Equipment and solutions

# Spring Submersible Pump

**Product technical datasheet**

Submersible pump for wells, suitable for irrigation and domestic water supply.

FT-P001 · Rev. 1

Spring submersible pump for wells, designed for irrigation systems, domestic water supply and agricultural applications. Compact and durable, built for clean water pumping. Supplied with 20 metres of cable and float switch (single-phase version).

## Applications

- Water abstraction from boreholes, reservoirs and water courses.
- Domestic water supply.
- Agricultural irrigation and gardens.
- Hydropneumatic systems.

## Operating conditions

- With 20 meters power cable. Equipped with float switch.

| | |
|---|---|
| **Engineering note** | Confirm the installation conditions, power supply and duty point before commissioning. |
| **Complementary equipment** | Contact JOVAL for compatible accessories and equipment. |
| **Resources and support** | Pump selection guide · JOVAL technical support |
| **Contact** | +351 253 490 740 · joval@joval.pt |

# Technical specifications

Type

Submersible for Clean Water

Material

Radial turbines and diffusers in Noryl reinforced with fiberglass

Motor Details

Hermetically sealed electric motor impregnated with protective resin

Environment

Ecological (Oil-free)

Installation

Vertical / Horizontal

Cable

20m (with float switch)

Protection

IP 68 | Class B

Voltage

230 V (1~) / 400 V (3~)

Max Temperature

35° C

Starts/Hour

Maximum 20 starts per hour

Discharge

1" 1/4 - 1" 1/2

Diameter

131 mm

Seal

Double mechanical seal in silicon carbide

Applications

- Water abstraction from boreholes, reservoirs and water courses.
- Domestic water supply.
- Agricultural irrigation and gardens.
- Hydropneumatic systems.

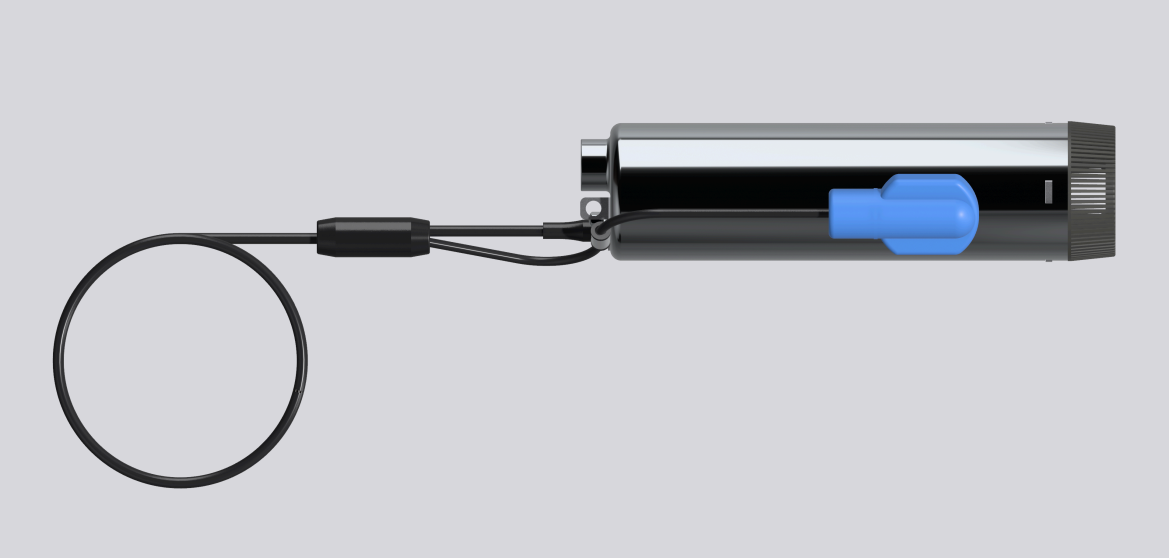
# Operating conditions

- With 20 meters power cable. Equipped with float switch.

