

## NOCCHI PRESSOMAT

### PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

HIGH HYDRAULIC EFFICIENCY, STURDY, PIPING IN STAINLESS STEEL AISI 304

These are automatic pressure booster set for the pressurization of distribution networks with single phase and three-phase power supply.

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

- the sequential start-up of the pumps
- the inversion of the start-up order
- timer settable from 0 to 180», only for the three-phase version
- protection against dry running

When the network pressure reaches the value for the closing of the electrical contact of pressure switch n.1, a pump starts.

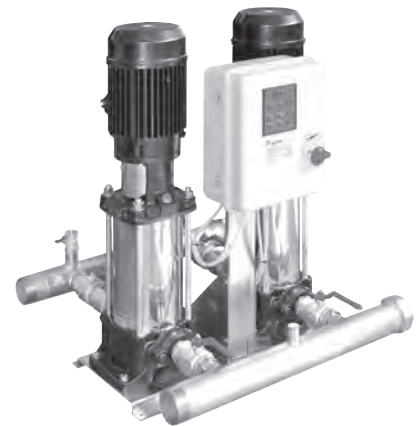
If the pressure continues to fall, when

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

When the value of the network pressure increases, the pressure switches open their contact causing the relative pump to stop.

At the end of each cycle, the automatic inverter changes the starting order of the pumps (once pressure switch n.1 is associated to pump n.1; in the next cycle to pump n.2).

If the two pressure switches close at the same time, the electronic board will delay the start-up of the second pump avoiding abrupt changes in pressure and the overload of the power supply.



NUMBER OF PUMPS		MAXIMUM CAPACITY	
Main	Pilot	l/min	m <sup>3</sup> /h
2	-	1320	80

#### MATERIAL

USAGE DATA	PVM 3	PVM 5	PVM 10	PVM 15	PVM 20	PVM 32
Maximum capacity (m <sup>3</sup> /h)	9	17	26	47	58	80
Maximum head (m.c.a.)	160	160	160	125	145	120
Maximum operating pressure	16 bar					
Power supply VOLT	1 ~ 230 / 3-400 V			3-400 V		
Ambient temperature	50° C					
Degree of protection of pump	IP55					
Degree of protection of electrical panel	IP54					

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## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### PUMP

- n. 2 PVM
- Centrifugal, multicellular, vertical axis

### SUCTION MANIFOLD

In steel AISI 304 with:

- n. 2 brass ball valves
- n. 2 check valves
- n. 1 sleeve for water load

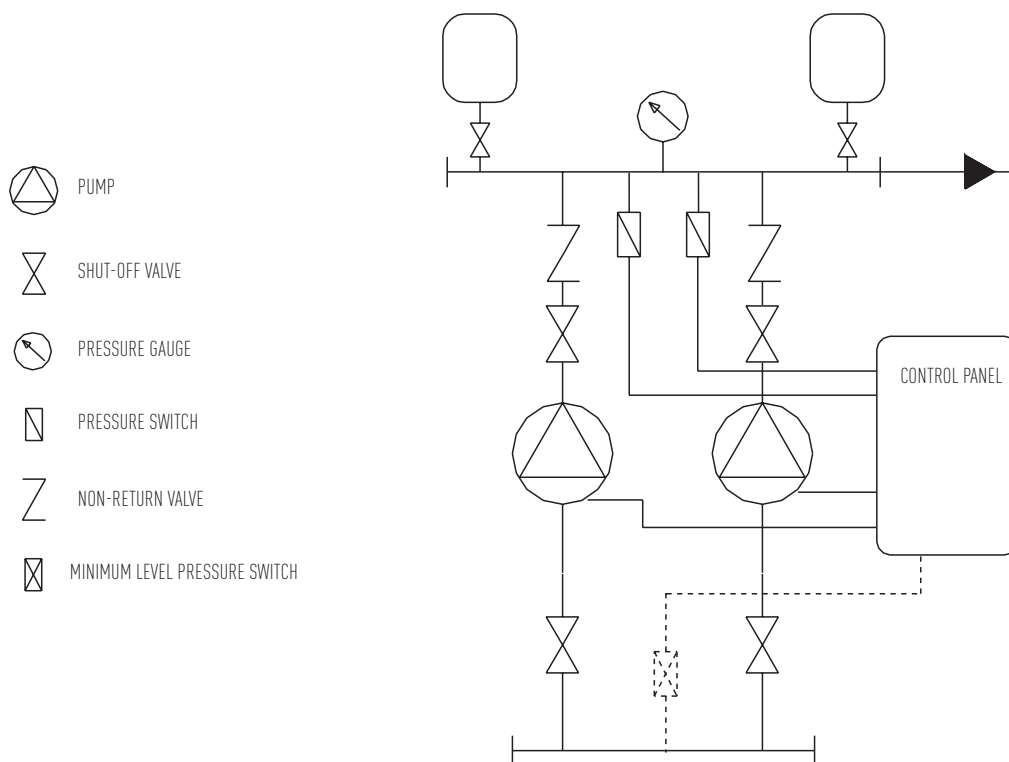
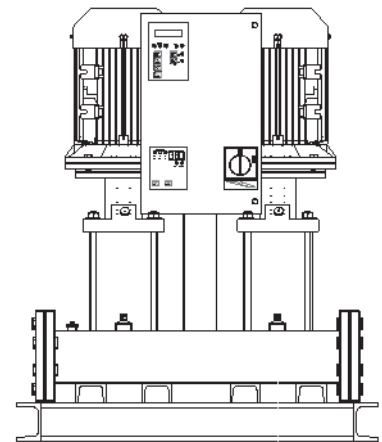
### BASE

- In galvanized metal
- Galvanized steel profiles

### DELIVERY MANIFOLD

In steel AISI 304 with:

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

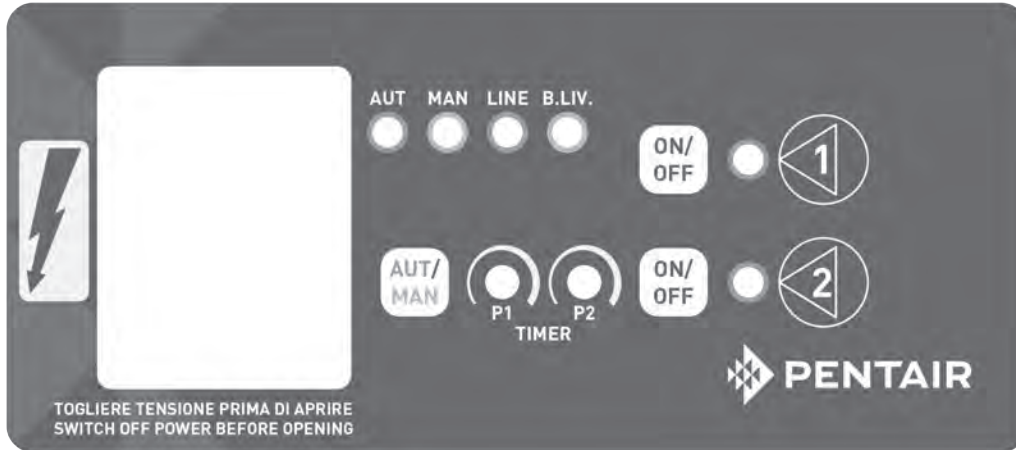


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## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### SINGLE PHASE ELECTRICAL PANEL

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#### ELECTRICAL PANEL

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- Box in plastic material IP55
- Main circuit breaker
- Electronic control panel with manual - automatic buttons for each pump
- SML electronic board
- Pump start-up relay

#### MAIN FUNCTIONS

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- Cyclic inversion of the start-up order of the pumps after each cycle end.
- ON/OFF control of the level of the tank or the pressure of the supply duct by means of a float switch or a different differential pressure switch.

