



# Fluid Mechanics & Refrigeration

# VB 12999

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

Accurate section of an in-line piston pump showing:

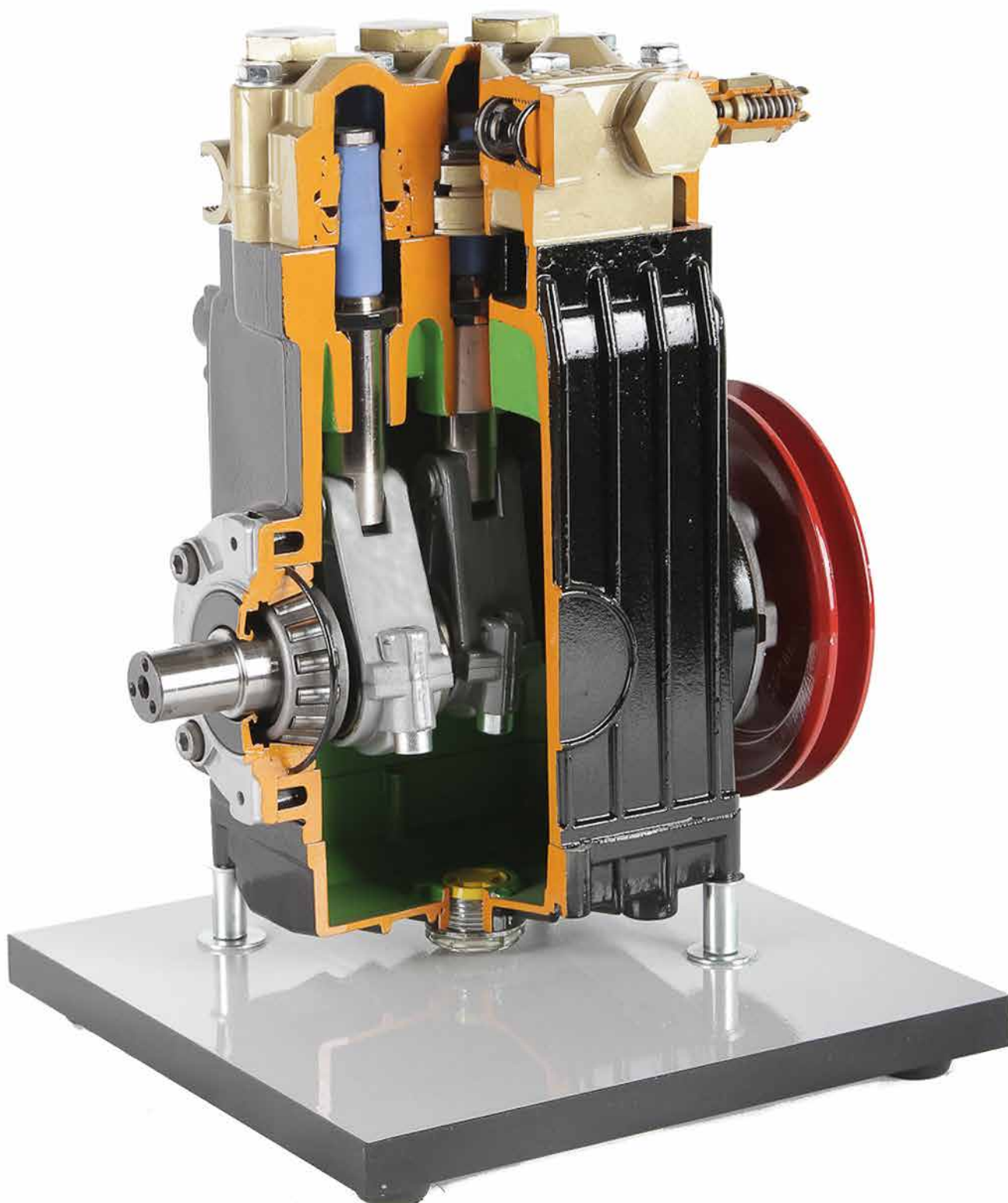
- Pump head
- Suction and discharge valves
- Pistons
- Piston rods
- Bearings

