mecair
clean air systems
TODAY'S CLEANING SYSTEM TECHNOLOGY

TECHNICAL SPECIFICATION

Full Immersion Tank

- **Product Description**
- **Product Variations**
- **Dimensional Details**
- **How to Order**

SOUTHCORP CLEAN AIR SYSTEMS
EXTENDING YOUR CLEAN AIR OPTIONS

PRODUCT DESCRIPTION

The Mecair “Full immersion” Patented System consists of a round header tank with fully integrated diaphragm valves. 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 consequently has a worldwide Patent. The particular design of the Mecair 500 Series diaphragm valve, allows you to fully optimise the increase in performance which 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 tank.

The Mecair header tanks are manufactured in accordance with the “CE” Directive, unlike the square header tanks which cannot be approved by a certified institute. The increased flow rates which this valve offers, is determined by the design of the valve which is mounted directly onto the round header tank. Therefore the valve draws air directly from the header tank and is not restricted.

The System should operate with filtered, oil free compressed air in the range of 0,5 bar to a maximum of 7,5 bar. The tanks are manufactured according to the customers’ specific requirements, and can also be equipped with brackets, bulkhead connectors and other accessories. The standard colour of the header tanks is light blue, RAL 5012.

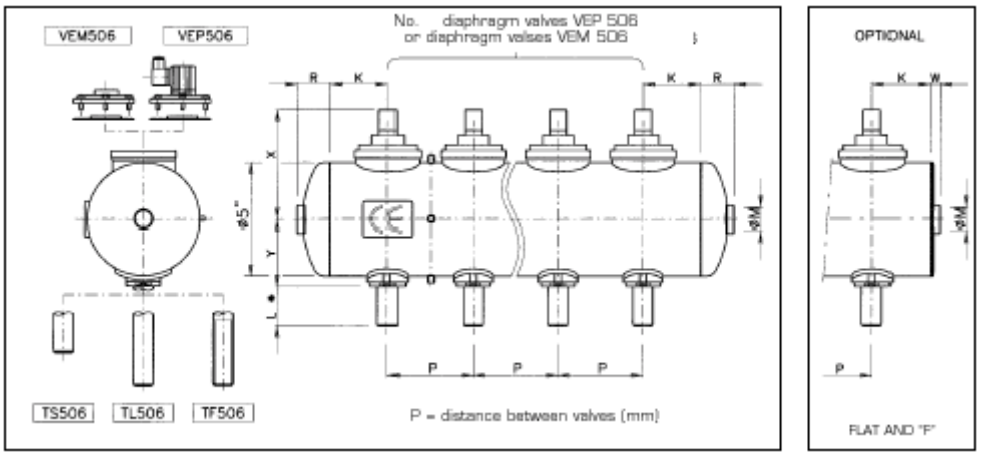
PRODUCT VARIATIONS

The System is available in the following 4 versions:

- Ø 5” + Diaphragm Valves type 506 (3/4”) + Blow tube
- Ø 6” + Diaphragm Valves type 508 (1”) + Blow tube
- Ø 8” + Diaphragm Valves type 512/514 (1 1 /2”) + Blow tube
- Ø 10” + Diaphragm Valves type 516 (2”) + Blow tube

DIMENSIONAL DETAILS

Ø 5” Tank and Valves Type 506 (3/4”) plus blow tube

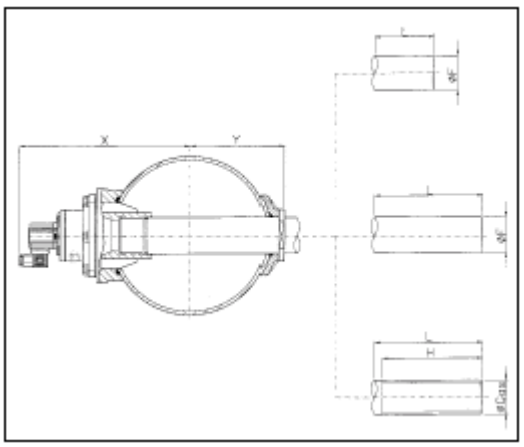


Ø nom.	Ø ext. (mm)	P min.	P	No. valves	Type valves	R	K min.	K	W	Y	X	ØM	FLAT END K min.	FLAT END K	FLAT END W
5”	141,3	95	(*)	(*)	3/4”	50	70	(*)	15	92	153	1”	70	(*)	15

* Dimensions to be set by designer, according to min. standard values.Tanks are painted in light blue RAL 5012.
On request: flat end (add ‘F’ at the end of the key)
Total length = 2K + 2R + P x (No. – 1)

VEM/VEP 506 – 15,1Kv/17,5Cv

Blow Tube



Short Smooth Tube 'TS506'

Tank Ø	ØF	L	Mod.	X	Y
5"	26,7	60	TS506	155	92

Long Smooth Tube 'TL506'

Tank Ø	ØF	L	Mod.	X	Y
5"	26,7	80	TL506	155	92

Threaded Male Tube 'TF506'

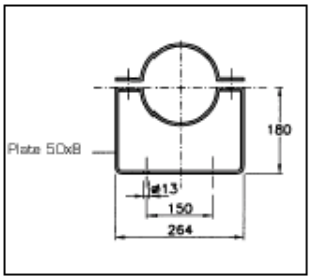
Tank Ø	ØGas	H	L	Mod.	X	Y
5"	3/4"	70	80	TF506	155	92

