



PCIFMCM- Free Flow interception pneumatic valve
extended stroke- AISI 316L microcast body - ON-OFF
AISI 304 servocontrol

PCIFMCM

• **DESCRIPTION**

The free flow interception pneumatic valve PCIFMCM series is made up of a free flow body, a packing seal bonnet and an actuator.

The Y shape of the valve grants value of the K_v flow coefficient, higher than the similar conveyed flow bodies.

The actuator consisting of 2 parts deep drawn in AISI 304 SS, is resistant and suitable for the most onerous outdoor environments in terms of temperature / humidity / presence of aggressive vapors.

The actuating spring inside is free; this allows an extended stroke of the valve stem with respect to the technopolymer actuator. On the other hand, the servo control must be inspected with extreme caution, carefully following the use and maintenance instructions.

The packing gland is composed of V-ring in PTFE/graphite and Viton, for a perfect seal both with high and low temperatures.



• **TECHNICAL FEATURES**

- > Valve body and bonnet made of microcast AISI 316L stainless steel
- > Nylon actuator reinforced with 30% fiberglass
 - ◆ STD execution: NC (normally closed)
 - ◆ On demand NA (normally opened), DE (double effect)
- > Pneumatic control connections: see page.2
- > Shutter seat seal in PTFE/graphite (STD), on demand EPDM, Viton, virgin PTFE or PEEK
- > Packing in PTFE/graphite and Viton
- > 360° rotating actuator for an optimal connection positioning
- > Protected visual stroke indicator to grant the insulation of the servocontrol from the external contamination
- > In accordance with PED 2014/68/UE

- **GENERAL TECHNICAL DATA**

- > Valve dimension from DN10 to DN65
- > Actuator sizes: D.050 / D.070 / D.100 / D.125 / D.160
- > Process fluid: water steam (P_{max} 10 bar), air, vacuum, neutral gases, water, corrosive liquid (please verify compatibility with AISI 316 and shutter seal material)
- > Process fluid temperature:
 - ◇ Shutter PTFE-graphite (STD): $-10\text{ °C} \div +180\text{ °C}$
 - On demand:
 - ◇ Shutter EPDM: $-10\text{ °C} \div +150\text{ °C}$
 - ◇ Shutter Virgin PTFE: $-10\text{ °C} \div +180\text{ °C}$
 - ◇ Shutter PEEK: $-10\text{ °C} \div +220\text{ °C}$
- > Connections:
 - * Threaded (BSPP, NPT)
 - * Welded (socket weld SW, clamp)
 - * Flanged (PN16 EN1092 red. thickness, PN6/PN10/PN16/PN40 EN1092, reduced size)
- > Differential pressure (below shutter), flow coefficient K_v and body rating: see table page.3

- **PNEUMATIC ACTUATOR TECHNICAL DATA**

- > Actuator supply pressure: 5-8 bar
- > Supply control fluid: air/inert, filtered and dehumidified gases (3/2 solenoid control valve can be supplied on request)
- > Pneumatic connections:
 - ◇ D.50 / D.70 / D.100 : 1/8" G
 - ◇ D.125 / D.160: 1/4" G
- > Room/supply fluid temperature $-10\text{ °C} \div +70\text{ °C}$

- **OPTIONS AND ACCESSORY(*) (for details, refer to tge dedicated section)**

- > Switch box
- > Adjustable stroke limiter
- > Special connection at customer choice
- > Special shutter material
- > Vacuum application
- > Degrease for oxygen use

Note (*): — All special applications must be required during offer phase and specified in OC.

