

5" TANK  $\frac{3}{4}$ " VALVE AND 6" TANK 1" VALVE

# HEADER TANK SOLUTIONS

# MECAIR - 5" TANK 3/4" VALVE AND 6" TANK 1" VALVE HEADER TANK SOLUTIONS

PRODUCT LEAFLET

## DESCRIPTION

### FULL IMMERSION SYSTEM

The patented Mecair "Full Immersion" System consists of a round header tank with fully integrated diaphragm valves, suitable for dust collector filter applications, in particular for reverse pulse-jet filter cleaning of filter bags, cartridges, envelope filters, ceramic filters and sintered metal fibre filters. The Mecair 500 Series diaphragm valve has been specifically designed to be mounted onto a round header tank. This valve is exclusively a Mecair design and has a worldwide patent. The particular design of the Mecair 500 Series diaphragm valve allows you to fully optimise the increased flow rate and performance this valve has to offer, and also the simple way in which you can mount the header tank onto the filter wall, eliminating the excessive weight of the traditional square header tanks. The Mecair header tanks are manufactured and tested 100%, in accordance with global pressure vessel certificate (CE PED or ASME certified).

### STANDARD CARBON STEEL PAINT SPECIFICATION

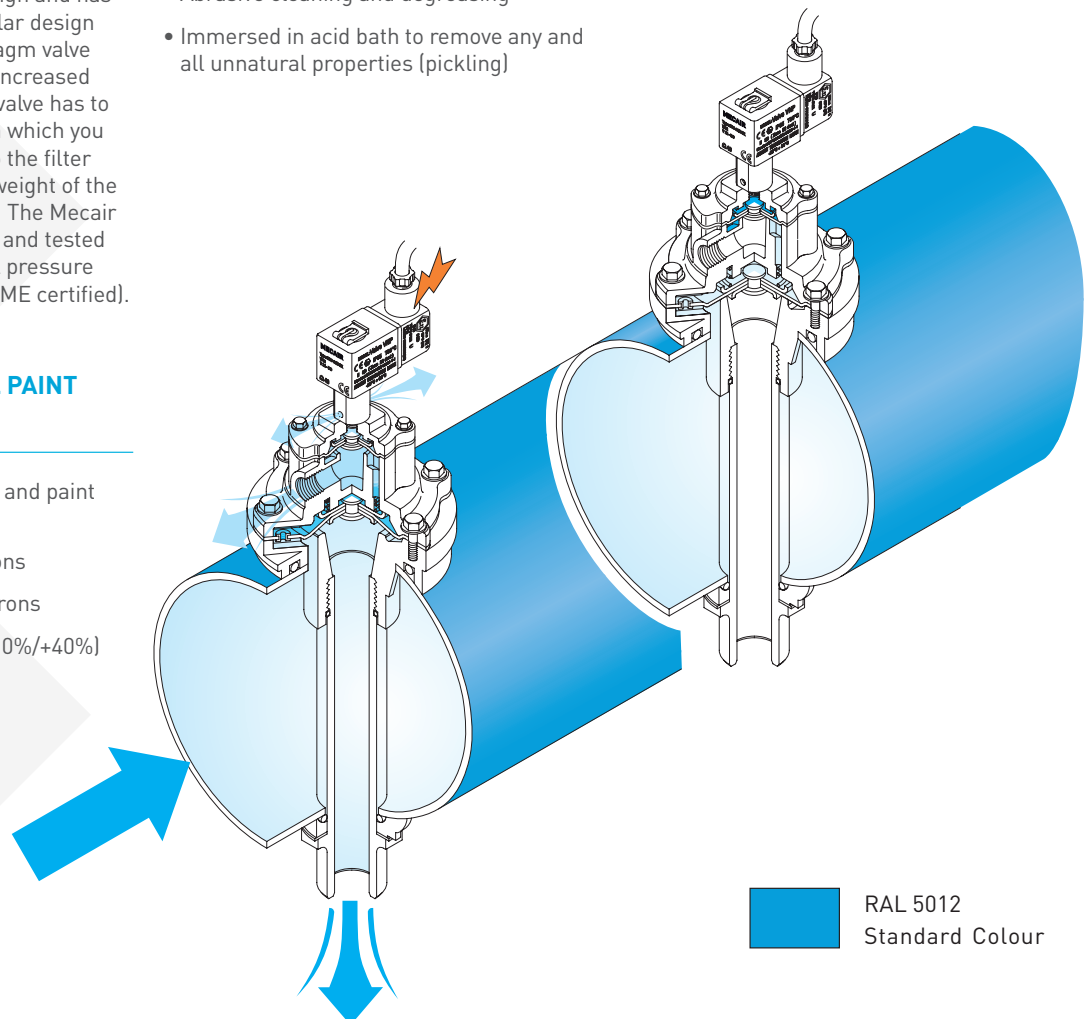
- Abrasive cleaning, degreasing and paint preparation
- Undercoat RAL 7042: 25 microns
- Final colour RAL 5012: 25 microns
- Total thickness 50 microns (-10%/+40%)