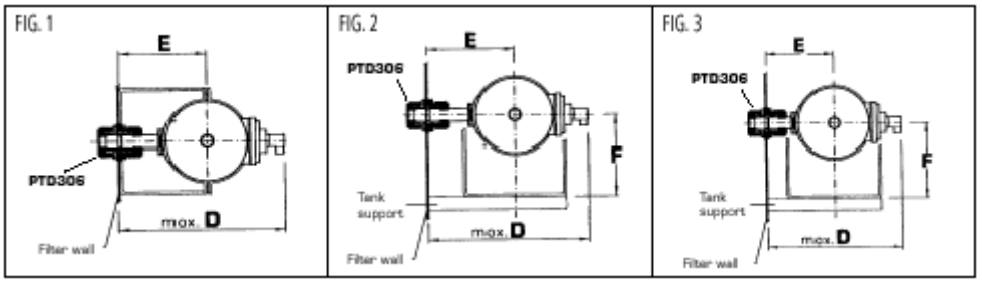
TH05 Brackets: Examples of Applications

Tank Ø5"

Brackets THO5

Figure	1	2	3
Blow Tube	TL506	TL506	TS506
D	325	325	305
E	180	180	160
F	–	180	180



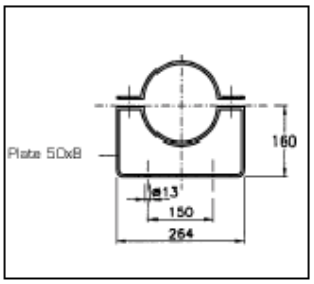


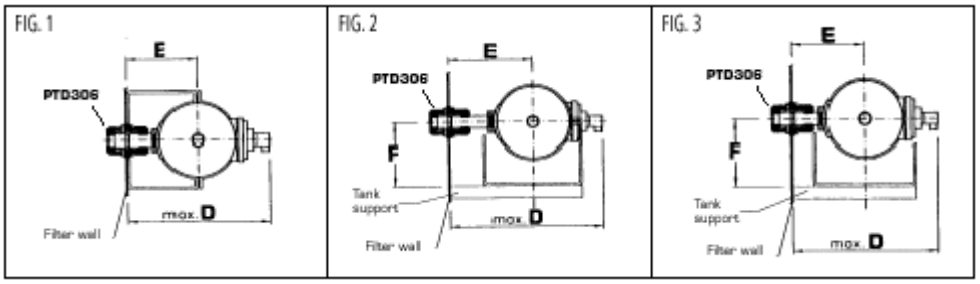
TM05 Brackets: Examples of Applications

Tank Ø5”

Brackets TMO5

Figure	1	2	3
Blow Tube	TS506	TL506	TS506
D	305	325	305
E	160	180	160
F	–	160	160



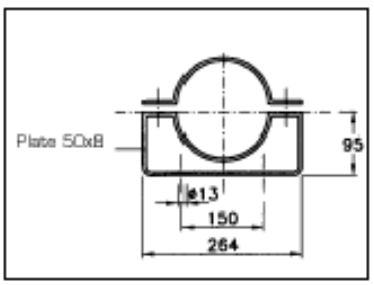


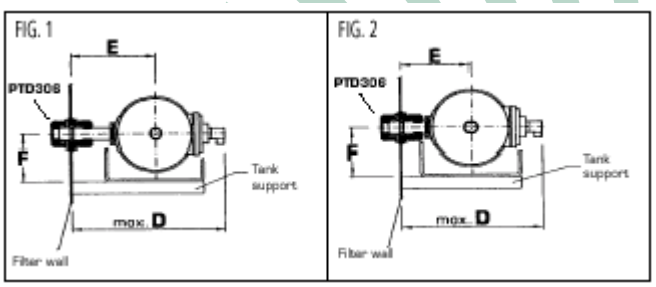
TB05 Brackets: Examples of Applications

Tank Ø5”

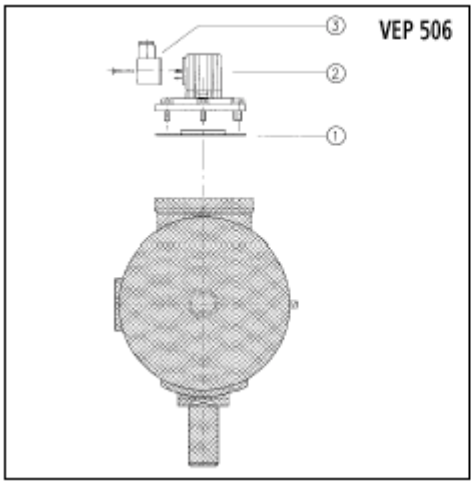
Brackets TBO5

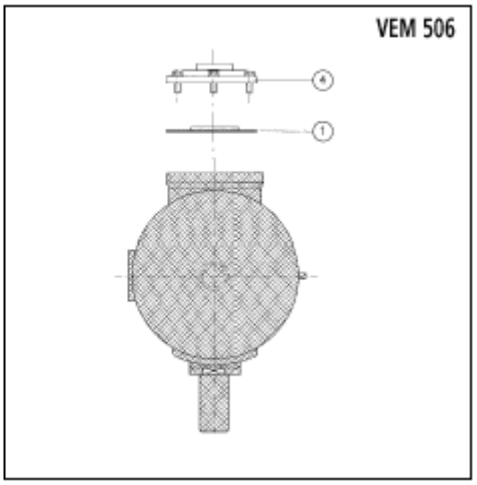
Figure	1	2
Blow Tube	TS506	TL506
D	325	305
E	180	160
F	95	95





