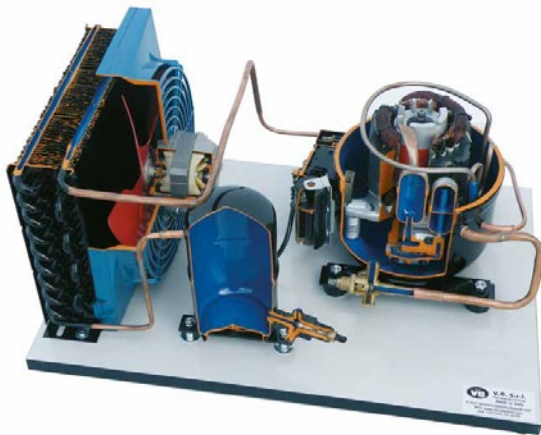




**Training Systems Australia**  
First in Vocational Training Equipment

## Fluid Mechanics & Refrigeration Cutaways



**Pullman Learning Group**

**ABN 25 154 228 630**

300 Centre Road, Bentleigh, VIC 3204

Phone: (+613) 9557 7993, Fax: (+613) 9557 6443

[www.pullmangroup.com.au](http://www.pullmangroup.com.au)

## VB 12999M IN-LINE PISTON PUMP (on base) - manual

Accurate section of an in-line piston pump showing:

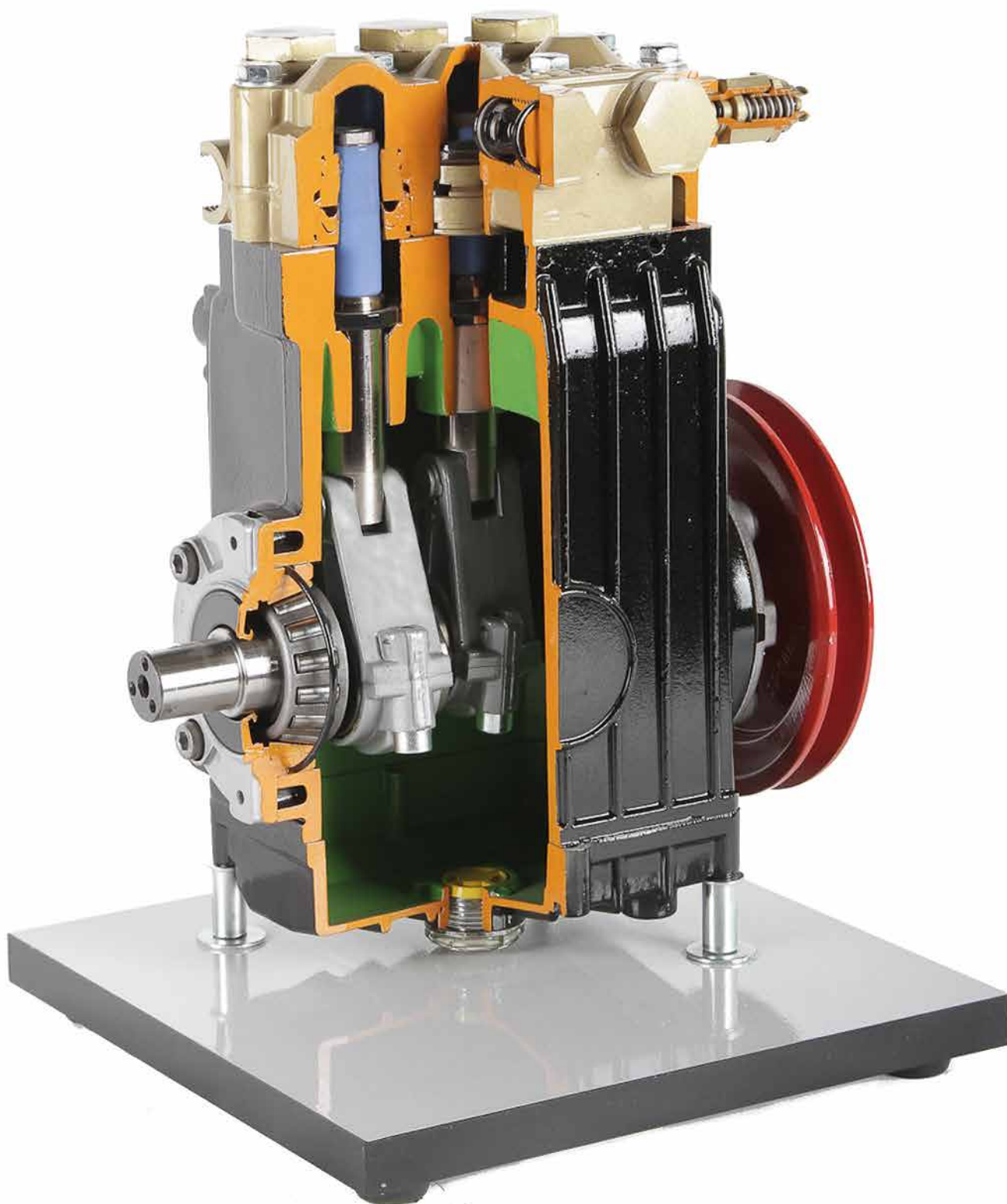
- Pump head
- Suction and discharge valves
- Pistons
- Piston rods
- Bearings

### Approx. weight and dim.:

Cm: 25x25x40h

Net Weight: kg 11

Gross Weight: kg 15



Indicative picture for reference only

**VB 13000S** SERIES OF 5 WATER PUMP ROTORS (on base) - static

**VB 13010M** MANUAL DIAPHRAGM PUMP FOR LIQUID TRANSFER (on base) - manual

**VB 13000S**



**VB 13010M**



**VB 13020M** SELF-PRIMING HIGH-LIFT CENTRIFUGAL ELECTRIC PUMP WITH BUILT-IN EJECTOR (on base) - manual

**VB 13030M** SELF-PRIMING CENTRIFUGAL ELECTRIC PUMP OPEN TYPE WHEEL FOR LIQUIDS CONTAINING SOLIDS - VALVE INCORPORATED IN THE SUCTION MOUTH (on base) - manual

