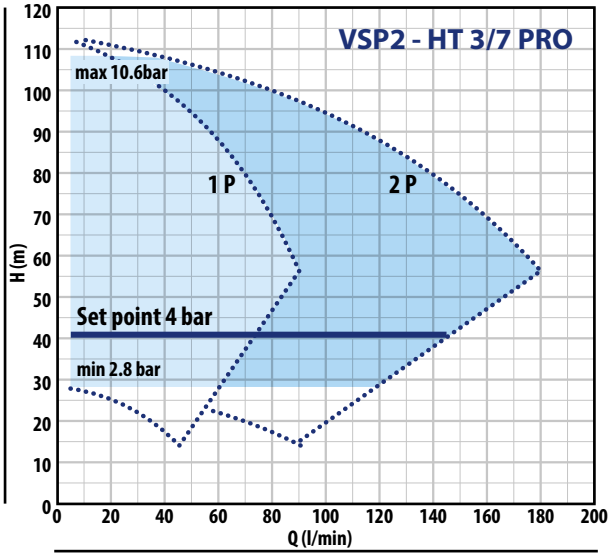
| TIPO | | POTENCIA P2 | | Q | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | m³/h | 0 | 0.3 | 4.8 | 7.2 | 9.6 | 12 | 14.4 | 18 | 22.8 | 26.4 | 28.8 |
| Monofásico | Trifásico | kW | HP | l/min | **0** | **5** | **80** | **120** | **160** | **200** | **240** | **300** | **380** | **440** | **480** |
| **VSP2m - HT10/3 PRO** | **VSP2 - HT10/3 PRO** | 2×1.5 | 2×2 | | 45 | 45 | 45 | 43.5 | 42 | 40 | 38 | 33.5 | 26.5 | 20.5 | 13 |
| – | **VSP2 - HT10/4 PRO** | 2×1.8 | 2×2.5 | | 60 | 60 | 60 | 58 | 56 | 53.5 | 50.5 | 45 | 35.5 | 27 | 17 |
| – | **VSP2 - HT10/5 PRO** | 2×2.2 | 2×3 | **H** m | 73.5 | 73.5 | 73.5 | 72.5 | 70 | 67 | 63 | 56 | 44.5 | 34 | 21.5 |