**Engineering note** Confirm the installation conditions, power supply and duty point before commissioning.

# List of materials

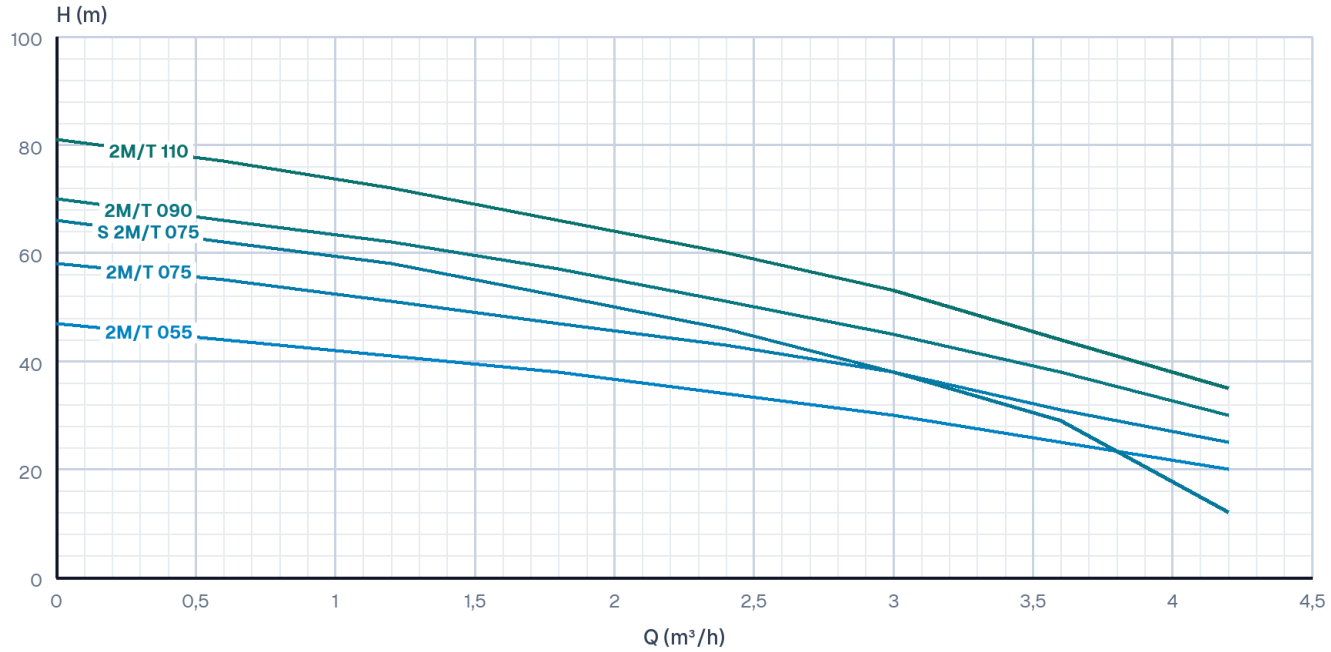
Materials



| Pos. | Description | Material (Standard) |
|---|---|---|
| **1** | Valve | AISI 304 stainless steel |
| **2** | Discharge chamber | AISI 304 stainless steel |
| **3** | Impeller | Polycarbonate / Noryl |
| **4** | Diffuser | Polycarbonate / Noryl |
| **5** | Shaft | AISI 304 stainless steel |
| **6** | Outer jacket | AISI 304 stainless steel |

# Spring 2M (2 stages)

Performance curves




## Electrical data

Rated values at 400 V

| Model | kW | HP | A (400 V) |
|---|---|---|---|
| **2M/T 055** | 0,55 | 0,75 | 4,2 / 1,6 |
| **2M/T 075** | 0,75 | 1 | 4,8 / 2,1 |
| **S 2M/T 075** | 0,75 | 1 | 4,8 / 2,1 |

| Model | kW | HP | A (400 V) |
|---|---|---|---|
| **2M/T 090** | 0,9 | 1,2 | 6,0 / 2,6 |
| **2M/T 110** | 1,1 | 1,5 | 7,0 / 2,9 |