**VB 13040M** CENTRIFUGAL ELECTRIC PUMP WITH PERIPHERAL CHANNELS (on base) - manual

**VB 13030M**

**Approx. weight and dim.:**

Cm: 35x30x25h

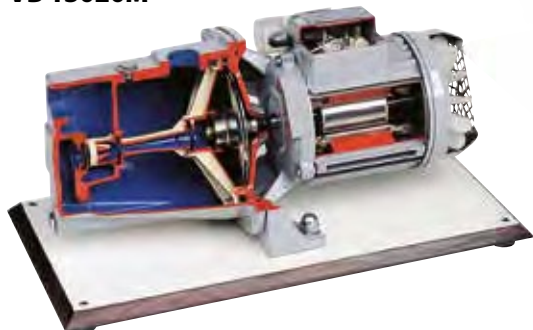
Net Weight: kg 6

Gross Weight: kg 9

**VB 13030M**



**VB 13020M**



**VB 13020M**

**Approx. weight and dim.:**

Cm: 40x30x30h

Net Weight: kg 8

Gross Weight: kg 13

**VB 13040M**



**VB 13040M**

**Approx. weight and dim.:**

Cm: 70x35x40h

Net Weight: kg 26

Gross Weight: kg 35

Indicative picture for reference only

**VB 13020 - VB 13030 - VB 13040 VB 13000 - VB 13010**



# VB 13050 - VB 13060

## VB 13050M MULTI-STAGE CENTRIFUGAL ELECTROPUMP (on base) - manual

## VB 13060M OPEN ROTOR CENTRIFUGAL ELECTRIC PUMP (on base) - manual

### Approx. weight and dim.:

Cm:	60x30x30h
Net Weight:	kg 16
Gross Weight:	kg 20



VB 13050M

### Approx. weight and dim.:

Cm:	30x30x25h
Net Weight:	kg 6
Gross Weight:	kg 8



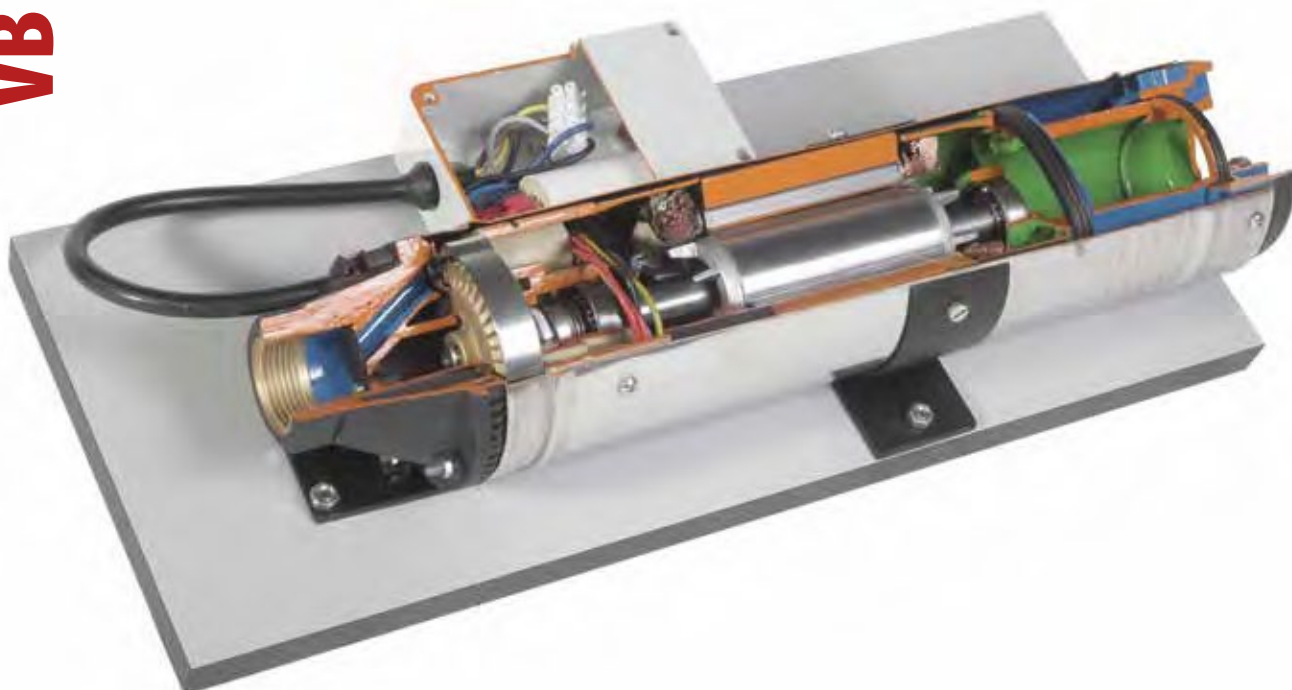
VB 13060M

The multi-stage electropump are able to develop a great pressure together with a great capacity of water with a little energy consumption. Due to the lack of noise and the good hydraulic characteristics, this type of pump is used for domestic systems, little drip irrigation or assembly of pressure systems.

Indicative picture for reference only

# VB 13065

## VB 13065S SUBMERSED ELECTROPUMP (on base) - static



### Approx. weight and dim.:

Cm:	50x20x15h
Net Weight:	kg 8
Gross Weight:	kg 15

**VB 13120S** CUTAWAY HYDRAULIC/PNEUMATIC BALL VALVE (on base)

**VB 13122S** CUTAWAY STEAM GATE VALVE (on base)



**Approx. weight and dim.:**

Cm: 20x25x30h

Weight: kg 5

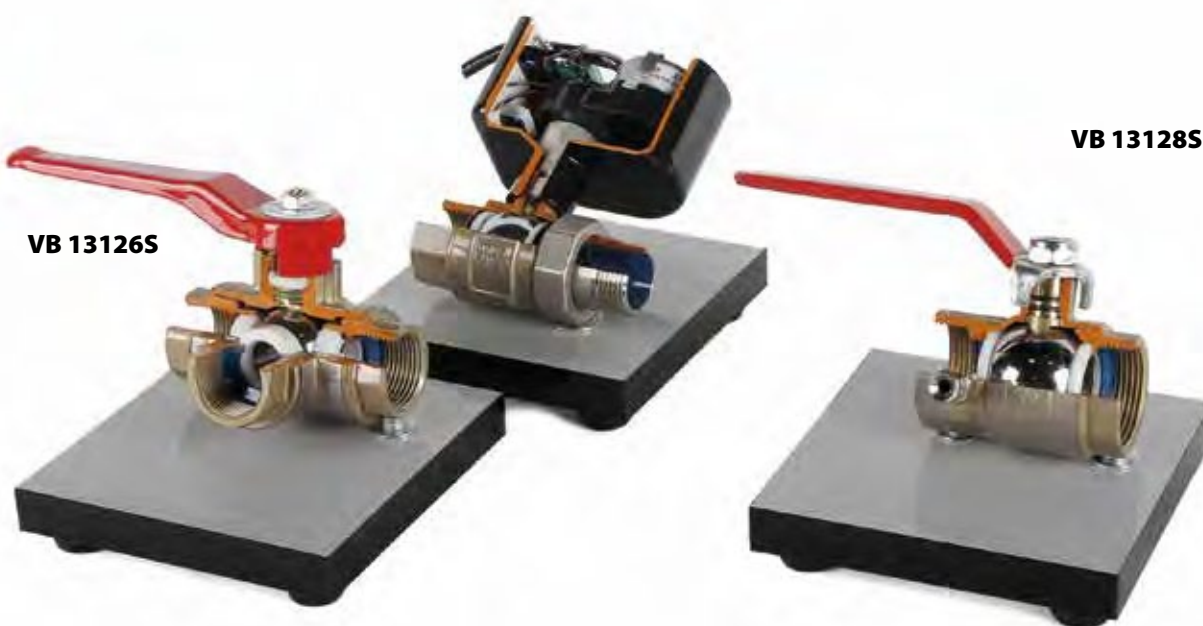
**VB 13124S** CUTAWAY TWO-WAY VALVE WITH ELECTRIC MOTOR (on base)