### 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 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**

Indicative picture for reference only

**VB 13030M**

**Approx. weight and dim.:**

Cm: 35x30x25h

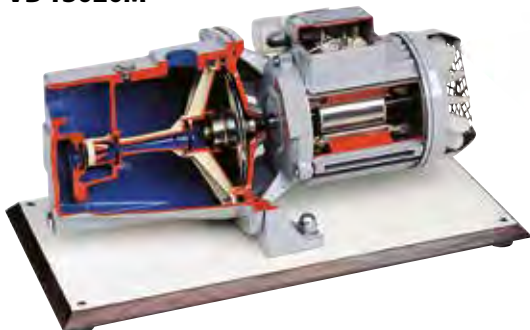
Net Weight: kg 6

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

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

# 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

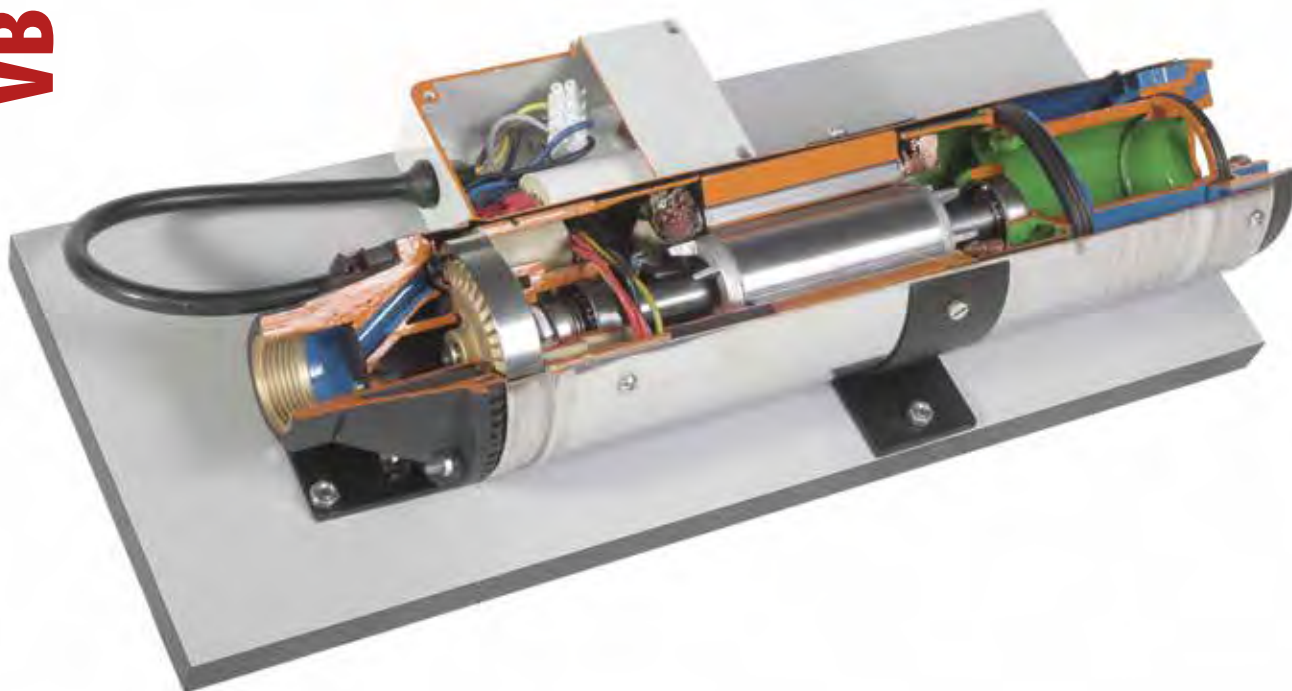


VB 13060M

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.

# VB 13065

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



### Approx. weight and dim.:

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

Indicative picture for reference only

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

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

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**Approx. weight and dim.:**

Cm: 20x25x30h

Weight: kg 5

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

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

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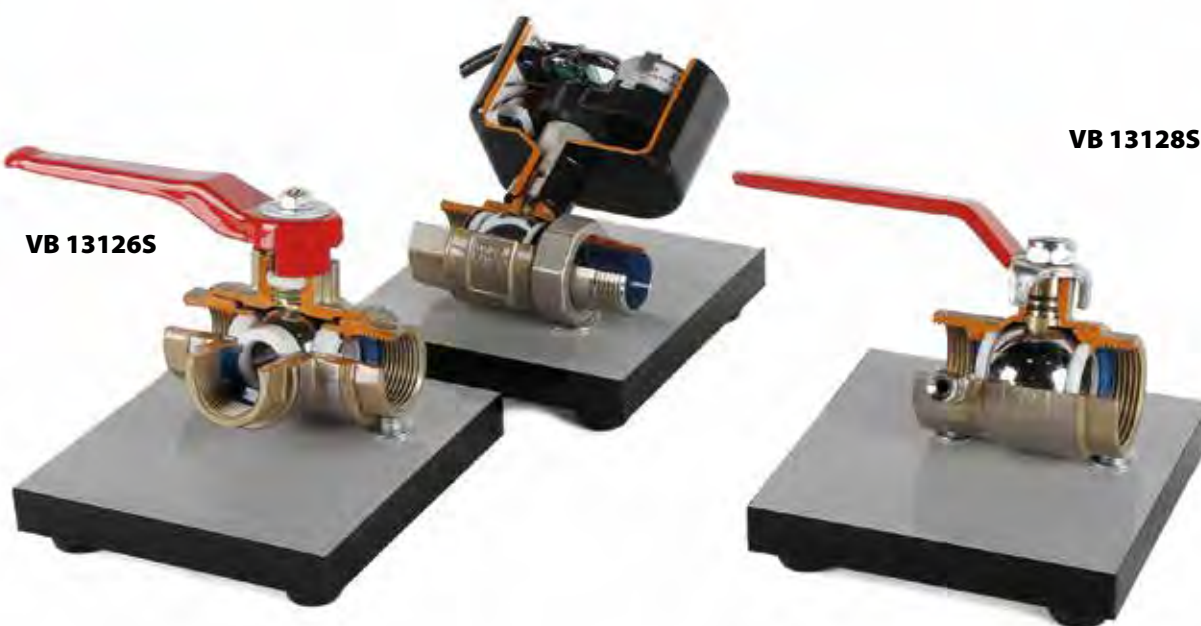
**VB 13128S** CUTAWAY BALL VALVE WITH DRAIN OFF/COCK (on base)

