ESA PYRONICS INTERNATIONAL
SIAD Group

Accessories

Coupled Flanges

PF & PFP & PFF & PSP
(E5701 rev. 05 - 06/07/2012)

GENERAL WARNINGS:

■ All installation, maintenance, ignition and setting must be performed by qualified staff, respecting the norms present at the time and place of the installation.

■ To avoid damage to people and things, it is essential to observe all the points indicated in this handbook. The reported indications do not exonerate the Client/User from observing general or specific laws concerning accidents and environmental safeguarding.

■ The operator must wear proper DPI clothing (shoes, helmets...) and respect the general safety, prevention and precaution norms.

■ To avoid the risks of burns or high voltage electrocutaion, the operator must avoid all contact with the burner and its control devices during the ignition phase and while it is running at high temperatures.

■ All ordinary and extraordinary maintenance must be performed when the system is stopped.

■ To assure correct and safe use of the combustion plant, it is of extreme importance that the contents of this document be brought to the attention of and be meticulously observed by all personnel in charge of controlling and working the devices.

■ The functioning of a combustion plant can be dangerous and cause injuries to persons or damage to equipment. Every burner must be provided with certified combustion safety and supervision devices.

■ The burner must be installed correctly to prevent any type of accidental/undesired heat transmission from the flame to the operator or the equipment.

■ The performances indicated in this technical document regarding the range of products are a result of experimental tests carried out at ESA-PYRONICS. The tests have been performed using ignition systems, flame detectors and supervisors developed by ESA-PYRONICS. The respect of the above mentioned functioning conditions cannot be guaranteed if equipment, which is not present in the ESA-PYRONICS catalogue, is used.

DISPOSAL:

To dispose of the product, abide by the local legislations regarding it.

GENERAL NOTES:

■ In accordance to the internal policy of constant quality improvement, ESA-PYRONICS reserves the right to modify the technical characteristics of the present document at any time and without warning.

■ It is possible to download technical sheets which have been updated to the latest revision from the **www.esapyronics.com** website.

■ The products manufactured by ESA-PYRONICS have been created in conformity to the **UNI EN 746-2:2010** Norms: Equipment for industrial thermal process - Part 2: Safety requirements for combustion and the movement and treatment of combustible elements. This norm is in harmony with the Machine Directive **2006/42/CE**. It is certified that the products in question respect all the requirements prescribed by the above mentioned Norms and Directives.

■ Certified in conformity with the **UNI EN ISO 9001** Norm by DNV GL.

CERTIFICATIONS:

The products comply with the requirements of the Eurasian market (Russia, Belarus and Kazakhstan) and are exempt from the EAC certification ref. **Doc. 01-11/437**

CONTACTS / SERVICE:

Headquarters:
Esa S.p.A.
Via Enrico Fermi 40
24035 Curno (BG) - Italy
Tel +39.035.6227411
Fax +39.035.6227499
esa@esacombustion.it

International Sales:
Pyronics International s.a.
Zoning Industriel, 4ème rue
B-6040 Jumet - Belgium
Tel +32.71.256970
Fax +32.71.256979
marketing@pyronics.be

www.esapyronics.com

The PFP and PSP series flanges were created to adapt to standard pipes with sizes ranging between DN10 and DN150, and guarantee tightness coupling also in case of frequent disassembly/reassembly. Each flange has a Rp1/8" (UNI EN 10226) threaded hole in which it is possible to mount a pressure tap allowing for quick and easy pressure check. The use of flanges makes the installation of auxilliary equipment easier and guarantees quick maintenance and replacement, without needing to make modifications on the pipeline. They are available individually or combined. The coupled flanges are supplied with appropriate gasket and pressure taps.

PFP

F5701I03

APPLICATIONS

- Flanged connections along the pipes
- Coupling of every type of equipment
- Junctions where pressure detection is necessary

PSP

F5701I04

CHARACTERISTICS

GENERAL:

■ Threaded PFP flange sizes:	from Rp 3/8" to Rp 2"
■ Welding PSP flange sizes:	from DN65 to DN150
■ Max. pressure:	400 mbar
■ Max. temperature:	400 °C

MATERIAL COMPOSITION:

■ Threaded flanges:	cast iron G25
■ Welding flanges:	Fe 360
■ Gaskets:	AFM-34/Xtreme Plus

WARNINGS

■ Make sure that the operating pressure and the fluid temperature are lower than the maximum allowed values.

■ Check that the flanges have been installed correctly before starting the flow in the pipeline.