Recommended Spare Parts: VEP/VEM 506 Valves

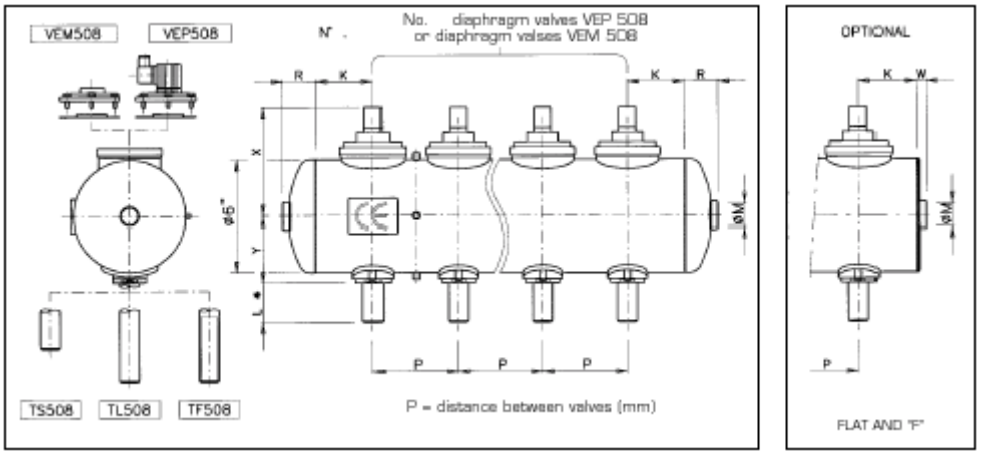




Note: for maintenance purpose only the spare parts listed below. Do not dismantle the body of the valve and the blow tube, which must be considered as an integral part of the tank.

		VEP 506	VEM 506
1	Diaphragm	DB16	DB16
2	Pilot group	PDM06.../..*	–
3	Connector	PLG9	–
4	Top Cover	–	M310082

Ø 6” Tank and Valves Type 508 (1”) plus blow tube

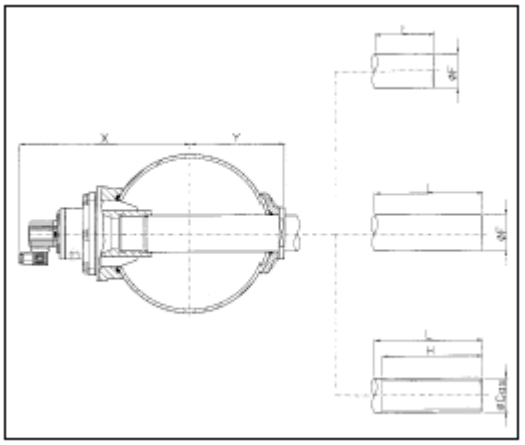


Ø nom.	Ø ext. (mm)	P min.	P	No. valves	Type valves	R	K min.	K	W	Y	X	ØM	FLAT END K min.	FLAT END K	FLAT END W
6”	168,3	120	(*)	(*)	1”	50	90	(*)	15	106	180	1”	90	(*)	15

* Dimensions to be set by designer, according to min. standard values.Tanks are painted in light blue RAL 5012.
On request: flat end (add ‘F’ at the end of the key)
Total length = 2K + 2R + P x (No. – 1)

VEM/VEP 508 – 26,3 Kv/30,6 Cv

Blow Tube



Short Smooth Tube 'TS508'

Ø Serb.	ØF	L	Mod.	X	Y
6"	33,4	60	TS508	180	106

Long Smooth Tube 'TL508'

Ø Serb.	ØF	L	Mod.	X	Y
6"	33,4	100	TL508	180	106

Threaded Male Tube 'TF508'

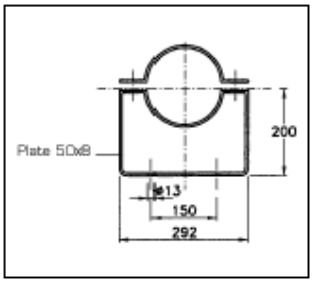
Ø Serb.	ØGas	H	L	Mod.	X	Y
6"	1"	90	100	TF508	180	106

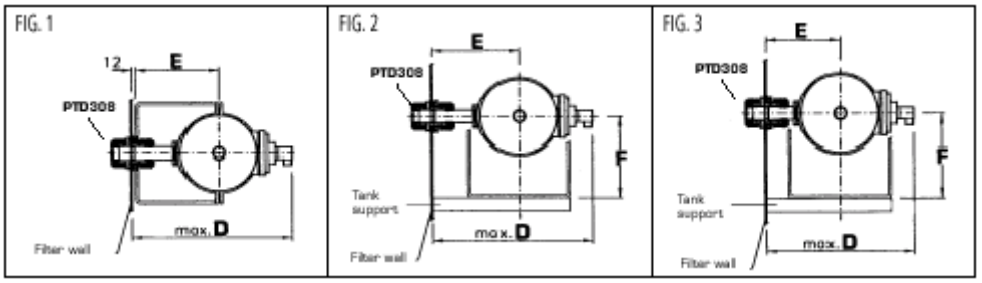
TH06 Brackets: Examples of Applications

Tank Ø6"