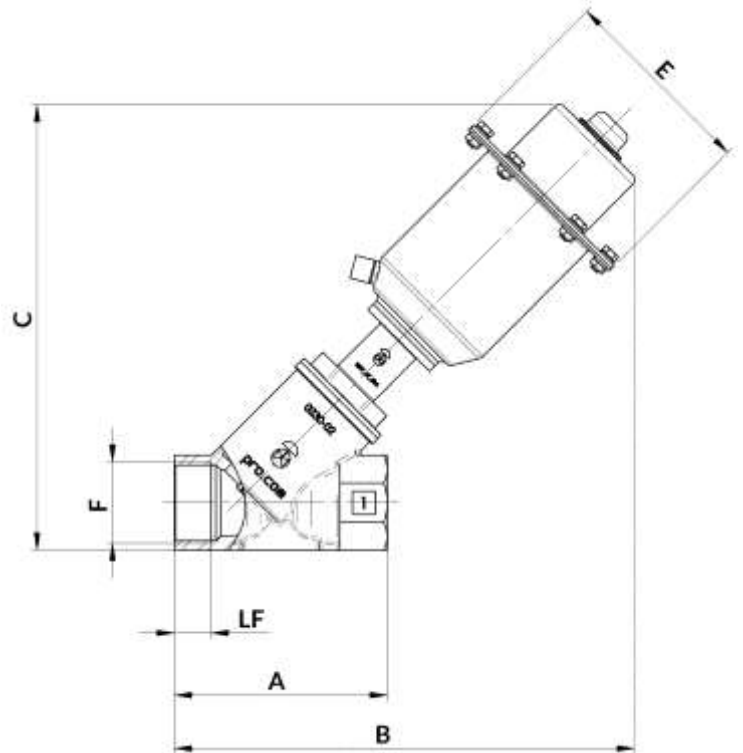
TECHNICAL DATA PCIFMCM SERIES

DN		Actuator size	PN		K _v	ΔP	Stroke
(mm)	(inch)		Threaded/ SW body	Flanged Body			
10	3/8"	50	40	6/10/16/40	3	28	6
15	1/2"	50	40	6/10/16/40	3.9	18	8
15	1/2"	70	40	6/10/16/40	4.9	35	10
20	3/4"	50	40	6/10/16/40	9	14	12
20	3/4"	70	40	6/10/16/40	10	25	14
25	1"	50	40	6/10/16/40	14.1	9	12
25	1"	70	40	6/10/16/40	16	20	20
25	1"	100	40	6/10/16/40	17.8	35	25
32	1 1/4"	70	25	6/10/16/40	23.1	13	20
32	1 1/4"	100	25	6/10/16/40	25	22	25
40	1 1/2"	70	25	6/10/16/40	33.8	8	20
40	1 1/2"	100	25	6/10/16/40	36.1	20	25
50	2"	70	16	6/10/16/40	42.8	5	20
50	2"	100	16	6/10/16/40	48.7	14	25
65	2 1/2"	100	16	6/10/16/40	64.2	6	25
65	2 1/2"	125	16	6/10/16/40	64.2	9	25
65	2 1/2"	160	16	6/10/16/40	64.2	14	25



