



Moduflex Valve System®

Flexibility for pneumatic users

Whether configured from basic components or ordered as a pre-assembled and tested valve island, **Moduflex flexibility** is unmatched in the market place.



Innovative

The 6 patents awarded to the Moduflex Valve System reflect that innovation is core to the Parker design process. Maintaining a clear understanding of our customer's expectations has defined the individuality of the Moduflex, and clearly differentiated it as a leading automation solution.

Adaptive

No other system can be adapted so simply once specified. Unique, captive fitting release system, quick release electrical connectors and single mechanical screw connection between manifolds offer the ultimate capability for late system design changes.

Multi-Functional

From stand-alone valves to fieldbus ready valve islands, from cylinder flow controls to vacuum generators with integrated blow-off, the Moduflex Valve System meets the requirements of the whole automation spectrum.



Moduflex Valve technology

Two technology platforms enable the compact design and high performance of the Moduflex Valve System.

The compact dual 4/2 and 3/2 valves utilize well proven Parker seal technology. The standard 4/2 valves adopt the long life super durable ceramic switching technology.

Dual 4/2 valve

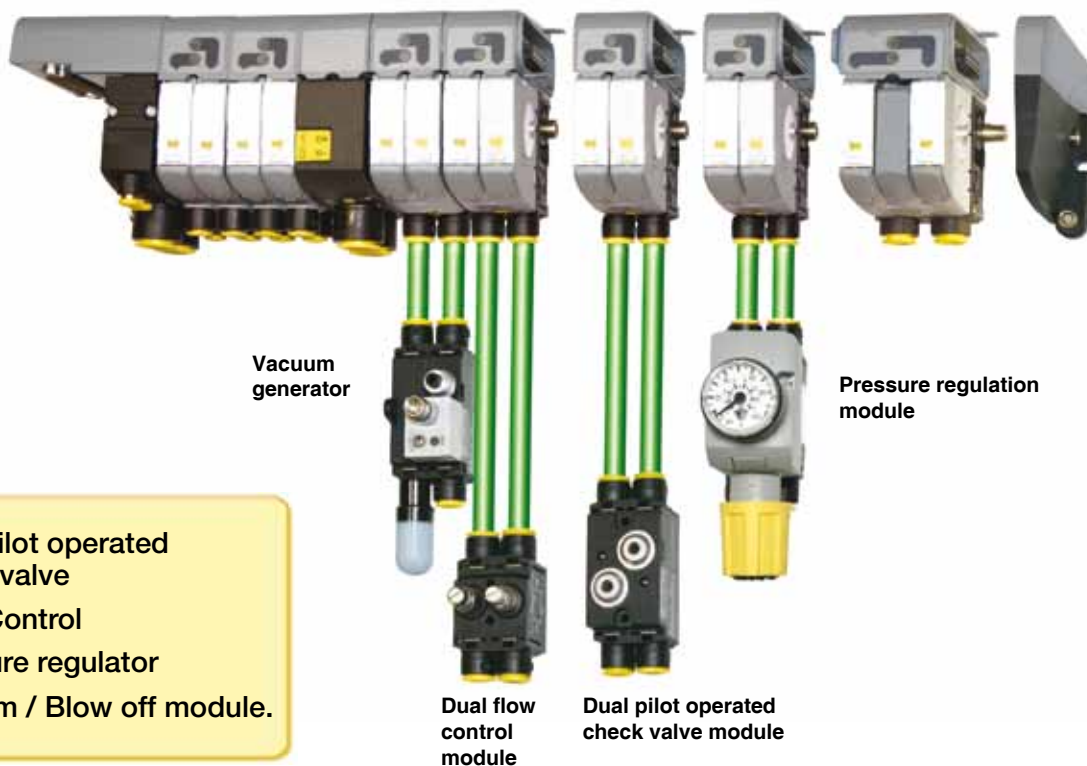


4/2 Valve



Moduflex Complete Control

With the introduction of the dual 4/2 size 1 valves, Moduflex now offers unrivaled ability of matching valves to exact flow requirements, ensuring cost and space are minimized. In addition, Moduflex Valve System offers all the necessary control peripherals to provide a complete automation solution. Moduflex is the complete control package.