### FULL IMMERSION STAINLESS STEEL

The Mecair 500 Series diaphragm valve is manufactured from diecast aluminium and is anodised. The valves are mounted on a painted carbon steel, stainless steel or aluminium tank.

### TANK PREPARATION SPECIFICATION

- Abrasive cleaning and degreasing
- Immersed in acid bath to remove any and all unnatural properties (pickling)



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### CODES AND TECHNICAL CHARACTERISTICS

The 500 Series is available in the following versions:

- **VNP**, with integrated solenoid pilot
- **VEM**, with remote pneumatic connection. (upon request, the solenoid enclosures can be mounted and pre-cabled on tank.)

### CONSTRUCTION FEATURES - VALVE

TOP COVER	Diecast aluminium (anodised)
BODY	Diecast aluminium (anodised)
PILOT BASE	Brass (chromed)
PILOT	Stainless steel
DIAPHRAGM	NBR
BOLTS	Stainless steel
DIAPHRAGM BACKING DISK	Stainless steel
DIAPHRAGM SPRING	Alloy steel

### ELECTRICAL CHARACTERISTICS - SOLENOID

COIL INSULATION	Class H
DIN SOCKET CONNECTOR	PG9 connection
DIN SOCKET SPECIFICATION	EN175301 - 803 / A/ISO 4400
DIN SOCKET OPTIONAL	94/9/CE ATEX II 3GD T6
ISOLATION CLASS DIN SOCKET	VDE 0110 - 1/89
ELECTRICAL PROTECTION	IP65 EN60529
VOLTAGE RANGE	12 V DC [-5%, +20%] 18 W 24 V DC [-5%, +20%] 18 W 48 V DC [-10%, +20%] 18 W 110 V DC [-10%, +20%] 18 W 24 V 50/60 Hz [-10%, +20%] 38/31 VA 48 V 50/60 Hz [-10%, +20%] 41/32 VA 110/127 V 50/60 Hz [-10%, +20%] 63/53 VA 220/240 V 50/60 Hz [-10%, +20%] 46/37 VA

### GENERAL CHARACTERISTICS

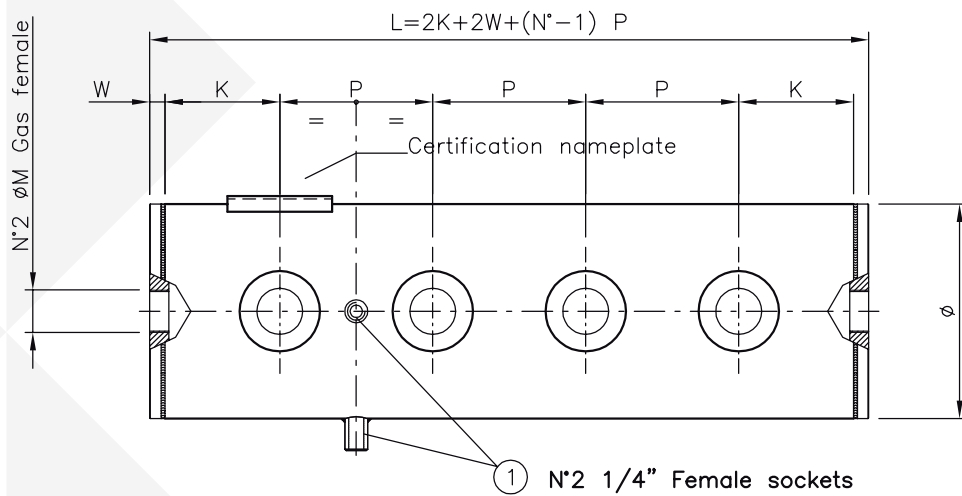
FLUIDS	Filtered air and oil free
DIAPHRAGM	Standard: NBR: -20°C/+120°C Viton: -30°C/+200°C
PRESSURE RANGE	0.5 to 7.5 bar

