

Pleno

Pressure control and water make up system



PNEUMATEX

Pressurisation & Water Quality › Balancing & Control › Thermostatic Control

ENGINEERING ADVANTAGE

Pressure-maintaining monitoring device in the sense of EN 12828-4.7.4. The Pleno ensures that the water reserve required for optimum functioning of the expansion vessels is given at all times. If the level drops below the minimum, water is automatically added to the system. The «fillsafe» electronically monitors and controls the water make-up and ensures maximum safety.



Technical description

Application:

Heating, solar and chilled water systems.
For systems according to EN 12828, EN 12976, ENV 12977, EN 12952, EN 12953.

Media:

Entry: fresh water
Outflow(Consumer side): Non-aggressive and non-toxic system media.
Addition of antifreeze agent up to 50%.

Pressure:

Mini. admissible pressure, PSmin: 0 bar

Temperature:

Max. admissible temperature, TS: 65 °C (P, PI), 30 °C (PI 6, PI 9)
Min. admissible temperature, TSmin: 0 °C
Max. admissible ambient temperature, TU: 40 °C

Supply voltage:

230 V/50 Hz

Enclosure class:

Pleno P: IP 65
Pleno PI: IP 54

Material:

Pleno PI 9.1: High quality metal cover.
Pleno PI 6.1, 6.2: High quality metal cover with handles.

Function, Equipment, Features

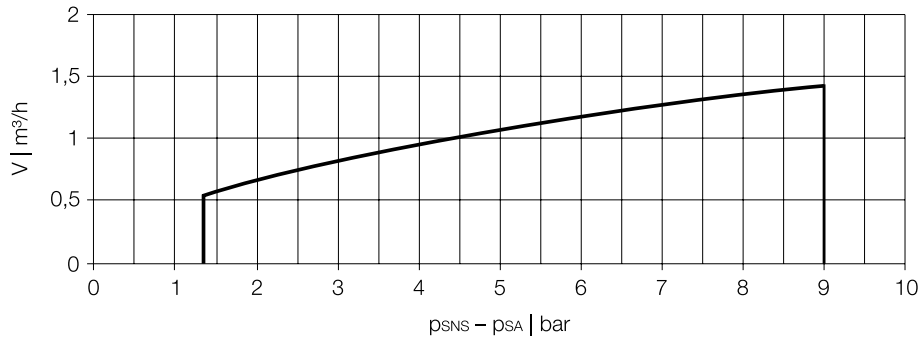
- BrainCube control. Self-optimising with memory function (PI, PI 6, PI 9).
- Fillsafe water make-up. Pressure-dependent. For pressure expansion vessels with fixed air cushion, i.e. Statico (PI).
- Fillsafe water make-up. Pressure- or level-dependent. For pressure expansion vessels, i.e. Statico or pressure-maintaining stations, i.e. Compresso.
- External control from pressure-maintaining or degassing stations, i.e. Compresso, Transfero or Vento (P, PI 6, PI 9).
- With contact water meter and back flow preventer type BA according to EN 1717, DVGW, SVGW, KIWA N.V., BELGAQUA, WRAS and ACS tested (P, PI).
- With contact water meter and a break tank type AB according to EN 1717, SVGW-tested (PI 6, PI 9).
- With integrated wall mounting bracket (P, PI, PI 9)
- Floor standing (PI 6).

Approvals:

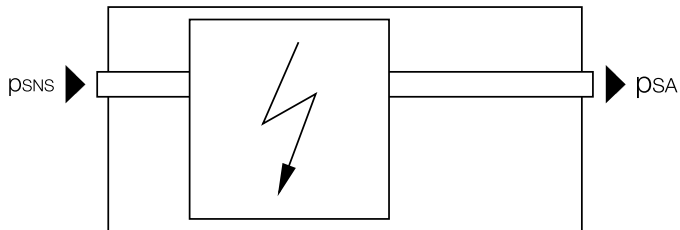
Pleno PI (without pumps): CE-tested according to the requirements of the European Directives 2004/108/EC, 2006/95/EC.
Pleno PI (with pumps): CE-tested according to the requirements of the European Directives PED/DEP 97/23/EC, 2004/108/EC, 2006/95/EC.

Diagrams

Approx. throughput V, Pleno P / PI

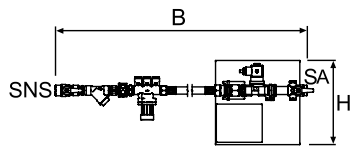


The requirements for pNS must be taken into account for Statico and Compresso:



Pleno P: Required fresh water pressure Compresso: $p_{NS} \geq P_0 \text{ (BrainCube)} + 1,9 \text{ bar}$, $p_{NS} \leq 10 \text{ bar}$
 Pleno P/PI: Required fresh water pressure Statico: $p_{NS} \geq P_0 \text{ (BrainCube)} + 1,7 \text{ bar}$, $p_{NS} \leq 10 \text{ bar}$.

