

NOCCHI PRESSOMAT

INDUSTRIAL - PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

HIGH HYDRAULIC EFFICIENCY, ROBUST, PIPELINES IN AISI 304 STAINLESS STEEL

These are automatic pressure booster sets on distribution mains with electric single phase and three phase power supply.

The pumps are controlled by two differential pressure switches with adjustable settings, connected to the analogue electronic board via an electrical panel for:

- sequential start-up of the pumps
- inversion of start-up sequence
- timer settable from 0 to 180", on three phase version only
- protection against dry-running.

When the mains pressure reaches the value for closure of the electric contact of pressure switch no. 1, the pump is started up.

If the pressure continues to fall, when

the closing value of the second pressure switch is reached, the second pump is started up.

When the mains pressure value increases, the pressure switches open their contact, leading to shutdown of the relative pump.

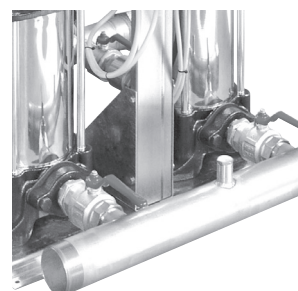
At the end of each cycle, the automatic inverter changes the pump start-up sequence (pressure switch no. 1 associated with pump no. 1, then with pump no.2 in the next cycle, and so on). In the event of simultaneous closure of the two pressure switches, the electronic board delays start-up of the second pump, 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

MATERIAL

APPLICATION DATA	VLR 2B	VLR 4	VLR 8	VLR 16	VLR 32
Maximum flow rate (m³/h)	6	14.4	24	42	84
Maximum head (m.c.a.)	125	109	103	93	90
Maximum operating pressure	16 bar				
Power supply voltage	1~230V / 3~400V			3~400V	
Ambient temperature	+50° C				
Electric pump protection rating	IP55				
El. panel protection rating	IP54				



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PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

ELECTRIC PUMP

- 2 VLR
- Centrifugal, multi-cell, vertical axis.

SUCTION MANIFOLD

In AISI 304 stainless steel with:

- 2 brass ball valves
- 2 check valves
- 1 water filling hose

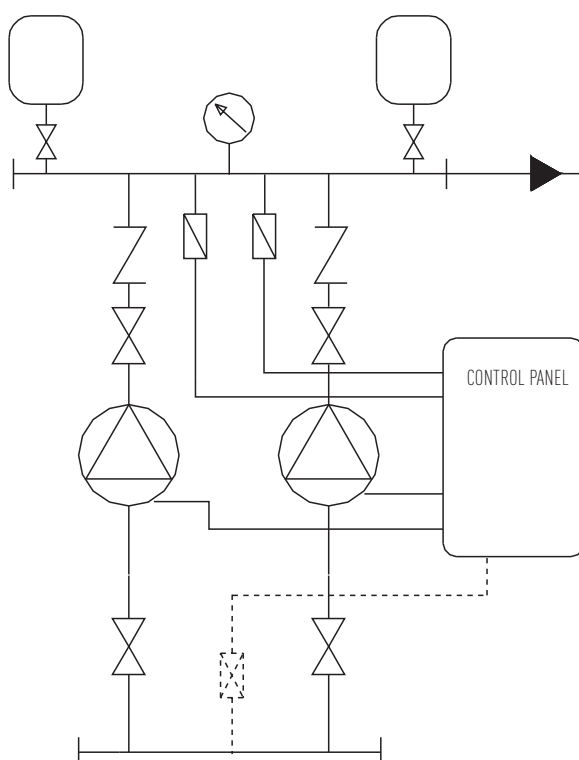
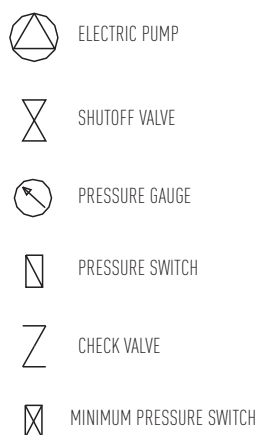
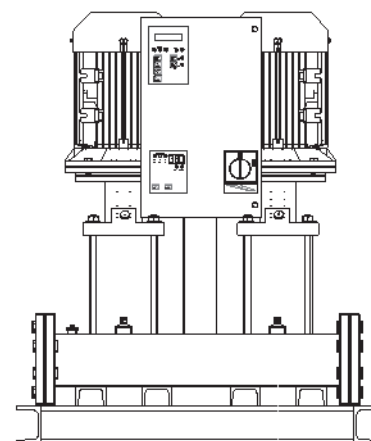
BASE

- In galvanized sheet steel on versions with VLR2B - VLR4 - VLR8 - VLR16/50.
- Profiles with galvanized steel on versions with VLR32.