#### SIGNALS AND CONTROLS

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- LED indicating the presence of power.
- LED indicating the low water level in the tank or an insufficient pressure in the supply duct (aqueduct).
- LED indicating the operation of each pump.

#### EXTRENAL CONTROL DEVICES

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- Two adjustable differential pressure switches ON/OFF

#### EXTRENAL CONTROL DEVICES

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- ON/OFF float switch, located in the water collection tank, or
- Reverse pressure switch inserted in the water supply duct (aqueduct)

# NOCCHI PRESSOMAT

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### THREE-PHASE ELECTRICAL PANEL

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#### ELECTRICAL PANEL

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- Box in metal IP54
- Main switch
- Keyboard with electronic board SA
- Fuses, contactor and thermal relay for each pump
- Transformer with fuses for the auxiliary circuit
- M-0-T switch for each pump
- Star-delta starter for motors above 7.5 kW

#### MAIN FUNCTIONS

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- Cyclic inversion of the start-up order of the pumps after each cycle end.
- ON/OFF control of the level of the tank or the pressure of the supply duct by means of a float switch or a different differential pressure switch.
- Timer of the pumps settable from 0 to 180 seconds, after the opening of the pressure switch operation contact.

#### SIGNALS AND CONTROLS

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- LED indicating the presence of power.
- LED indicating the low water level in the tank or an insufficient pressure in the supply duct (aqueduct).
- LED indicating the operation of each pump.
- LED indicating that one of the two thermal relays has tripped because of an overload.
- LED indicating manual or automatic operation.
- Buttons to select manual or automatic control.
- Buttons to start or stop each pump (manual operation).

#### EXTRENAL CONTROL DEVICES

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- Two adjustable differential pressure switches ON/OFF

#### EXTRENAL CONTROL DEVICES

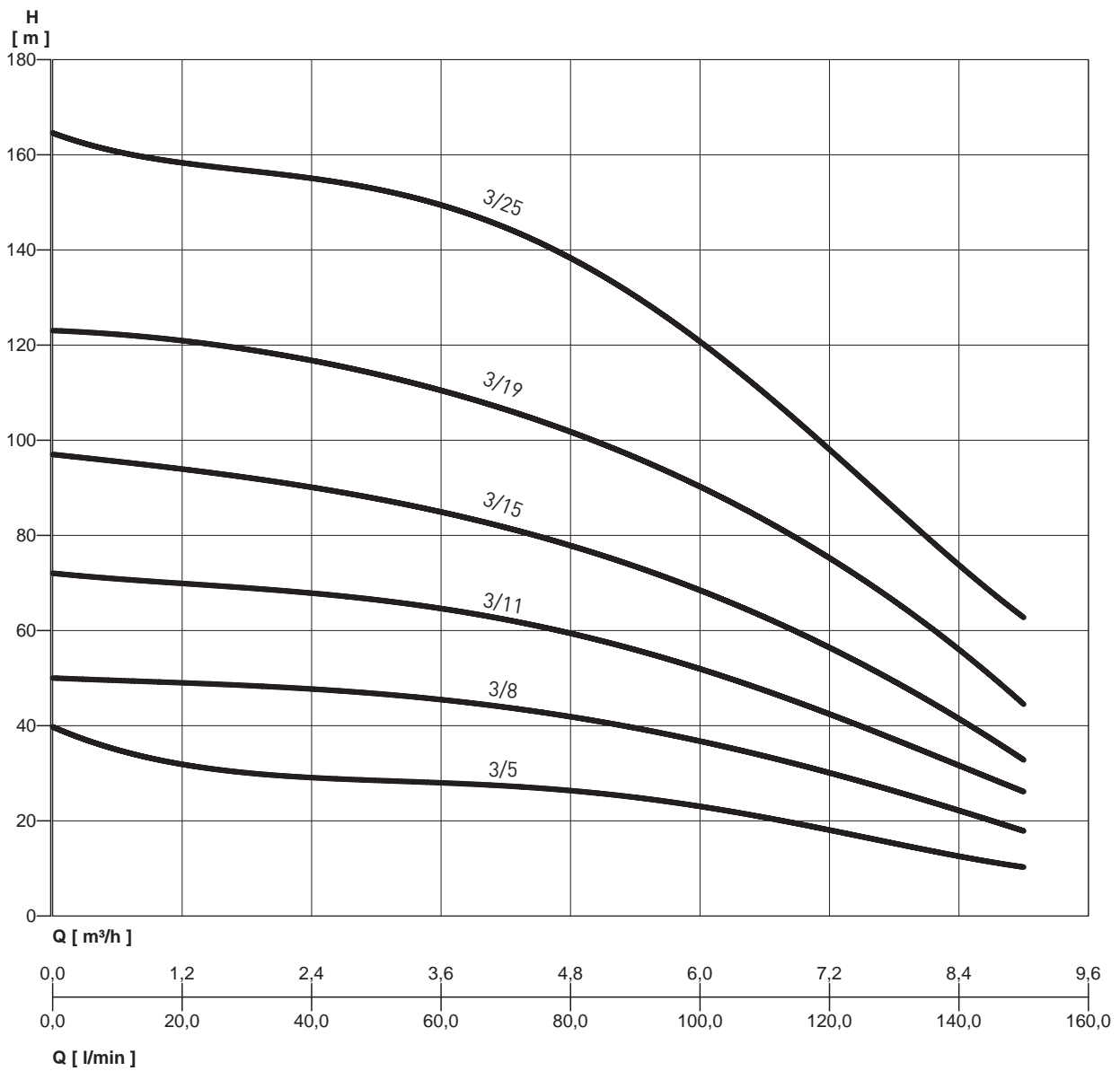
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- ON/OFF float switch, located in the water collection tank, or
- 3 electrodes for the electronic control of the level of the tank, or
- Reverse pressure switch inserted in the water supply duct (aqueduct)