• **DIMENSIONAL DATA**

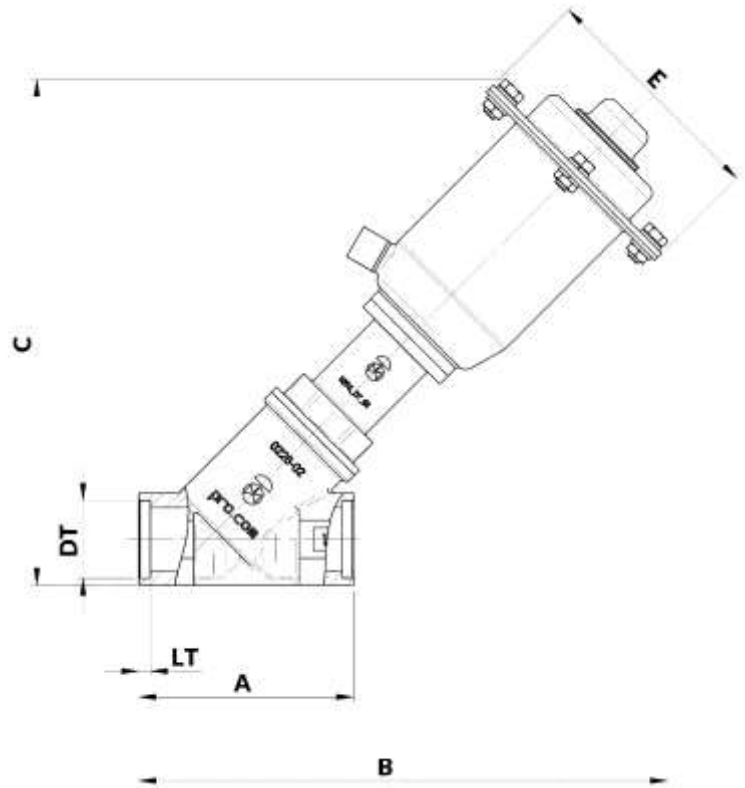
> **Threaded FF connections**



DIMENSIONAL TABLE PCIFMCM SERIES - Threaded FF connections

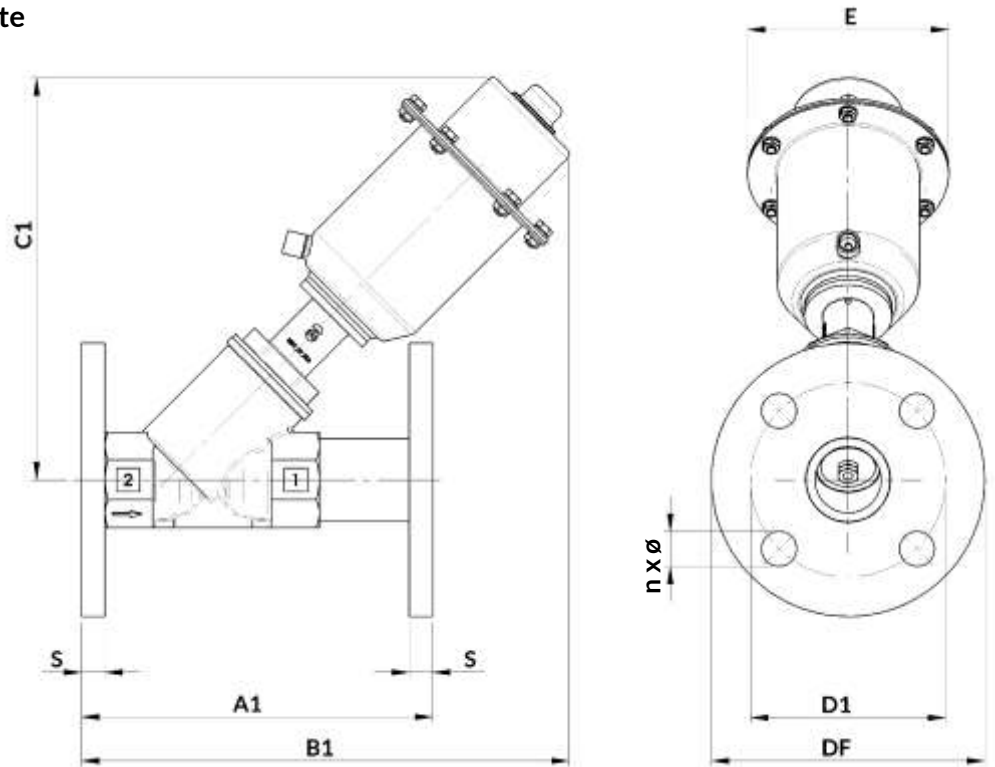
DN		ATT.	A	B	C	E	F		LF	
(mm)	(inch)						BSPP	NPT	BSPP	NPT
10	3/8"	ø50	55	170	165	83	3/8"-19	3/8"-18	8	8
15	1/2"	ø50	65	180	170	83	1/2"-14	1/2"-14	13	13
15	1/2"	ø70	65	210	195	103	1/2"-14	1/2"-14	13	13
20	3/4"	ø50	75	185	175	83	3/4"-14	3/4"-14	14	14
20	3/4"	ø70	75	215	205	103	3/4"-14	3/4"-14	14	14
25	1"	ø50	90	200	185	83	1"-11	1"-11 1/2	17	16
25	1"	ø70	90	230	220	103	1"-11	1"-11 1/2	17	16
32	1 1/4"	ø50	110	210	200	135	1 1/4"-11	1 1/4"-11 1/2	19	17
32	1 1/4"	ø70	110	240	230	103	1 1/4"-11	1 1/4"-11 1/2	19	17
32	1 1/4"	ø100	110	265	260	135	1 1/4"-11	1 1/4"-11 1/2	19	17
40	1 1/2"	ø70	120	245	235	103	1 1/2"-11	1 1/2"-11 1/2	19	17
40	1 1/2"	ø100	120	270	265	135	1 1/2"-11	1 1/2"-11 1/2	19	17
50	2"	ø70	150	265	255	103	2"-11	2"-11 1/2	25	18
50	2"	ø100	150	290	280	135	2"-11	2"-11 1/2	25	18
65	2 1/2"	ø100	175	330	320	135	2 1/2"-11	-	22	-
65	2 1/2"	ø125	175	355	350	170	2 1/2"-11	-	22	-
65	2 1/2"	ø160	175	360	350	210	2 1/2"-11	-	22	-