DELIVERY MANIFOLD

In AISI 304 stainless steel with:

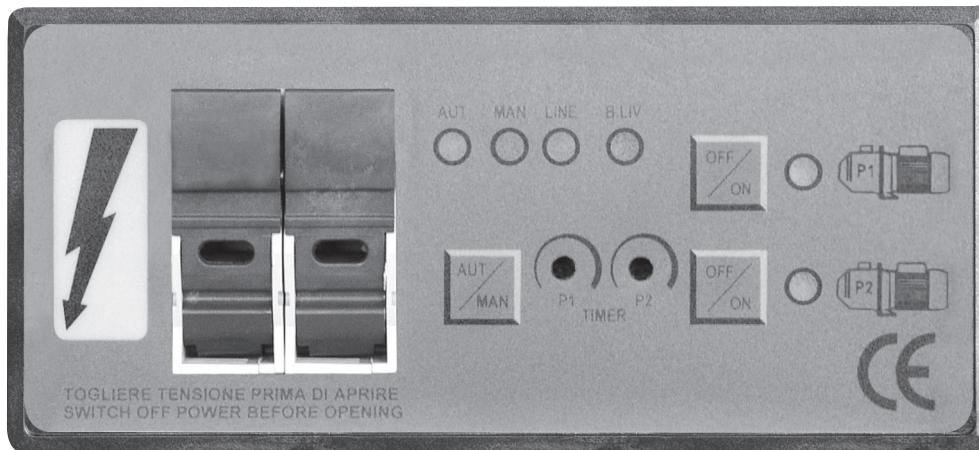
- 2 brass ball valves
- 1 pressure gauge
- 2 differential pressure switches



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PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

SINGLE PHASE ELECTRICAL PANEL



ELECTRICAL PANEL

- IP55 plastic enclosure
- Main thermal magnetic switch
- Electronic control panel with manual-automatic selection buttons for each pump.
- SML Electronic board
- Pump start relay

MAIN FUNCTIONS

- Sequential inversion of pump start-up at the end of each work cycle.
- ON/OFF control of tank level for first collection or pressure in supply pipeline via a float switch or other differential pressure switch.

SIGNALS AND CONTROLS

- Power ON indicator led
- Indicator led to signal low water level in tank on first collection or low pressure on supply line (aqueduct).
- Pump running indicator led for each pump.

EXTERNAL CONTROL DEVICES

- Two differential ON/OFF pressure switches.

EXTERNAL CONTROL DEVICES

- ON/OFF float switch installed in the water collection tank, or
- Inverse pressure switch inserted in water supply line (aqueduct).

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PRESSURE BOOSTERS WITH PRESSURE SWITCH 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.

MAIN FUNCTIONS

- Sequential inversion of pump start-up at the end of each work cycle.
- ON/OFF control of tank level for first collection or pressure in supply pipeline via a float switch or other differential pressure switch.
- Pump timer, settable between 0 and 180 sec., after opening of pressure switch operation contact.

SIGNALS AND CONTROLS

- Power ON indicator led.
- Indicator led to signal low water level in tank on first collection or low pressure on supply line (aqueduct).
- Pump running indicator led for each pump.
- Indicator led to signal trip of one of the two overload thermal cut-outs.
- Automatic/Manual mode indicator led.
- Buttons for selection of automatic or manual control.
- Buttons for start and stop of each pump (manual mode).

EXTERNAL CONTROL DEVICES

- Two differential ON/OFF pressure switches.