# Spring 2M (2 stages)

Hydraulic performance

Total head H in metres

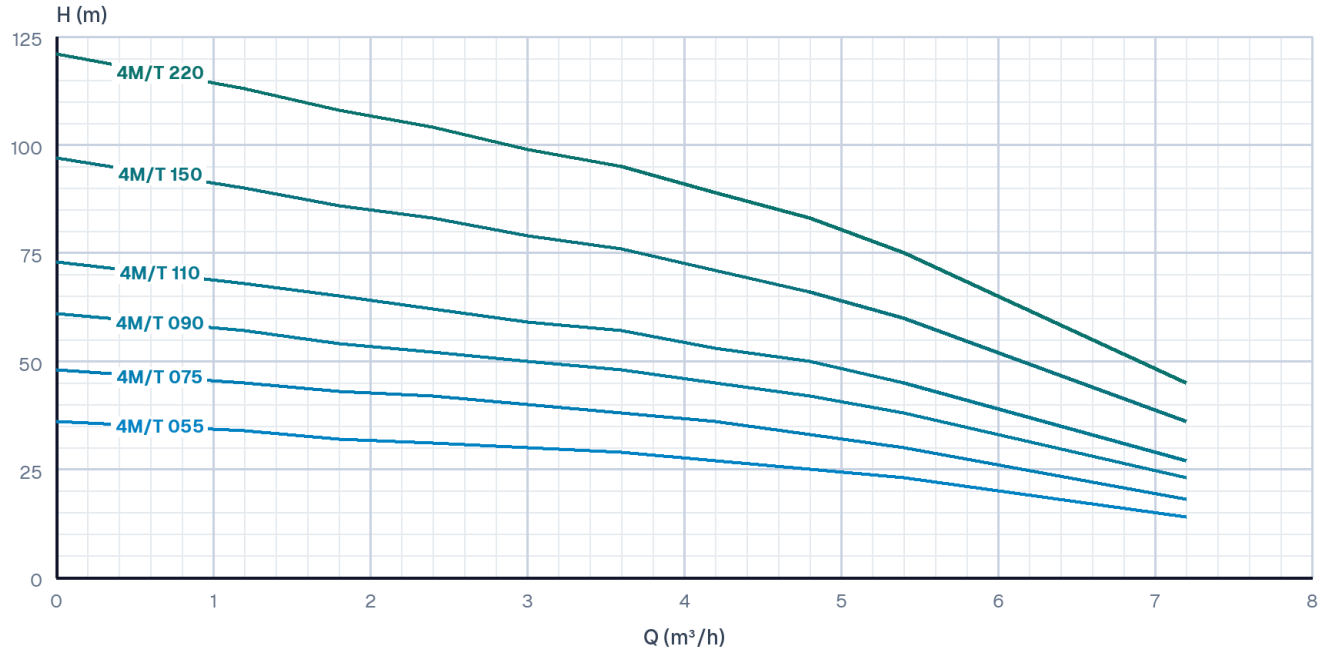
Q · Flow (m³/h)

| Model | 0 | 0,6 | 1,2 | 1,8 | 2,4 | 3 | 3,6 | 4,2 |
|---|---|---|---|---|---|---|---|---|
| **2M/T 055** | 47 | 44 | 41 | 38 | 34 | 30 | 25 | 20 |
| **2M/T 075** | 58 | 55 | 51 | 47 | 43 | 38 | 31 | 25 |
| **S 2M/T 075** | 66 | 62 | 58 | 52 | 46 | 38 | 29 | 12 |
| **2M/T 090** | 70 | 66 | 62 | 57 | 51 | 45 | 38 | 30 |
| **2M/T 110** | 81 | 77 | 72 | 66 | 60 | 53 | 44 | 35 |

Select the duty point at the intersection of Q and H.

# Spring 4M (4 stages)

Performance curves




## Electrical data

Rated values at 400 V

| Model | kW | HP | A (400 V) |
|---|---|---|---|
| **4M/T 055** | 0,55 | 0,75 | 4,1 / 1,6 |
| **4M/T 075** | 0,75 | 1 | 5,5 / 2,2 |
| **4M/T 090** | 0,9 | 1,2 | 7,0 / 2,7 |

| Model | kW | HP | A (400 V) |
|---|---|---|---|
| **4M/T 110** | 1,1 | 1,5 | 7,6 / 3,0 |
| **4M/T 150** | 1,5 | 2 | 10,2 / 3,2 |
| **4M/T 220** | 2,2 | 3 | 12,8 / 4,7 |