MODEL	PORT SIZE	NO. DIAPH.	PRESSURE RANGE (BAR)		COIL	KV	CV
			MIN.	MAX.			
VNP506	3/4"	1	0.5	7.5	Yes	15.1	17.5
VNP508	1"	1	0.5	7.5	Yes	26.3	30.6
VEM506	3/4"	1	0.5	7.5	No	15.1	17.5
VEM508	1"	1	0.5	7.5	No	26.3	30.6

# MECAIR - 5" TANK 3/4" VALVE AND 6" TANK 1" VALVE HEADER TANK SOLUTIONS

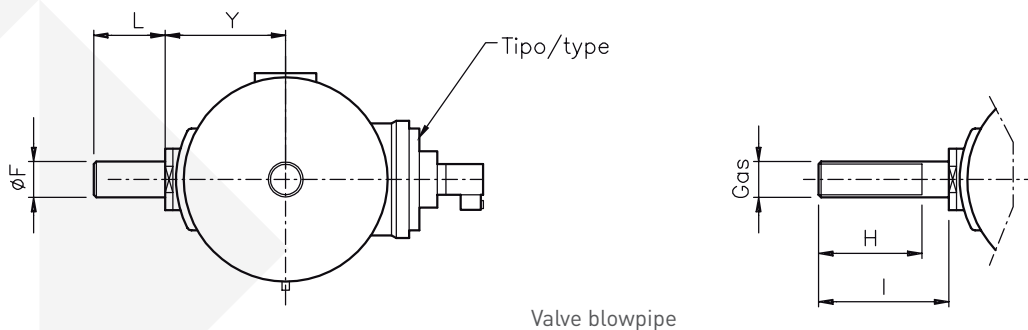
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## TANK DIMENSIONS TABLE



						TO BE COMPLETED BY CUSTOMER		
$\varnothing$ TANK	$\varnothing$ VALVE	P MIN.	K MIN.	W	$\varnothing M$	P DISTANCE REQUIRED	N NUMBER OF VALVES	K OPTIONAL
DN5"	3/4"	95	75	15	1"			
DN6"	1"	120	90	15	1"			

\* Only available with flat end caps and max. length size 4.6 metres. For lengths superior to those specified, please contact our technical department.



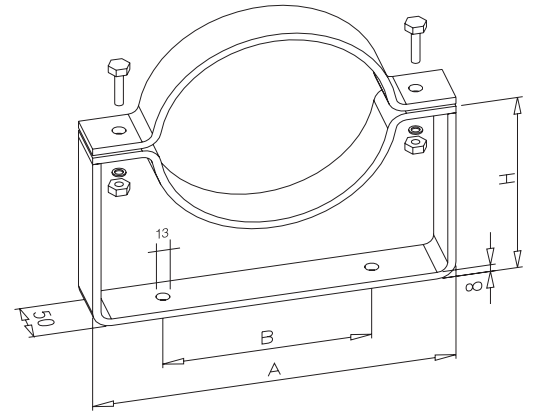
$\varnothing$ TANK	$\varnothing F$	Y	SHORT UNTHREADED	L	LONG UNTHREADED	L	LONG THREADED	$\varnothing G$ GAS	H	I
DN5"	26.7	93	TS506	60	TL506	80	TF506	3/4"	70	80
DN6"	33.4	106	TS508	60	TL508	100	TF508	1"	90	100

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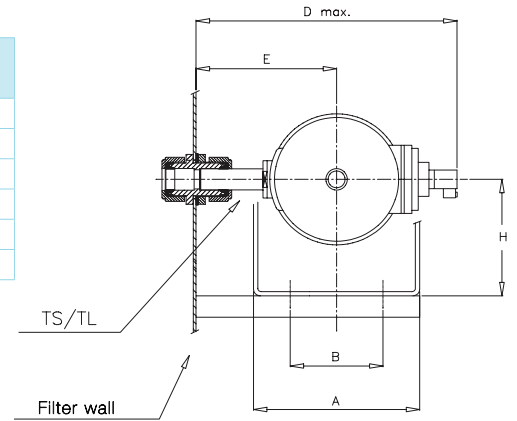
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## BRACKET AND BLOWTUBE CONFIGURATIONS

