

## NOCCHI SENSORMAT

### PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

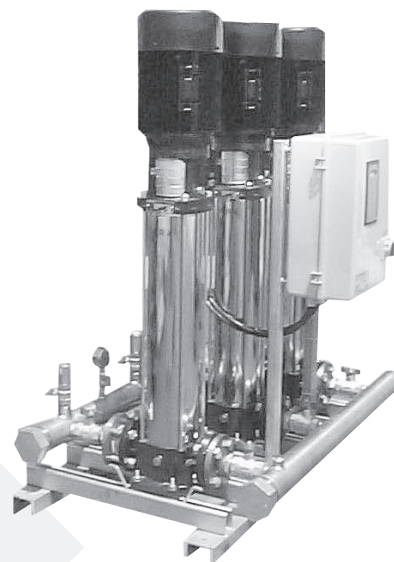
COMPACT, ROBUST, HIGH HYDRAULIC PERFORMANCE, PIPELINES IN AISI 304 STAINLESS STEEL

These are automatic pressure booster sets for installation on the water mains with three phase electric power supply, transducer control and fixed speed.

The pumps are controlled via an electrical panel fitted with an electronic board linked to an electronic transducer that reads the outlet pressure. The keypad on the electrical panel enables the entry of unit configuration parameters and settings (start and stop pressures for each pump, timers for

each pump etc.).

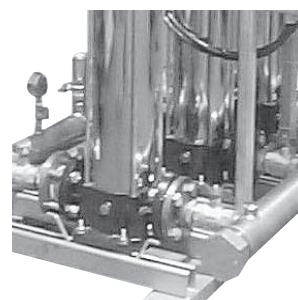
The pumps start up and stop when the mains pressure reaches the set value. At the end of each cycle, the inverter automatically switches the pump start sequence. In the event of large water demands, the electronic board applies a gradual start-up of the pumps, thereby avoiding sudden pressure variations and overload of the power supply.



| NUMBER OF PUMPS |       | MAXIMUM FLOW RATE |      |
|-----------------|-------|-------------------|------|
| Main            | Pilot | L/min             | m³/h |
| 2               | -     | 1400              | 84   |
| 3               | 0     | 2100              | 126  |
| 3               | 1     | 2100              | 126  |

| APPLICATION DATA           | VLR 16  |           |
|----------------------------|---------|-----------|
|                            | SM. 2.1 | SM. 30/31 |
| Maximum flow rate (m³/h)   | 42      | 28.8      |
| Maximum head (m.c.a.)      | 91      |           |
| Maximum operating pressure | 16 bar  |           |

| APPLICATION DATA                | VLR 32                                                |           | MULTINOX - VE |
|---------------------------------|-------------------------------------------------------|-----------|---------------|
|                                 | SM. 21                                                | SM. 30/31 | SMD30         |
| Maximum flow rate (m³/h)        | 84                                                    | 126       | 28.8          |
| Maximum head (m.c.a.)           | 89                                                    |           | 109           |
| Maximum operating pressure      | 16 bar                                                |           | 12 bar        |
| Power supply voltage            | 400 V                                                 |           |               |
| Direct pump start-up            | Direct up to 7.5 kW inclusive. Star/Delta over 7.5 kW |           |               |
| Ambient temperature             | +50° C                                                |           |               |
| Electric pump protection rating | IP55<br>IP44 for MULTINOX-VE                          |           |               |
| El. panel protection rating     | IP54                                                  |           |               |



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## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### ELECTRIC PUMP

MULTINOX-VE / VLR:

- Centrifugal, multi-cell, vertical axis.

### SUCTION MANIFOLD

In AISI 304 stainless steel with:

- 1 water filling hose
- 1 brass ball valve
- 1 check valve \*

### BASE

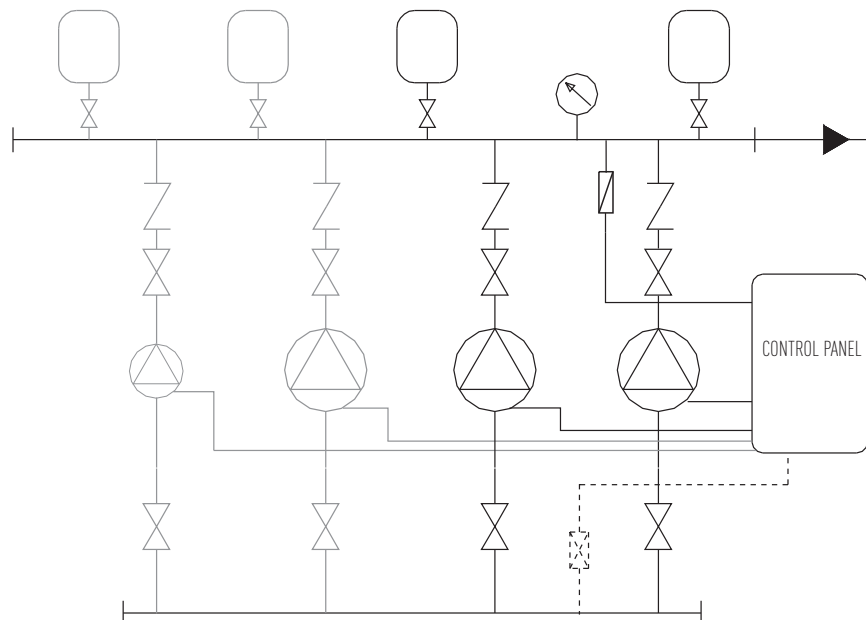
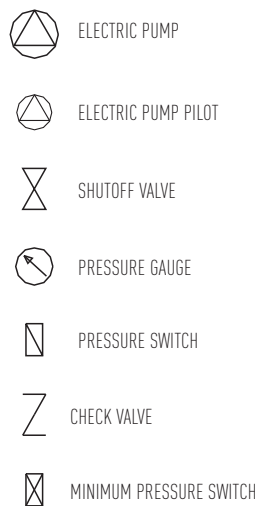
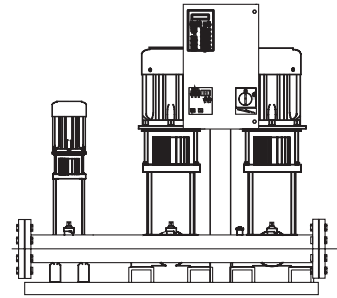
- Galvanized steel profile