# Spring 4M (4 stages)

Hydraulic performance

Total head H in metres

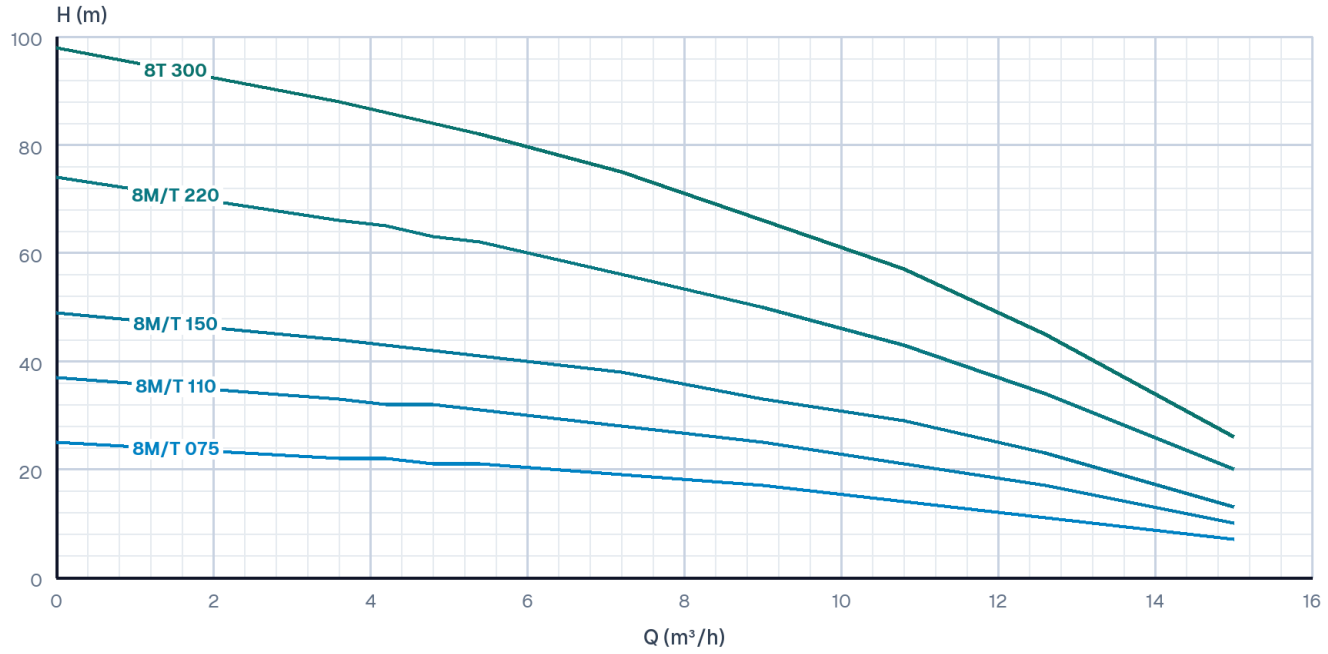
Q · Flow (m³/h)

| Model | 0 | 1,2 | 1,8 | 2,4 | 3 | 3,6 | 4,2 | 4,8 | 5,4 | 7,2 |
|---|---|---|---|---|---|---|---|---|---|---|
| **4M/T 055** | 36 | 34 | 32 | 31 | 30 | 29 | 27 | 25 | 23 | 14 |
| **4M/T 075** | 48 | 45 | 43 | 42 | 40 | 38 | 36 | 33 | 30 | 18 |
| **4M/T 090** | 61 | 57 | 54 | 52 | 50 | 48 | 45 | 42 | 38 | 23 |
| **4M/T 110** | 73 | 68 | 65 | 62 | 59 | 57 | 53 | 50 | 45 | 27 |
| **4M/T 150** | 97 | 90 | 86 | 83 | 79 | 76 | 71 | 66 | 60 | 36 |
| **4M/T 220** | 121 | 113 | 108 | 104 | 99 | 95 | 89 | 83 | 75 | 45 |

Select the duty point at the intersection of Q and H.

# Spring 8M (8 stages)

Performance curves




## Electrical data

Rated values at 400 V

| Model | kW | HP | A (400 V) |
|---|---|---|---|
| **8M/T 075** | 0,75 | 1 | 5,4 / 2,2 |
| **8M/T 110** | 1,1 | 1,5 | 7,5 / 3,1 |
| **8M/T 150** | 1,5 | 2 | 9,6 / 3,2 |

| Model | kW | HP | A (400 V) |
|---|---|---|---|
| **8M/T 220** | 2,2 | 3 | 14,3 / 5,1 |
| **8T 300** | 3 | 4 | - / 7,0 |