Brackets THO6

Figure	1	2	3
Blow Tube	TL508	TL508	TS508
D	395	395	360
E	200	212	175
F	–	200	200

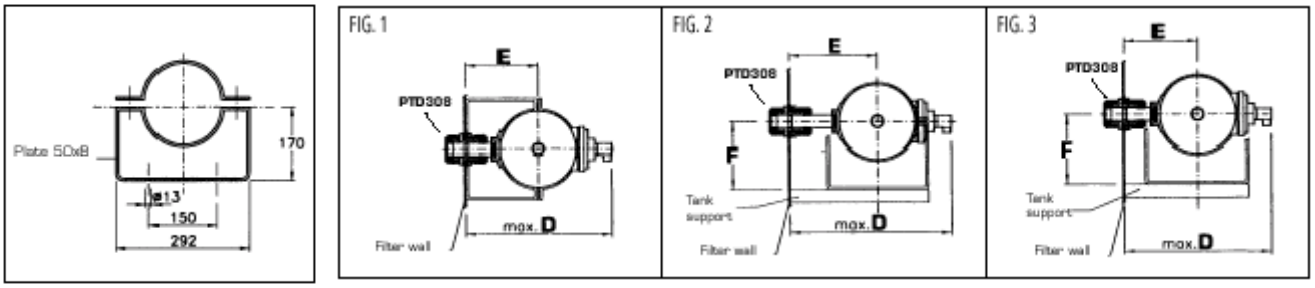




TM06 Brackets: Examples of Applications

Tank	Ø6”
Brackets	TMO6

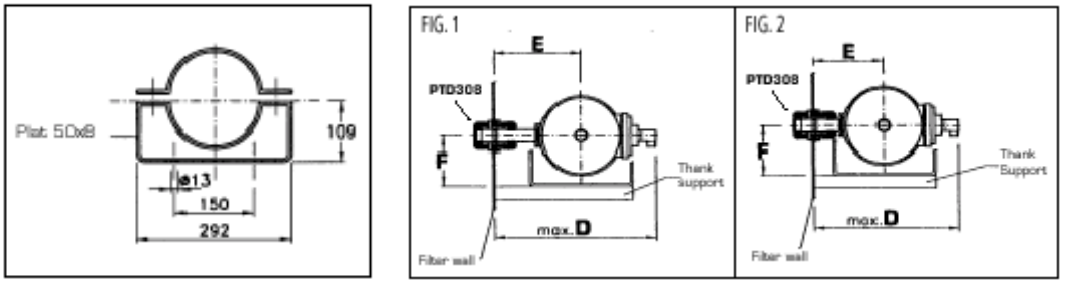
Figure	1	2	3
Blow Tube	TS508	TL508	TS508
D	360	395	360
E	170	212	170
F	–	170	170