### DELIVERY MANIFOLD

In AISI 304 stainless steel :

- 1 pressure gauge
- 1 pressure transducer  
0-5Volt – 0-10 Bar
- 1 brass ball valve \*

\* components for each electric pump installed



# NOCCHI SENSORMAT

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### THREE PHASE ELECTRICAL PANEL



### ELECTRICAL PANEL

- IP 54 metal enclosure
- Main switch
- Keypad with SA electronic board.
- Fuses, contactors and thermal relay for each pump.
- Transformer with fuses for auxiliary circuit.
- M-0-T selector for each pump
- Delta-Star starter for motors over 7.5 kW.

### SIGNALS AND CONTROLS

- LCD display to indicate operating parameters and for entry of configuration parameters and settings.
- Power ON indicator led.
- Indicator led to signal low water level in tank on first collection or low pressure on water supply line (aqueduct).
- Indicator led to signal trip of the overload thermal cut-out.
- Automatic/Manual mode indicator led.
- Pump running indicator led for each pump.
- Buttons for selection of automatic or manual control.
- Start-stop button for each pump when set to manual mode.
- Button to enter configuration parameters.

### MAIN FUNCTIONS

- Sequential inversion of pump start-up at the end of each work cycle.
- Timer, settable from 0 to 255 sec., for pump operation after opening of the pressure switch contact or when operating pressure values are reached.
- ON/OFF control of tank level for first collection or pressure in supply pipeline via a float switch or other differential pressure switch.
- Sequential control of pump start-up to prevent simultaneous activation.

### EXTERNAL CONTROL DEVICES

- A differential pressure switch settable as ON/OFF for each pump, or
- An electric pressure transducer (0-5 V)

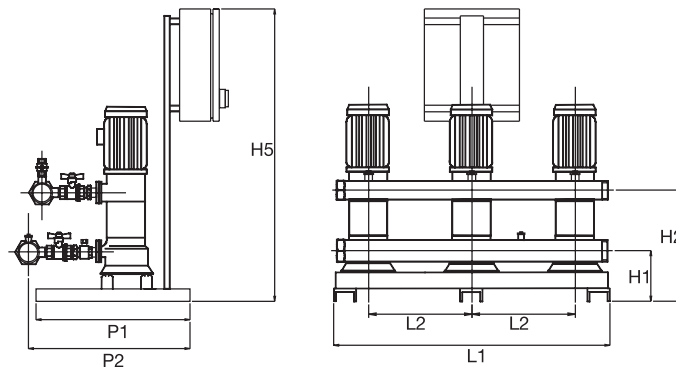
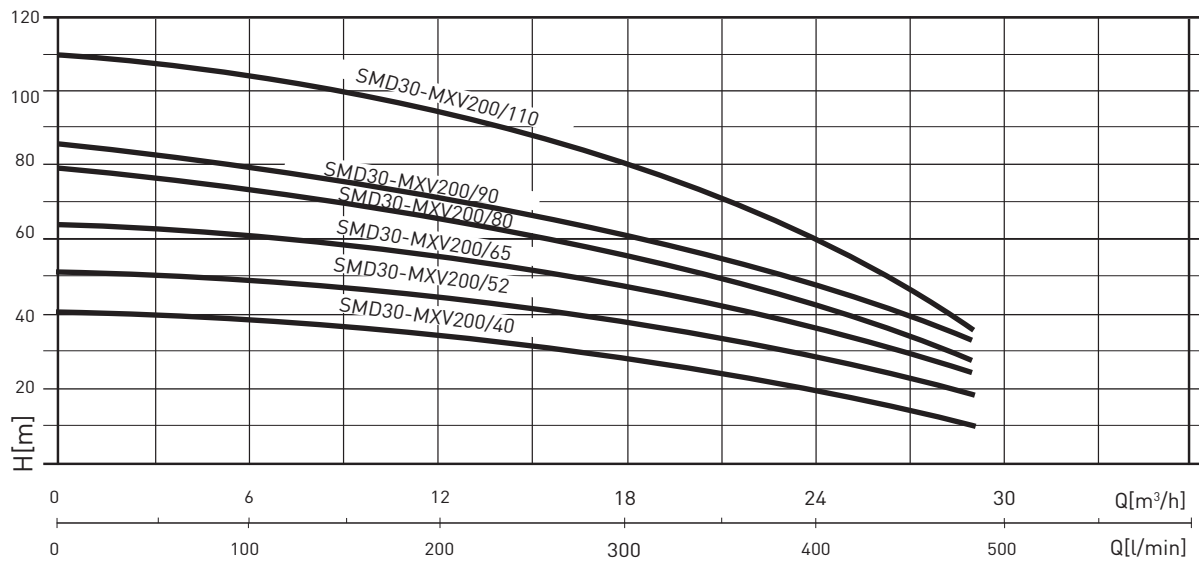
### ACCESSORIES

| Sensormat accessories available on request                                     | SDM |
|--------------------------------------------------------------------------------|-----|
|                                                                                | SMY |
| Float switch for protection against dry running                                | X   |
| Differential pressure switch for inhibition in event of mains pressure failure | X   |
| Electrodes for electronic level control                                        | X   |
| Membrane autoclaves                                                            | X   |