> Control unit TecBox, Pleno P – Articles

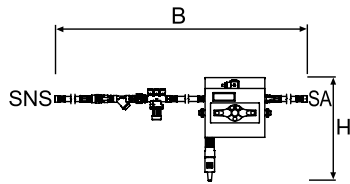


Pleno P

Hydraulic unit. Water make-up without pumps.
 Connection out (SA): G1/2.
 Connection water make-up (SNS): G1/2.

Type	PS [bar]	B	H	T	[kg]	PA [kW]	Kvs	EAN	Article No
P	10	1700	200	125	3	0,02	0,5	7640148632164	813 1000

> Control unit TecBox, Pleno PI – Articles

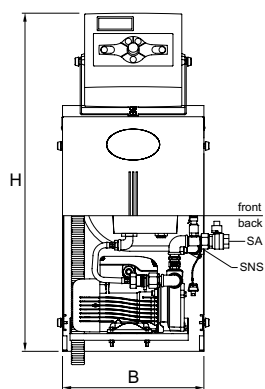


Pleno PI

Control unit TecBox. Water make-up without pumps.
 Connection out (SA): G1/2.
 Connection water make-up (SNS): G1/2.

Type	PS [bar]	B	H	T	[kg]	PA [kW]	Kvs	EAN	Article No
PI	10	1700	220	280	4	0,04	0,5	7640148632171	813 1010

> Control unit TecBox, Pleno PI 9 – Articles



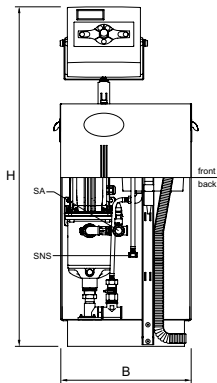
Pleno PI 9.1

Control unit TecBox. Water make-up with pump with filling function.
 1 pump with integrated wall mounting bracket.
 Connection out (SA): Rp3/4.
 Connection water make-up (SNS): Rp1/2.

Type	PS [bar]	B	H	T	[kg]	PA [kW]	SPL [dB(A)]	DPp [bar]	VNS [l/h]	EAN	Article No
PI 9.1	10	320	760	260	20	0,75	74	1-8	500	7640148632201	813 1040

T = Depth of the device

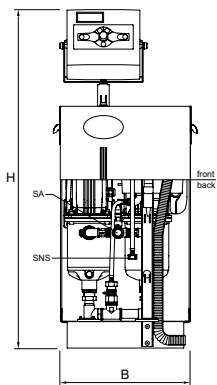
Control unit TecBox, Pleno PI 6 – Articles



Pleno PI 6.1

Control unit TecBox. Water make-up with pump with filling function.
 1 pump. Floor standing. Inclusive of flexible hose for inlet.
 Connection out (SA): Rp3/4.
 Connection water make-up (SNS): Rp1/2.

Type	PS [bar]	B	H	T	[kg]	PA [kW]	SPL [dB(A)]	DPp [bar]	VNS [l/h]	EAN	Article No
PI 6.1	8	390	1000	490	26	1,1	55	1-5,5	500	7640148632188	813 1020



Pleno PI 6.2

Control unit TecBox. Water make-up with pumps with filling function.
 2 pumps. Including a reserve pump. Floor standing. Inclusive of flexible hose for inlet.
 Connection out (SA): Rp3/4.
 Connection water make-up (SNS): Rp1/2.

Type	PS [bar]	B	H	T	[kg]	PA [kW]	SPL [dB(A)]	DPp [bar]	VNS [l/h]	EAN	Article No
PI 6.2	8	390	1000	490	37	1,1	55	1-5,5	500	7640148632195	813 1030

T = Depth of the device

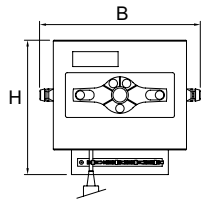
Accessories for control modules

Communication module for BrainCube control

Max. admissible ambient temperature, TU: 40°C

Enclosure class: IP 54

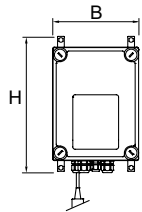
Supply voltage: 230 V/50 Hz



ComCube DCD

RS 485 interface for communicating with BrainCube, 6 digital inputs for the use of external volt free signals (NO), 9 volt free digital outputs, freely programmable; all outputs can be inverted. Wall mounted, fixing elements for cable management.

Type	B	H	T	[kg]	PA [kW]	EAN	Article No
DCD	270	230	260	0,5	0,1	7640148638715	814 1000



ComCube DCA

2 separated analogue outputs 4-20 mA for connection to BMS, isolation voltage 2.5 kVAC. All cabling inside the casing, wall mounted.

Type	B	H	T	[kg]	PA [kW]	EAN	Article No
DCA	190	260	180	0,5	0,1	7640148638739	814 1010

T = Depth of the device

Additional information

System design: Online calculation software *SelectPI!*

Abbreviations and terminology: Datasheet *Planning and calculation. Glossary.*

Accessories for control modules: Communication module.

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