**VB 13126S** CUTAWAY THREE-WAY BALL VALVE (on base)

**VB 13128S** CUTAWAY BALL VALVE WITH DRAIN OFF/COCK (on base)

**VB 13124S**

**VB 13128S**



**Approx. weight and dim.**

Cm: 15x20x15h

Weight: Kg 2

Indicative picture for reference only

**VB 13120 - VB 13122**

**VB 13124 - VB 13126 - VB 13128**

# VB 13130 - VB 13132 - VB 13134 - VB 13136

**VB 13130S** CUTAWAY STANDARD BORE BALL VALVE (on base)

**VB 13132S** CUTAWAY STRAIGHT-WAY PLUG VALVE (on base)

**VB 13134S** CUTAWAY GATE VALVE (on base)

**VB 13136S** CUTAWAY COMPRESSION VALVE (on base)



Indicative picture for reference only

**VB 13130S - VB 13132S - VB 13134S**

**Approx. weight and dim.:**

Cm: 15x15x15h

Weight: kg 1

**VB 13136S**

**Approx. weight and dim.:**

Cm: 15x15x10h

Weight: kg 1

**VB 13138S** CUTAWAY LINE STRAINER VALVE (on base)

---

**VB 13140S** CUTAWAY STANDARD CLAPET FULL NON-RETURN VALVE (on base)

---

**VB 13142S** CUTAWAY CHECK VALVE WITH DRAIN (on base)

---

**VB 13144S** CUTAWAY PRESSURE VALVE REDUCER WITH FEMALE CONNECTION (on base)

---

**VB 13138S**



**VB 13140S**



**VB 13142S**



**VB 13144S**



*Indicative picture for reference only*

**VB 13138S - VB 13140S - VB 13142S**

**Approx. weight and dim.:**

Cm: 15x15x10h

Weight: kg 1

**VB 13144S**

**Approx. weight and dim.:**

Cm: 10x10x5h

Weight: kg 1

**VB 13138 - VB 13140 - VB 13142 - VB 13144**



# VB 13146 - VB 13148

**VB 13146S CUTAWAY THROTTLE VALVE (on base)**

**VB 13148S CUTAWAY CIRCULATION PUMP (on base)**



**VB 13146S**

**Approx. weight and dim.:**

Cm: 25x20x20h  
Weight: kg 3

**VB 13148S**

**Approx. weight and dim.:**

Cm: 15x15x20h  
Weight: kg 2

Indicative picture for reference only

# VB 13150 - VB 13152

**VB 13150S CUTAWAY WATER METER (on base)**

**VB 13152S CUTAWAY FILTER (on base)**



**VB 13150S**

**Approx. weight and dim.:**

Cm: 20x20x20h  
Weight: Kg 2

**VB 13152S**

**Approx. weight and dim.:**

Cm: 20x20x25h  
Weight: Kg 2,5



## **VB 13160S** CUTAWAY SOLENOID MEMBRANE ELECTRO VALVE (on base)

## **VB 13161S** CUTAWAY NEEDLE TWIN DIRECTIONAL FLOW VALVE (on base)



### **VB 13160S**

#### **Approx. weight and dim.:**

Cm: 20x20x20h  
Net Weight: kg 1  
Gross Weight: kg 2

### **VB 13161S**

#### **Approx. weight and dim.:**

Cm: 20x20x15h  
Net Weight: kg 1  
Gross Weight: kg 2

## **VB 13162S** CUTAWAY SAFETY VALVE (on base) - static

## **VB 13163S** CUTAWAY BALANCING VALVE (on base) - static



### **VB 13162S**

#### **Approx. weight and dim.:**

Cm: 20x20x10h  
Net Weight: kg 0,5  
Gross Weight: kg 1

### **VB 13163S**

#### **Approx. weight and dim.:**

Cm: 25x25x20h  
Net Weight: kg 1  
Gross Weight: kg 1,5

**VB 13160 - VB 13161**

**VB 13162 - VB 13163**

Indicative picture for reference only

# VB 13164 - VB 13165

## VB 13164S CUTAWAY MEMBRANE VALVE (on base)



### VB 13164S

#### Approx. weight and dim.:

Cm: 25x25x20h  
 Net Weight: kg 3  
 Gross Weight: kg 4



### VB 13165S

#### Approx. weight and dim.:

Cm: 25x25x15h  
 Net Weight: kg 1  
 Gross Weight: kg 2

Indicative picture for reference only

# VB 13166 - VB 13167

## VB 13166S CUTAWAY FLOOR MANIFOLD BRASS WITH MANUALLY VALVES WITH OPTION FOR THERMAL ACTUATOR (on base) – static

## VB 13167S CUTAWAY FLOOR MANIFOLD BRASS WITH MANUALLY VALVES WITH BALANCING FLOW METERS FOR CIRCUIT CALIBRATION (on base) – static



### VB 13166S

#### Approx. weight and dim.:

Cm: 25x25x10h  
 Net Weight: kg 1  
 Gross Weight: kg 2



### VB 13167S

#### Approx. weight and dim.:

Cm: 25x25x10h  
 Net Weight: kg 1  
 Gross Weight: kg 2

### **VB 13168S** CUTAWAY PRESSOSTATIC VALVE (on base)

### **VB 13169S** CUTAWAY BALL VALVE TO INTERCEPT FLUIDS FREE FROM SOLID AND FILAMENTOUS SUSPENSION WITH PNEUMATIC (on base)