# NOCCHI SMD 30 - MXV 200

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### HYDRAULIC PERFORMANCE



### PERFORMANCE TABLE

| MODEL            | kW    | L/min           | 0   | 60  | 120 | 240  | 360  | 480  |
|------------------|-------|-----------------|-----|-----|-----|------|------|------|
|                  |       | m3/h            | 4.8 | 3.6 | 7.2 | 14.4 | 21.6 | 28.8 |
| SMD30-MXV200/40  | 3X1.5 | m.c.a. / m.w.c. | 39  | 38  | 37  | 32   | 24   | 12   |
| SMD30-MXV200/52  | 2x1.8 |                 | 51  | 50  | 49  | 42   | 32   | 18   |
| SMD30-MXV200/65  | 3X2   |                 | 64  | 63  | 60  | 52   | 40   | 24   |
| SMD30-MXV200/80  | 3X2.6 |                 | 79  | 77  | 73  | 62   | 48   | 27   |
| SMD30-MXV200/90  | 3X2.7 |                 | 85  | 83  | 78  | 67   | 54   | 33   |
| SMD30-MXV200/110 | 3X3.2 |                 | 109 | 107 | 103 | 90   | 68   | 35   |

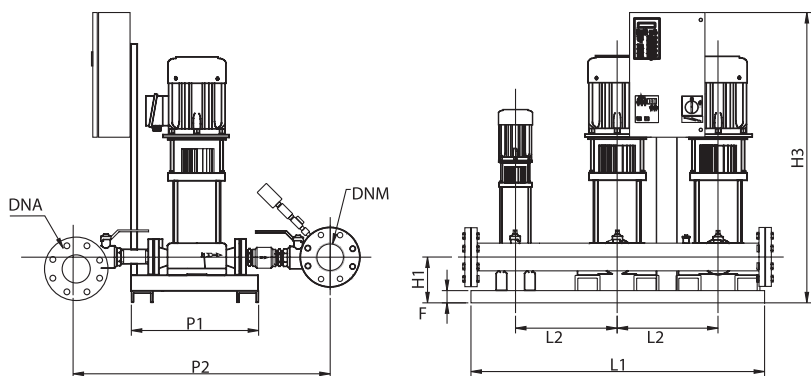
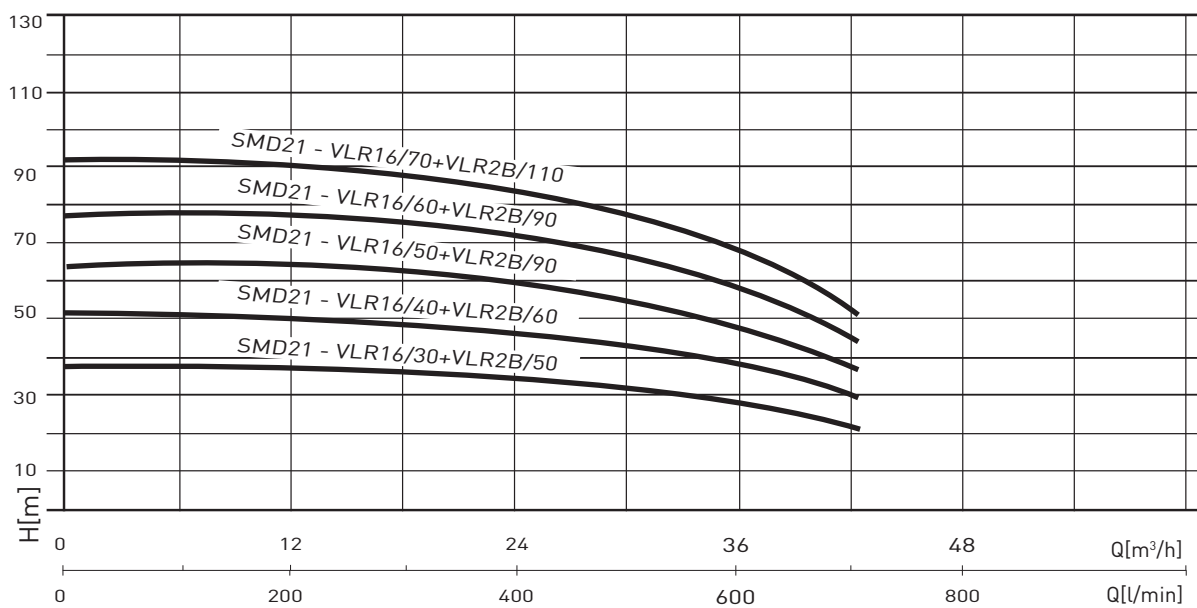
### OVERALL DIMENSIONS AND WEIGHTS

| MODEL            | Dimensions (mm) |     |     |     |     |      |     |       |     | Weight (kg) |
|------------------|-----------------|-----|-----|-----|-----|------|-----|-------|-----|-------------|
|                  | L1              | P1  | P2  | H1  | H2  | H3   | DNA | DNM   | L2  |             |
| SMD30-MXV200/40  | 1200            | 500 | 540 | 145 | 320 | 1100 | 3"  | 2"1/2 | 370 | 114         |
| SMD30-MXV200/52  | 1200            | 500 | 540 | 145 | 320 | 1100 | 3"  | 2"1/2 | 370 | 126         |
| SMD30-MXV200/65  | 1200            | 500 | 540 | 145 | 320 | 1100 | 3"  | 2"1/2 | 370 | 138         |
| SMD30-MXV200/80  | 1200            | 500 | 540 | 145 | 320 | 1100 | 3"  | 2"1/2 | 370 | 144         |
| SMD30-MXV200/90  | 1200            | 500 | 540 | 145 | 320 | 1100 | 3"  | 2"1/2 | 370 | 156         |
| SMD30-MXV200/110 | 1200            | 500 | 540 | 145 | 320 | 1100 | 3"  | 2"1/2 | 370 | 160         |