# NOCCHI PMS20 PVM - PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### HYDRAULIC PERFORMANCE



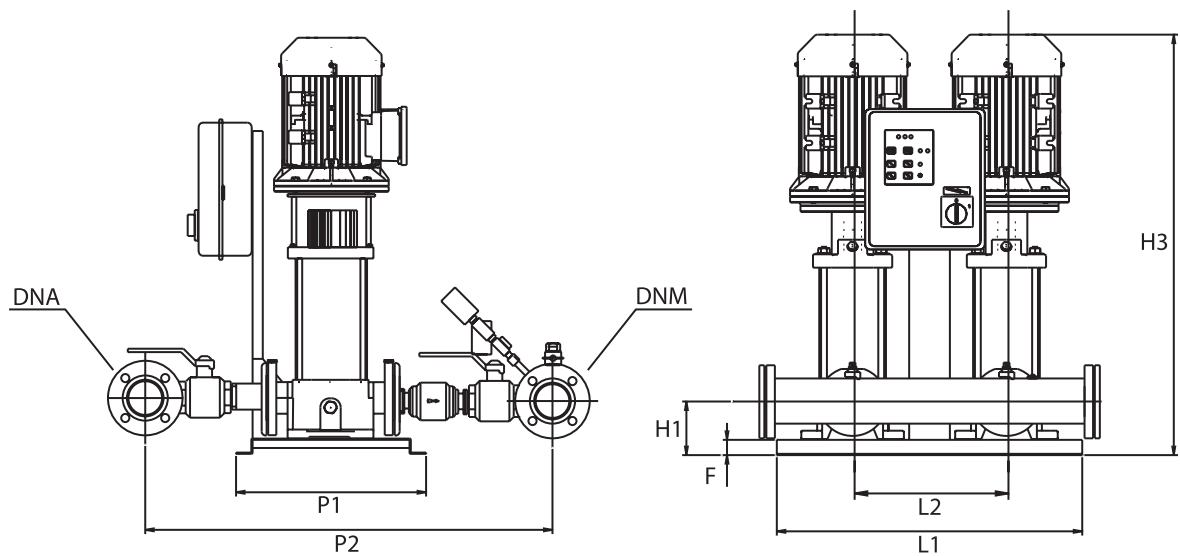
# NOCCHI PMS20 PVM - PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### PERFORMANCE TABLE

MODEL	P2	VOLT. (V)	Q	U/min m <sup>3</sup> /h	0	20	40	60	80	100	120	140	150
	kW				0	1	2	4	5	6	7	8	9
PMS20 PVM 3-5 PMD20 PVM 3-5	2x0.37	1 - 230 3 - 400	m.c.w.		40	31	30	28	26	23	18	13	10
PMS20 PVM 3-5 PMD20 PVM 3-8	2x0.75	1 - 230 3 - 400		50	49	48	45	42	37	30	22	18	
PMS20 PVM 3-11 PMD20 PVM 3-11	2x1.1	1 - 230 3 - 400		72	70	68	64	60	52	42	32	26	
PMS20 PVM 3-15 PMD20 PVM 3-15	2x1.1	1 - 230 3 - 400		97	94	90	85	78	68	57	41	33	
PMS20 PVM 3-19 PMD20 PVM 3-19	2x1.5	1 - 230 3 - 400		123	121	117	110	102	90	76	55	45	
PMD20 PVM 3-25	2x2.2	3 - 400		165	157	156	150	138	120	98	75	62	

For VOLT values, see the data of the reference pump



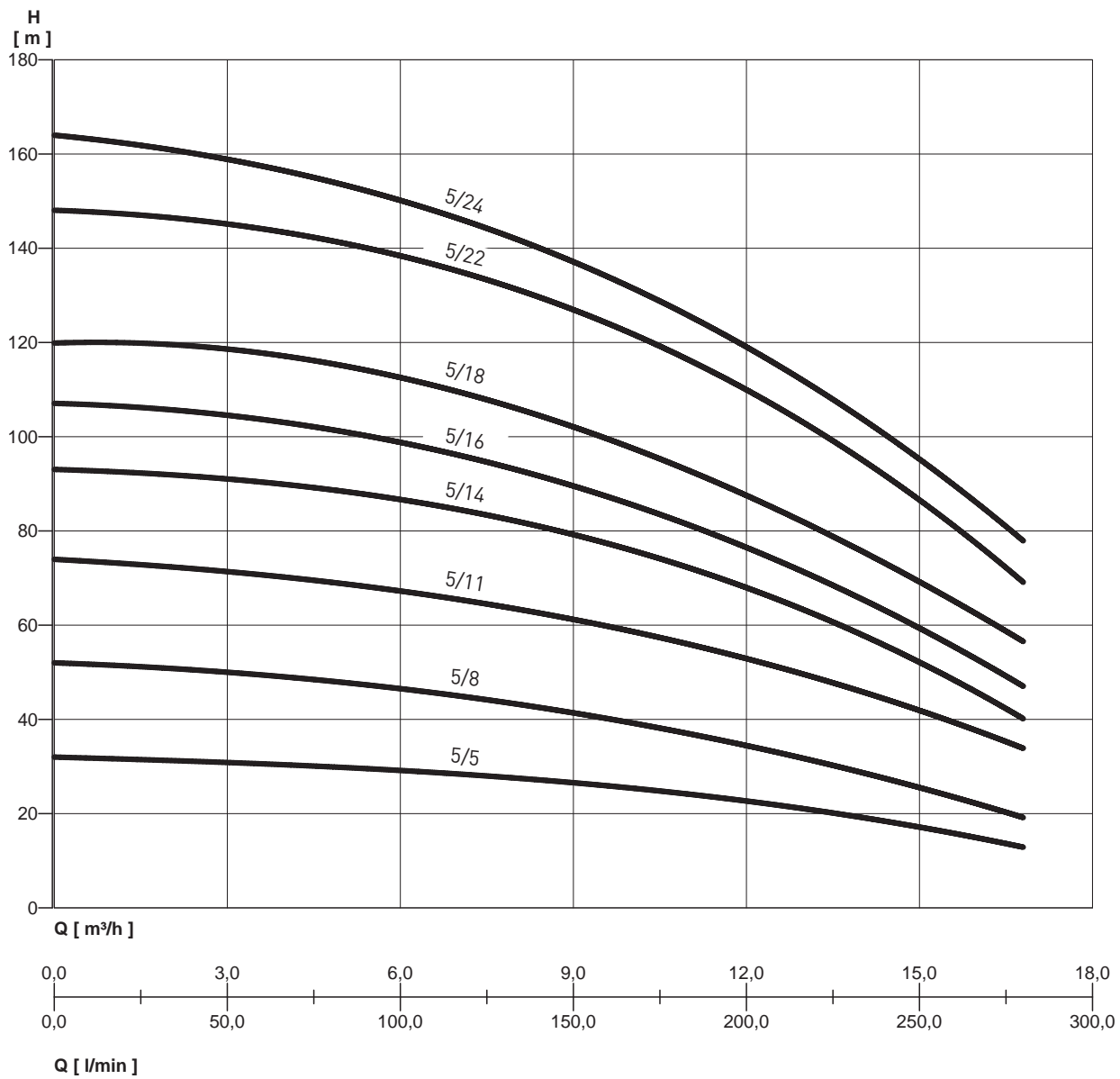
### OVERALL DIMENSIONS AND WEIGHTS

MODEL	Dimensions in mm.										WEIGHT (Kg)
	L1	P1	P2	H1	H2	H3	DNA	DNM	F	L2	
PMS20 PVM 3-5	600	320	620	80	775	510	2"	2"	30	370	62
PMD20 PVM 3-5	600	320	620	80	775	510	2"	2"	30	370	72
PMS20 PVM 3-8	600	320	620	80	775	610	2"	2"	30	370	68
PMD20 PVM 3-8	600	320	620	80	775	610	2"	2"	30	370	74
PMS20 PVM 3-11	600	320	620	80	775	664	2"	2"	30	370	74
PMD20 PVM 3-11	600	320	620	80	775	664	2"	2"	30	370	80
PMS20 PVM 3-15	600	320	620	80	775	736	2"	2"	30	370	89
PMD20 PVM 3-15	600	320	620	80	775	736	2"	2"	30	370	95
PMS20 PVM 3-19	600	320	620	80	775	880	2"	2"	30	370	100
PMD20 PVM 3-19	600	320	620	80	775	880	2"	2"	30	370	106
PMD20 PVM 3-25	600	320	620	80	775	988	2"	2"	30	370	122