> **Socket Weld Connections**



DIMENSIONAL TABLE PCIPFM SERIE - Socket weld connections								
DN		ATT.	A	B	C	DT	LT	E
(mm)	(inch)							
15	1/2"	ø50	65	190	180	21,5	4	83
15	1/2"	ø70	65	215	205	21,5	4	103
20	3/4"	ø50	75	195	190	27,2	4	83
20	3/4"	ø70	75	220	215	27,2	4	103
25	1"	ø50	90	210	200	34	4	83
25	1"	ø70	90	235	230	34	4	103
25	1"	ø100	90	280	270	34	4	135
32	1 1/4"	ø70	110	245	240	43	4	103
32	1 1/4"	ø100	110	290	280	43	4	135
40	1 1/2"	ø70	120	250	245	49	4	103
40	1 1/2"	ø100	120	295	290	49	4	135
50	2"	ø70	150	270	265	61	4	103
50	2"	ø100	150	315	305	61	4	135
65	2 1/2"	ø100	175	330	320	76,5	29	135
65	2 1/2"	ø125	175	355	350	76,5	29	170
65	2 1/2"	ø160	175	360	350	76,5	29	210

> **Connessioni flangiate**

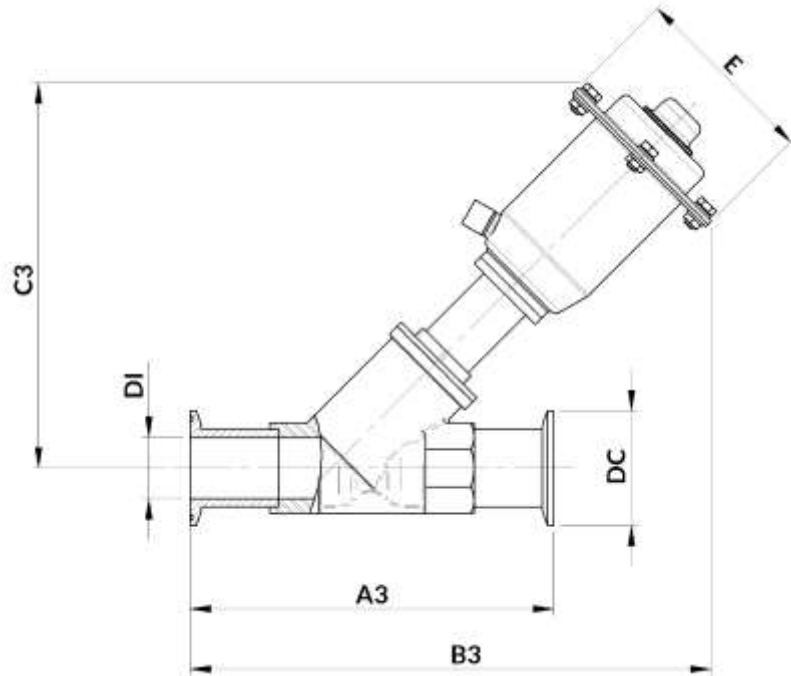


DIMENSIONAL TABLE PCIFMCM SERIE – Flanged connections

DN		ATT.	A1	B1	C1	DF		D1		n x Ø		S				E
(mm)	(inch)					PN16 Low./ PN16/ PN40	Reduc ed	PN16 Low./ PN16/ PN40	Fl. Rid.	PN16 Low./ PN16/ PN40	Reduc ed	PN16 Low.	PN 16	Redu ced	PN 40	
10	3/8"	ø50	110	165	150	90	65	60	45	4x14	4x7	10	14	6	14	83
15	1/2"	ø50	130	200	160	95	70	65	50	4x14	4x7	10	14	6	14	83