# NOCCHI SMD 21 - VLR 16

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### HYDRAULIC PERFORMANCE



### PERFORMANCE TABLE

| MODEL                      | kW        | L/min              | 200 | 400 | 500 | 600 | 700 |
|----------------------------|-----------|--------------------|-----|-----|-----|-----|-----|
|                            |           | m <sup>3</sup> / h | 12  | 24  | 30  | 36  | 42  |
| SMD21-VLR16/30 + VLR2B/50  | 2x3+0.55  | m.c.a. / m.w.c.    | 39  | 37  | 34  | 30  | 24  |
| SMD21-VLR16/40 + VLR2B/60  | 2x4+0.75  |                    | 52  | 49  | 46  | 40  | 32  |
| SMD21-VLR16/50 + VLR2B/90  | 2x5.5+1.1 |                    | 65  | 62  | 57  | 51  | 40  |
| SMD21-VLR16/60 + VLR2B/90  | 2x5.5+1.1 |                    | 78  | 74  | 69  | 61  | 47  |
| SMD21-VLR16/70 + VLR2B/110 | 2x5.5+1.1 |                    | 91  | 86  | 80  | 71  | 55  |

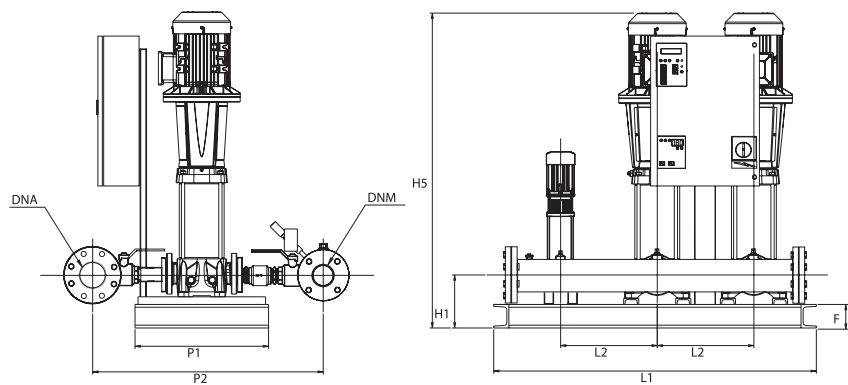
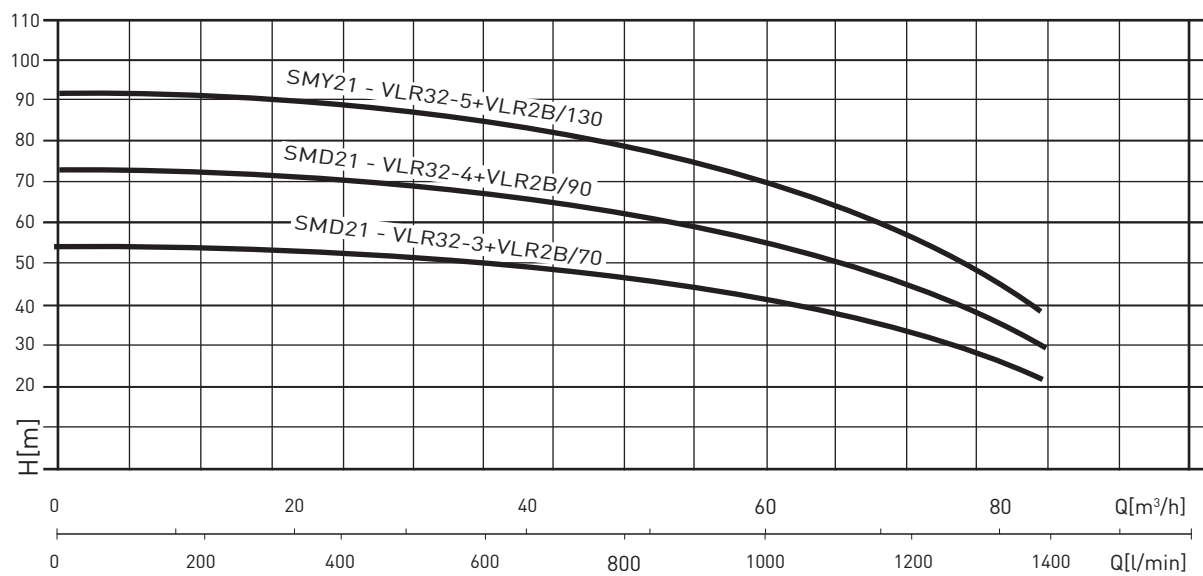
### OVERALL DIMENSIONS AND WEIGHTS

| MODEL                      | Dimensions (mm) |     |     |     |      |     |     |    |     | Weight (kg) |
|----------------------------|-----------------|-----|-----|-----|------|-----|-----|----|-----|-------------|
|                            | L1              | P1  | P2  | H1  | H3   | DNA | DNM | F  | L2  |             |
| SMD21-VLR16/30 + VLR2B/50  | 1100            | 610 | 860 | 180 | 1200 | 3"  | 3"  | 45 | 370 | 233         |
| SMD21-VLR16/40 + VLR2B/60  | 1100            | 610 | 860 | 180 | 1200 | 3"  | 3"  | 45 | 370 | 240         |
| SMD21-VLR16/50 + VLR2B/90  | 1100            | 610 | 860 | 180 | 1200 | 3"  | 3"  | 45 | 370 | 294         |
| SMD21-VLR16/60 + VLR2B/90  | 1100            | 610 | 860 | 180 | 1200 | 3"  | 3"  | 45 | 370 | 298         |
| SMD21-VLR16/70 + VLR2B/110 | 1100            | 610 | 860 | 180 | 1200 | 3"  | 3"  | 45 | 370 | 312         |