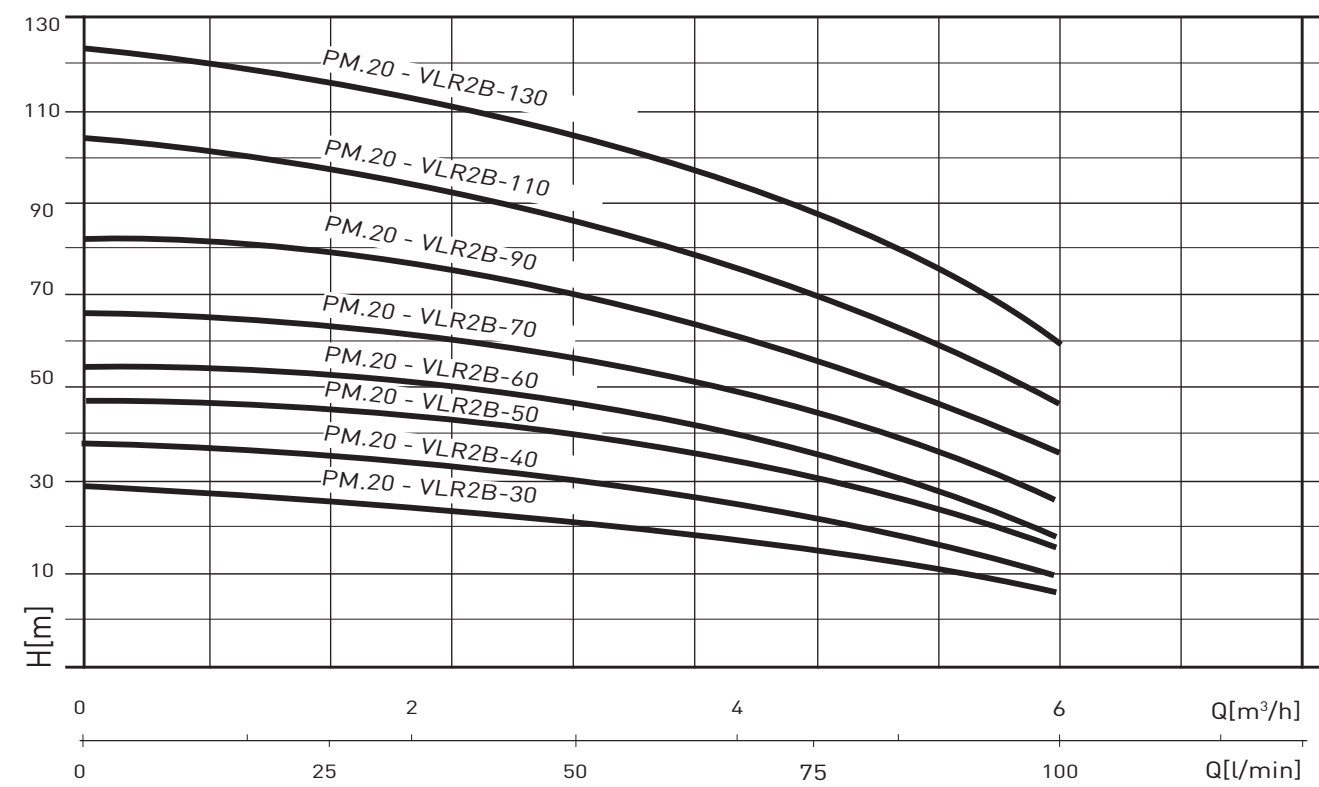
EXTERNAL CONTROL DEVICES

- ON/OFF float switch installed in the water collection tank, or
- 3 electrodes for electronic level control in first collection tank, or
- Inverse pressure switch inserted in water supply line (aqueduct).

NOCCHI PM.20 - VLR 2B

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

HYDRAULIC PERFORMANCE



PERFORMANCE TABLE

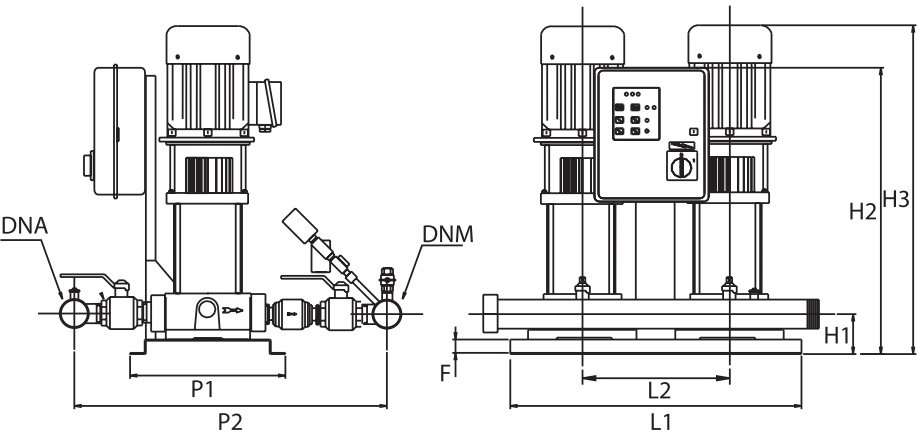
MODEL	kW	Q	L/min	20	40	60	80	100
			m³/h	1.2	2.4	3.6	4.8	6
PM.20-VLR 2B-30	2x0.37	m.c.a. / m.w.c.		27	26	23	20	15
PM.20-VLR 2B-40	2x0.55			36	34	31	26	20
PM.20-VLR 2B-50	2x0.55			45	43	39	33	25
PM.20-VLR 2B-60	2x0.75			54	51	46	39	30
PM.20-VLR 2B-70	2x0.75			64	60	54	46	35
PM.20-VLR 2B-90	2x1.1			82	77	70	59	45
PM.20-VLR 2B-110	2x1.1			100	94	85	72	55
PM.20-VLR 2B-130	2x1.5			118	111	101	85	65