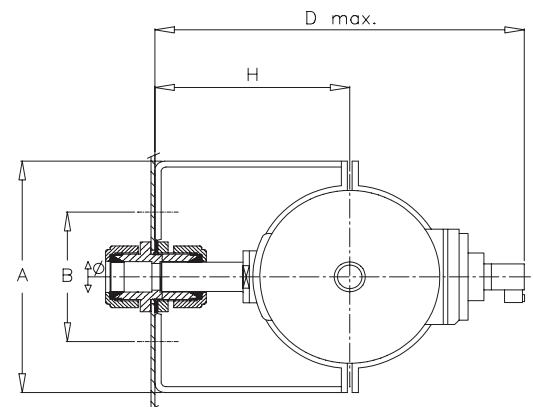
DN TANK	TYPE OF BRACKET	A	B	H
5" (141.3)	TH05	264	150	180
	TM05	264	150	160
	TB05	264	150	95
6" (168.3)	TH06	292	150	200
	TM06	292	150	170
	TB06	292	150	109



DN TANK	TYPE OF BRACKET	VALVE BLOWPIPE	E	D MAX.	VALVE BLOWPIPE	E	D MAX.
5" (141.3)	TH05	TS506	160	305	TL506	180	325
	TM05	TS506	160	305	TL506	180	325
	TB05	TS506	160	305	TL506	180	325
6" (168.3)	TH06	TS508	175	360	TL508	212	400
	TM06	TS508	175	360	TL508	212	400
	TB06	TS508	175	360	TL508	212	400



DN TANK	TYPE OF BRACKET	D MAX.	VALVE BLOWPIPE	Ø
5" (141.3)	TH05	325/360	TL506/558	3/4"
	TM05	305/340	TS506/558	3/4"
6" (168.3)	TM06	360/420	TS508/564	1"

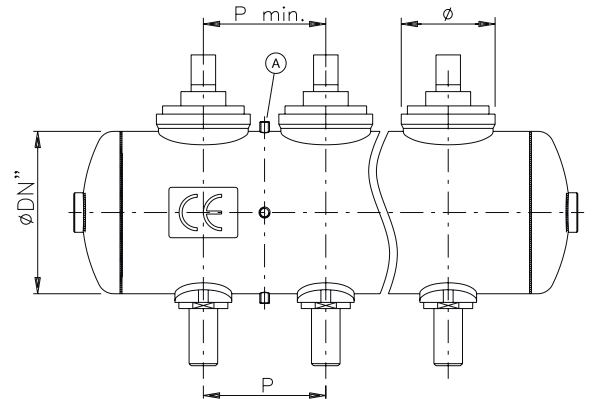


# MECAIR - 5" TANK 3/4" VALVE AND 6" TANK 1" VALVE HEADER TANK SOLUTIONS

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## TANK ASSEMBLY TABLE

Ø TANK	P MIN.	Ø VALVE BODY	P MIN. FOR INSTALLATION OF STANDARD BRACKETS	P MIN. PIPE STUB A
5" [141.3]	95	80	140	115
6" [168.3]	120	95	150	140



## OPERATING RECOMMENDATIONS

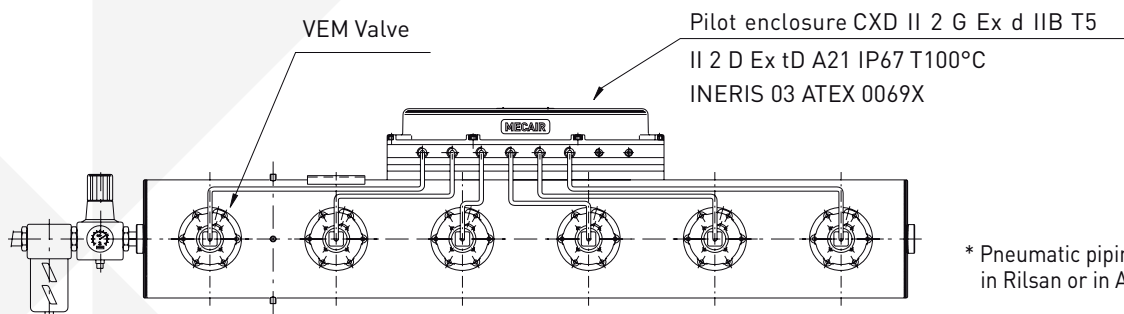
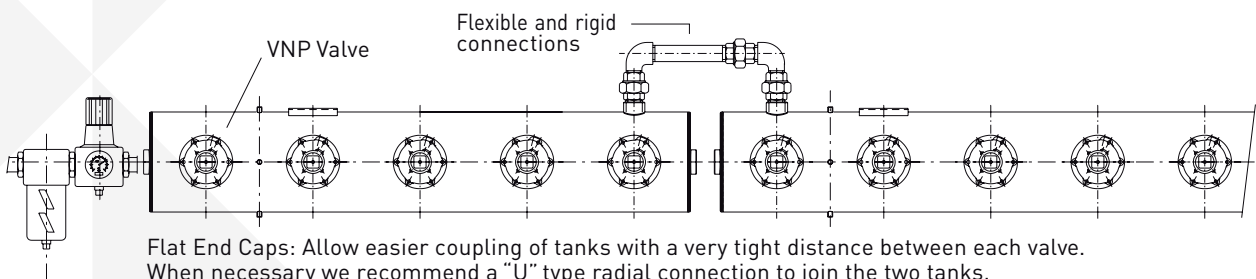
Ensure air supply is clean and dry. (We recommend the installation of compressed-air filter units to be installed directly before the pressure vessel, in order to ensure clean and dry air is supplied to the diaphragm valve). Operating pressure min./ max. 0.5–7.5 bar.