# NOCCHI SM.21 - VLR 32

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### HYDRAULIC PERFORMANCE



### PERFORMANCE TABLE

| MODEL                     | kW         | L/min           | 400 | 800 | 1000 | 1200 | 1400 |
|---------------------------|------------|-----------------|-----|-----|------|------|------|
|                           |            | m³ / h          | 24  | 48  | 60   | 72   | 84   |
| SMD21-VLR32-3 + VLR2B/70  | 2x5.5+0.75 | m.c.a. / m.w.c. | 53  | 47  | 41   | 33   | 20   |
| SMD30-VLR32-4 + VLR2B/90  | 2x7.5+1.1  |                 | 71  | 63  | 55   | 44   | 27   |
| SMY30-VLR32-5 + VLR2B/130 | 2x11+1.1   |                 | 89  | 79  | 69   | 55   | 34   |

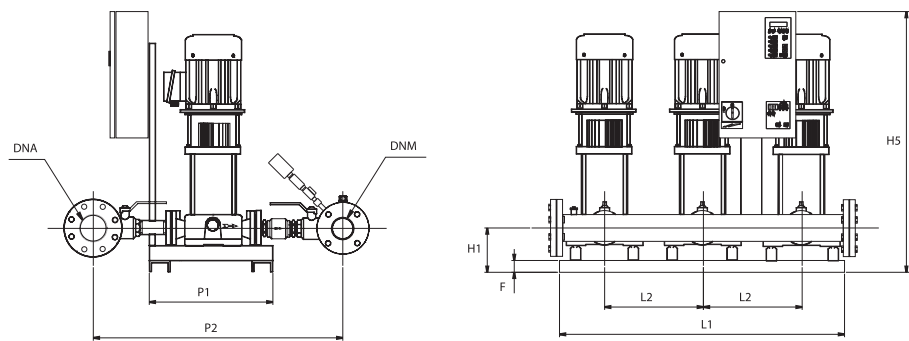
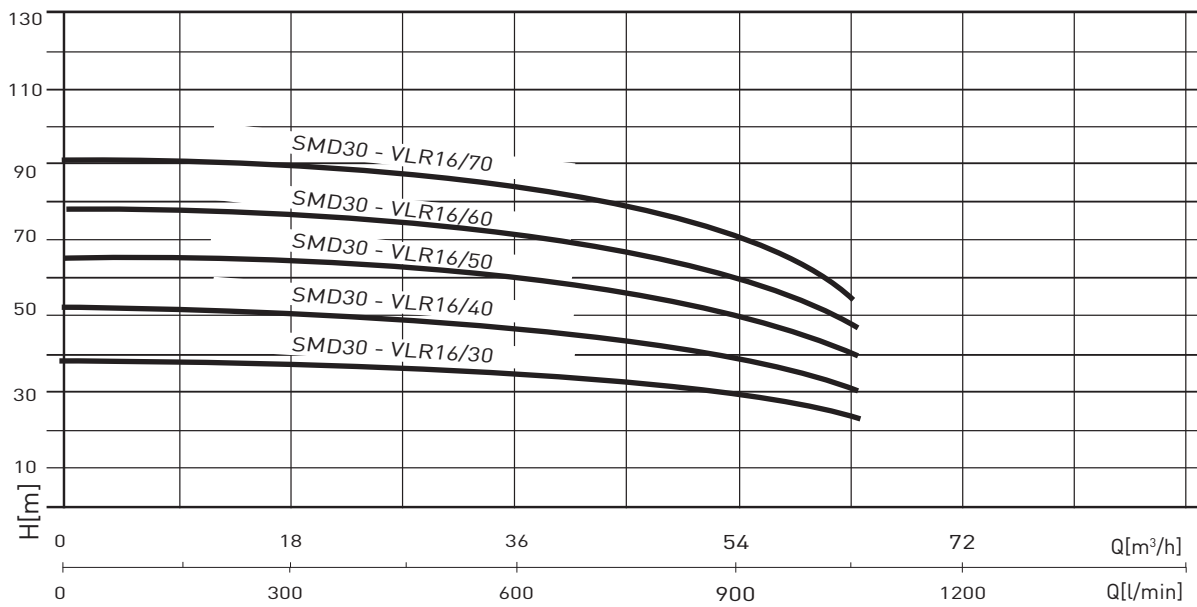
### OVERALL DIMENSIONS AND WEIGHTS

| MODEL                     | Dimensions (mm) |     |      |     |      |     |     |    |     | Weight (kg) |
|---------------------------|-----------------|-----|------|-----|------|-----|-----|----|-----|-------------|
|                           | L1              | P1  | P2   | H1  | H5   | DNA | DNM | F  | L2  |             |
| SMD21-VLR32-3 + VLR2B/70  | 1300            | 700 | 1060 | 230 | 1520 | 4"  | 4"  | 80 | 440 | 404         |
| SMD30-VLR32-4 + VLR2B/90  | 1300            | 700 | 1060 | 230 | 1520 | 4"  | 4"  | 80 | 440 | 424         |
| SMY30-VLR32-5 + VLR2B/130 | 1300            | 700 | 1060 | 230 | 1520 | 4"  | 4"  | 80 | 440 | 497         |

# NOCCHI SMD 30 - VLR 16

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### HYDRAULIC PERFORMANCE



### PERFORMANCE TABLE

| MODEL          | kW    | L/min              | 300 | 600 | 750 | 900 | 1050 |
|----------------|-------|--------------------|-----|-----|-----|-----|------|
|                |       | m <sup>3</sup> / h | 18  | 36  | 45  | 54  | 63   |
| SMD30-VLR16/30 | 3x3   | m.c.a. / m.w.c.    | 39  | 37  | 34  | 30  | 24   |
| SMD30-VLR16/40 | 3x4   |                    | 52  | 49  | 46  | 40  | 32   |
| SMD30-VLR16/50 | 3x5.5 |                    | 65  | 62  | 57  | 51  | 40   |
| SMD30-VLR16/60 | 3x5.5 |                    | 78  | 74  | 69  | 61  | 47   |
| SMD30-VLR16/70 | 3x7.5 |                    | 91  | 86  | 80  | 71  | 55   |