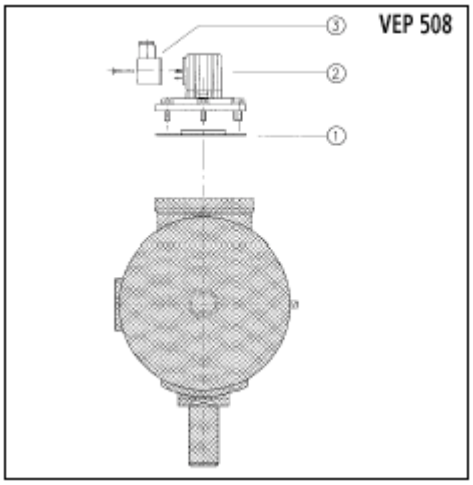
TB06 Brackets: Examples of Applications

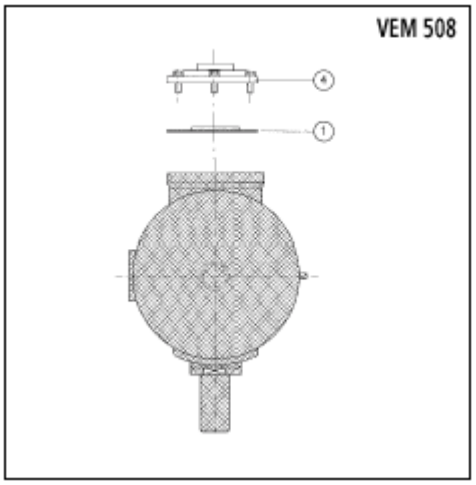
Tank	Ø6”
Brackets	TBO6

Figure	1	2
Blow Tube	TS508	TL508
D	395	395
E	212	175
F	109	109



Recommended Spare Parts: VEP/VEM 508 Valves

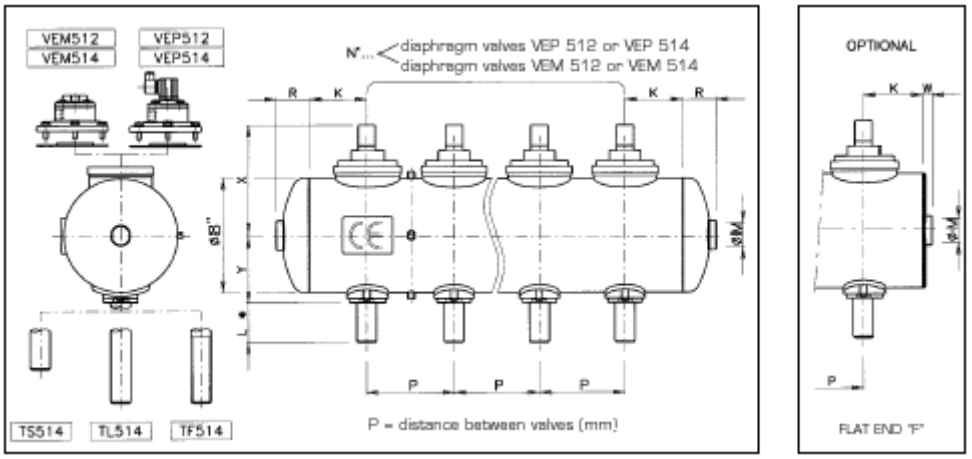




Note: for maintenance purpose only the spare parts listed below. Do not dismantle the body of the valve and the blow tube, which must be considered as an integral part of the tank.

		VEP 508	VEM 508
1	Diaphragm	DB18	DB18
2	Pilot group	PDM08.../..*	–
3	Connector	PLG9	–
4	Top Cover	–	M310086

Ø 8” Tank and Valves Type 512 or 514 (1 1/2”) plus blow tube

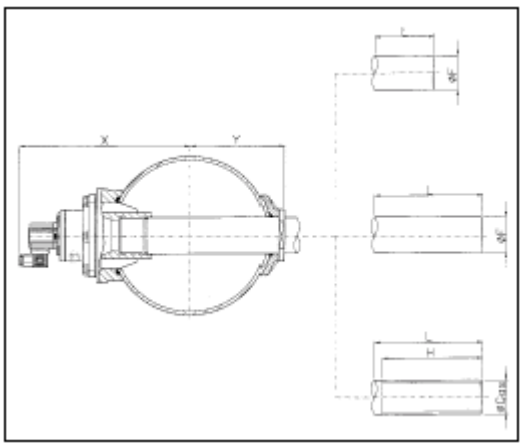


Ø nom.	Ø ext. (mm)	P min.	P	No. valves	Type valves	R	K min.	K	W	Y	X	ØM	FLAT END K min.	FLAT END K	FLAT END W
8”	219,1	160	(*)	(*)	1 1/2”	70	100	(*)	18	131	249	1 1/2”	100	(*)	18

* Dimensions to be set by designer, according to min. standard values.Tanks are painted in light blue RAL 5012.
On request: flat end (add ‘F’ at the end of the key)
Total length = 2K + 2R + P x (No. – 1)

	VEM/VEP 512	VEM/VEP 514
Kv/Cv	46,2/53,7	58,2/67,7

Blow Tube



Short Smooth Tube 'TS514'

Ø Serb.	ØF	L	Mod.	X	Y
8"	48,3	60	TS514	249	131

Long Smooth Tube 'TS514'

Ø Serb.	ØF	L	Mod.	X	Y
8"	48,3	120	TL514	249	131

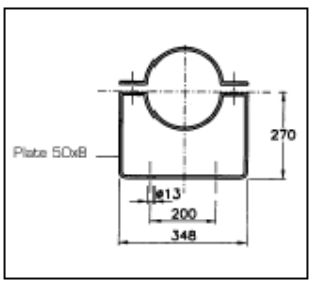
Threaded Male Tube 'TF514'

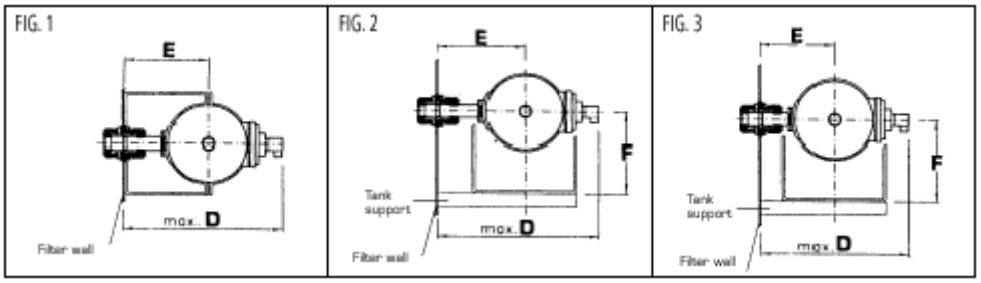
Ø Serb.	ØGas	H	L	Mod.	X	Y
8"	48,3	110	120	TF514	249	131