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Indicative picture for reference only

**VB 13124S**

**VB 13128S**



**Approx. weight and dim.**

Cm: 15x20x15h

Weight: Kg 2

**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)

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

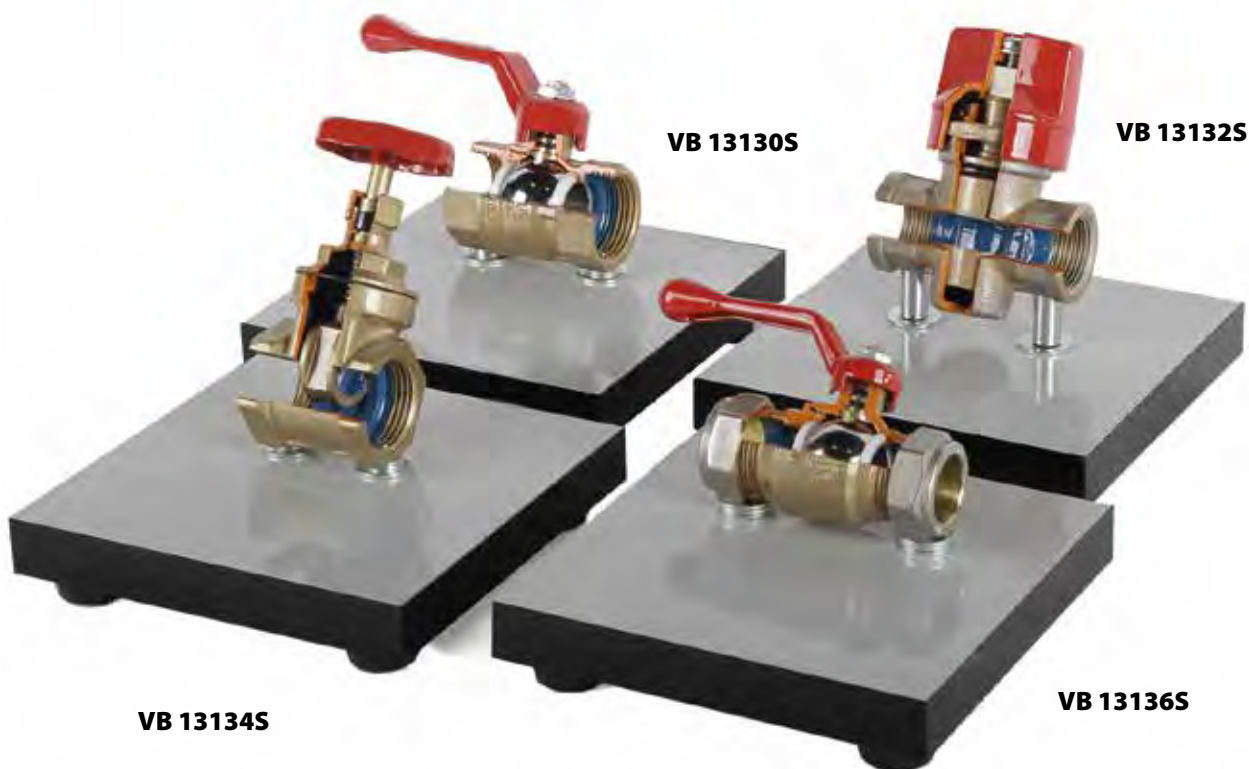
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**VB 13134S** CUTAWAY GATE VALVE (on base)

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

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*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)

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

---

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

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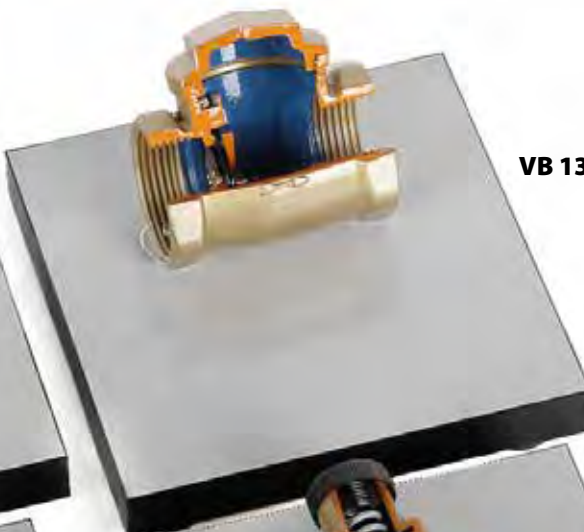
**VB 13144S** CUTAWAY PRESSURE VALVE REDUCER WITH FEMALE CONNECTION (on base)