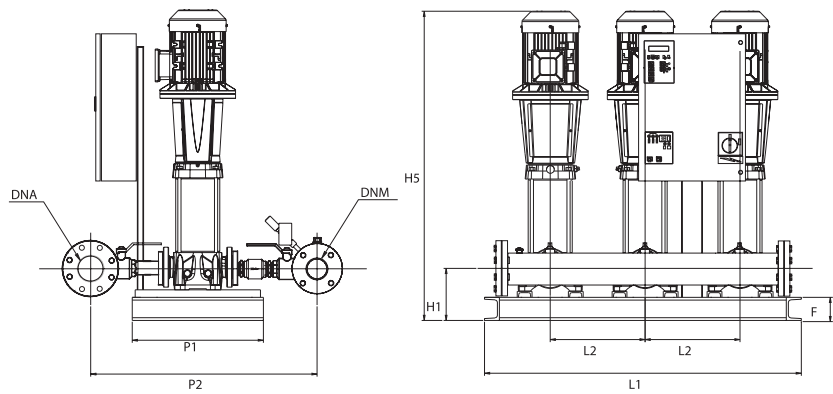
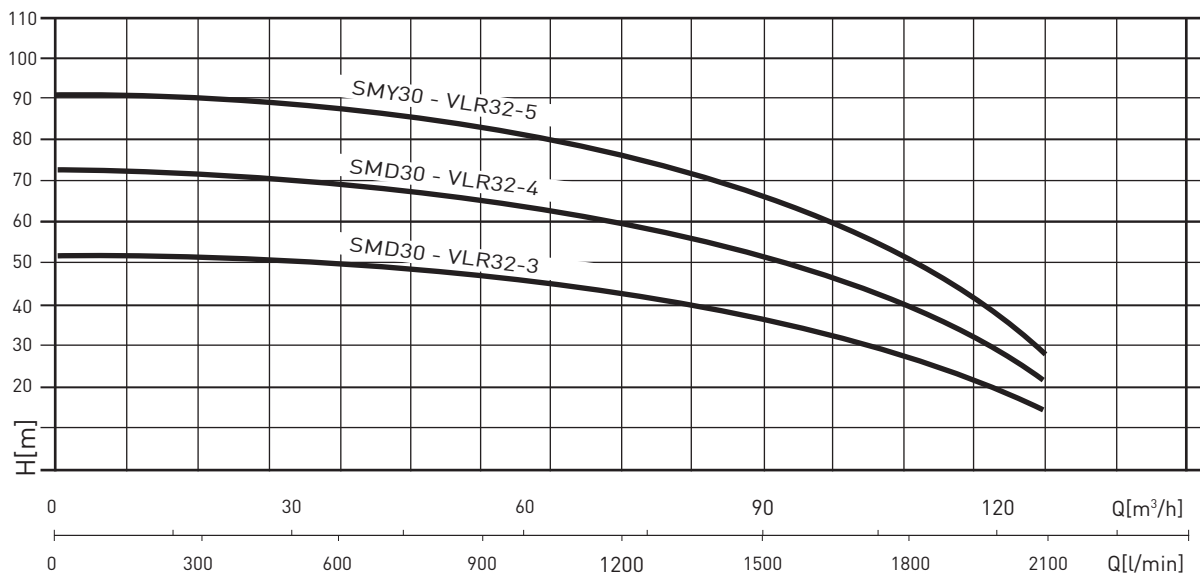
### OVERALL DIMENSIONS AND WEIGHTS

| MODEL          | Dimensions (mm) |     |     |     |      |     |     |    |     | Weight (kg) |
|----------------|-----------------|-----|-----|-----|------|-----|-----|----|-----|-------------|
|                | L1              | P1  | P2  | H1  | H5   | DNA | DNM | F  | L2  |             |
| SMD30-VLR16/30 | 1100            | 610 | 860 | 180 | 1200 | 4"  | 3"  | 45 | 370 | 264         |
| SMD30-VLR16/40 | 1100            | 610 | 860 | 180 | 1200 | 4"  | 3"  | 45 | 370 | 273         |
| SMD30-VLR16/50 | 1100            | 610 | 860 | 180 | 1200 | 4"  | 3"  | 45 | 370 | 342         |
| SMD30-VLR16/60 | 1100            | 610 | 860 | 180 | 1200 | 4"  | 3"  | 45 | 370 | 348         |
| SMD30-VLR16/70 | 1100            | 610 | 860 | 180 | 1200 | 4"  | 3"  | 45 | 370 | 366         |

# NOCCHI SM. 30 - VLR 32

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### HYDRAULIC PERFORMANCE



### PERFORMANCE TABLE

| MODEL         | kW    | L/min           | 600 | 1200 | 1500 | 1800 | 2100 |
|---------------|-------|-----------------|-----|------|------|------|------|
|               |       | m³ / h          | 36  | 72   | 90   | 108  | 126  |
| SMD30-VLR32-3 | 3x5.5 | m.c.a. / m.w.c. | 53  | 47   | 41   | 33   | 20   |
| SMD30-VLR32-4 | 3x7.5 |                 | 71  | 63   | 55   | 44   | 27   |
| SMY30-VLR32-5 | 3x11  |                 | 89  | 79   | 69   | 55   | 34   |