NOCCHI PM.20 - VLR 2B

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

OVERALL DIMENSIONS AND WEIGHTS

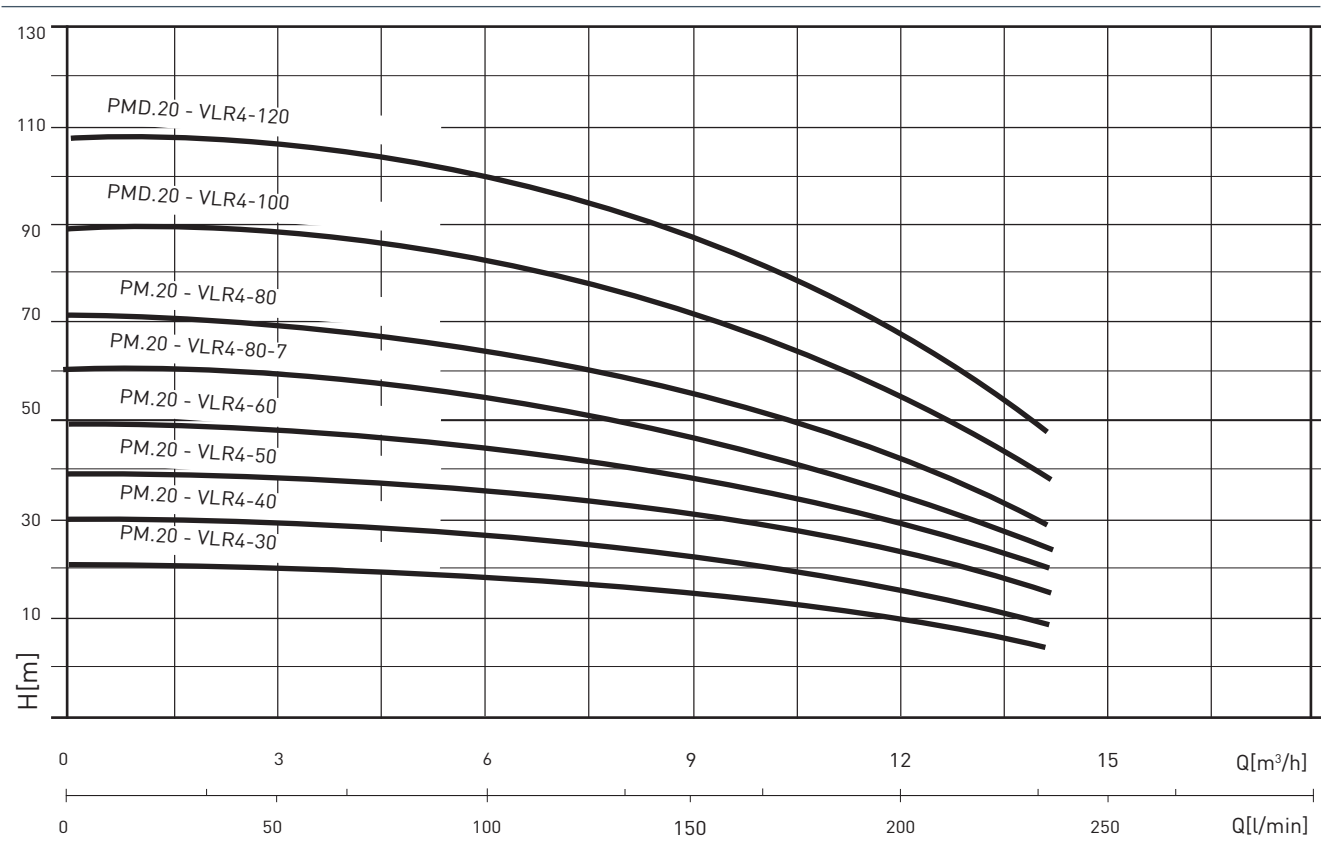
MODEL	Dimensions (mm)										Net weight (kg)	
	L1	P1	P2	H1	H2	H3	DNA	DNM	F	L2	230 V	400V
PM.20-VLR 2B-30	600	320	620	80	775	481	2"	2"	30	370	64	70
PM.20-VLR 2B-40	600	320	620	80	775	499	2"	2"	30	370	68	74
PM.20-VLR 2B-50	600	320	620	80	775	517	2"	2"	30	370	72	78
PM.20-VLR 2B-60	600	320	620	80	775	563	2"	2"	30	370	74	80
PM.20-VLR 2B-70	600	320	620	80	775	581	2"	2"	30	370	88	94
PM.20-VLR 2B-90	600	320	620	80	775	617	2"	2"	30	370	90	96
PM.20-VLR 2B-110	600	320	620	80	775	653	2"	2"	30	370	94	100
PM.20-VLR 2B-130	600	320	620	80	775	763	2"	2"	30	370	96	102