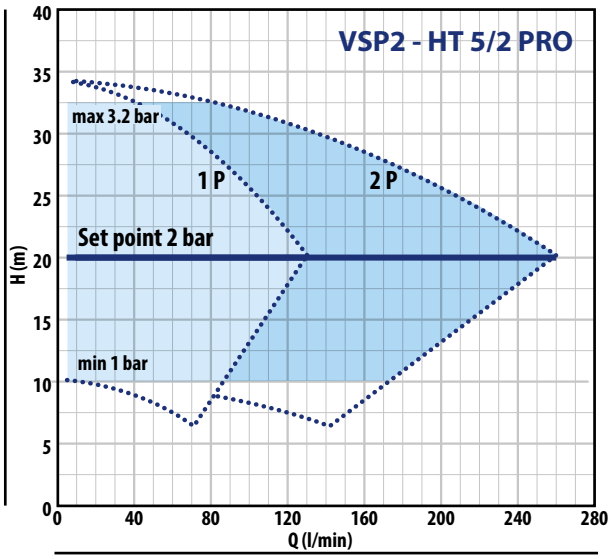
## CURVAS DE PRESTACIONES

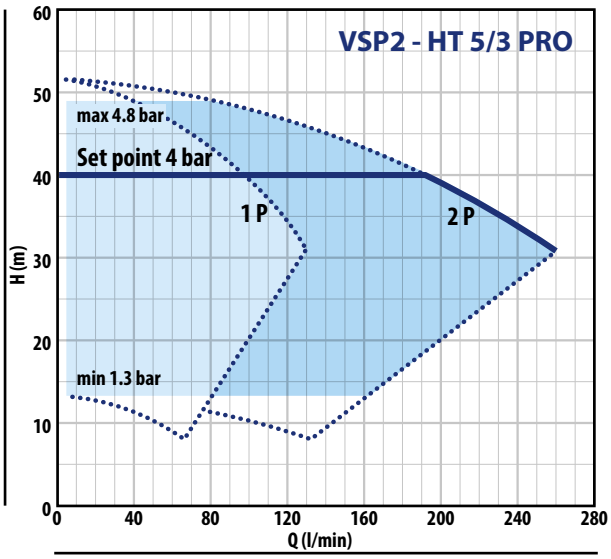


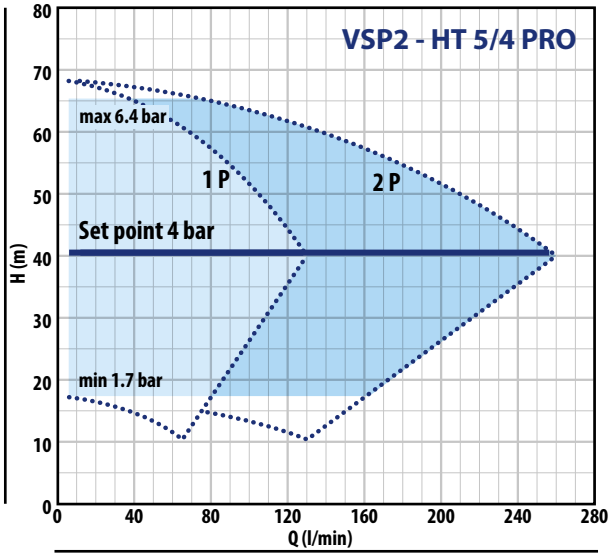



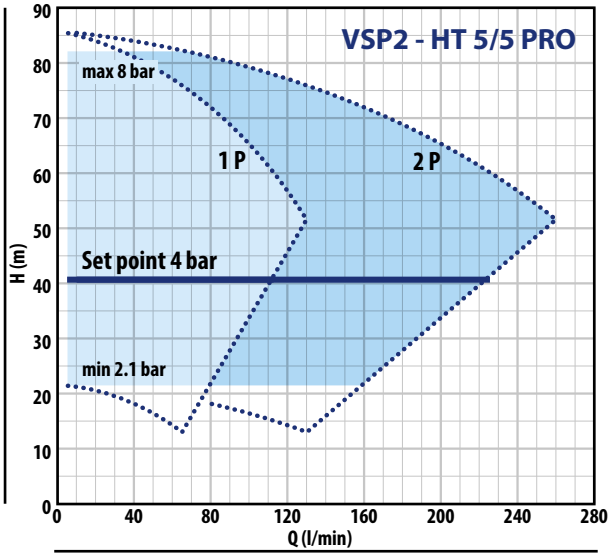



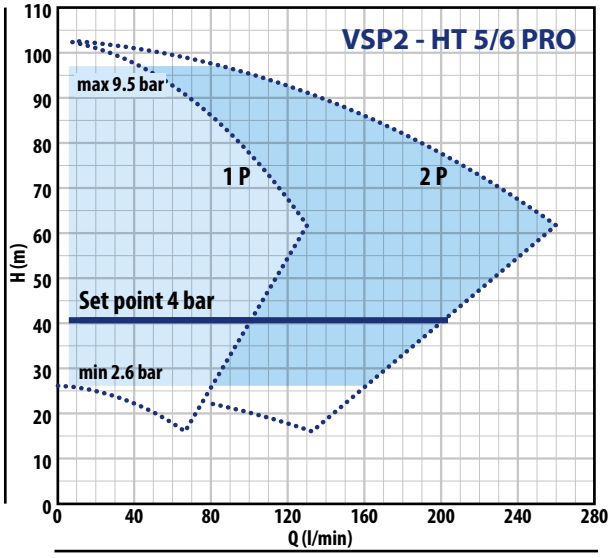



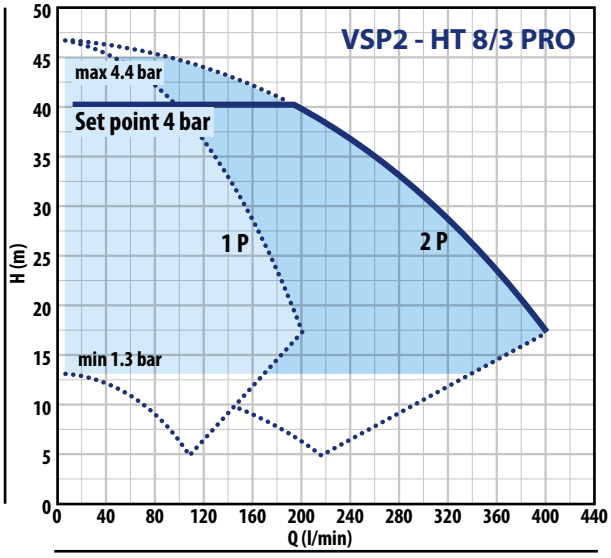
# VSP2 – HT-PRO

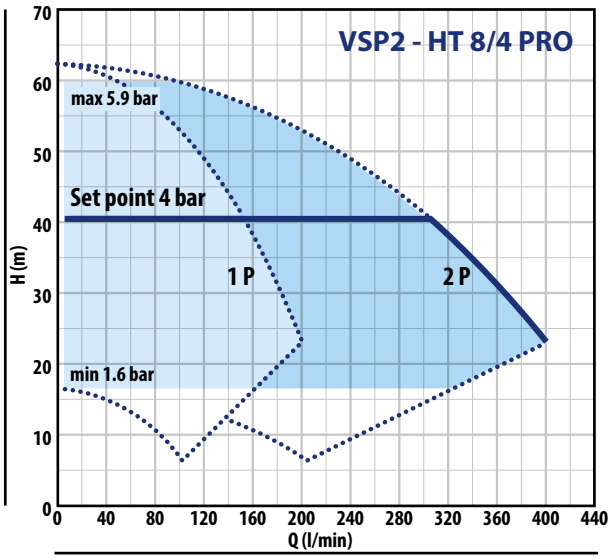
## CURVAS DE PRESTACIONES

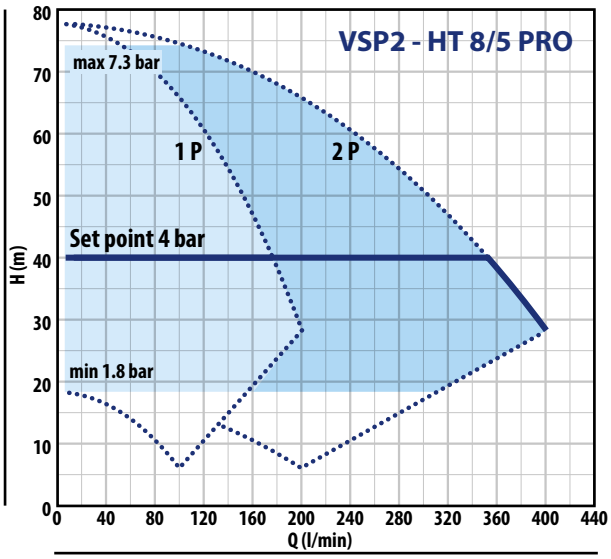


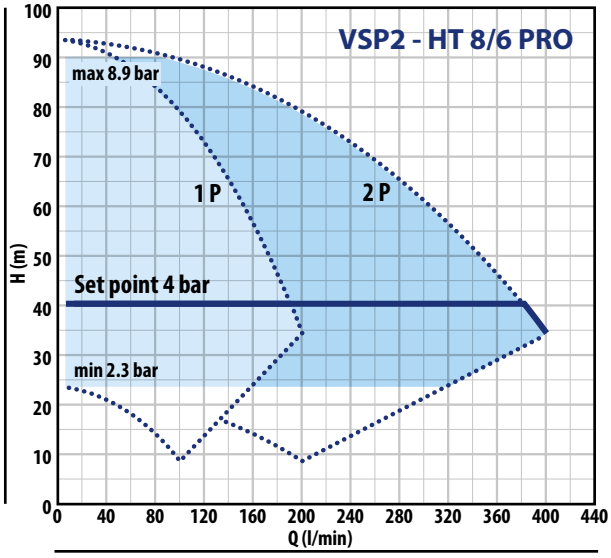



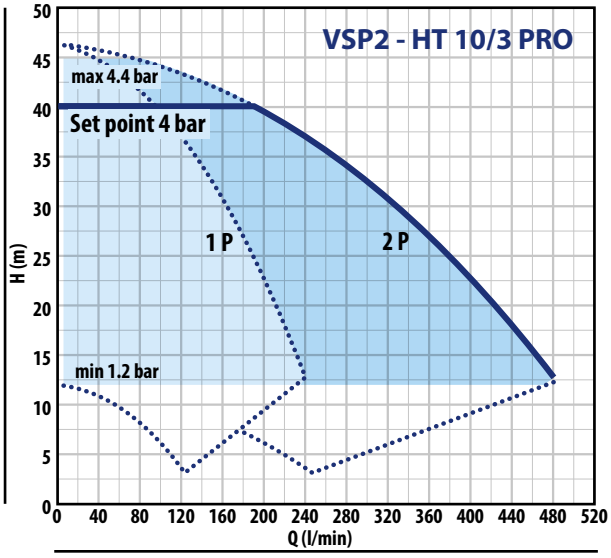