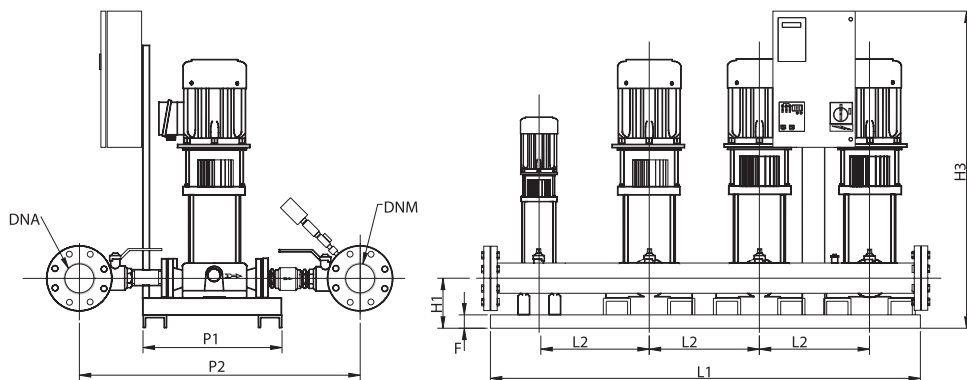
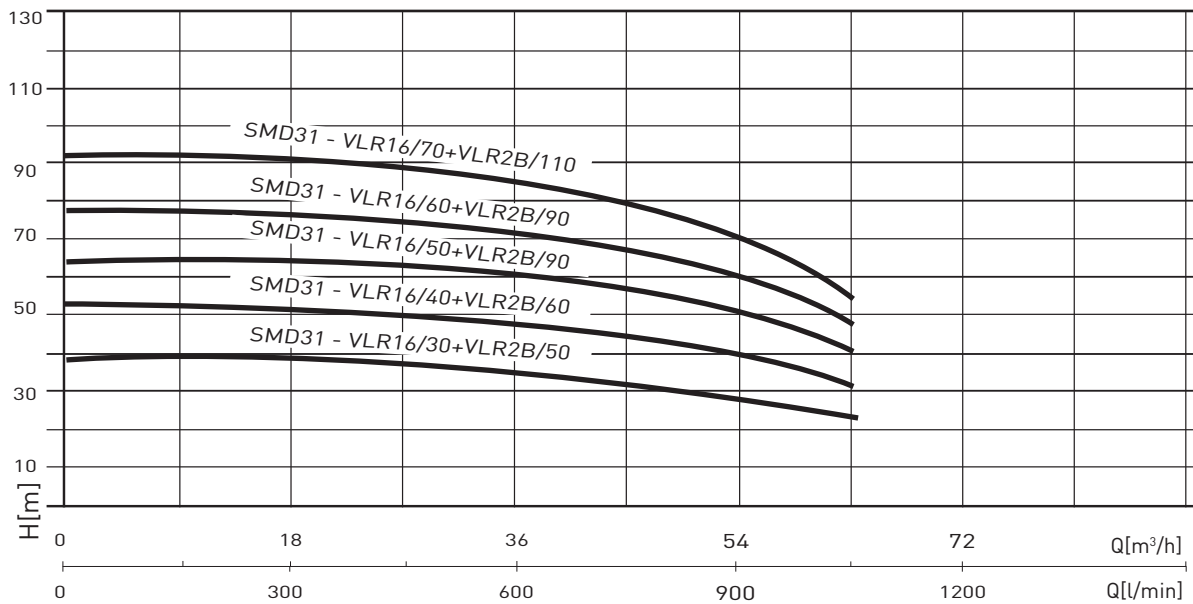
### OVERALL DIMENSIONS AND WEIGHTS

| MODEL         | Dimensions (mm) |     |      |     |      |     |     |    |     | Weight (kg) |
|---------------|-----------------|-----|------|-----|------|-----|-----|----|-----|-------------|
|               | L1              | P1  | P2   | H1  | H5   | DNA | DNM | F  | L2  |             |
| SMD30-VLR32-3 | 1300            | 700 | 1060 | 230 | 1520 | 5"  | 4"  | 80 | 440 | 526         |
| SMD30-VLR32-4 | 1300            | 700 | 1060 | 230 | 1520 | 5"  | 4"  | 80 | 440 | 550         |
| SMY30-VLR32-5 | 1300            | 700 | 1060 | 230 | 1520 | 5"  | 4"  | 80 | 440 | 670         |

# NOCCHI SMD 31 - VLR 16

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### HYDRAULIC PERFORMANCE



### PERFORMANCE TABLE

| MODEL                    | kW        | L/min              | 300 | 600 | 750 | 900 | 1050 |
|--------------------------|-----------|--------------------|-----|-----|-----|-----|------|
|                          |           | m <sup>3</sup> / h | 18  | 36  | 45  | 54  | 63   |
| SMD31-VLR16/30+VLR2B/50  | 3x3+0.55  | m.c.a. / m.w.c.    | 39  | 37  | 34  | 30  | 24   |
| SMD31-VLR16/40+VLR2B/60  | 3x4+0.75  |                    | 52  | 49  | 46  | 40  | 32   |
| SMD31-VLR16/50+VLR2B/90  | 3x5.5+1.1 |                    | 65  | 62  | 57  | 51  | 40   |
| SMD31-VLR16/60+VLR2B/90  | 3x5.5+1.1 |                    | 78  | 74  | 69  | 61  | 47   |
| SMD31-VLR16/70+VLR2B/110 | 3x7.5+1.1 |                    | 91  | 86  | 80  | 71  | 55   |