15	1/2"	ø70	130	220	190	95	70	65	50	4x14	4x7	10	14	6	14	103
20	3/4"	ø50	150	205	160	105	75	75	55	4x14	4x9	10	16	8	16	83
20	3/4"	ø70	150	225	195	105	75	75	55	4x14	4x9	10	16	8	16	103
25	1"	ø50	160	220	170	115	80	85	60	4x14	4x9	10	16	8	16	83
25	1"	ø70	160	240	200	115	80	85	60	4x14	4x9	10	16	8	16	103
25	1"	ø100	160	275	210	115	80	85	60	4x14	4x9	10	16	8	16	135
32	1 1/4"	ø70	180	250	210	140	90	100	70	4x18	4x9	12	18	8	18	103
32	1 1/4"	ø100	180	300	230	140	90	100	70	4x18	4x9	12	18	8	18	135
40	1 1/2"	ø70	200	255	210	150	100	110	80	4x18	4x9	12	18	8	18	103
40	1 1/2"	ø100	200	300	245	150	100	110	80	4x18	4x9	12	18	8	18	135
50	2"	ø70	230	280	225	165	110	125	90	4x18	4x11	12	20	10	20	103
50	2"	ø100	230	325	250	165	110	125	90	4x18	4x11	12	20	10	20	135
65	2 1/2"	ø100	290	360	280	185	135	145	110	8x18	4x11	12	20	10	22	135
65	2 1/2"	ø125	290	385	310	185	135	145	110	8x18	4x11	12	20	10	22	170
65	2 1/2"	ø160	290	390	335	185	135	145	110	8x18	4x11	12	20	10	22	210



> **Clamp Connections**



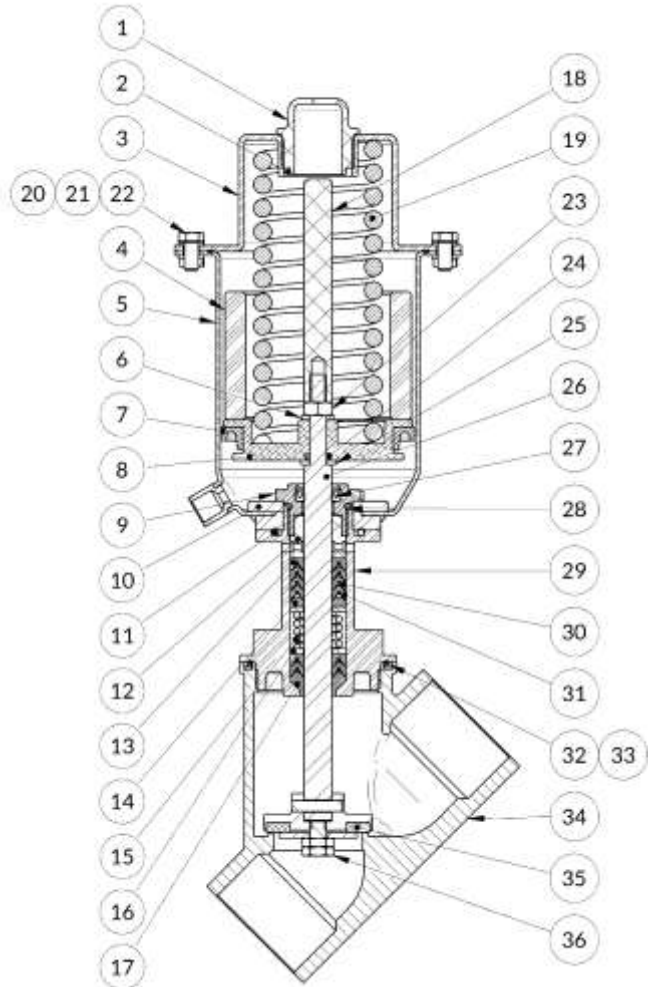
DIMENSIONAL TABLE PCIFMCM SERIES—Clamp Connections