#### **VB 13168S**

##### **Approx. weight and dim.:**

Cm: 25x30x15h  
Net Weight: kg 2  
Gross Weight: kg 2,5

#### **VB 13169S**

##### **Approx. weight and dim.:**

Cm: 25x30x20h  
Net Weight: kg 2  
Gross Weight: kg 3

### **VB 13170S** CUTAWAY THERMOSTATIC VALVE (on base) – static



##### **Approx. weight and dim.:**

Cm: 25x30x15h  
Net Weight: kg 2,5  
Gross Weight: kg 3,5

Indicative picture for reference only

**VB 13168 - VB 13169**

**VB 13170**



# VB 13171 - VB 13172

**VB 13171S CUTAWAY ZONE VALVE 3 WAYS - 4 CONNECTIONS (on base)**

**VB 13172S CUTAWAY ZONE VALVE 4 WAYS - 4 CONNECTIONS (on base)**



## Approx. weight and dim.:

Cm:	25x25x10h
Net Weight:	kg 1,5
Gross Weight:	kg 2

# VB 13173

**VB 13170S CUTAWAY SET OF 5 DIFFERENT TYPES OF JOINTS (on base) – static**



## Approx. weight and dim.:

Cm:	40x25x10h
Net Weight:	kg 3
Gross Weight:	kg 5

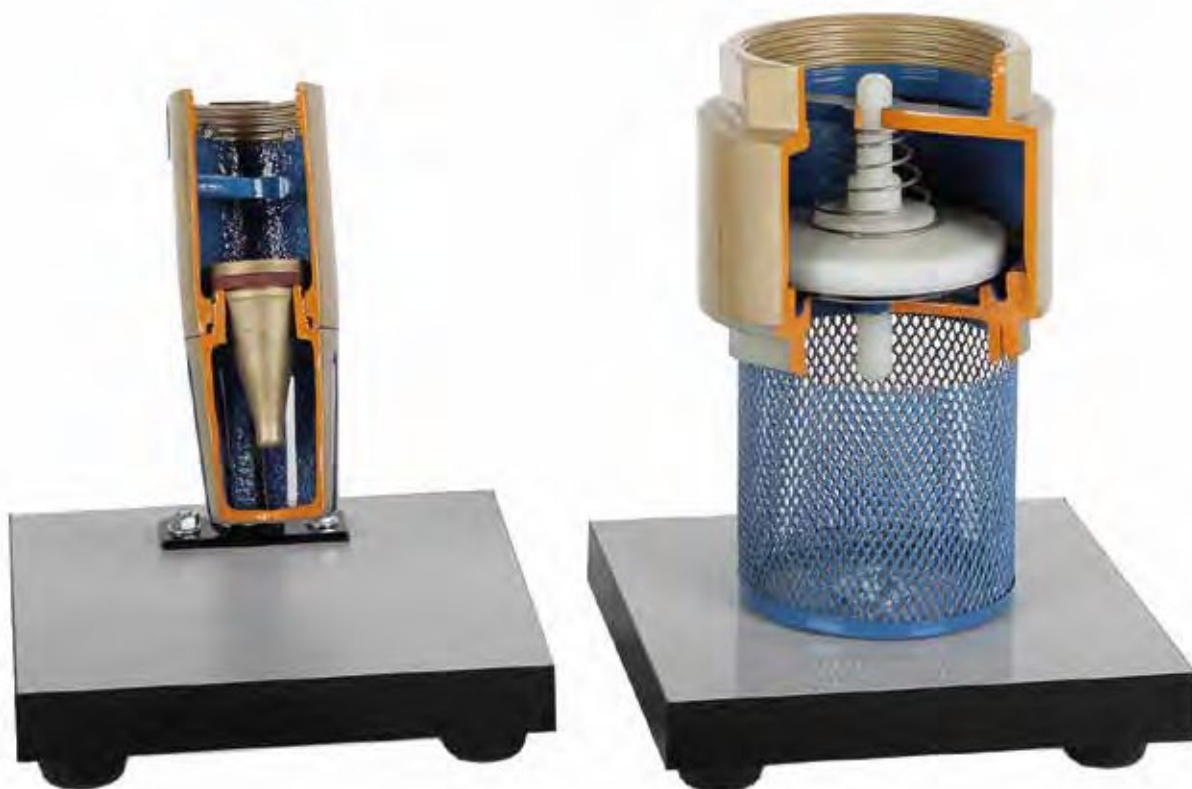
Indicative picture for reference only

**VB 13154S CUTAWAY BRASS FOOT TUBULAR VALVE (on base)**

---

**VB 13156S CUTAWAY YACHT CHECK VALVE WITH STAINLESS STEEL FILTER (on base)**

---



**VB 13154S**

**Approx. weight and dim.:**

Cm: 15x15x15h

Weight: kg 1

**VB 13156S**

**Approx. weight and dim.:**

Cm: 15x15x20h

Weight: kg 1

**VB 13158S CUTAWAY SELF-CLEANING FILTER + PRESSURE GAUGE (on base)**

---



**Approx. weight and dim.:**

Cm: 20x30x10h

Weight: Kg 2

**VB 13154 - VB 13156**

**VB 13158**

Indicative picture for reference only

# VB 13076

## VB 13076M SELF PRIMING MOTORPUMP (on base) - manual

### Main technical specifications:

- Model type 2 stroke engine
- Displacement: 25 cu. cm
- Specifications pump
- Suction 1"
- Delivery 1"
- Max suction head mt.6

### Approx. weight and dim.:

Cm: 30x30x40h

Net Weight: kg 6

Gross Weight: kg 10



Indicative picture for reference only

# VB 13078

## VB 13078M CENTRIFUGAL MOTORPUMP (on table support) - manual

### Main technical specifications:

- Model type 2 stroke engine
- Displacement: 46 cu. cm
- Specifications pump
- Suction 1"
- Delivery 1"
- Max suction head mt.8

### Approx. weight and dim.:

Cm: 40x30x40h

Net Weight: kg 10

Gross Weight: kg 15



These cutaway models are carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts, cross-sections, lubricating circuits, fuel system, cooling system etc. Many parts have been chromium, plated and galvanized for a longer life.



## VB 9180M FRANCIS TURBINE (on base) - manual

Sectioned model of "Francis" Turbine.  
Operated manually.



### Approx. weight and dim.:

Cm:	25x40x40h
Net Weight:	kg 7
Gross Weight:	kg 10

## VB 9190M PELTON TURBINE (on base) - manual

Sectioned model of "Pelton" turbine.  
Operated manually.



### Approx. weight and dim.:

Cm:	40x30x20h
Net Weight:	kg 6
Gross Weight:	kg 10

Indicative picture for reference only

VB 9180

VB 9190

# VB 13071 - VB 13074

## VB 13071M RECIPROCATING COMPRESSOR (on base) - manual



### VB 13071M

#### Approx. weight and dim.:

Cm:	40x40x60h
Net Weight:	kg 30
Gross Weight:	kg 40

## VB 13074M AIR COMPRESSOR (on base) - manual



Section of a typical alternative compressor used in braking systems.