- Dual pilot operated check valve
- Flow Control
- Pressure regulator
- Vacuum / Blow off module.

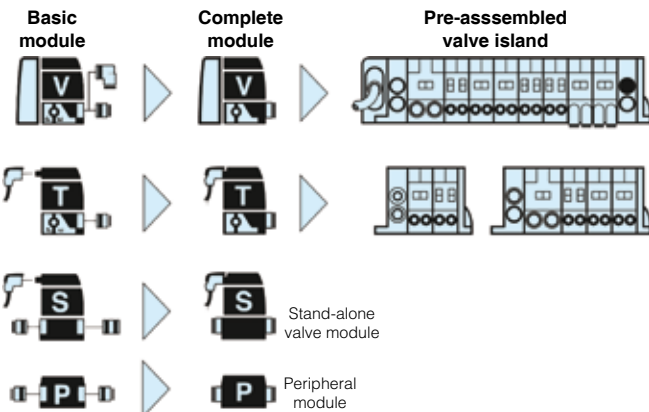
Operating information

Working pressure	-0,9 to 8 bar
Pilot pressure	3 to 8 bar *
Working temperature	-15 °C to 60 °C
Protection individual connectors	IP 67 NEMA4
Protection integrated connectors	IP 65
Voltage	24 V DC
* Single and double 3/2	3,5 to 8 bar

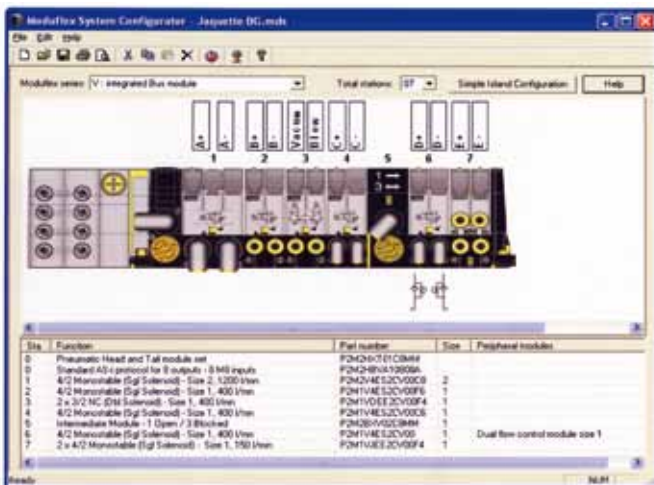
		Dual 4/2	Dual 3/2	3/2	4/2
Size 1	Qmax.	275 l/min	415 l/min	415 l/min	510 l/min
	Qn	165 l/min	235 l/min	235 l/min	310 l/min
Size 2	Qmax.	-	805 l/min	805 l/min	1340 l/min
	Qn	-	450 l/min	440 l/min	800 l/min

Total ordering flexibility

Additionally to the complete product adaptability, the Moduflex Valve range offers for V, T, S and P series an ordering flexibility with 3 different designs; from all components separately ordered (basic module) to pre-assembled and tested valve island.



The Moduflex Valve Island Configurator software is the easy way to, step by step, configure and order the required valve island for the application.



Ordering options

1 - Basic modules ordering

Using this option, all basic components are separately ordered :

- Head and Tail set
- Valve modules
- Intermediate module kit
- Peripheral modules
- Pneumatic connectors, mufflers and plugs
- Electrical connection or fieldbus module

The complete bill of material needed for the valve island assembly can be easily details using page 1 of the Moduflex Valve Configurator software report.

2 - Complete modules ordering

Using this option, modules are defined, ordered and supplied, pneumatic connectors and electrical connection equipped. One part number defines :

- Function module
- Pneumatic connectors, muffler and plugs
- Electrical connection and cable

For an entire valve island configuration, the list of complete modules can be easily details using page 3 of the Moduflex Valve Configurator software report.

3 - Pre-assembled valve islands ordering

Using this option, the complete valves island configuration has to be defined, and may be ordered, delivered fully assembly and tested under one part number.

The Moduflex Valve Configurator software is an easy way for a clear definition of the requested valve island configuration.