# NOCCHI PMS20 PVM - PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### HYDRAULIC PERFORMANCE



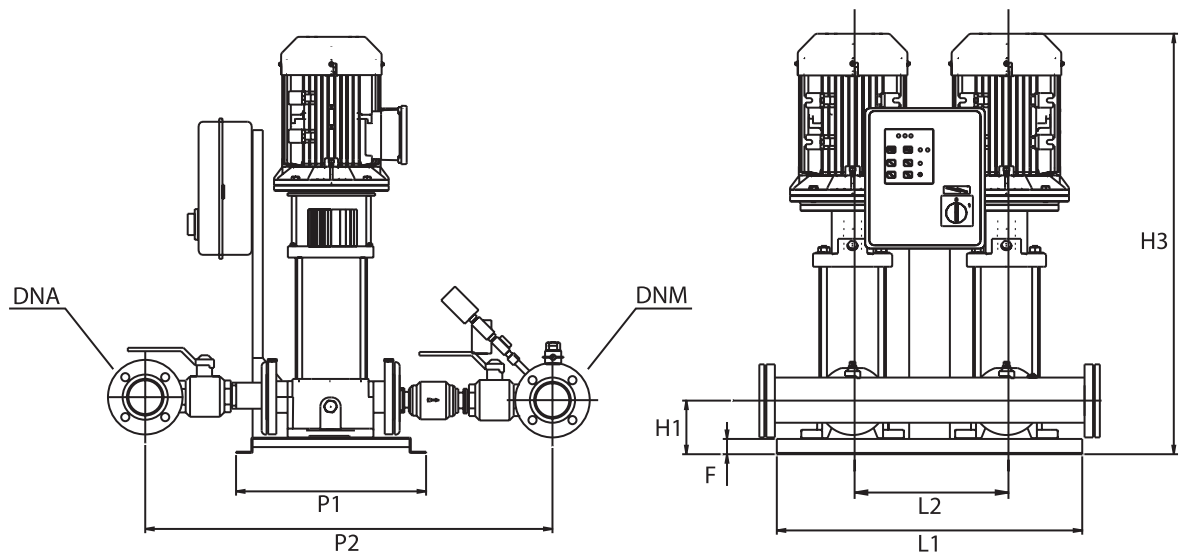
# NOCCHI PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### PERFORMANCE TABLE

MODEL	P2	VOLT. (V)	Q	l/min	0	80	120	160	200	240	280
	kW			m <sup>3</sup> /h	0	4,8	7,2	9,6	12	14,4	16,8
PMS20 PVM 5-5 PMD20 PVM 5-5	2x0.75	1 ~ 230 3 ~ 400	m.c.w.	32	30	28	26	23	18	13	
PMS20 PVM 5-8 PMD20 PVM 5-8	2x1.1	1 ~ 230 3 ~ 400		52	48	45	40	34	28	19	
PMD20 PVM 5-11	2x2.2	3 ~ 400		74	69	65	60	53	44	34	
PMD20 PVM 5-14	2x2.2	3 ~ 400		93	89	84	77	68	56	40	
PMD20 PVM 5-16	2x2.2	3 ~ 400		107	102	95	87	77	63	47	
PMD20 PVM 5-18	2x3	3 ~ 400		120	115	109	100	88	72	57	
PMD20 PVM 5-22	2x4	3 ~ 400		148	142	134	124	110	92	69	
PMD20 PVM 5-24	2x4	3 ~ 400		164	154	146	133	120	100	78	

For VOLT values, see the data of the reference pump



### OVERALL DIMENSIONS AND WEIGHTS

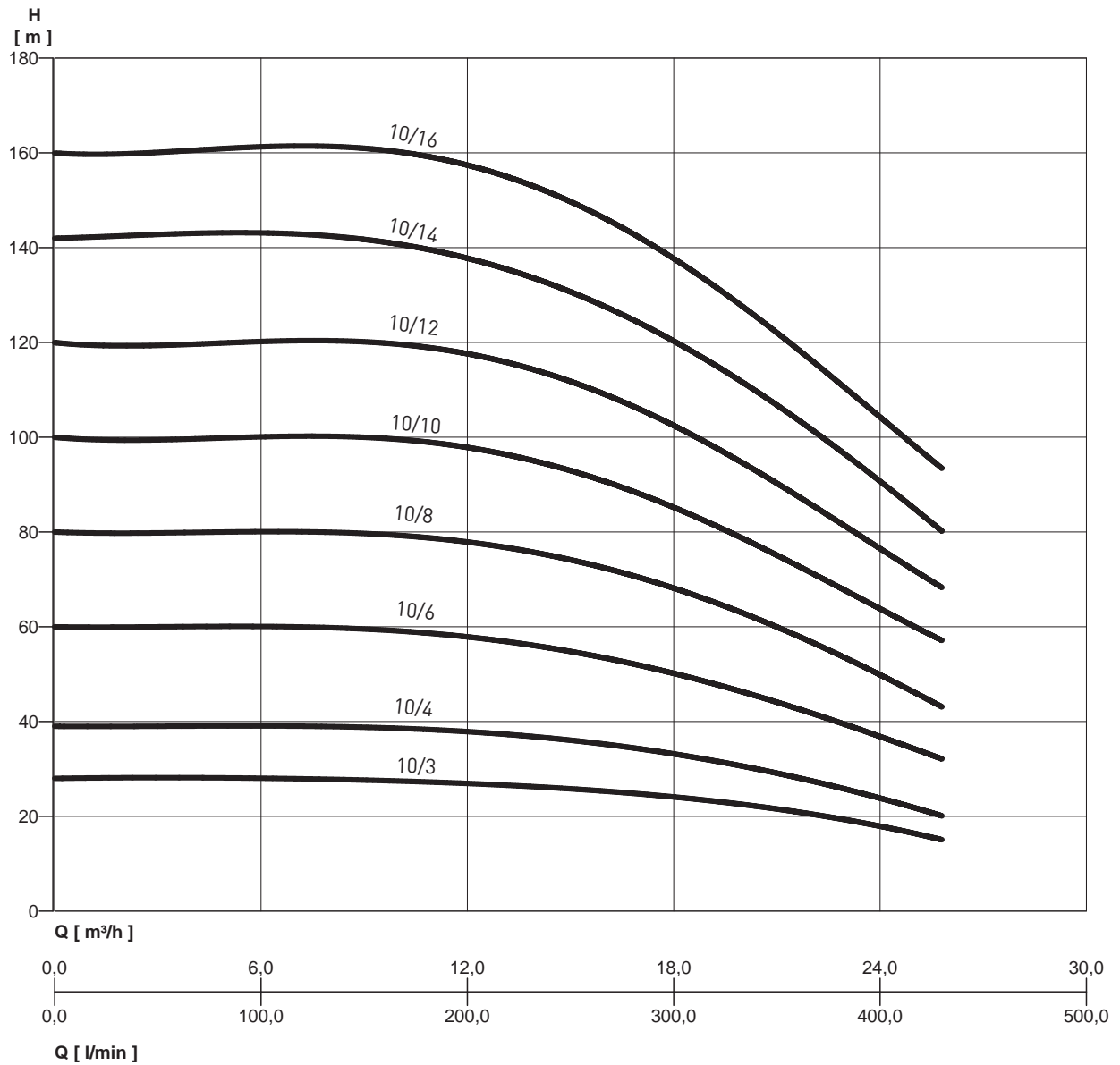
MODEL	Dimensions mm.										WEIGHT (Kg)
	L1	P1	P2	H1	H2	H3	DNA	DNM	F	L2	
PMS20 PVM 5-5	600	320	620	80	775	601	2"	2"	30	370	62
PMD20 PVM 5-5	600	320	620	80	775	601	2"	2"	30	370	72
PMS20 PVM 5-8	600	320	620	80	775	682	2"	2"	30	370	70
PMD20 PVM 5-8	600	320	620	80	775	682	2"	2"	30	370	78
PMD20 PVM 5-11	600	320	620	80	775	835	2"	2"	30	370	83
PMD20 PVM 5-14	600	320	620	80	775	916	2"	2"	30	370	90
PMD20 PVM 5-16	600	320	620	80	775	970	2"	2"	30	370	95
PMD20 PVM 5-18	600	320	620	80	775	1053	2"	2"	30	370	100
PMD20 PVM 5-22	600	320	620	80	775	1171	2"	2"	30	370	110
PMD20 PVM 5-24	600	320	620	80	775	1225	2"	2"	30	370	115