DN		ATT.	A3	B3	C3	DN		DI		E
(mm)	(inch)					EN-ISO 2852	ASME-BS 4825	EN-ISO 2852	ASME-BS 4825	
15	1/2"	ø50	130	205	160	34	25.2	17	9.4	83
15	1/2"	ø70	130	235	190	34	25.2	17	9.4	103
20	3/4"	ø50	150	215	160	50.5	25.2	22	15.7	83
20	3/4"	ø70	150	245	195	50.5	25.2	22	15.7	103
25	1"	ø50	160	230	170	50.5	50.5	27	22.1	83
25	1"	ø70	160	260	200	50.5	50.5	27	22.1	103
25	1"	ø100	160	280	210	50.5	50.5	27	22.1	135
32	1 1/4"	ø70	180	270	210	50.5	50.5	34	28.5	103
32	1 1/4"	ø100	180	295	230	50.5	50.5	34	28.5	135
40	1 1/2"	ø70	200	285	210	64	50.5	41.5	34.8	103
40	1 1/2"	ø100	200	310	245	64	50.5	41.5	34.8	135
50	2"	ø70	230	305	225	77.5	64	52	47.5	103
50	2"	ø100	230	330	250	77.5	64	52	47.5	135
65	2 1/2"	ø100	290	385	280	91	77.5	69	60.2	135
65	2 1/2"	ø125	290	415	310	91	77.5	69	60.2	170
65	2 1/2"	ø160	290	450	335	91	77.5	69	60.2	210



• **SPARE PARTS LIST**

POS	QT	Description	Material	KIT Spares (*)
1	1	Cap	POLICARB. TRASP.	
2	1	OR seal	VITON	A
3	1	Servocontrol cover	AISI304	
4	1	Spacer	PVC	
5	1	Servocontrol body	AISI304	
6	1	Grower washer	A2/70	
7	1	Piston seal	POLIURET.	A
8	1	Servocontrol piston	AL 6082	
9	1	Chape	AISI304	
10	1	Spacer washer	AISI304	
11	1	OR seal	VITON	A
12	1	Packing gland bush	PTFE-graphite	
13	2	Packing gland head	PTFE-graphite	F
14	1	Packing gland bottom	PTFE-graphite	F
15	1	Packing gland spring	AISI316	F
16	2	Flat washer	A2/70	
17	1	Packing gland bush	PEEK	F
18	1	Stroke indicator	PVC	
19	1	Servocontrol spring	EN10270-1 SH	
20	6	TE screw	A2/70	
21	6	Nut	A2/70	
22	6	Grower washer	A2/70	
23	1	Nut	A2/70	
24	1	OR seal	VITON	A
25	1	Washer	AISI304	
26	1	Valve stem	AISI316	
27	1	Scraper seal	VITON	A
28	1	OR seal	VITON	A
29	1	Packing gland bonnet	AISI316	
30	1	Packing gland ring	VITON	F
31	3	Packing gland intermediate ring	PTFE-graphite	F
32	1	OR seal	VITON	F
33	1	Body seal	PTFE	F
34	1	Valve body	AISI 316L	
35	1	Shutter seal	PTFE-graphite	F
36	2	Nut	A4/70	



(*) The spare parts shown in the table are available in kit

> **A: KITSERV_TS CM-KIT** spares AISI 304 servocontrol air side – it depends on the servocontrol size (TS: 050/ 070/ 100/ 125/ 160)

> **F: KITFLUID_DN CM-KIT** spares fluid side –it depends on the valve size (DN: 015/ 020/ 025/



- ORDER CODES

PCIFMCM - Free flow interception valve - AISI 316L microcast body - AISI304 ON/OFF Servocontrol—Extended stroke							
PCIFMCM	_DN	_TS (Actuator size)		_A (Body connections)		_V (Version)	
			010	1	D.050	1	FF GAS
	015	2	D.070	1N	FF NPT	NA ^(*)	Norm. Opened
	020	3	D.100	2	Flang. PN16 Lowered	DE ^(*)	Double Effect
	025	4	D.125	2U	Flang. PN16 EN1092	HT ^(*)	PEEK seat
	032	5	D.160	3	Flang. Reduced	V ^(*)	Vacuum application
	040			4	Socket weld (SW)		
	050			6_2852	Clamp EN ISO 2852		
	065			6_4825	Clamp ASME BS 4825		
				8	Flanged. PN40		

Note (*): – All special applications must be required during offer phase and specified in OC

Es. : PCIFMCM_032_2_1 – Free Flow valve DN032 - body AISI316L - serv. AISI304 D070 NC - FF 1"1/4G