NOCCHI PM.20 - VLR 4

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

HYDRAULIC PERFORMANCE



PERFORMANCE TABLE

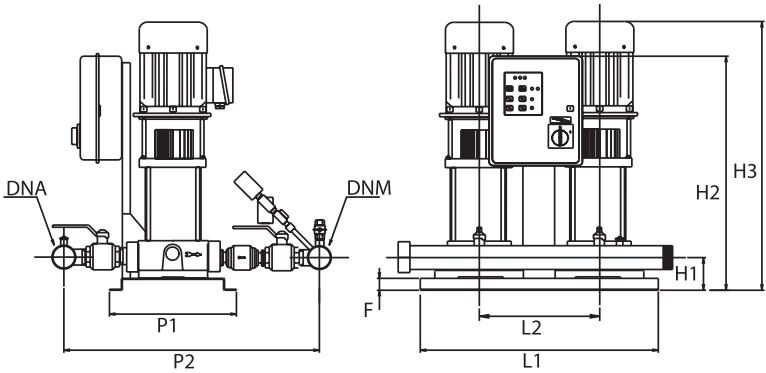
MODEL	kW	Q	L/min	80	120	160	200	240
			m³/h	4.8	7.2	9.6	12.0	14.4
PM.20-VLR4/30	2x0.55	m.c.a./m.w.c.		27	25	22	18	13
PM.20-VLR4/40	2x0.75			35	33	29	24	18
PM.20-VLR4/50	2x1.1			44	41	36	30	22
PM.20-VLR4/60	2x1.1			53	49	44	36	27
PM.20-VLR4/80	2x1.5			62	58	21	43	31
PM.20-VLR4/80-7	2x1.5			71	66	58	49	35
PMD20-VLR4/100	2x2.2			89	82	73	61	44
PMD20-VLR4/120	2x2.2			106	99	87	73	53

NOCCHI PM.20 - VLR 4

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

OVERALL DIMENSIONS AND WEIGHTS

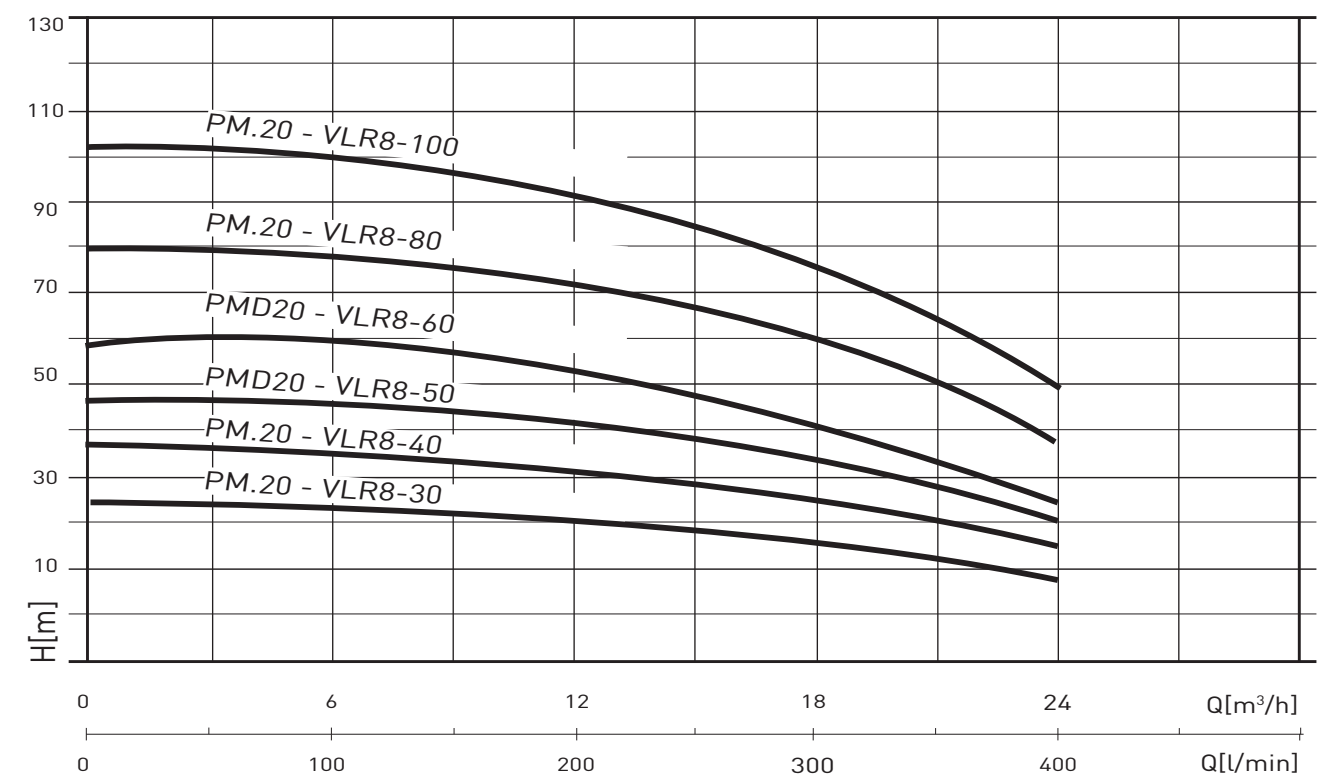
MODEL	Dimensions (mm)										Weight (kg)	
	L1	P1	P2	H1	H2	H3	DNA	DNM	F	L2	230 V	400 V
PM.20-VLR4/30	600	320	620	80	775	508	2"	2"	30	370	60	70
PM.20-VLR4/40	600	320	620	80	775	563	2"	2"	30	370	68	74
PM.20-VLR4/50	600	320	620	80	775	590	2"	2"	30	370	72	78
PM.20-VLR4/60	600	320	620	80	775	617	2"	2"	30	370	74	80
PM.20-VLR4/80	600	320	620	80	775	718	2"	2"	30	370	88	94
PM.20-VLR4/80-7	600	320	620	80	775	718	2"	2"	30	370	88	94
PMD20-VLR4/100	600	320	620	80	775	772	2"	2"	30	370		100
PMD20-VLR4/120	600	320	620	80	775	826	2"	2"	30	370		102