# NOCCHI PMS20 PVM - PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### HYDRAULIC PERFORMANCE



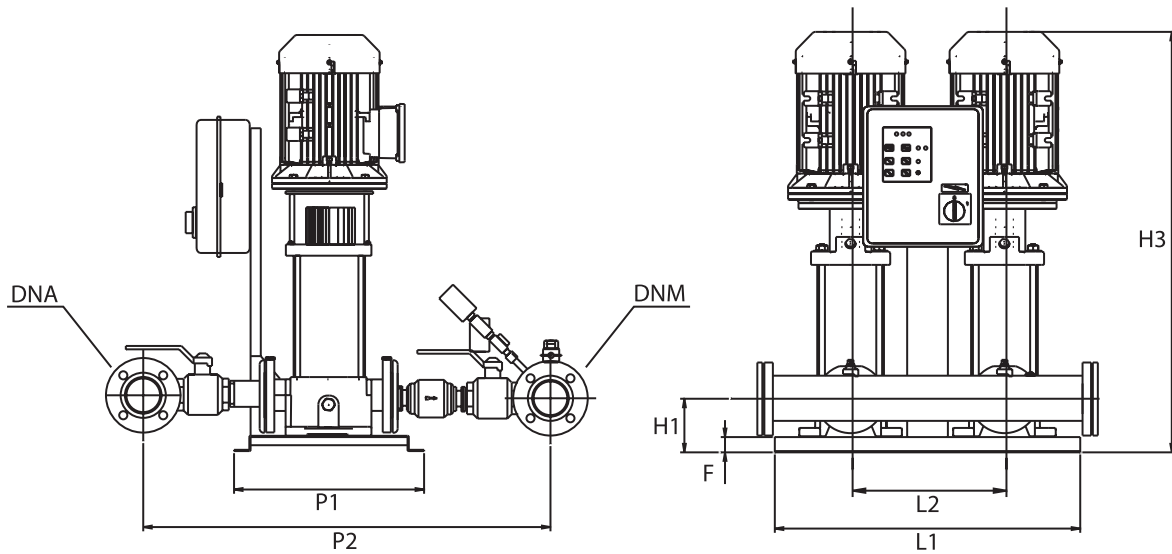
# NOCCHI PMS20 PVM - PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### PERFORMANCE TABLE

MODEL	P2	VOLT. (V)	Q	L/min	0	100	200	300	400	430
	kW			m³/h	0	6	12	18	24	26
PMS20 PVM 10-3 PMD20 PVM 10-3	2x1.1	1 ~ 230 3 ~ 400	m.c.w.	28	28	27	24	18	15	
PMS20 PVM 10-4 PMD20 PVM 10-4	2x1.5	1 ~ 230 3 ~ 400		39	39	38	33	24	20	
PMD20 PVM 10-6	2x2.2	3 ~ 400		60	60	58	50	37	32	
PMD20 PVM 10-8	2x3	3 ~ 400		80	80	78	68	50	43	
PMD20 PVM 10-10	2x4	3 ~ 400		100	100	98	85	64	57	
PMD20 PVM 10-12	2x4	3 ~ 400		120	120	118	102	77	68	
PMD20 PVM 10-14	2x5.5	3 ~ 400		142	143	138	120	91	80	
PMD20 PVM 10-16	2x5.5	3 ~ 400		160	161	158	137	105	93	