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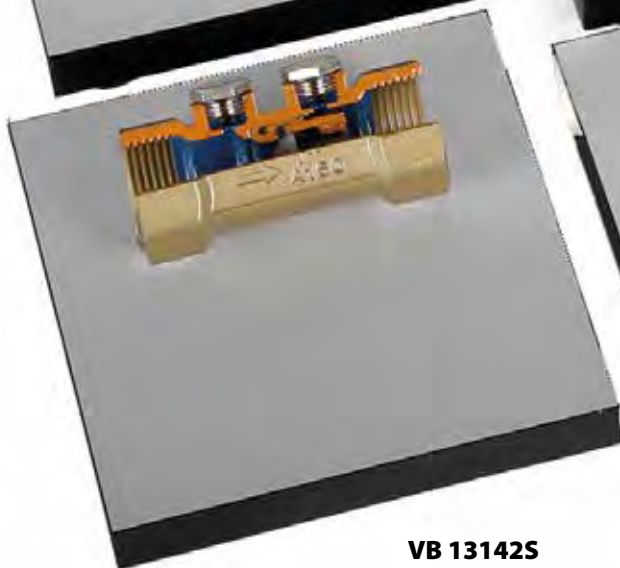
**VB 13138S**



**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

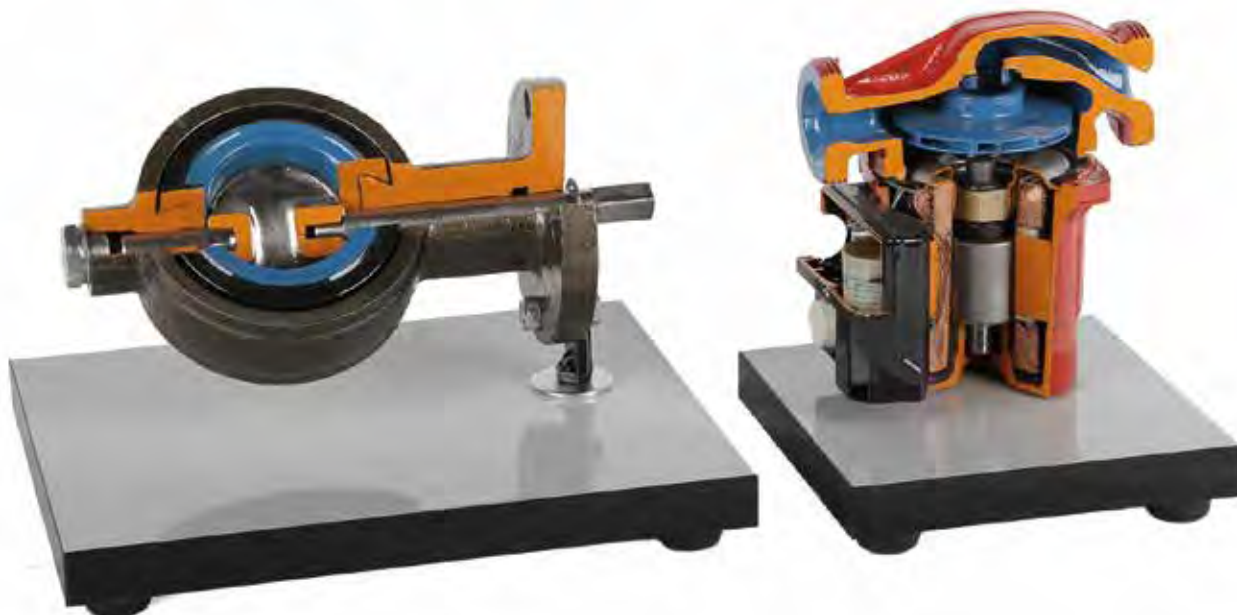
*Weight:* kg 1

**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)**

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

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**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**

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

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**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

Indicative picture for reference only

**VB 13160 - VB 13161**

**VB 13162 - VB 13163**

# VB 13164 - VB 13165

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

**VB 13165S CUTAWAY MANIFOLD 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

# 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

Indicative picture for reference only

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

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

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**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**

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**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)**

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

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**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)**

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**Approx. weight and dim.:**