NOCCHI PM.20 - VLR 8

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

HYDRAULIC PERFORMANCE



PERFORMANCE TABLE

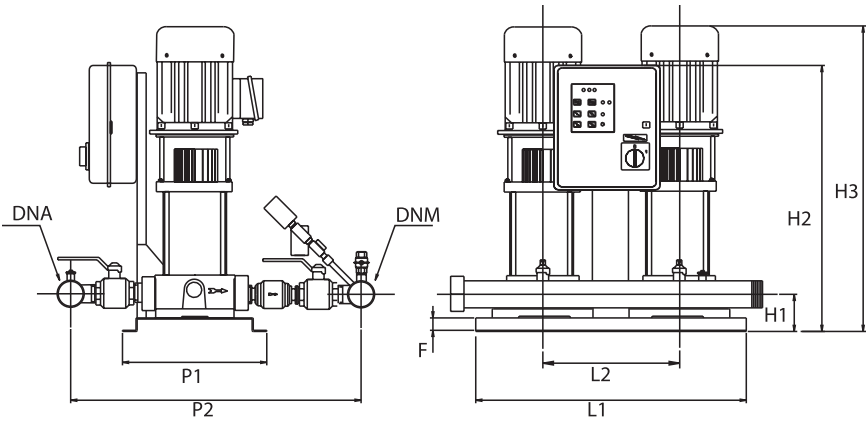
MODEL	kW	Q	L/min	100	200	300	350	400
			m³/h	6	12	18	21	24
PM.20-VLR8/30	2x1.1	m.c.a./m.w.c.		31	29	24	21	16
PM.20-VLR8/40	2x1.5			41	38	32	27	22
PMD20-VLR8/50	2x2.2			52	48	40	34	27
PMD20-VLR8/60	2x2.2			62	58	48	41	33
PMD20-VLR8/80	2x3			82	77	64	55	44
PMD20-VLR8/100	2x4			103	96	80	69	55