For VOLT values, see the data of the reference pump



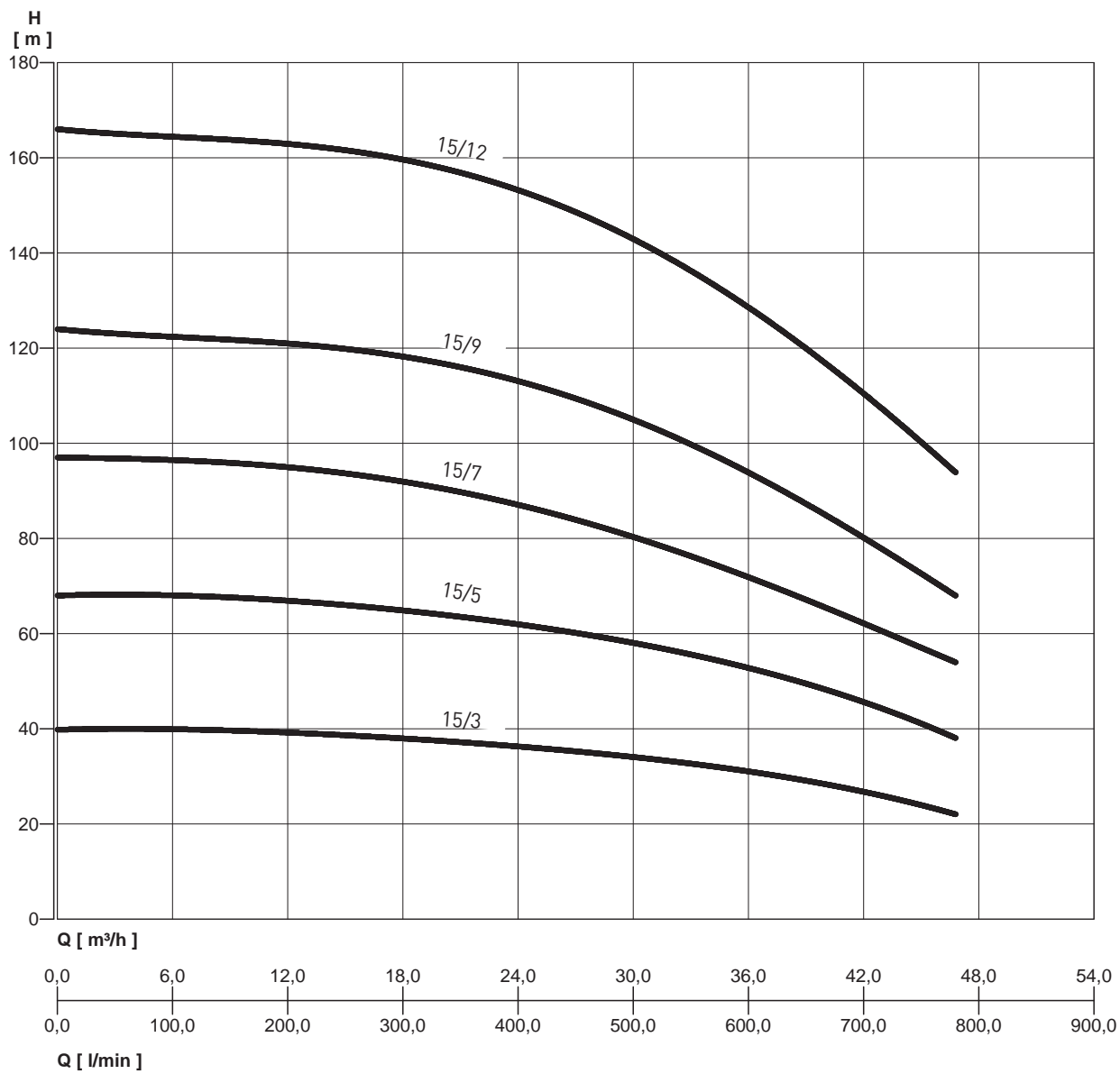
### OVERALL DIMENSIONS AND WEIGHTS

MODEL	Dimensions mm.										WEIGHT (Kg)
	L1	P1	P2	H1	H2	H3	DNA	DNM	F	L2	
PMS20 PVM 10-3	620	320	720	120	775	612	2" 1/2	2" 1/2	30	370	116
PMD20 PVM 10-3	620	320	720	120	775	612	2" 1/2	2" 1/2	30	370	106
PMS20 PVM 10-4	620	320	720	120	775	714	2" 1/2	2" 1/2	30	370	126
PMD20 PVM 10-4	620	320	720	120	775	714	2" 1/2	2" 1/2	30	370	114
PMD20 PVM 10-6	620	320	720	120	775	774	2" 1/2	2" 1/2	30	370	120
PMD20 PVM 10-8	680	320	720	120	775	864	2" 1/2	2" 1/2	30	370	136
PMD20 PVM 10-10	680	320	720	120	775	934	2" 1/2	2" 1/2	30	370	146
PMD20 PVM 10-12	680	320	720	120	775	994	2" 1/2	2" 1/2	30	370	160
PMD20 PVM 10-14	680	320	720	120	775	1122	2" 1/2	2" 1/2	30	370	170
PMD20 PVM 10-16	680	320	720	120	775	1182	2" 1/2	2" 1/2	30	370	180

# NOCCHI PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### HYDRAULIC PERFORMANCE



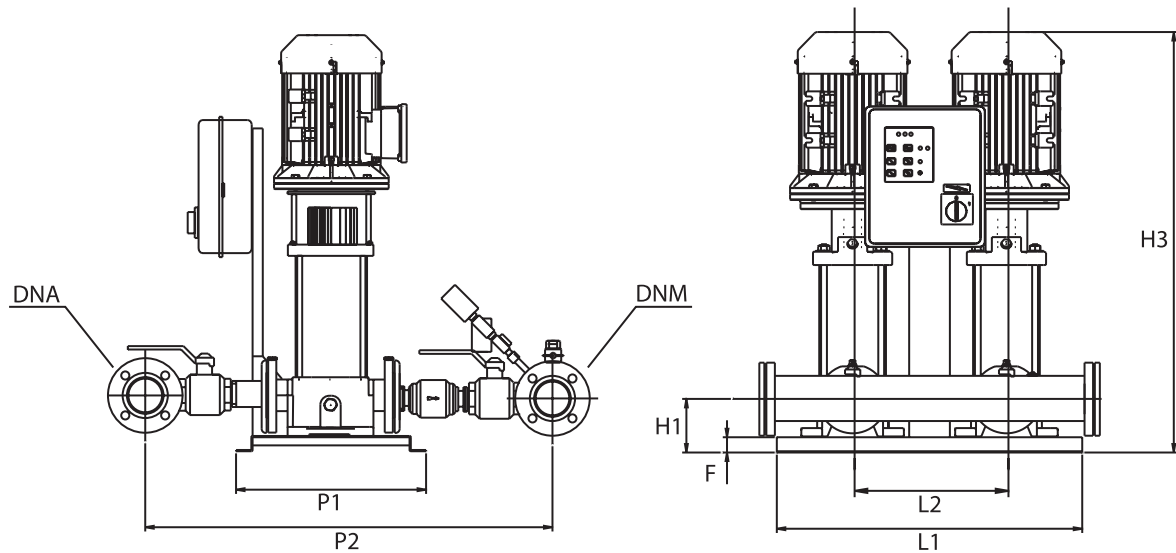
# NOCCHI PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### PERFORMANCE TABLE

MODEL	P2	VOLT. (V)	Q	l/min	0	200	400	600	700	780
	kW			m <sup>3</sup> /h	0	12	24	36	42	47
PMD20 PVM 15-3	2x3	3 ~ 400			39,8	39,2	36,3	31	26,8	22
PMD20 PVM 15-5	2x4	3 ~ 400			68	66,9	62	52,7	45,7	38
PMD20 PVM 15-7	2x5.5	3 ~ 400			97	95	87	72	62	54
PMD20 PVM 15-9	2x7.5	3 ~ 400			124	121	113	94	80	68
PMY20 PVM 15-12	2x11	3 ~ 400			166	163	153	129	110	94