TH08 Brackets: Examples of Applications

Tank	Ø8"
Brackets	THO8

Figure	1	2	3
Blow Tube	TL514	TL514	TS514
D	520	520	460
E	270	270	210
F	–	270	270

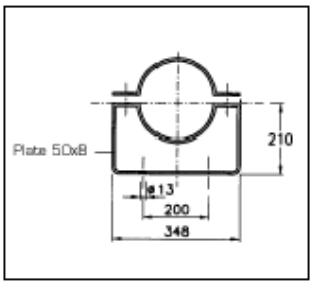


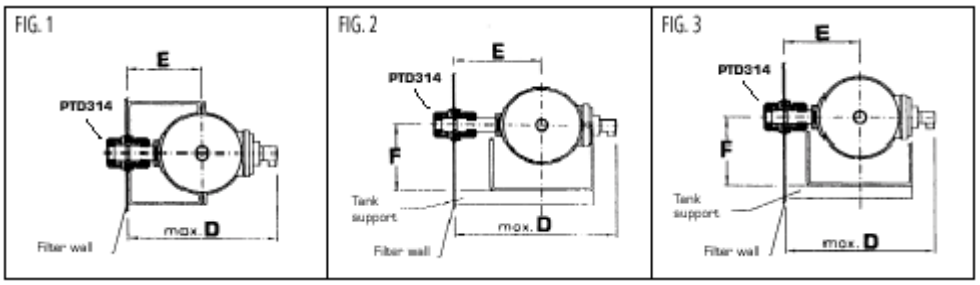


TM08 Brackets: Examples of Applications

Tank	Ø8”
Brackets	TMO8

Figure	1	2	3
Blow Tube	TS514	TL514	TS514
D	460	520	460
E	210	270	210
F	–	210	210

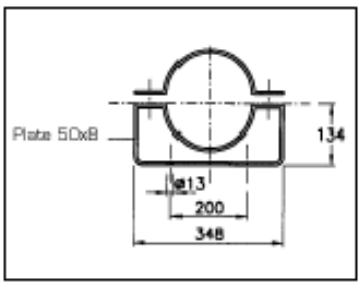


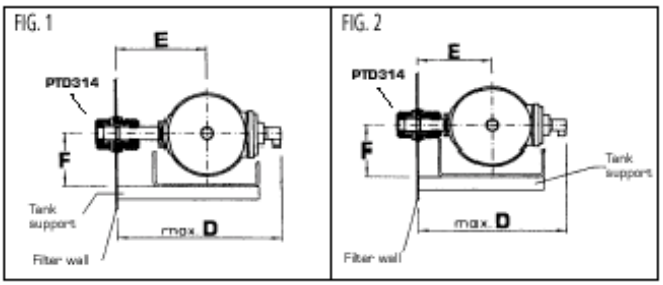


TB08 Brackets: Examples of Applications

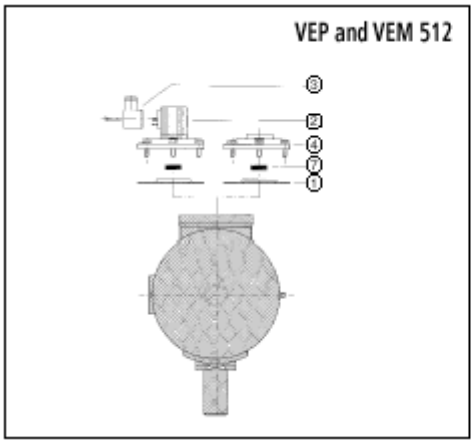
Tank	Ø8”
Brackets	TBO8

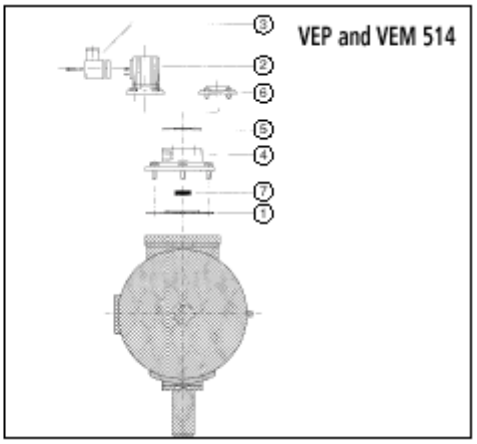
Figure	1	2
Blow Tube	TS514	TL514
D	520	460
E	270	210
F	134	134





Recommended Spare Parts: VEP/VEM 512 and 514 Valves



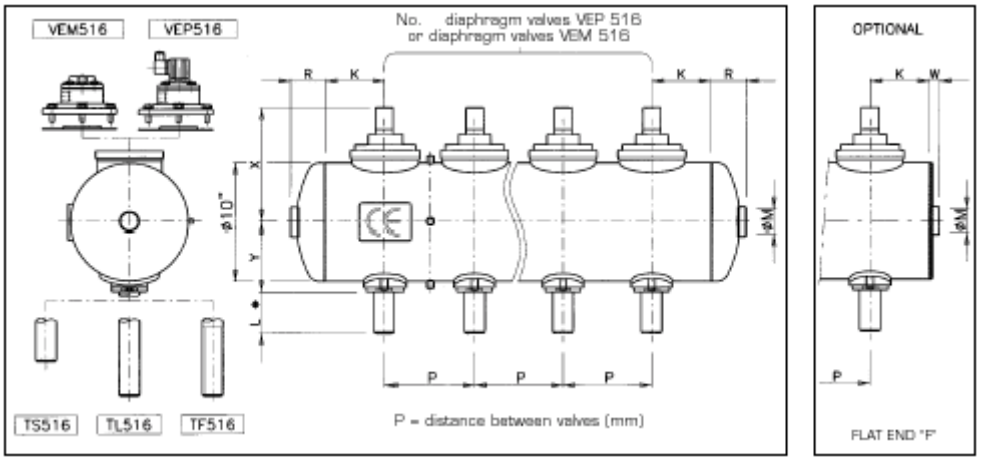


Note: for maintenance purpose only the spare parts listed below. Do not dismantle the body of the valve and the blow tube, which must be considered as an integral part of the tank.