V series

Integrated connection field bus or multi-connector valve island



T series

Individual connector valve islands
 Solenoid or air pilot



S series

Stand alone valves
 Solenoid or air pilot



P series

Peripheral modules
 Flow control, check valves, pressure regulator, vacuum



Moduflex Valve Configurator software



For more information see - Parker Pneumatic Catalogue PDE2600PNUK

Integrated connections valve islands : V series

In a V series Moduflex valve island, electrical controls are all received by the head module and transmitted to the concerned valve modules through the modular integrated circuit.

The head module may either be a cable multi-connector or a Fieldbus communication module : the next pages show multi-connector cable and a complete choice of bus protocols.

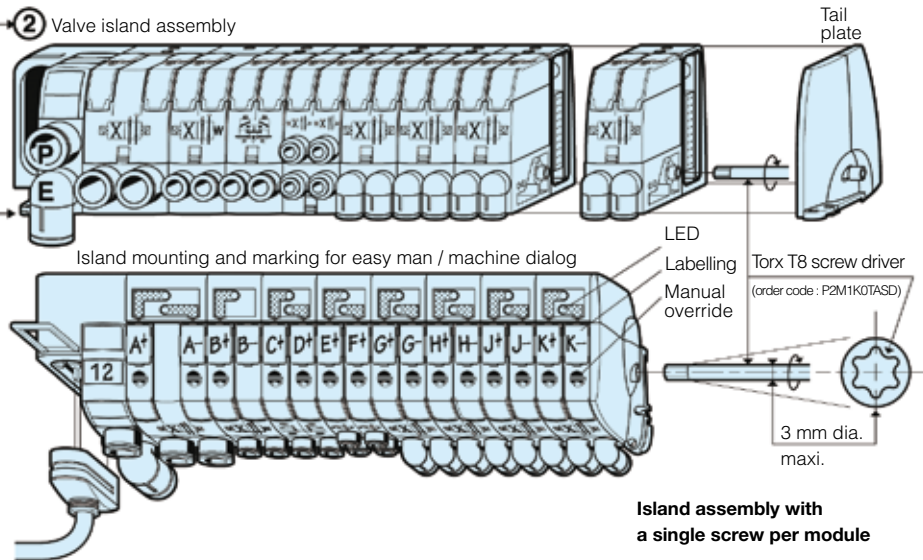
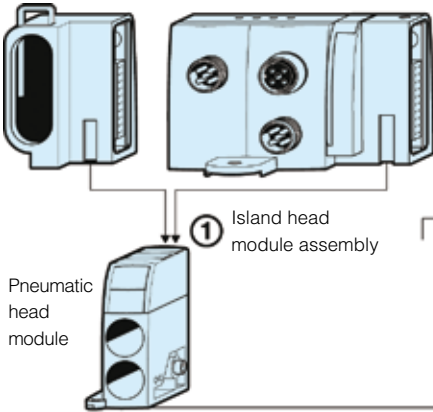


Valve island configuration

The following page shows all valve sizes and functions that may enter into a V series valve island and, for each valve size, a choice of clip-on pneumatic connectors : tubing size, straight, elbow...
 To receive its pressure supply and collect its exhaust, the island also requires a pneumatic

head and tail module set and sometimes an intermediate module set with 4 configuration plates for different functions. To receive its electrical controls, the island is completed by an electrical head module, either a multi-connector or by a bus module to be chosen from the next pages.

Valve island electrical head module :
 multi-connector or field bus connection



Valve island assembly

- The above illustration presents :
- **Step ①** : the electrical head module is engaged into the pneumatic head module ;
 - **Step ②** valve modules are one by one screwed onto each other starting from the head module. For this task, the single integrated screw is tightened with a torx T8 standard screwdriver.

The pneumatic connectors may be clipped or unclipped at any stage.

With a LED, a manual override and a labelling for each valve pilot (see illustration), the island front face eases the "man / machine" dialog.

The resulting valve island length is expressed by the drawing below, while further size details and mountings are presented on dimensions pages.

Modules and island ordering

Choice between 3 approaches :

1 - Basic modules ordering :

The following page shows these modules supplied without connector, together with the choice of clip-on connectors separately supplied (10 units packs). This approach gives the maximum flexibility.