For VOLT values, see the data of the reference pump



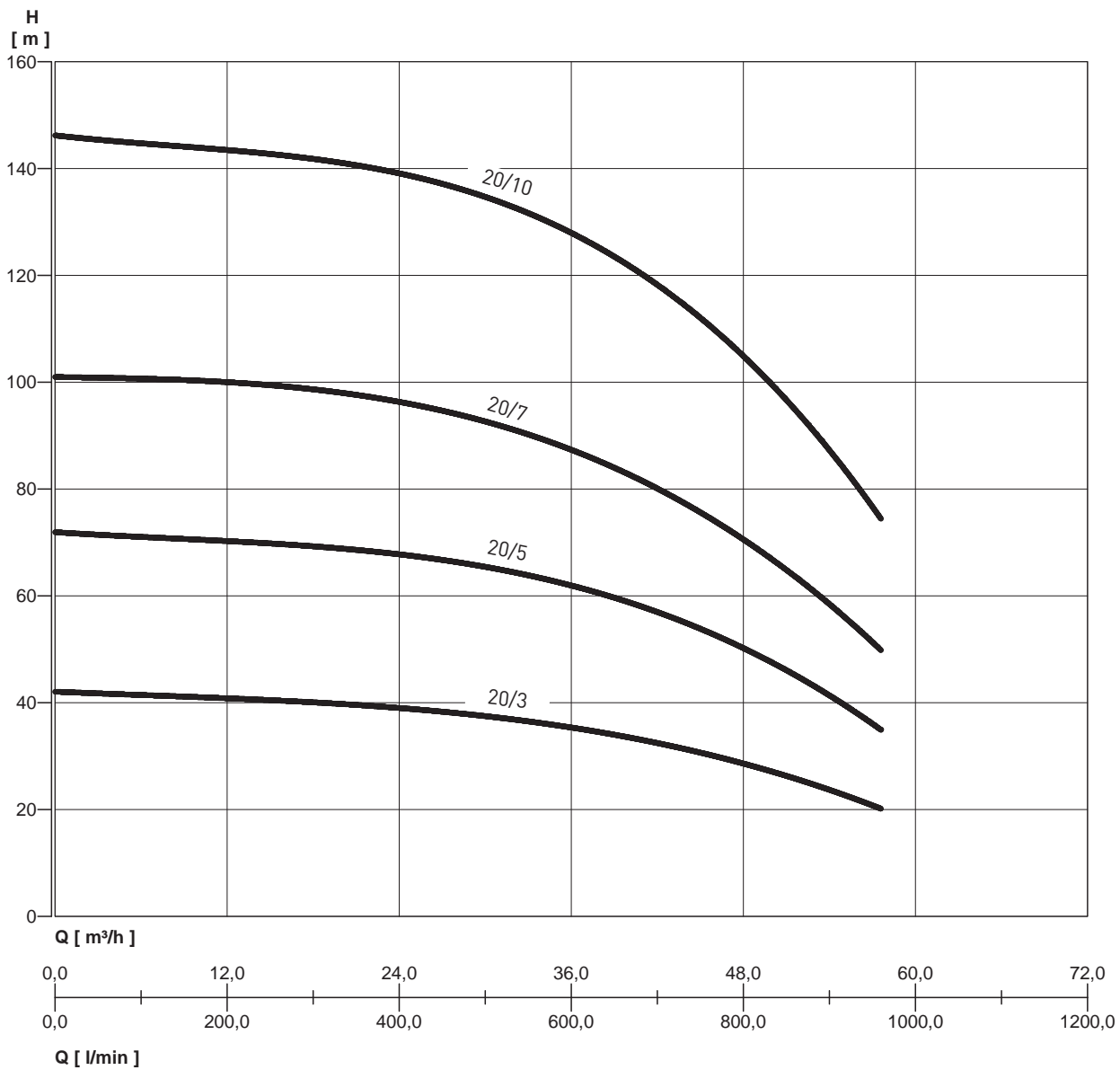
### OVERALL DIMENSIONS AND WEIGHTS

MODEL	Dimensions mm.									WEIGHT (Kg)
	L1	P1	P2	H1	H3	DNA	DNM	F	L2	
PMD20 PVM 15-3	620	380	860	120	781	3"	2" 1/2	30	370	175
PMD20 PVM 15-5	620	380	860	120	881	3"	2" 1/2	30	370	200
PMD20 PVM 15-7	620	380	860	120	1039	3"	2" 1/2	30	370	220
PMD20 PVM 15-9	620	380	860	120	1165	3"	2" 1/2	30	370	250
PMY20 PVM 15-12	620	380	860	120	1484	3"	2" 1/2	30	370	270

# NOCCHI PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### HYDRAULIC PERFORMANCE



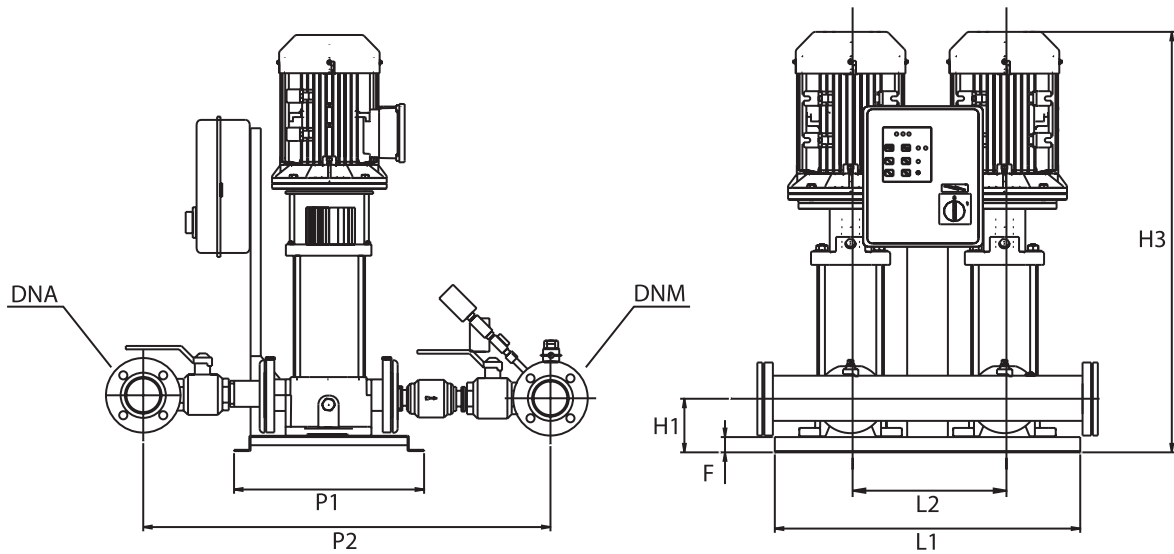
# NOCCHI PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### PERFORMANCE TABLE

MODEL	P2	VOLT. (V)	Q	l/min	0	200	400	600	800	960
	kW			m <sup>3</sup> /h	0	12	24	36	48	57,6
PMD20 PVM 20-3	2x4	3 ~ 400	m.c.w.	42	41	39	35	29	20	
PMD20 PVM 20-5	2x5.5	3 ~ 400		72	70	68	62	50	35	
PMD20 PVM 20-7	2x7.5	3 ~ 400		101	100	96	88	70	50	
PMY20 PVM 20-10	2x11	3 ~ 400		146	144	139	127	106	74	