NOCCHI PM.20 - VLR 8

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

OVERALL DIMENSIONS AND WEIGHTS

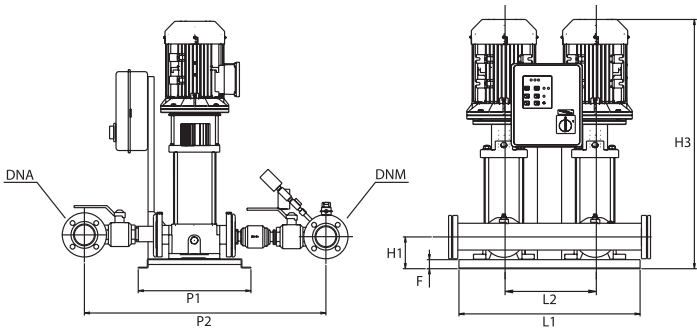
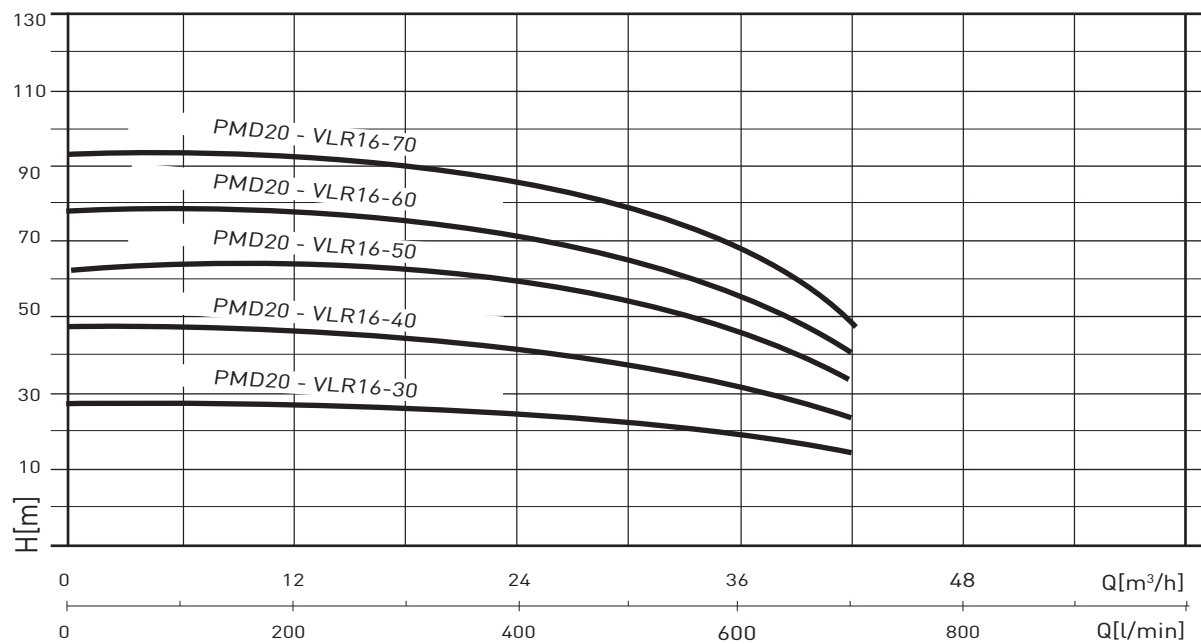
MODEL	Dimensions (mm)										Weight (kg)	
	L1	P1	P2	H1	H2	H3	DNA	DNM	F	L2	230 V	400 V
PM.20-VLR8/30	620	320	720	120	775	642	2"1/2	2"1/2	30	370	92	98
PM.20-VLR8/40	620	320	720	120	775	715	2"1/2	2"1/2	30	370	108	114
PMD20-VLR8/50	620	320	720	120	775	745	2"1/2	2"1/2	30	370		118
PMD20-VLR8/60	620	320	720	120	775	775	2"1/2	2"1/2	30	370		120
PMD20-VLR8/80	680	320	720	120	775	890	2"1/2	2"1/2	30	370		136
PMD20-VLR8/100	680	320	720	120	775	970	2"1/2	2"1/2	30	370		146



NOCCHI PM.20 - VLR 16

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

HYDRAULIC PERFORMANCE



PERFORMANCE TABLE

MODEL	kW	Q	L/min	200	400	500	600	700
			m³/h	12	24	30	36	42
PMD20-VLR16/30	2x3	m.c.a. / m.w.c.		39	37	34	30	24
PMD20-VLR16/40	2x4			52	49	46	40	32
PMD20-VLR16/50	2x5.5			65	62	57	51	40
PMD20-VLR16/60	2x5.5			78	74	69	61	47
PMD20-VLR 16/70	2x7.5			101	95	90	80	67