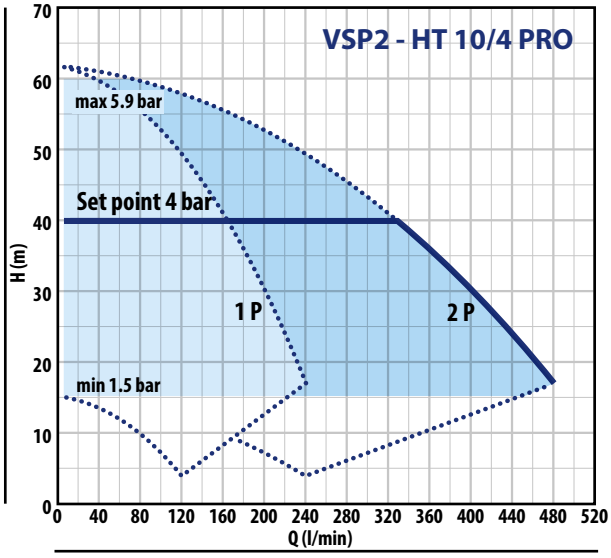



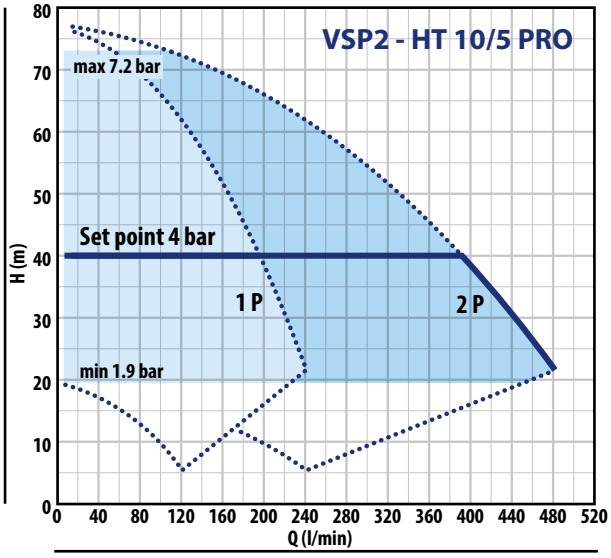



## CURVAS DE PRESTACIONES



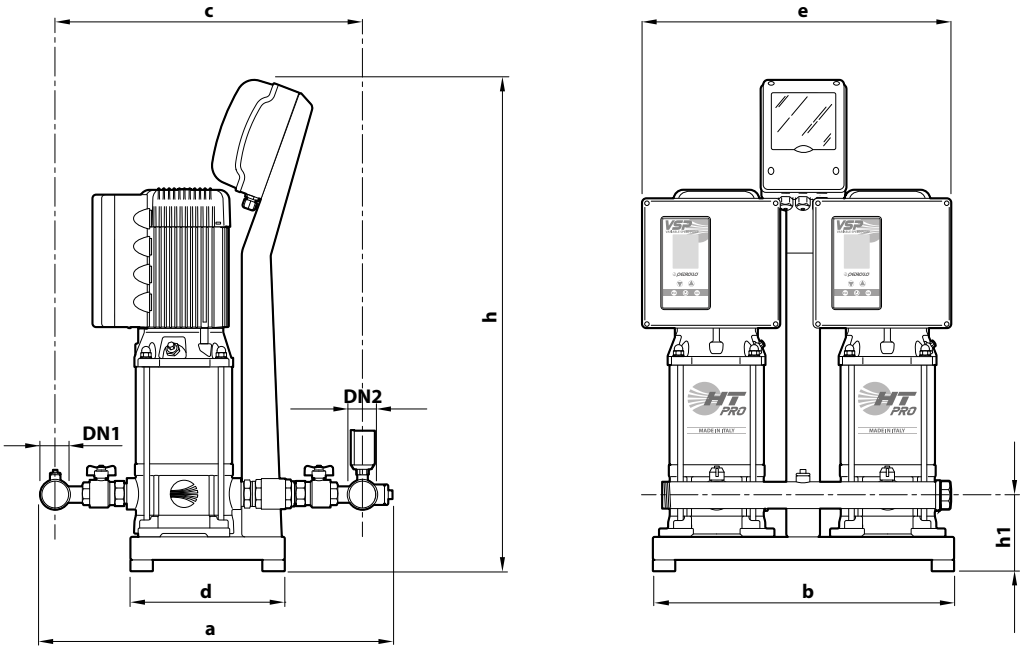



# VSP2 – HT-PRO

## DIMENSIONES Y PESOS




| TIPO | | BOCAS | | DIMENSIONES mm | | | | | | | kg | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Monofásico** | **Trifásico** | **DN1** | **DN2** | a | b | c | d | e | h | h1 | 1~ | 3~ |
| **VSP2m-HT 3/4 PRO** | **VSP2-HT 3/4 PRO** | **2"** | **2"** | 694 | 530 | 576 | 270 | 542 | 863 | 135 | 97 | 97 |