### VB 13074M

#### Approx. weight and dim.:

Cm:	20x20x30h
Net Weight:	kg 6
Gross Weight:	kg 10

Indicative picture for reference only

# VB 13072

## VB 13072 CUTAWAY AIR COMPRESSOR 2HP

An air compressor is a device that converts power (using an electric motor, diesel or gasoline engine, etc.) into potential energy stored in pressurized air. By one of several methods, an air compressor forces more and more air into a storage tank, increasing the pressure. When tank pressure reaches its upper limit the air compressor shuts off. The compressed air, then, is held in the tank until called into use. The energy contained in the compressed air can be used for a variety of applications, utilizing the kinetic energy of the air as it is released and the tank depressurizes. When tank pressure reaches its lower limit, the air compressor turns on again and re-pressurizes the tank.

#### Main technical specifications:

- 7.8 CFM direct air rating
- Compact 24 litres tank
- Reducer with pressure gauge
- Motor: 2HP 1500 Watt
- Max pressure: 116 PSI/ 8 bar
- Free air delivery: 222 l/min
- Lubricated
- RPM: 2850
- Voltage: 240V

#### Approx. weight and dim.:

Cm:	30x60x60h
Net Weight:	kg 25
Gross Weight:	kg 35



## VB 13075M SCREW COMPRESSOR (on base) - manual



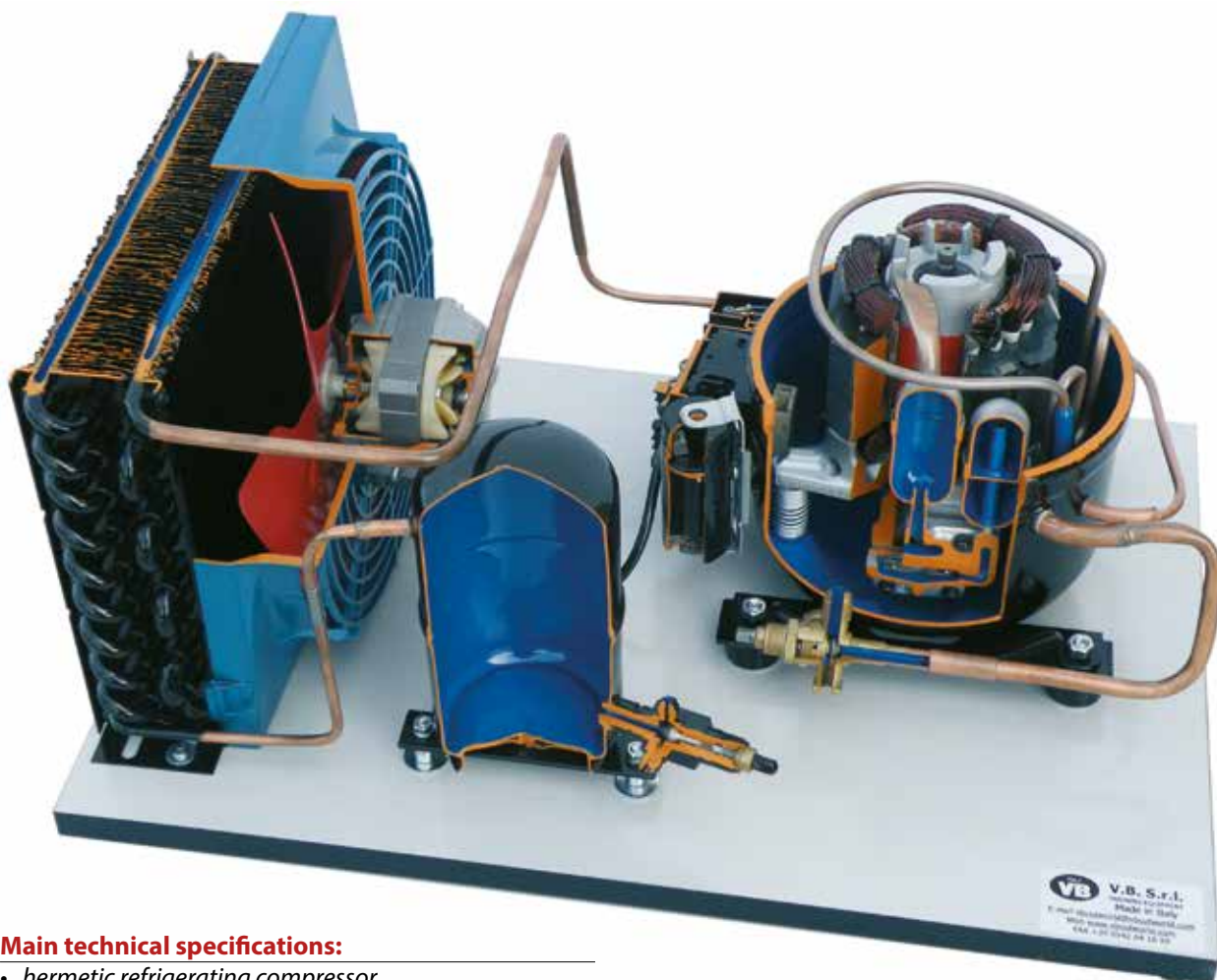
### Approx. weight and dim.:

Cm:	40x30x30h
Net Weight:	kg 25
Gross Weight:	kg 35

*These cutaway models are carefully sectioned for training purposes, professionally painted with different colours to better differentiate the various parts. Many parts have been chromium, plated and galvanized for a longer life.*

**VB 13075**

## VB 13080S HERMETIC CONDENSING UNIT (on base) - static



### Main technical specifications:

- hermetic refrigerating compressor
- air condenser
- liquid receiver
- interception tap
- electro-fan + radiator