# Spring 8M (8 stages)

Hydraulic performance

Total head H in metres

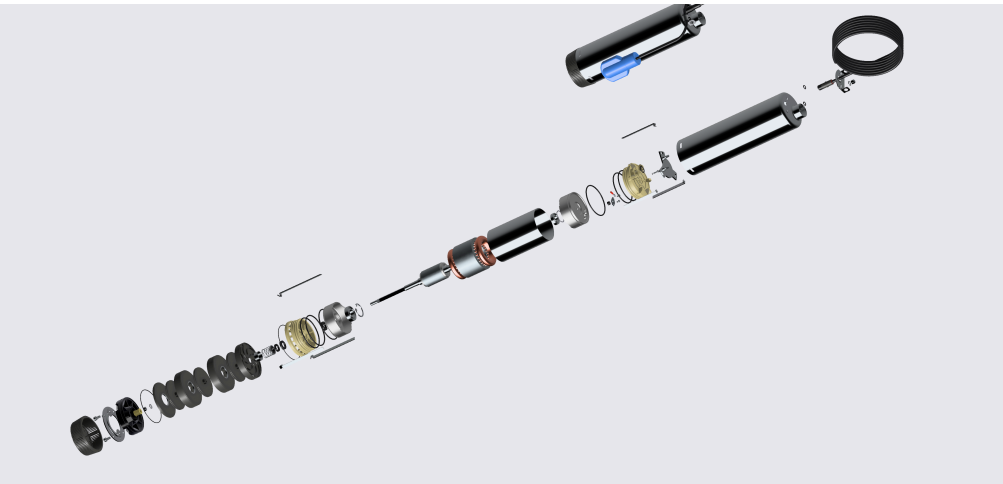
Q · Flow (m³/h)

| Model | 0 | 3,6 | 4,2 | 4,8 | 5,4 | 7,2 | 9 | 10,8 | 12,6 | 15 |
|---|---|---|---|---|---|---|---|---|---|---|
| **8M/T 075** | 25 | 22 | 22 | 21 | 21 | 19 | 17 | 14 | 11 | 7 |
| **8M/T 110** | 37 | 33 | 32 | 32 | 31 | 28 | 25 | 21 | 17 | 10 |
| **8M/T 150** | 49 | 44 | 43 | 42 | 41 | 38 | 33 | 29 | 23 | 13 |
| **8M/T 220** | 74 | 66 | 65 | 63 | 62 | 56 | 50 | 43 | 34 | 20 |
| **8T 300** | 98 | 88 | 86 | 84 | 82 | 75 | 66 | 57 | 45 | 26 |

Select the duty point at the intersection of Q and H.

# Spring 2M (2 stages)

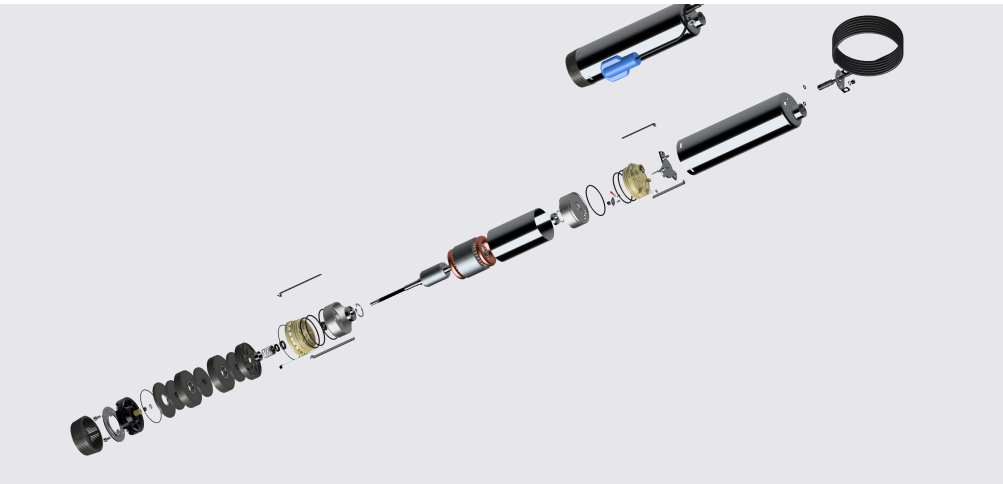
Dimensions and models



| Model | Voltage | A (mm) | Weight (kg) | Outlet |
|---|---|---|---|---|
| **2M 055** | 230V | 441 | 12.1 | 1" 1/4 |
| **2T 055** | 400V | 480 | 13.5 | 1" 1/4 |
| **2M 075** | 230V | 520 | 15.4 | 1" 1/4 |
| **2T 075** | 400V | 543 | 15.7 | 1" 1/4 |
| **S 2M 075** | 230V | 480 | 13.5 | 1" 1/4 |
| **S 2T 075** | 400V | 465 | 12.2 | 1" 1/4 |
| **2M 090** | 230V | 431 | 11 | 1" 1/4 |
| **2T 090** | 400V | 465 | 12.2 | 1" 1/4 |
| **2M 110** | 230V | 505 | 13.1 | 1" 1/4 |
| **2T 110** | 400V | 529 | 13.8 | 1" 1/4 |