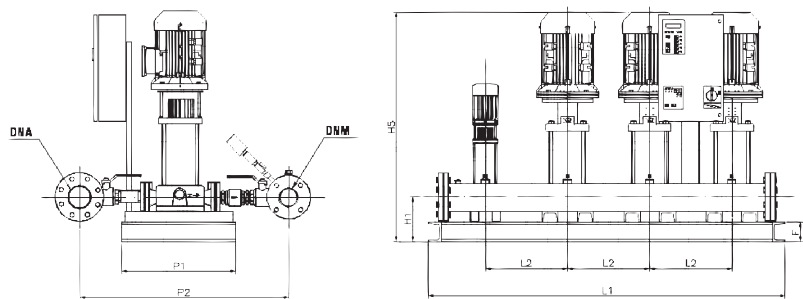
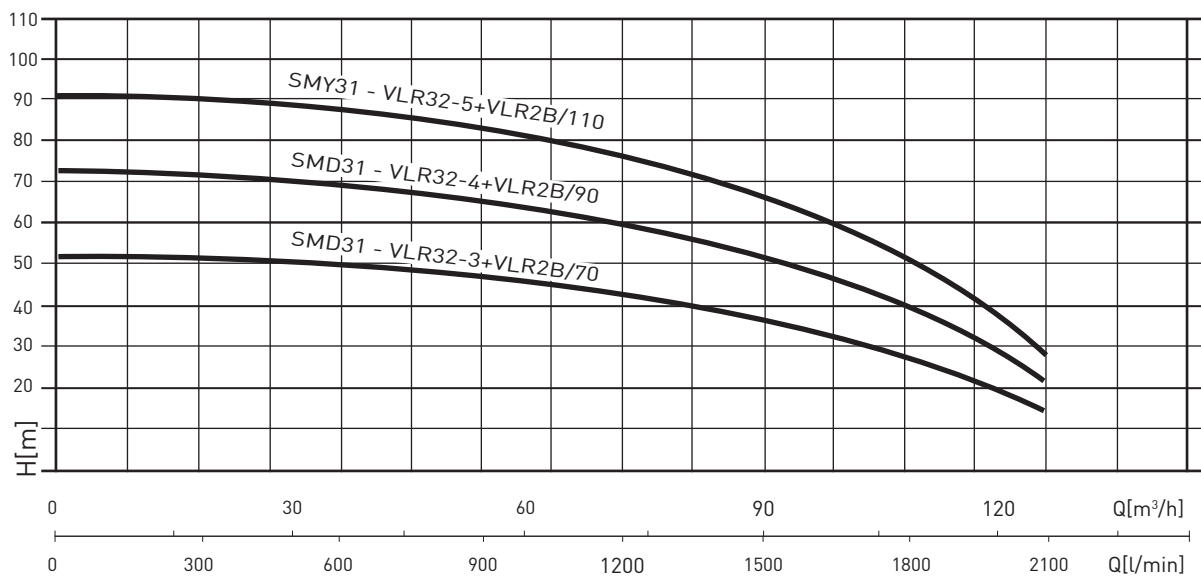
### OVERALL DIMENSIONS AND WEIGHTS

| MODEL                    | Dimensions (mm) |     |     |     |      |     |     |    |     | Weight (kg) |
|--------------------------|-----------------|-----|-----|-----|------|-----|-----|----|-----|-------------|
|                          | L1              | P1  | P2  | H1  | H3   | DNA | DNM | F  | L2  |             |
| SMD31-VLR16/30+VLR2B/50  | 1500            | 610 | 860 | 180 | 1410 | 4"  | 4"  | 45 | 370 | 354         |
| SMD31-VLR16/40+VLR2B/60  | 1500            | 610 | 860 | 180 | 1410 | 4"  | 4"  | 45 | 370 | 364         |
| SMD31-VLR16/50+VLR2B/90  | 1500            | 610 | 860 | 180 | 1410 | 4"  | 4"  | 45 | 370 | 440         |
| SMD31-VLR16/60+VLR2B/90  | 1500            | 610 | 860 | 180 | 1410 | 4"  | 4"  | 45 | 370 | 446         |
| SMD31-VLR16/70+VLR2B/110 | 1500            | 610 | 860 | 180 | 1410 | 4"  | 4"  | 45 | 370 | 470         |

# NOCCHI SMD 31 - VLR 32

## PRESSURE BOOSTER SETS WITH TRANSDUCER CONTROL

### HYDRAULIC PERFORMANCE



### PERFORMANCE TABLE

| MODEL                   | kW        | L/min           | 600 | 1200 | 1500 | 1800 | 2100 |
|-------------------------|-----------|-----------------|-----|------|------|------|------|
|                         |           | m³ / h          | 36  | 72   | 90   | 108  | 126  |
| SMD31-VLR32-3+VLR2B/70  | 3x5+0.75  | m.c.a. / m.w.c. | 53  | 47   | 41   | 33   | 20   |
| SMD31-VLR32-4+VLR2B/90  | 3x7.5+1.1 |                 | 71  | 63   | 55   | 44   | 27   |
| SMY31-VLR32-5+VLR2B/110 | 3x11+1.1  |                 | 89  | 79   | 69   | 55   | 34   |

### OVERALL DIMENSIONS AND WEIGHTS

| MODEL                   | Dimensions (mm) |     |      |     |      |     |     |    |     | Weight (kg) |
|-------------------------|-----------------|-----|------|-----|------|-----|-----|----|-----|-------------|
|                         | L1              | P1  | P2   | H1  | H5   | DNA | DNM | F  | L2  |             |
| SMD31-VLR32-3+VLR2B/70  | 1750            | 700 | 1060 | 230 | 1520 | 6"  | 5"  | 80 | 440 | 591         |
| SMD31-VLR32-4+VLR2B/90  | 1750            | 700 | 1060 | 230 | 1520 | 6"  | 5"  | 80 | 440 | 611         |
| SMY31-VLR32-5+VLR2B/110 | 1750            | 700 | 1060 | 230 | 1520 | 6"  | 5"  | 80 | 440 | 715         |