For VOLT values, see the data of the reference pump



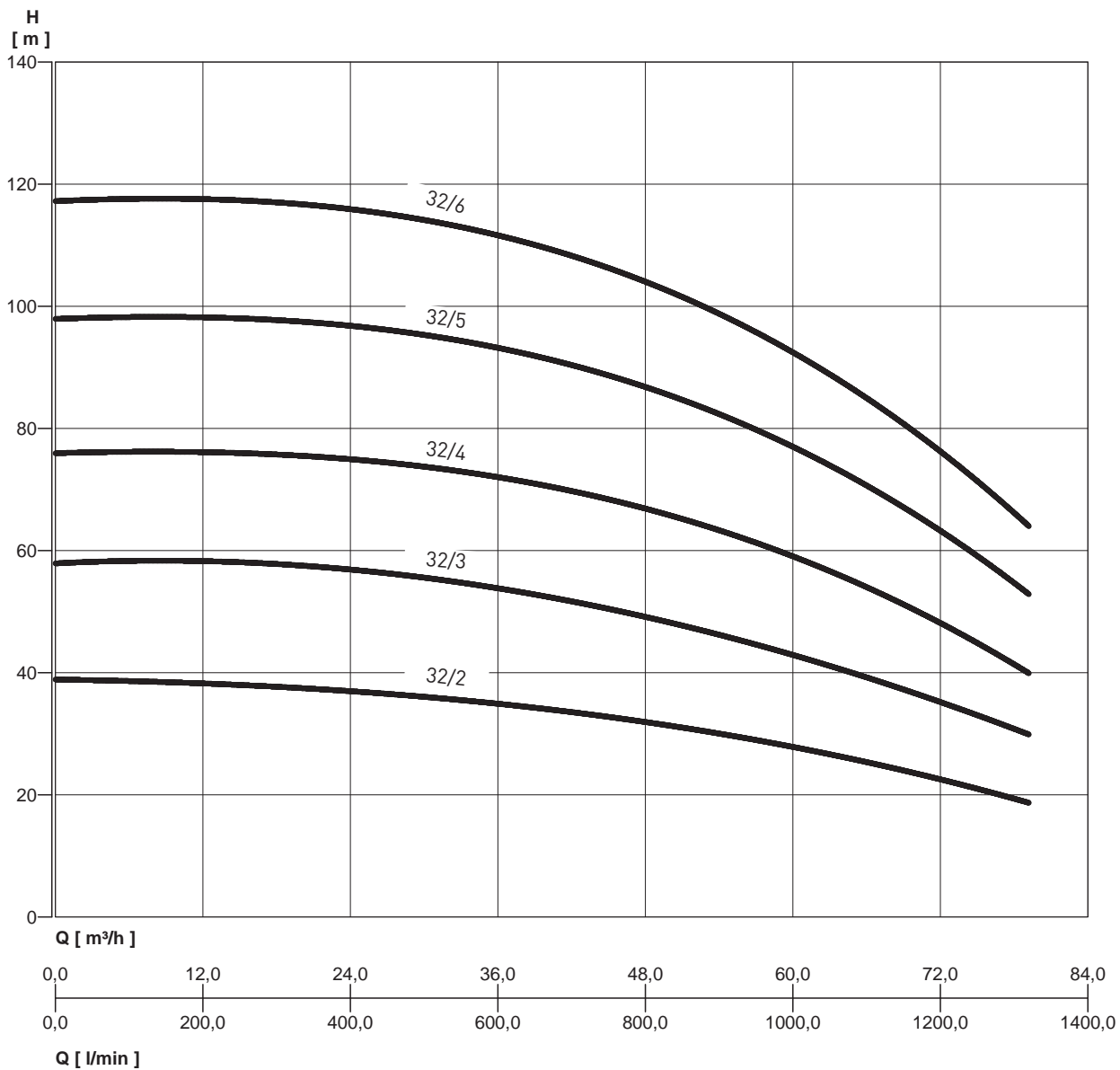
### OVERALL DIMENSIONS AND WEIGHTS

MODEL	Dimensions mm.									WEIGHT (Kg)
	L1	P1	P2	H1	H3	DNA	DNM	F	L2	
PMD20 PVM 20-3	620	380	860	120	795	3"	2" 1/2	30	370	181
PMD20 PVM 20-5	620	380	860	120	955	3"	2" 1/2	30	370	220
PMD20 PVM 20-7	620	380	860	180	1083	3"	2" 1/2	30	370	232
PMY20 PVM 20-10	620	380	860	180	1405	3"	2" 1/2	30	370	260

# NOCCHI PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### HYDRAULIC PERFORMANCE



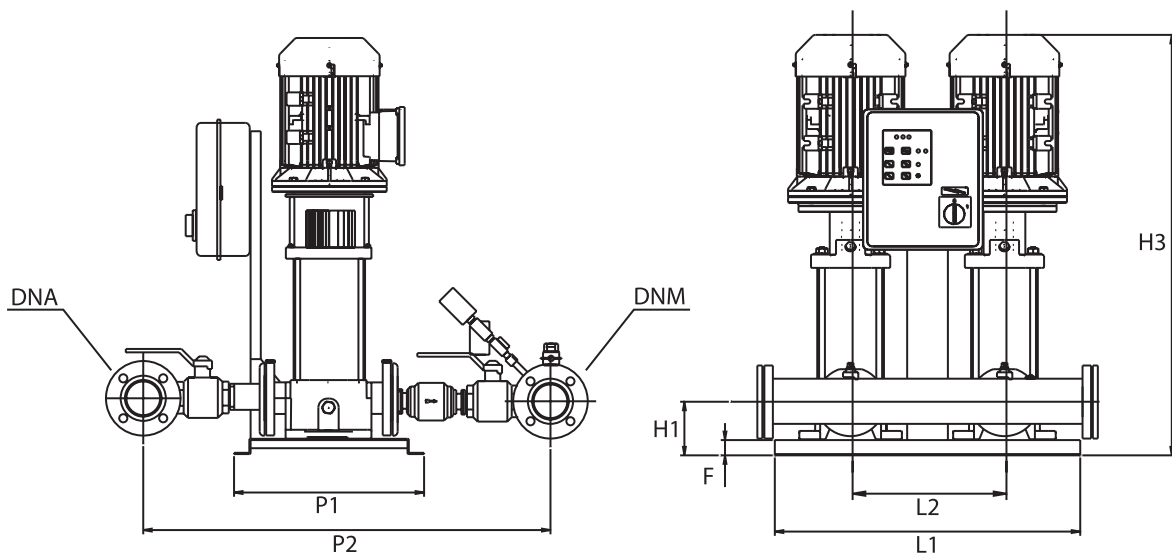
# NOCCHI PMD20 PVM

## PRESSURE BOOSTER SET WITH PRESSURE SWITCH CONTROL

### PERFORMANCE TABLE

MODEL	P2	VOLT. (V)	Q	L/min	0	200	400	600	800	1000	1200	1320
	kW			m <sup>3</sup> /h	0	12	24	36	48	60	72	79,2
PMD20 PVM 32-2	2x4	3 - 400	m.c.w.	39	38	37	35	32	28	22	19	
PMD20 PVM 32-3	2x5.5	3 - 400		58	58	57	54	49	43	35	30	
PMD20 PVM 32-4	2x7.5	3 - 400		76	76	75	72	67	59	48	40	
PMY20 PVM 32-5	2x11	3 - 400		98	98	97	93	87	77	63	53	
PMY20 PVM 32-6	2x11	3 - 400		117	118	116	111	104	93	76	64	

For VOLT values, see the data of the reference pump



### OVERALL DIMENSIONS AND WEIGHTS

MODEL	Dimensions mm.									WEIGHT (Kg)
	L1	P1	P2	H1	H3	DNA	DNM	F	L2	
PMD20 PVM 32-2	860	700	1060	230	900	4"	3"	80	440	330
PMD20 PVM 32-3	860	700	1060	230	1006	4"	3"	80	440	350
PMD20 PVM 32-4	860	700	1060	230	1112	4"	3"	80	440	370
PMY20 PVM 32-5	860	700	1060	230	1399	4"	3"	80	440	390
PMY20 PVM 32-6	860	700	1060	230	1469	4"	3"	80	440	410