a) **AIR INLET PIPE TO HEADER TANK/ PRESSURE VESSEL:** Minimum  $\varnothing$  1" for tanks with a 1" valve or 1½" valves. We

always recommend the air inlet pipe to tank to be the same size as the diameter of valve being used, or the next available size down. This ensures that the air supply to the tank is sufficient to allow the tank to refill in as short a time as possible. With the correct volume of air in the tank, this ensures the correct and efficient functioning of the diaphragm valve without any waste of compressed air.

b) **ORIENTATION:** Can work in all orientations.

c) **ELECTRICAL ON TIMES AND PULSE TIMES:** For the correct and efficient use of a diaphragm valve, it is important to set the correct pulse times and pause times. Average pulse times range from 100 ms–250 ms depending on size of the valves being used. Pause times also depend on number of valves in the filter, but MECAIR recommends a total cycle time of between 300 and 360 seconds for the total number of valves installed.

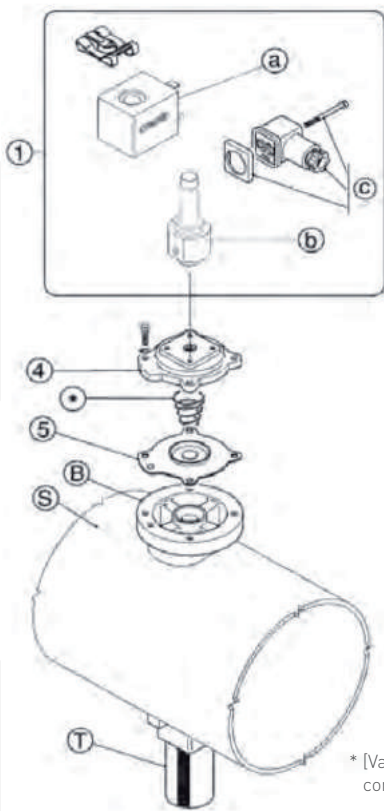


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## SPARE PARTS

VEM/VNP 506 - 508



\* [Valve Body(B) + Tank(S) + Valve blowpipe (T) are to be considered single and complete module.] [No spare parts available for this configuration.]

### STANDARD VERSION

POS.	DESCRIPTION	CODE
1	a) Solenoid*	a) KIT SB4 - ../..*
	b) Pilot group complete with base and ferrule	b) KIT CP1/4
	c) DIN connector PG9EN175301-803 IP65	c) KIT PLG9

### OPTIONAL VERSION

POS.	DESCRIPTION	CODE
1	a) Solenoid	a) KIT SB4 -24/DCX
	b) Pilot group complete with base and ferrule	b) KIT CP1/4
	c) DIN connector PG9EN175301-803 IP65	c) KIT PLG11 - ATEX

In conformity with 94/9/CE ATEX Directive (cod. KIT PV-24/DCX)

POS	DESCRIPTION	CODE	
		VEM/VNP506	VEM/VNP508
1	Pilot group complete with solenoid* and DIN connector	KIT PV - ../..*	KIT PV - ../..*
a+b+4	Pilot group complete with solenoid*, top cover and screws	KIT PVM06 - ../..*	KIT PVM08 - ../..*
4	Top cover	KIT M110082	KIT M10086
5	Diaphragm	KIT DB 16	KIT DB 18

\* Specify voltage and frequency

Thank you for you time.  
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