		VEP 512	VEM 512
1	Diaphragm	DB112	DB112
2	Pilot group	PDM12.../..*	–
3	Connector	PLG9	–
4	Top cover	–	M310092
5	Spring	M470568	M470568

		VEP 514	VEM 514
1	Main diaphragm	DB114	DB114
2	Pilot group	PDM06.../..*	–
3	Connector	PLG9	–
4	Top cover	M310098	M310098
5	First stage diaphragm	DB16	DB16
6	Small cover	–	M310082
7	Spring	M470568	M470568

Ø 10” Tank and Valves Type 516 (2”) plus blow tube

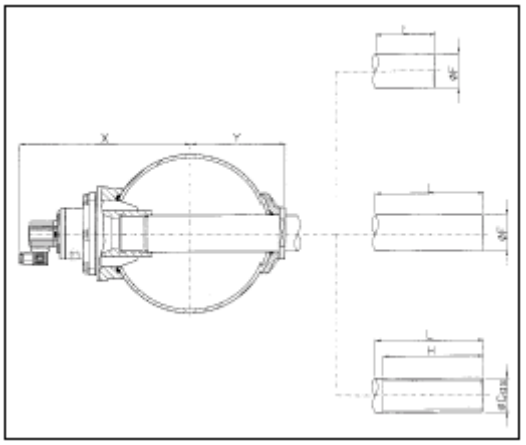


Ø nom.	Ø ext. (mm)	P min.	P	No. valves	Type valves	R	K min.	K	W	Y	X	ØM	FLAT END K min.	FLAT END K	FLAT END W
10”	273,0	180	(*)	(*)	2”	90	115	(*)	18	158	267	1 1/2”	115	(*)	18

* Dimensions to be set by designer, according to min. standard values.Tanks are painted in light blue RAL 5012.
On request: flat end (add ‘F’ at the end of the key)
Total length = 2K + 2R + P x (No. – 1)

VEM/VEP 516 – 93,1 Kv/108,2 Cv

Blow Tube



Short Smooth Tube 'TS516'

Ø Serb.	ØF	L	Mod.	X	Y
10"	60,3	60	TS516	267	158

Long Smooth Tube 'TL516'

Ø Serb.	ØF	L	Mod.	X	Y
10"	60,3	120	TS516	267	158

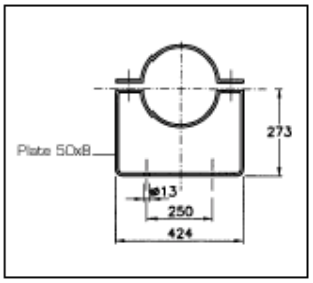
Threaded Male Tube 'TF516'

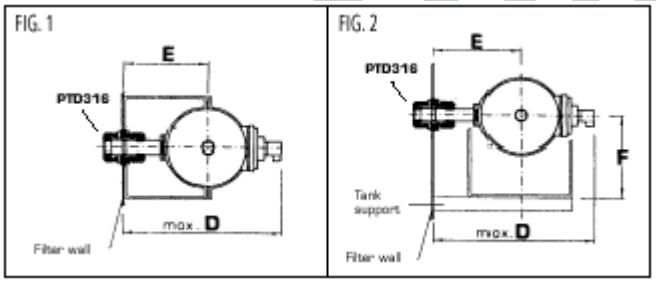
Ø Serb.	ØGas	H	L	Mod.	X	Y
10"	60,3	130	140	TF516	267	158

TH10 Brackets: Examples of Applications

Tank	Ø10"
Brackets	TH10

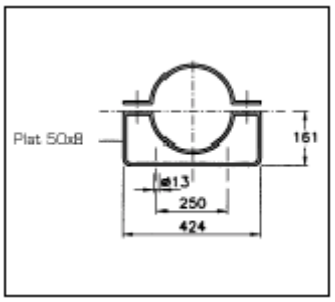
Figure	1	2
Blow Tube	TL516	TL516
D	560	550
E	290	280
F	–	290