### Approx. weight and dim.:

Cm:	70x50x45h
Net Weight:	kg 20
Gross Weight:	kg 35

**VB 13080**

Indicative picture for reference only

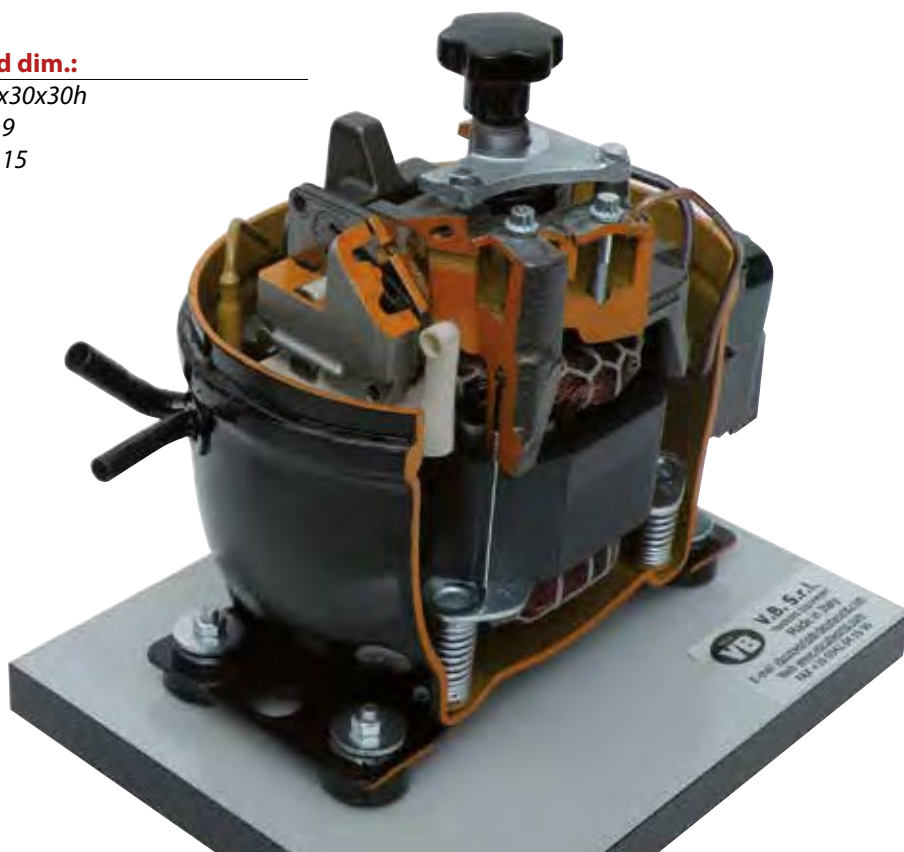


# VB 13082

## VB 13082M HERMETIC COMPRESSOR (on base) - manual

### Approx. weight and dim.:

Cm: 25x30x30h  
 Net Weight: kg 9  
 Gross Weight: kg 15



Indicative picture for reference only

# VB 13083

## VB 13083M OPEN COMPRESSOR (on base) - manual

### Approx. weight and dim.:

Cm: 25x30x25h  
 Net Weight: kg 8  
 Gross Weight: kg 15



## VB 13084S ROTATIVE COMPRESSOR (on base) - static

VB 13084



### Approx. weight and dim.:

Cm: 25x30x40h

Net Weight: kg 9

Gross Weight: kg 15

## VB 13085M SEMI-HERMETIC COMPRESSOR (on base) - manual

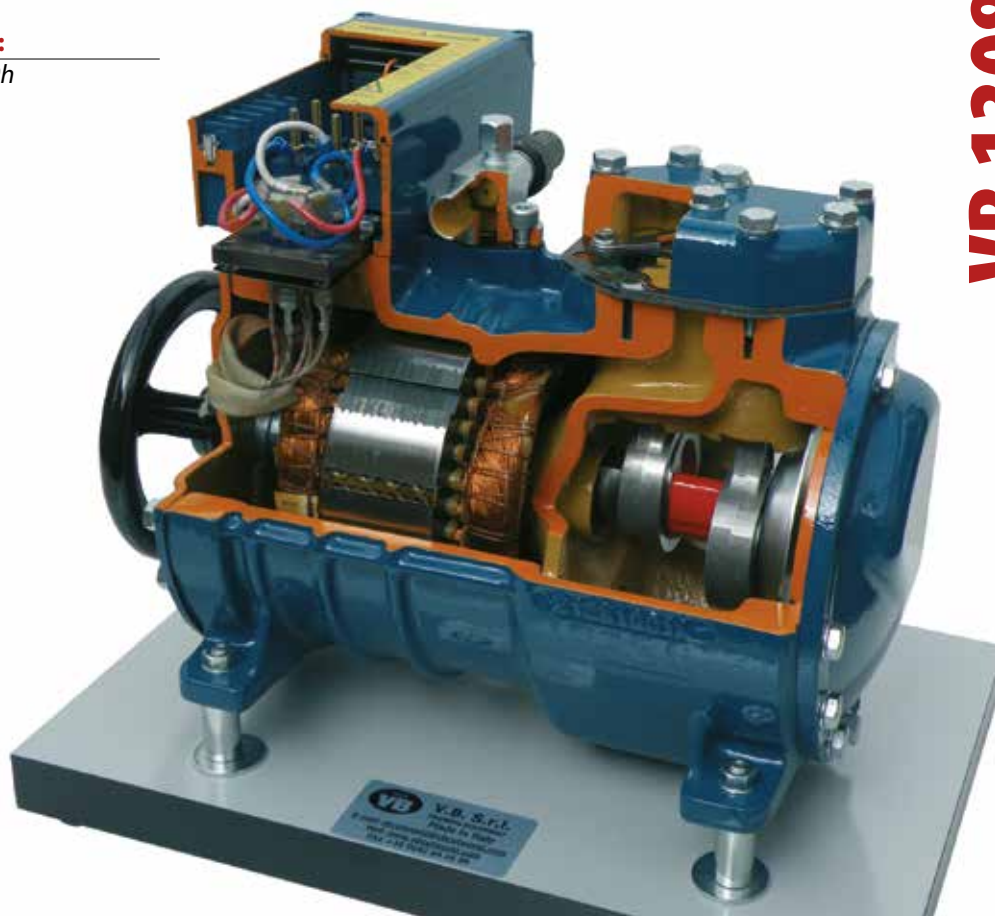
VB 13085

### Approx. weight and dim.:

Cm: 30x50x40h

Net Weight: kg 30

Gross Weight: kg 40



Indicative picture for reference only

# VB 13174 - VB 13175

**VB 13174S CUTAWAY EVAPORATOR PRESSURE REGULATOR KVP (on base)**

**VB 13175S CUTAWAY CONDENSING PRESSURE REGULATOR KVR (on base)**



**Approx. weight and dim.:**

Cm: 16x25x10h