# Spring 4M (4 stages)

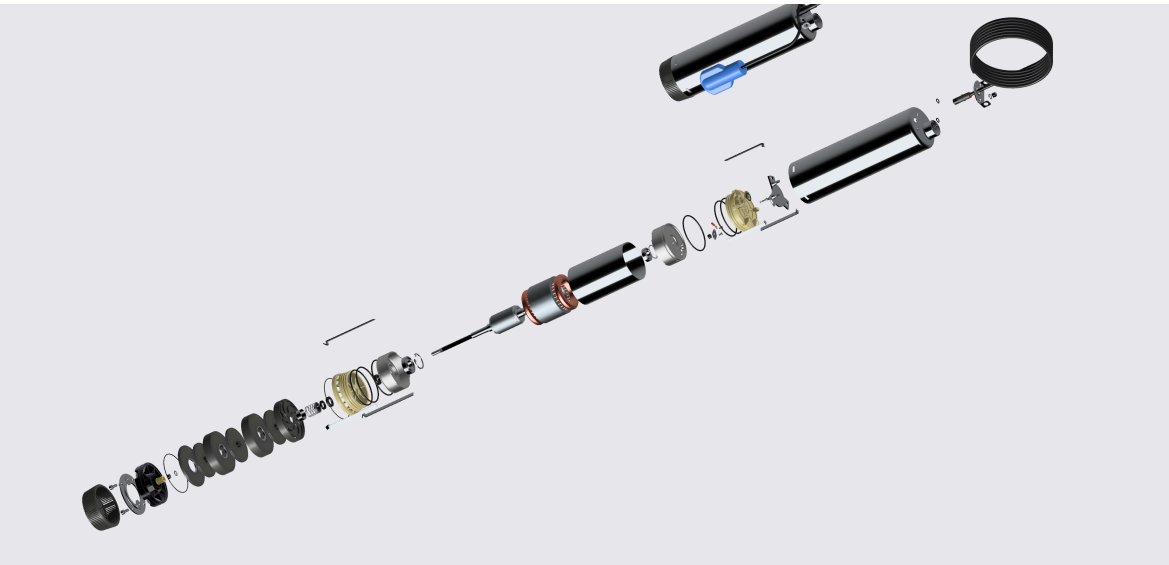
Dimensions and models



| Model | Voltage | A (mm) | Weight (kg) | Outlet |
|---|---|---|---|---|
| **4M 055** | 230V | 417 | 11.9 | 1" 1/4 |
| **4T 055** | 400V | 456 | 13.1 | 1" 1/4 |
| **4M 075** | 230V | 495 | 14.3 | 1" 1/4 |
| **4T 075** | 400V | 519 | 14.6 | 1" 1/4 |
| **4M 090** | 230V | 583 | 14.8 | 1" 1/4 |
| **4T 090** | 400V | 661 | 18 | 1" 1/4 |
| **4M 110** | 230V | 406 | 10.6 | 1" 1/4 |
| **4T 110** | 400V | 440 | 11.8 | 1" 1/4 |
| **4M 150** | 230V | 481 | 12.7 | 1" 1/4 |
| **4T 150** | 400V | 505 | 13.4 | 1" 1/4 |
| **4M 220** | 230V | 569 | 15.6 | 1" 1/4 |
| **4T 220** | 400V | 647 | 18.1 | 1" 1/4 |

# Spring 8M (8 stages)

Dimensions and models



| Model | Voltage | A (mm) | Weight (kg) | Outlet |
|---|---|---|---|---|
| **8M 075** | 230V | 421 | 12.8 | 1" 1/2 |
| **8T 075** | 400V | 467 | 14.3 | 1" 1/2 |
| **8M 110** | 230V | 527 | 16.8 | 1" 1/2 |
| **8T 110** | 400V | 621 | 19.6 | 1" 1/2 |
| **8M 150** | 230V | 405 | 11.5 | 1" 1/2 |
| **8T 150** | 400V | 452 | 14.7 | 1" 1/2 |
| **8M 220** | 230V | 497 | 15.1 | 1" 1/2 |
| **8T 220** | 400V | 591 | 17.4 | 1" 1/2 |
| **8T 300** | 400V | 682 | 20.6 | 1" 1/2 |