| **VSP2m-HT 3/5 PRO** | **VSP2-HT 3/5 PRO** | | | | | | | | | | 97 | 97 |
| **VSP2m-HT 3/6 PRO** | **VSP2-HT 3/6 PRO** | | | | | | | | | | 100 | 100 |
| – | **VSP2-HT 3/7 PRO** | | | | | | | | | | – | 110 |
| **VSP2m-HT 5/2 PRO** | **VSP2-HT 5/2 PRO** | **2"** | **2"** | 740 | | 622 | | | | | 96 | 96 |
| **VSP2m-HT 5/3 PRO** | **VSP2-HT 5/3 PRO** | | | | | | | | | | 96 | 96 |
| **VSP2m-HT 5/4 PRO** | **VSP2-HT 5/4 PRO** | | | | | | | | | | 100 | 100 |
| – | **VSP2-HT 5/5 PRO** | | | | | | | | | | – | 105 |
| – | **VSP2-HT 5/6 PRO** | | | | | | | | | | – | 107 |
| **VSP2m-HT 8/3 PRO** | **VSP2-HT 8/3 PRO** | **2½"** | **2½"** | 833 | | 698 | | | | 140 | 101 | 101 |
| **VSP2m-HT 8/4 PRO** | **VSP2-HT 8/4 PRO** | | | | | | | | | | 105 | 105 |
| – | **VSP2-HT 8/5 PRO** | | | | | | | | | | – | 112 |
| – | **VSP2-HT 8/6 PRO** | | | | | | | | | | – | 114 |
| **VSP2m - HT 10/3 PRO** | **VSP2 - HT 10/3 PRO** | | | | | | | | | | 101 | 101 |
| – | **VSP2 - HT 10/4 PRO** | | | | | | | | | | – | 105 |
| – | **VSP2 - HT 10/5 PRO** | | | | | | | | | | – | 112 |