Cm: 20x30x10h

Weight: Kg 2

Indicative picture for reference only

**VB 13154 - VB 13156**

**VB 13158**

# 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 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

# 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



Indicative picture for reference only

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



### Approx. weight and dim.:

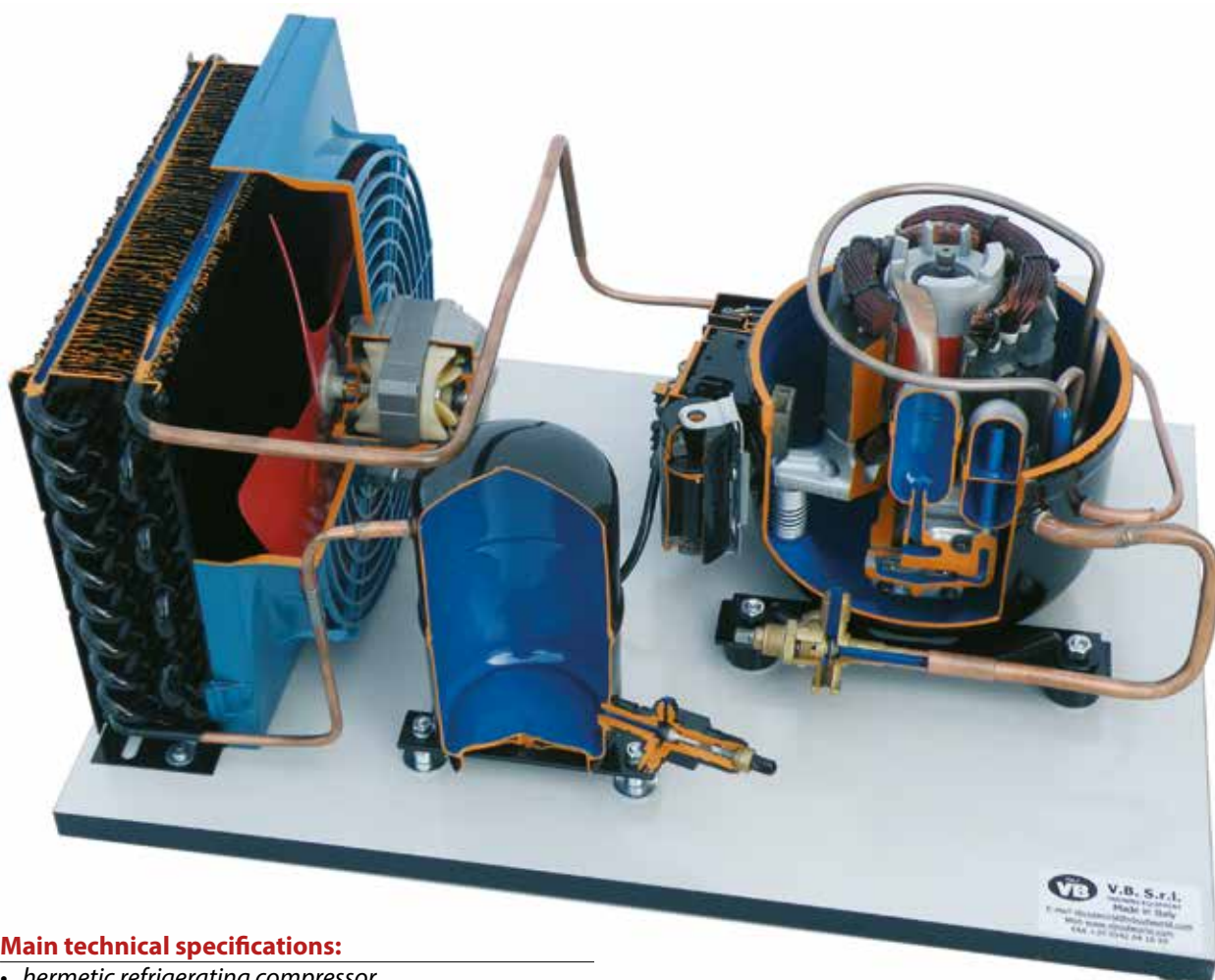
Cm:	40x30x30h
Net Weight:	kg 25
Gross Weight:	kg 35