■ In case of malfunctioning of the coupled flanges follow the indications in the present handbook in the “MAINTENANCE” chapter or contact ESA PYRONICS assistance.

■ Any type of modification or repair done by third parties could compromise the application safety and cause the general guarantee conditions to automatically expire.

INSTALLATION

ASSEMBLY OF WELDING FLANGES

1 - Disassemble the coupled flange.

2 - Weld the flanges onto the ends of the pipes, removing welding burrs.

3 - Before assembling, make sure that there are no foreign objects inside the valve or in the pipes, if necessary, remove the impurities.

4 - Check the correct alignment of the connecting pipes and check the correct distance between the pipes and the assembly (flange/gasket/valve body), to avoid exerting tension on the pipes during the tightening phase.

5 - Place the gasket between the two flanges, then insert the bolts, washers and nuts.

6 - Using appropriate tools, progressively screw on the bolts in a crisscross, avoiding excessive tightening.

7 - Check the tightness of the flanged connection with a leak detector, pressurizing the pipe.

ASSEMBLY OF THREADED FLANGES

1 - Disassemble the coupled flange

2 - Using thread sealing paste, individually screw the flanges onto the pipes, guaranteeing adequate tightening of the thread.

3 - Before assembling, make sure that there are no foreign objects inside the valve or in the pipes, if necessary, remove the impurities.

4 - Check the correct alignment of the connecting pipes and check the correct distance between the pipes and the assembly (flange/gasket/valve body), to avoid exerting tension on the pipes during the tightening phase.

5 - Place the gasket between the two flanges, then insert the bolts, washers and nuts

6 - Using appropriate tools, progressively screw on the bolts in a crisscross, avoiding excessive tightening.

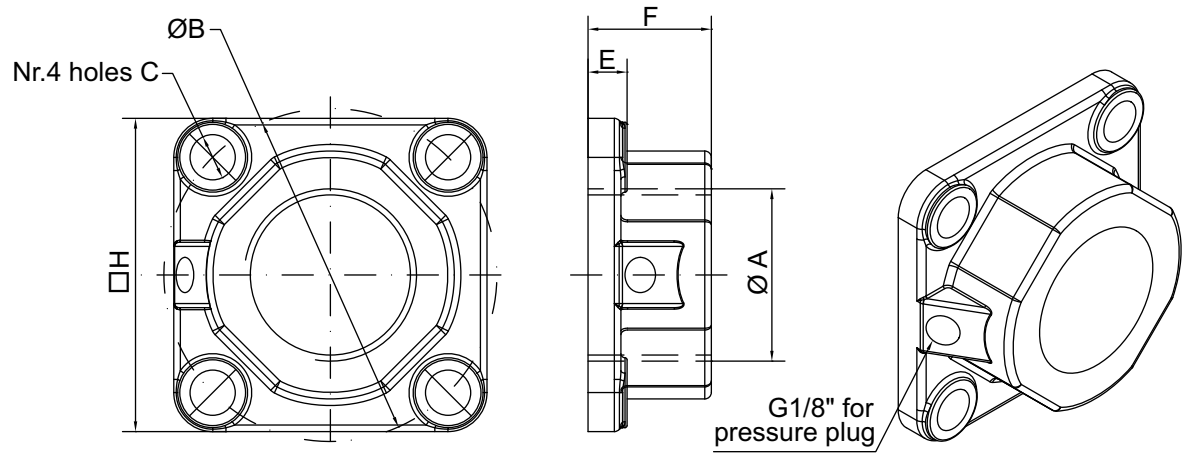
7 - Check the tightness of the flanged connection with a leak detector, pressurizing the pipe.

GENERAL MAINTENANCE PLAN

Operation	Type (*)	Advised time	Notes
GAsket intergity	O	anual	Check that there are no air leaks towards the outside
Bolt fastening	E	anual	Reduce to every six months in applications with vibrations.

NOTES:
Key: O = ordinary / E = extraordinary
(*) you are advised to replace the gaskets each time the flanges are disassembled.