Net Weight: kg 0,5

Gross Weight: kg 1

# VB 13176

**VB 13176S CUTAWAY THERMAL EXPANSION VALVE (on base) – static**



**Approx. weight and dim.:**

Cm: 15x20x10h

Net Weight: kg 0,5

Gross Weight: kg 1

Indicative picture for reference only



*Indicative picture for reference only*



**Approx. weight and dim.:**

Cm: 60x50x50h

Net Weight: kg 25

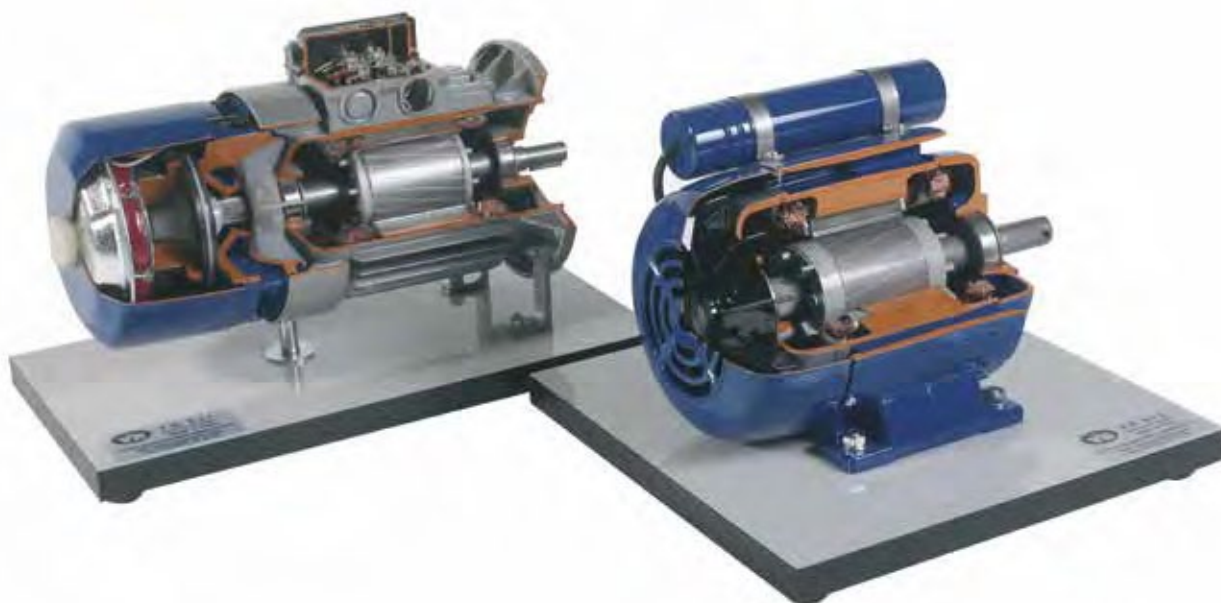
Gross Weight: kg 35

*In electricity generation, a generator is a device that converts mechanical energy to electrical energy for use in an external circuit. The source of mechanical energy may vary widely from a hand crank to an internal combustion engine. Generators provide nearly all of the power for electric power grids.*

**VB 13088M** THREE-PHASE SELF-BRAKING ELECTRIC MOTOR (on base) - manual

**VB 13089M** SINGLE-PHASE ELECTRIC MOTOR (on base) - manual

**VB 13090M** THREE-PHASE ELECTRIC MOTOR (on base) - manual



**VB 13088M**

**Approx. weight and dim.:**

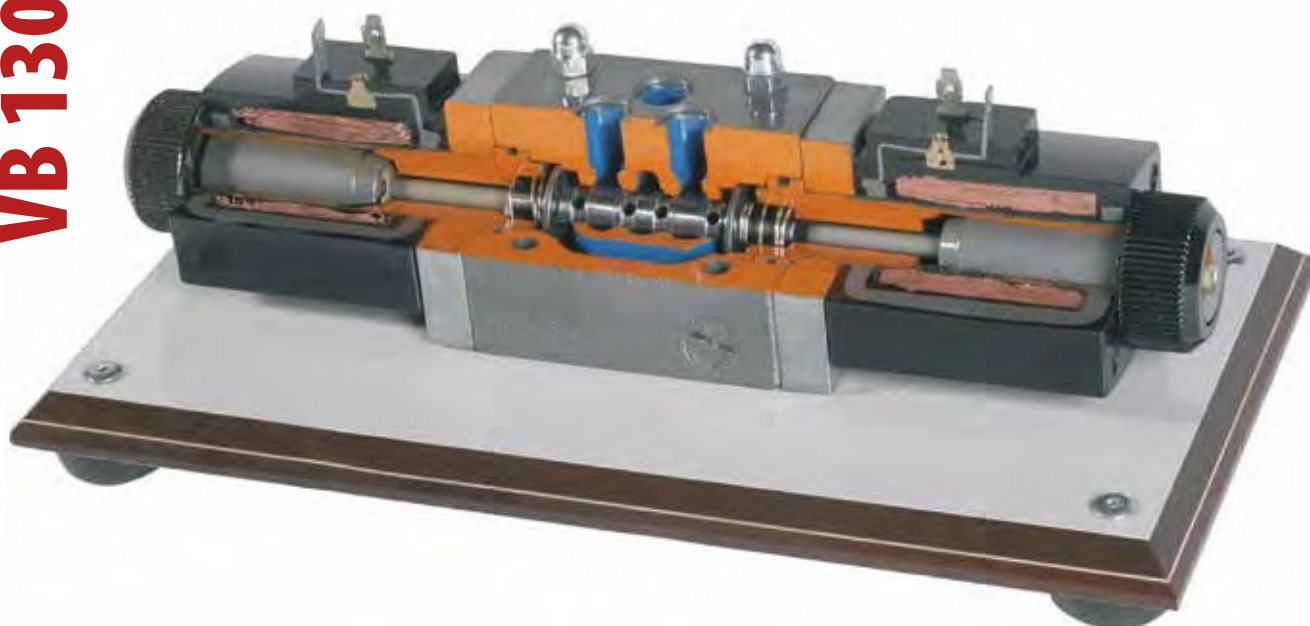
Cm: 38x20x25h  
Net Weight: kg 10  
Gross Weight: kg 16