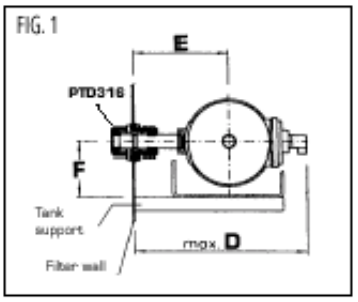




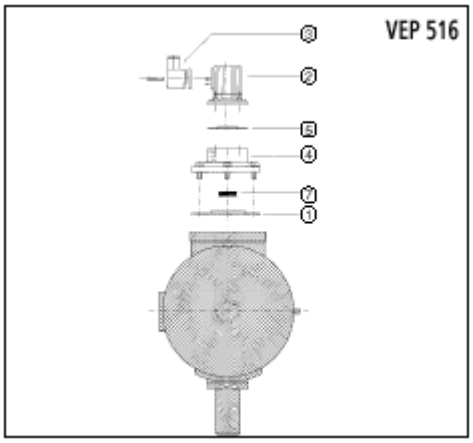
TB10 Brackets: Examples of Applications

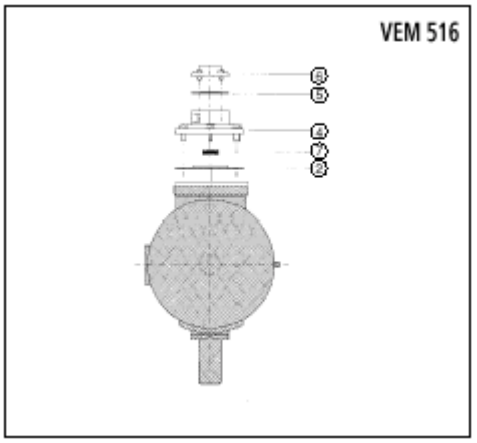
Tank	Ø10”
Brackets	TB10
Figure	1
Blow Tube	TS516
D	550
E	280
F	161





Recommended Spare Parts: VEP/VEM 516 Valves



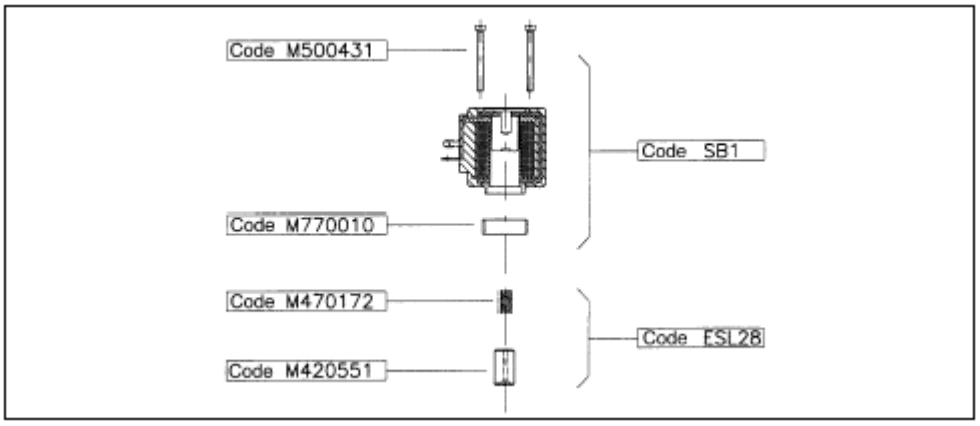


Note: for maintenance purpose only the spare parts listed below. Do not dismantle the body of the valve and the blow tube, which must be considered as an integral part of the tank.

		VEP 516	VEM 516
1	Main diaphragm	DB116	DB116
2	Pilot group	PDM06.../..*	–
3	Connector	PLG9	–
4	Top cover	M310100	M310100
5	First stage diaphragm	DB16	DB16
6	Small cover	–	M310082
7	Spring	M470568	M470568

* Specify voltage/frequence

Pilot Details



HOW TO ORDER

How to Compile the 'Full Immersion' System Code

Full Immersion System Assembly Example

Assembled and tested group:

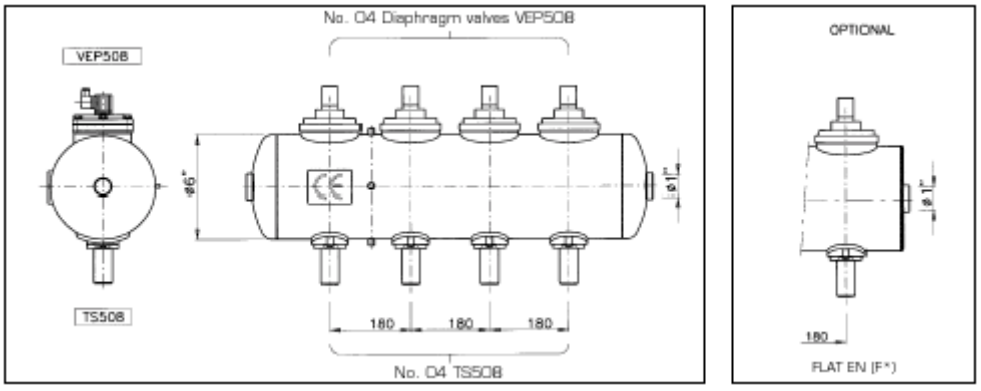
- 6" Ø TANK
- No.4 diaphragm valves VEP508, voltage 110V - 50 Hz
- No.4 short smooth blow tubes TS508

Accessories:

- No.2 brackets TM06
- No.4 bulkhead connection fittings PTD308

S6C08N04P180

No. 4 VEP508-110/50
No. 4 TS508
No. 2 TM06
No. 4 PTD308



S 6 C 08 N04 P180/F*

S	–	Tank
6	–	Tank Diameter 5” 6” 8” 10”
C	–	Full Immersion
08	–	Valve Type (specify VEP or VEM) 06 = 506 (3/4”), for 5” tank 08 = 508 (1”), for 6” tank 12 = 512 (1 1/2” single diaphragm), for 8” tank 14 = 514 (1 1/2” double diaphragm), for 8” tank 16 = 516 (2”), for 10” tank
N04	–	N: Number of valves
P180	–	P: Distance between valves (mm)
F*	–	Add ‘F’ at the end of the key for flat end tanks only (on request)