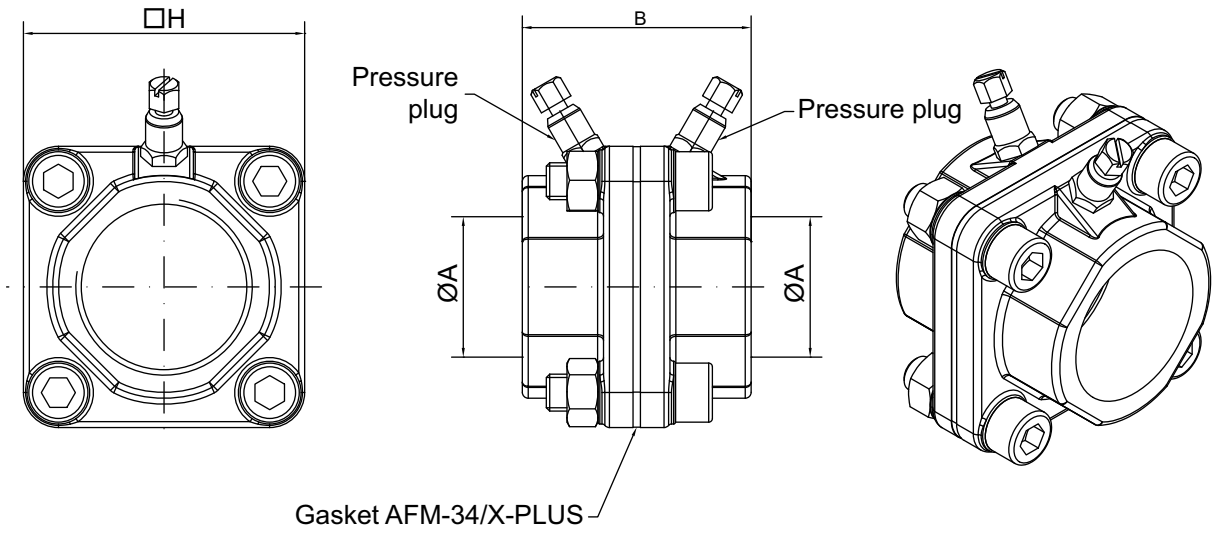
OVERALL DIMENSIONS - PF THREADED FLANGE



D5701I01

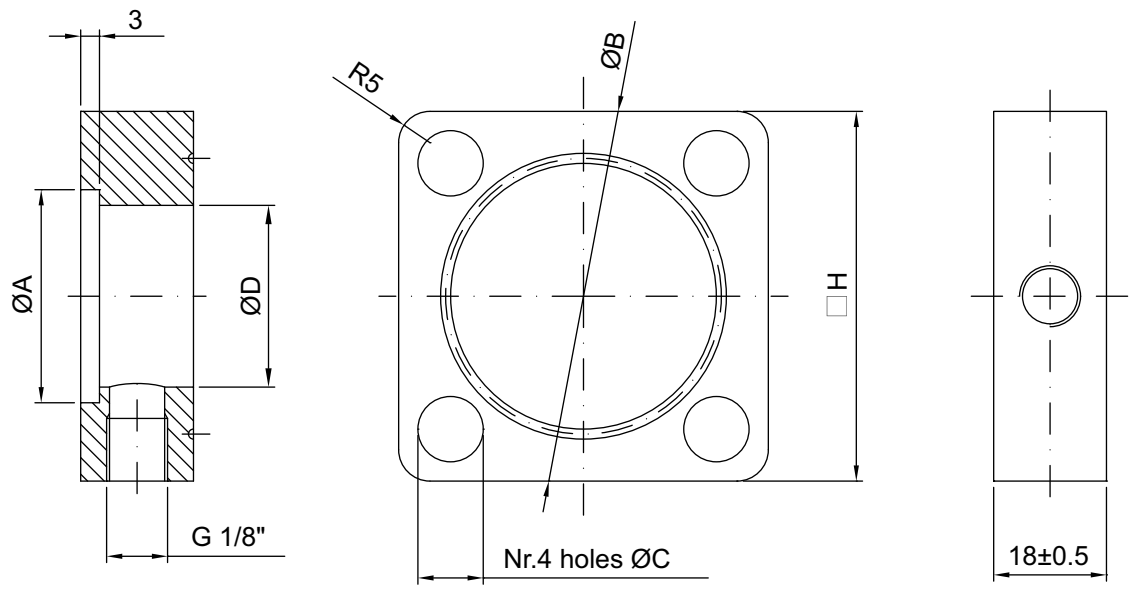
Model	ø A	ø B [mm]	ø C [mm]	E [mm]	F [mm]	H [mm]	R [mm]	Weight [Kg]
103 PF	G - 3/8”	60,3	9	13	21	60	7,5	0,32
104 PF	G - 1/2”	60,3	9	13	21	60	7,5	0,34
106 PF	G - 3/4”	60,3	9	13	21	60	7,5	0,30
108 PF	G - 1”	60,3	9	13	21	60	8	0,35
310 PF	G - 1.1/4”	81	11	9.5	30	76,2	9,5	0,5
312 PF	G - 1.1/2”	81	11	9.5	30	76,2	9,5	0,45
416 PF	G - 2”	96,8	11	9.5	30,5	87,3	11	0,6
412 PF	G - 1.1/2”	96,8	11	11	32	89	10,5	0,7