**VB 13089M - VB13090M**

**Approx. weight and dim.:**

Cm: 30x30x25h  
Net Weight: kg 9  
Gross Weight: kg 15

**VB 13091S** ELECTROVALVE (on base) - static



**Approx. weight and dim.:**

Cm: 25x15x10h  
Net Weight: kg 2  
Gross Weight: kg 4

Indicative picture for reference only

**VB 13092M** ANGLE REDUCER (on base) - manual

**VB 13093M** RIGHT ANGLE REDUCER (on base) - manual

**VB 13094M** WORM GEAR REDUCER (on base) - manual

**VB 13095M** WORM GEAR REDUCER WITH PRE-STAGE GEAR (on base) - manual



**VB 13092M**

**Approx. weight and dim.:**

Cm: 20x20x16h  
Net Weight: kg 5  
Gross Weight: kg 7

**VB 13093M**

**Approx. weight and dim.:**

Cm: 20x20x15h  
Net Weight: kg 2  
Gross Weight: kg 3

**VB 13094M**

**Approx. weight and dim.:**

Cm: 20x20x20h  
Net Weight: kg 5  
Gross Weight: kg 7

**VB 13095M**

**Approx. weight and dim.:**

Cm: 20x20x20h  
Net Weight: kg 4  
Gross Weight: kg 6

**VB 13096M** SINGLE-STAGE REDUCER (on base) - manual

**VB 13097M** REDUCER WITH SPEED CONVERTER (on base) - manual

**VB 13098M** CO-AXIAL REDUCER (on base) - manual



**VB 13096M**

**Approx. weight and dim.:**

Cm: 30x30x30h  
Net Weight: kg 9  
Gross Weight: kg 15

**VB 13097M**

**Approx. weight and dim.:**

Cm: 24x20x20h  
Net Weight: kg 5  
Gross Weight: kg 7

**VB 13098M**

**Approx. weight and dim.:**

Cm: 30x30x25h  
Net Weight: kg 15  
Gross Weight: kg 21

Indicative picture for reference only

**VB 13096 - VB 13097 - VB 13098 VB 13092 - VB 13093 - VB 13094 - VB 13095**



**VB 13099M** EPYCYCLOYD COAXIAL REDUCER (on base) - manual

**VB 13100M** COMBINED WORM GEAR REDUCER (on base) - manual



**VB 13099M**

**Approx. weight and dim.:**

Cm: 38x20x16h

Net Weight: kg 8

Gross Weight: kg 14

**VB 13100M**

**Approx. weight and dim.:**

Cm: 38x20x16h

Net Weight: kg 7

Gross Weight: kg 12

**VB 13101M** HYDRAULIC GEAR ENGINE (on base) - manual

**VB 13102M** ORBITAL HYDRAULIC MOTOR (on base) - manual

**VB 13103M** VARIABLE CAPACITY HYDRAULIC PUMP (on base) - manual



**VB 13102M**

**VB 13103M**

**VB 13101M**

**VB 13101M**

**Approx. weight and dim.:**

Cm: 20x20x14h

Net Weight: kg 3

Gross Weight: kg 4

**VB 13102M**

**Approx. weight and dim.:**

Cm: 20x20x25h

Net Weight: kg 8

Gross Weight: kg 14

**VB 13103M**

**Approx. weight and dim.:**

Cm: 20x20x28h

Net Weight: kg 7

Gross Weight: kg 12

Indicative picture for reference only

## VB 13110M BEVEL HELICAL REDUCER (on base) - manual



### Approx. weight and dim.:

Cm: 25x20x20h  
Net Weight: kg 5  
Gross Weight: kg 8

## VB 13111S KOYO BALL BEARING (on base) - static



### Approx. weight and dim.:

Cm: 25x20x20h  
Net Weight: kg 4  
Gross Weight: kg 6

VB 13110

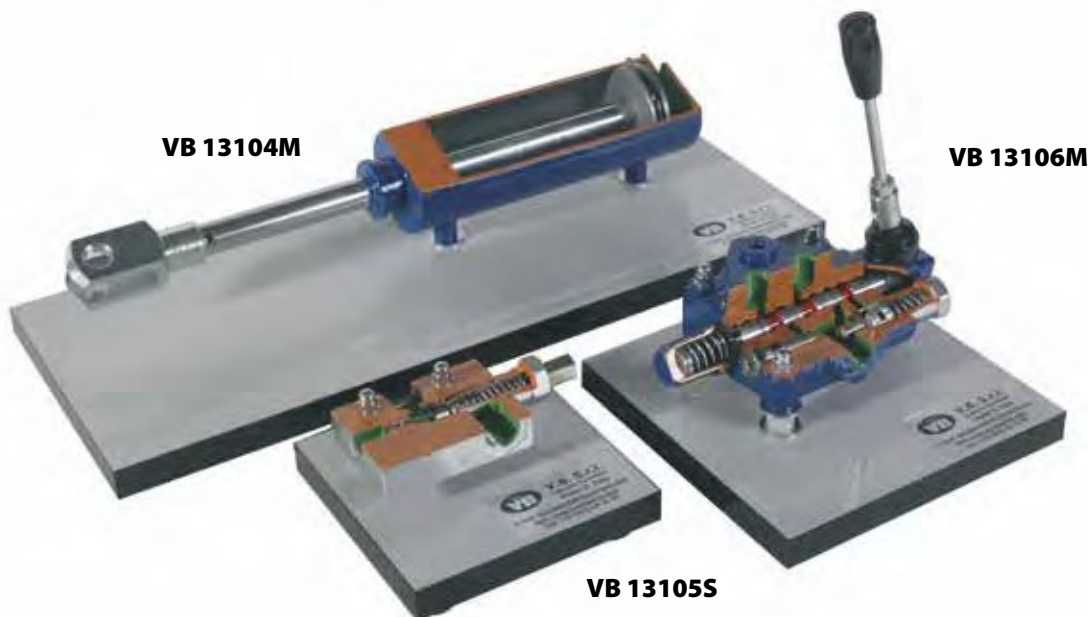
VB 13111

Indicative picture for reference only

**VB 13104M SIMPLE EFFECT PISTON (on base) - manual**

**VB 13105S PRESSURE REGULATOR VALVE (on base) - static**

**VB 13106M SIMPLE EFFECT DISTRIBUTOR WITH PRESSURE VALVE (on base) - manual**



**VB 13104M**

**Approx. weight and dim.:**

Cm: 50x20x14h  
Net Weight: kg 3  
Gross Weight: kg 4

**VB 13105S**

**Approx. weight and dim.:**

Cm: 15x15x10h  
Net Weight: kg 1  
Gross Weight: kg 1,5

**VB 13106M**

**Approx. weight and dim.:**

Cm: 20x20x28h  
Net Weight: kg 1  
Gross Weight: kg 1,5

**VB 13107M DOUBLE EFFECT HYDRAULIC CYLINDER (on base) - manual**

**VB 13108S TELESCOPIC HYDRAULIC CYLINDER with hydraulic jack (on base) - static**

**VB 13109M SIMPLE EFFECT HYDRAULIC CYLINDER (on base) - manual**

**VB 13107M**

**Approx. weight and dim.:**

Cm: 12x40x15h  
Net Weight: kg 3  
Gross Weight: kg 6

**VB 13108S**

**Approx. weight and dim.:**

Cm: 40x20x15h  
Net Weight: kg 5  
Gross Weight: kg 9

**VB 13109M**

**Approx. weight and dim.:**

Cm: 12x40x15h  
Net Weight: kg 4  
Gross Weight: kg 7







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