*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

Indicative picture for reference only



### 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

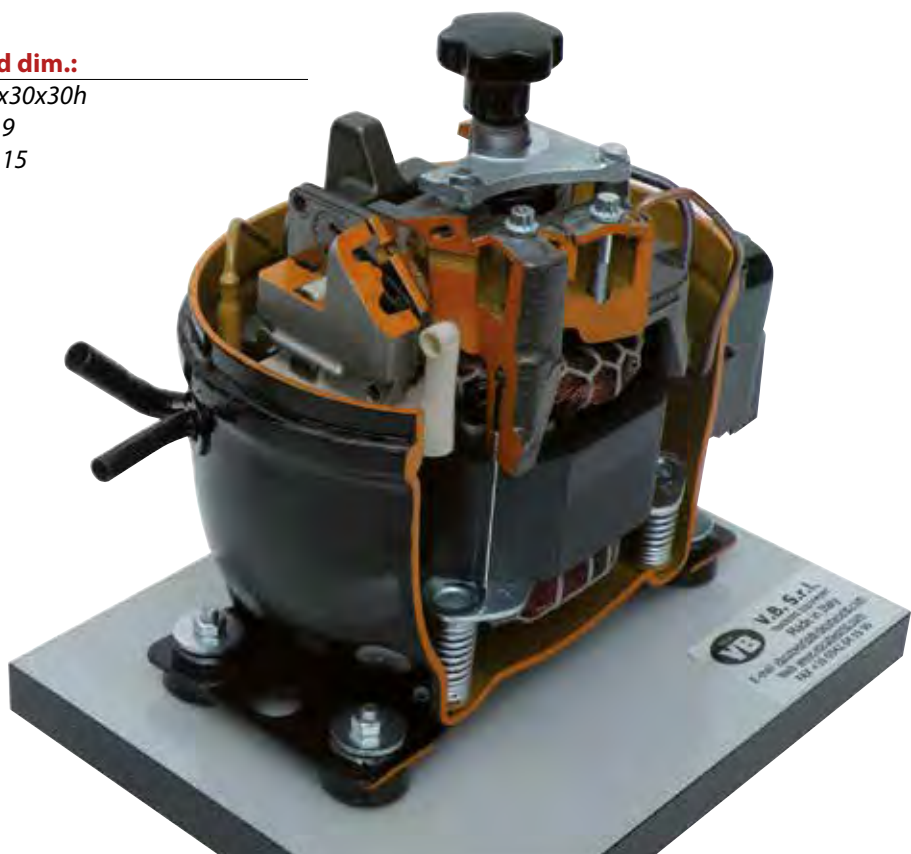


# VB 13082

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

### Approx. weight and dim.:

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



# VB 13083

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

### Approx. weight and dim.:

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



Indicative picture for reference only

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

**VB 13084**



**Approx. weight and dim.:**

Cm: 25x30x40h

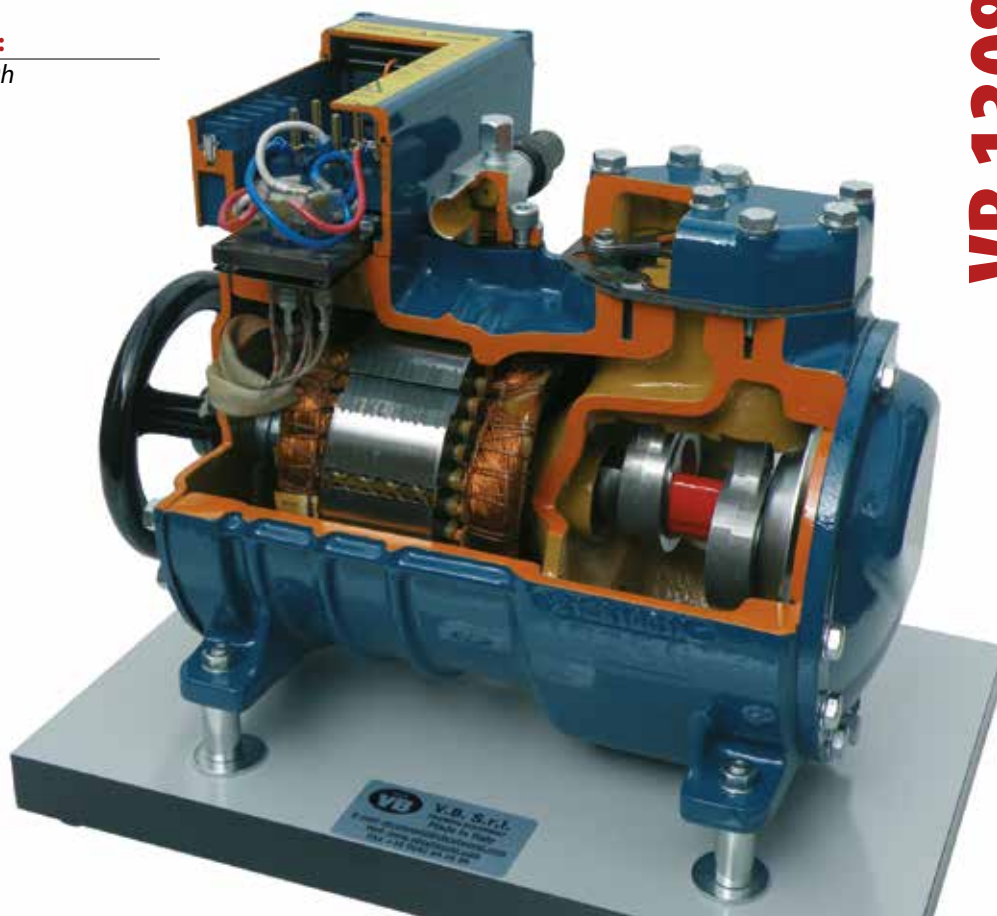
Net Weight: kg 9

Gross Weight: kg 15

*Indicative picture for reference only*

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

**VB 13085**



**Approx. weight and dim.:**

Cm: 30x50x40h

Net Weight: kg 30

Gross Weight: kg 40

# 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

## VB 13177S CUTAWAY ELECTRIC GENERATOR (on table-stand support)

# VB 13177



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.*

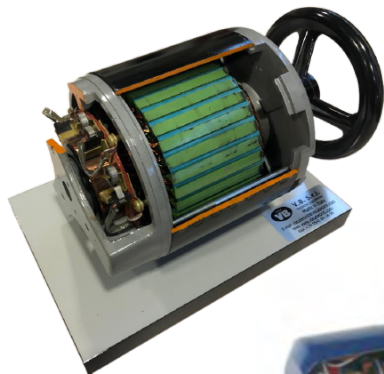
# VB 13091 - VB 13088 - VB 13089 - VB 13090