DOVERALL DIMENSIONS - PFP COUPLED THREADED FLANGES



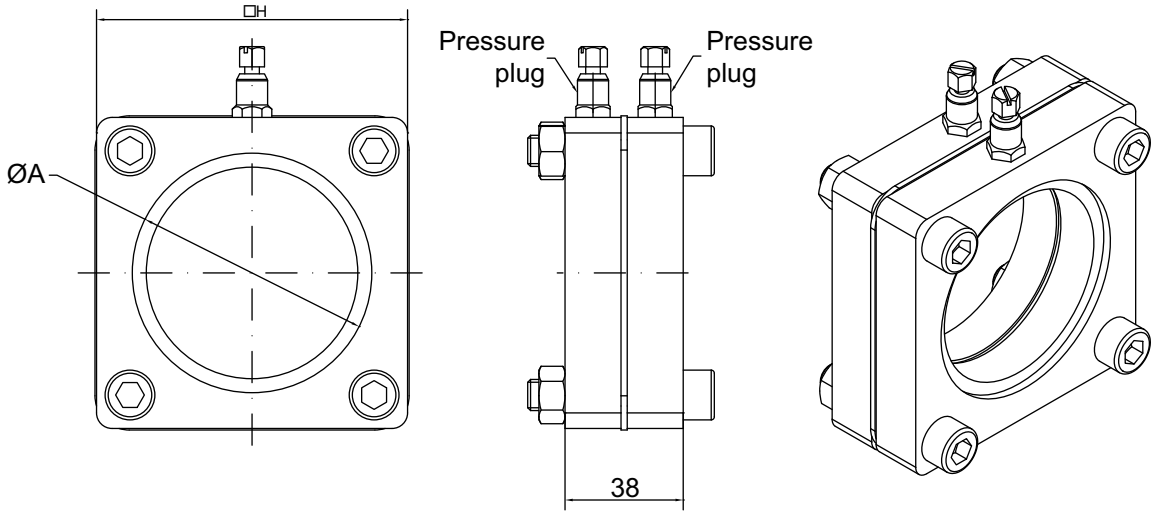
Modell	A ø	B [mm]	□ H [mm]	Weight [Kg]
103 PFP	3/8”	44	60	0,9
104 PFP	1/2”	44	60	0,9
106 PFP	3/4”	44	60	0,8
108 PFP	1”	44	60	0,8
310 PFP	1.1/4”	62	76,2	1,2
312 PFP	1.1/2”	62	76,2	1,0
412 PFP	1.1/2”	63	87,3	1,5
416 PFP	2”	66	89	1,4

OVERALL DIMENSIONS - PFF WELDING FLANGE



Model	Tubo ø	ø A [mm]	ø B [mm]	ø C [mm]	ø D [mm]	□ H [mm]	Weight [Kg]
516 PFF	2”	61	111,1	11	53	100	1,0
520 PFF	2.1/2”	77	111,1	11	68	100	0,8
524 PFF	3”	90	111,1	11	80	100	0,6
616 PFF	2”	61	123,8	11	53	110	1,3
620 PFF	2.1/2”	77	123,8	11	68	110	1,1
624 PFF	3”	90	123,8	11	80	110	0,9
720 PFF	2.1/2”	77	168,1	13,5	68	150	2,5
724 PFF	3”	90	168,1	13,5	80	150	2,3
732 PFF	4”	115	168,1	13,5	106	150	1,8
832 PFF	4”	115	235	13,5	106	200	4,2
840 PFF	5”	142	235	13,5	133	200	3,5
848 PFF	6”	170	235	13,5	157	200	2,8

OVERALL DIMENSIONS - PSP COUPLED WELDING FLANGES



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Model	A ø	□ H [mm]	Weight [Kg]
520 PSP	2.1/2”	100	1,9
624 PSP	3”	110	2,0
732 PSP	4”	150	3,9
840 PSP	5”	200	7,4
848 PSP	6”	200	5,8