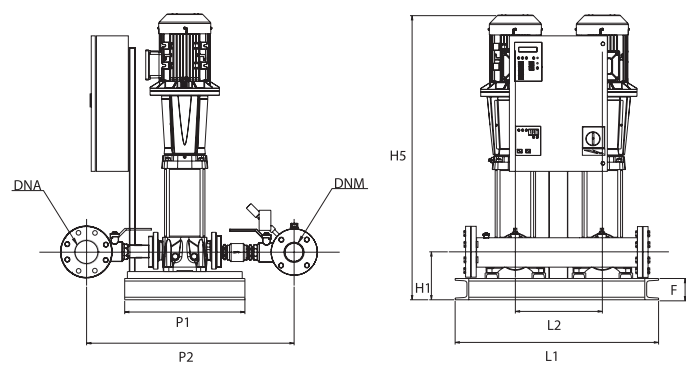
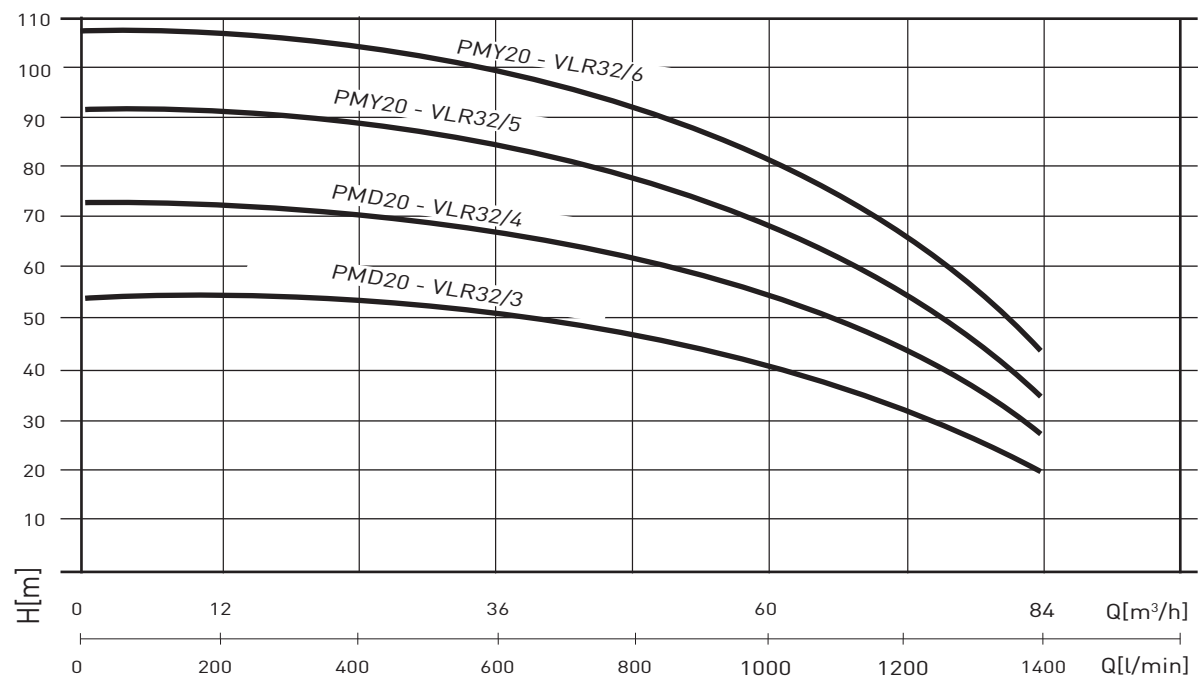
OVERALL DIMENSIONS AND WEIGHTS

MODEL	Dimensions (mm)									Weight (kg)
	L1	P1	P2	H1	H3	DNA	DNM	F	L2	
PMD20-VLR16/30	620	380	860	120	809	3"	2"1/2	30	370	171
PMD20-VLR16/40	620	380	860	120	874	3"	2"1/2	30	370	177
PMD20-VLR16/50	620	380	860	120	990	3"	2"1/2	30	370	223
PMD20-VLR16/60	620	380	860	120	1035	3"	2"1/2	30	370	227
PMD20-VLR 16/70	620	380	860	180	1230	3"	2"1/2	45	370	256

NOCCHI PM.20 - VLR 32

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

HYDRAULIC PERFORMANCE



PERFORMANCE TABLE

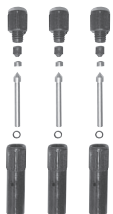
MODEL	kW	Q	L/min	400	800	1000	1200	1400
			m³/h	24	48	60	72	84
PMD20-VLR32-3	2x5.5	m.c.a. / m.w.c.	53	47	41	33	20	
PMD20-VLR32-4	2x7.5		71	63	55	44	27	
PMY20-VLR32-5	2x11		89	79	69	55	34	
PMY20-VLR32-6	2x11		106	94	82	76	41	

OVERALL DIMENSIONS AND WEIGHTS

MODEL	Dimensions (mm)									Weight (kg)
	L1	P1	P2	H1	H5	DNA	DNM	F	L2	
PMD20-VLR32-3	860	700	1060	230	1400	4"	3"	80	440	348
PMD20-VLR32-4	860	700	1060	230	1400	4"	3"	80	440	364
PMY20-VLR32-5	860	700	1060	230	1400	4"	3"	80	440	432
PMY20-VLR32-6	860	700	1060	230	1400	4"	3"	80	440	442

NOCCHI ACCESSORIES

PRESSURE BOOSTERS WITH PRESSURE SWITCH CONTROL

ACCESSORIES	DESCRIPTION	Residential		Industrial
		230 V	400 V	400 V
	Float switch for protection against dry running	X	X	X
	Differential pressure switch for inhibition in event of mains pressure failure	X	X	X
	Electrodes for electronic level control		X	X
	Membrane autoclaves	X	X	X
	Kit of couplings for expansion tanks	X	X	Included

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