**VB 13087M** DC MOTOR (on base) - manual

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

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

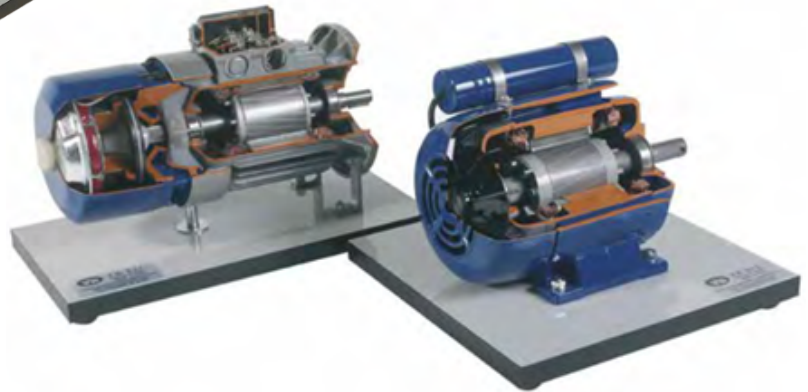
**VB 13090M** THREE-PHASE ELECTRIC MOTOR (on base) - manual



**VB 13087M**

**Approx. weight and dim.:**

Cm: 69x38x40h  
Net weight: kg 14  
Gross weight: kg 20



**VB 13088M**

**Approx. weight and dim.:**

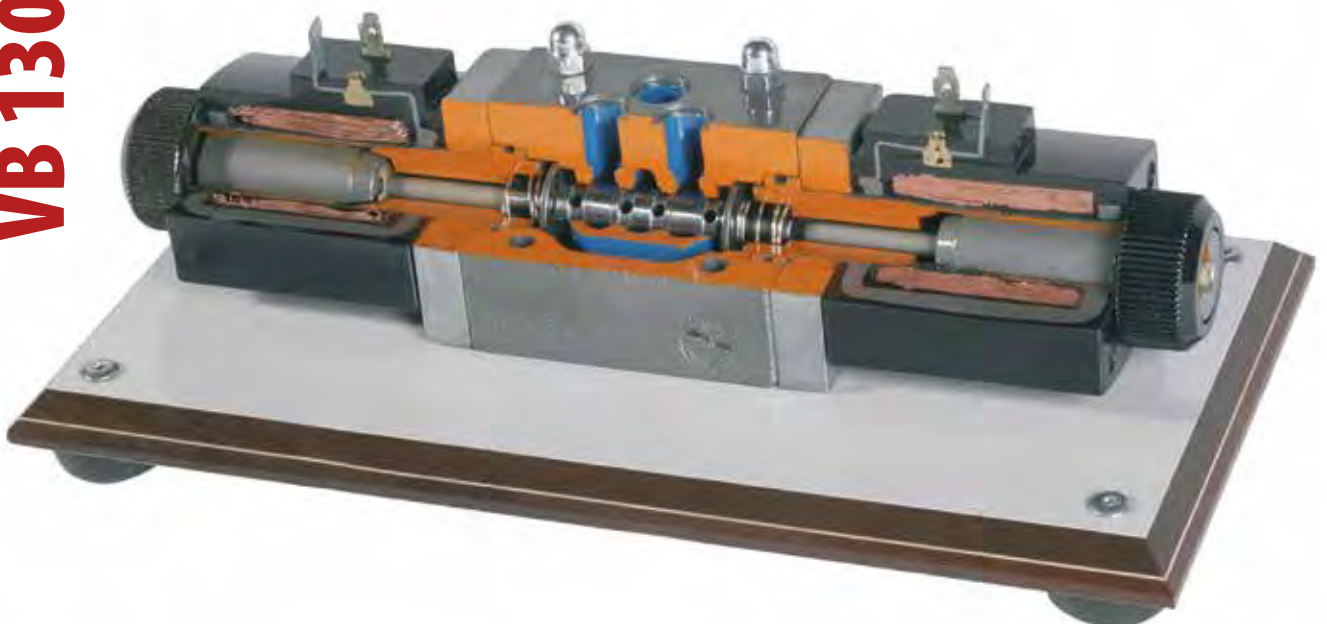
Cm: 38x20x25h  
Net Weight: kg 10  
Gross Weight: kg 16

**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**

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

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

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

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**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**

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

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

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**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 13099 - VB 13100

**VB 13099M EPYCICLOYD 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**

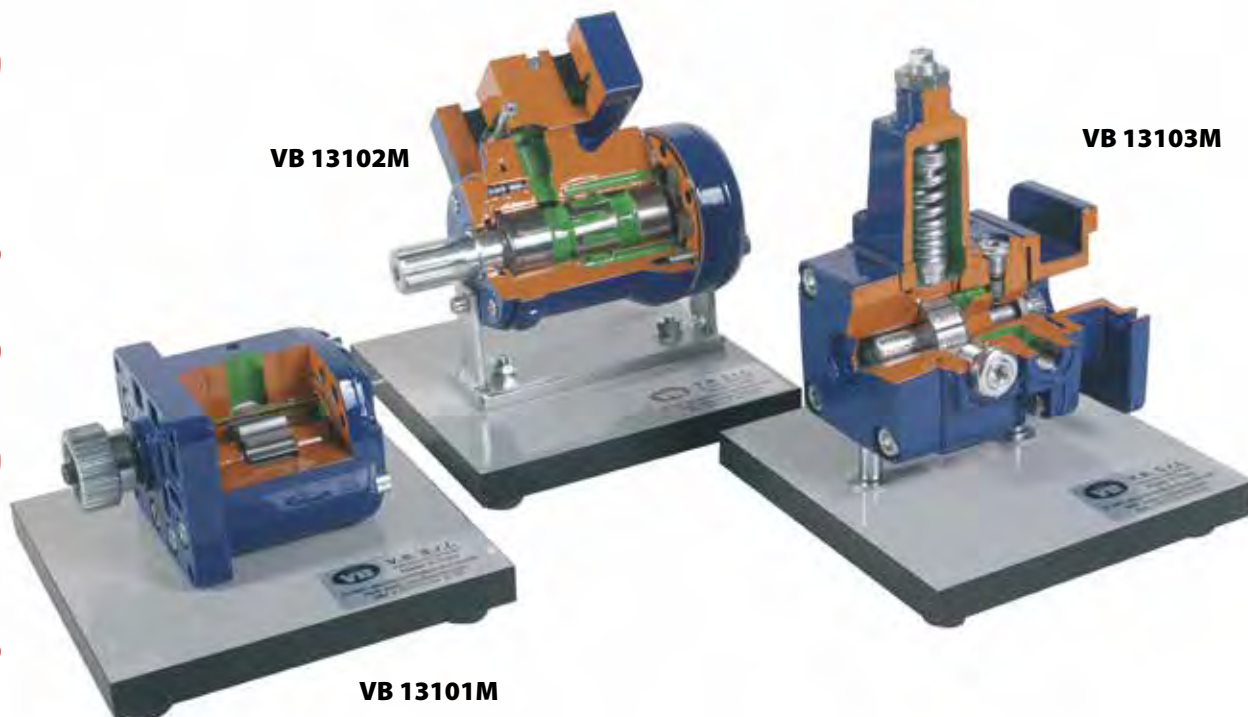
**Approx. weight and dim.:**

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 13101 - VB 13102 - VB 13103

**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

Indicative picture for reference only

**VB 13110**

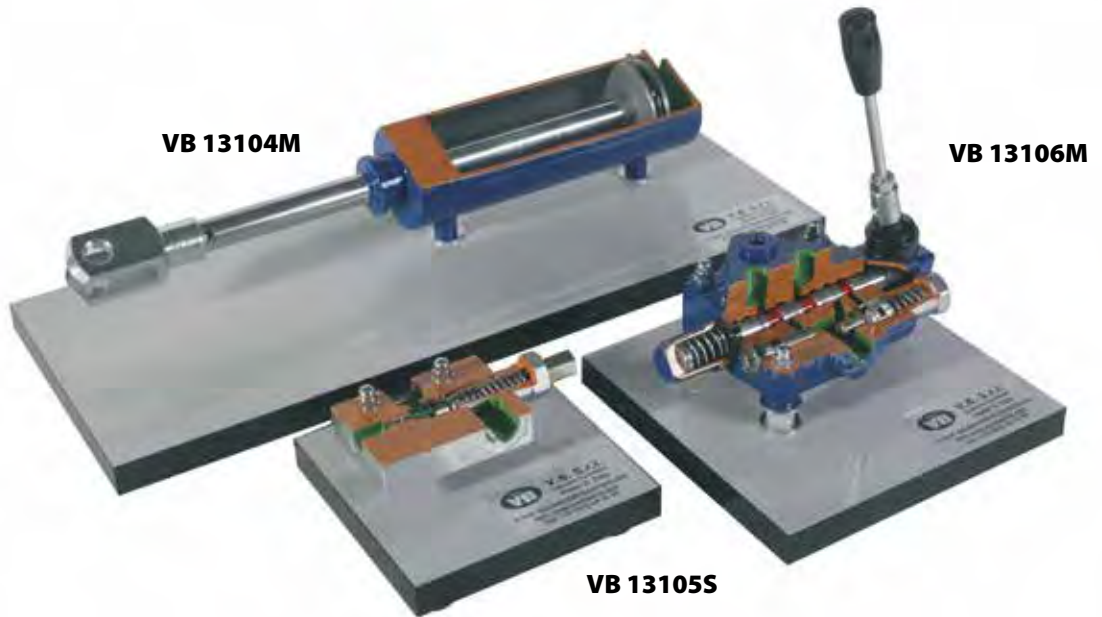
**VB 13111**



**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



Indicative picture for reference only