2 - Complete modules ordering :

Page 265 shows the ordering chart for modules supplied with their connectors.

3 - Assembled island ordering :

Page 268 shows the valve island configurator CD-Rom to specify a valve island that may be delivered assembled.

Field bus head module :
 ■ width : 94 mm

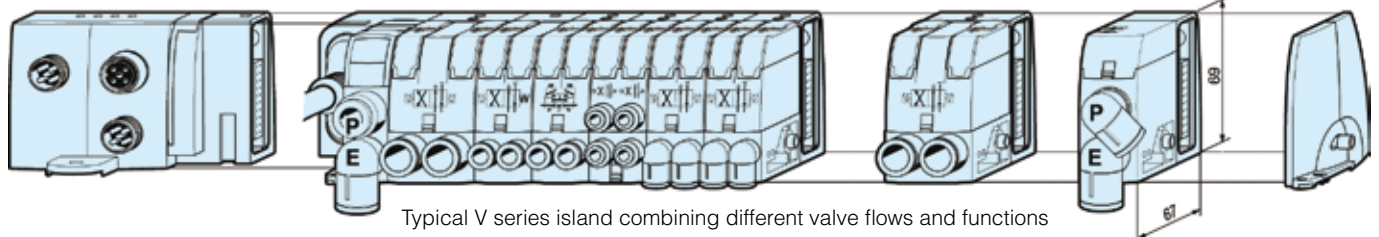
Multi-connector head module :
 ■ guillotine, width : 47 mm
 ■ sub-D 25, width : 56 mm

Valve modules size 1 :
 ■ width : 25 mm

Valve module size 2 :
 ■ width : 37.5 mm











Intermediate module :
 ■ width : 25 mm

Tail plate :
 ■ width : 16 mm





Typical V series island combining different valve flows and functions




Basic modules (without connector)

Valve Modules	Symbol	Description	Size 1		Size 2	
			Weight (g)	Order code	Weight (g)	Order code
 <p>Size 1</p>		4/2 Solenoid spring	94	P2M1V4ES2CV	100	P2M2V4ES2CV
		4/2 Double solenoid	103	P2M1V4EE2CV	110	P2M2V4EE2CV
		2 x 3/2 NC + NC with exhaust check valves	106	P2M1VDEE2CV	115	P2M2VDEE2CV
		2 x 3/2 NO + NO with exhaust check valves	106	P2M1VCEE2CV	115	P2M2VCEE2CV
 <p>Size 2</p>		2 x 3/2 NC + NO with exhaust check valves	106	P2M1VEEE2CV	115	P2M2VEEE2CV
		2 x 4/2 Solenoid spring with exhaust check valves	114	P2M1VJEE2CV		
		3/2 NC with exhaust check valves	102	P2M1V3ES2CV	110	P2M2V3ES2CV
		4/3 Centre exhaust 2 x 3/2 NC + NC without exhaust check valves	106	P2M1VGEE2CV	115	P2M2VGEE2CV

Island head and intermediate module sets

Valve Modules	Description	Size 2	
		Weight (g)	Order code
 <p>P2M2HXT01</p>	Valve island pneumatic head and tail module set	64	P2M2HXT01
	 <p>P2M2BXV0A</p>	Valve island intermediate supply module with a set of 4 configuration plates	68

Clip-On pneumatic connectors *



Valve Modules	Description	Tube OD	Size 1		Size 2	
			Weight (g)	Order code	Weight (g)	Order code
	Straight connector	G1/8"	2	FMDG1-1		
		4 mm	2	FMD04-1		
		6 mm	3	FMD06-1	3	FMD06-2
		8 mm			4	FMD08-2
		10 mm			5	FMD10-2
		12 mm			6	FMD12-2
	Elbow connector	G1/8"	3	CMDG1-1		
		4 mm	3	CMD04-1		
		6 mm	5	CMD06-1	5	CMD06-2
		8 mm			6	CMD08-2
		10 mm			7	CMD10-2
		12 mm			8	CMD12-2
	Silencer				5	MMDVA2
		Plug		3	PMDXX1	5

* Fittings and plugs pack quantity : 10

Electrical multi-connection and field bus head modules

Multiconnector or field bus head module to be chosen from next pages.


V series valve island : Electrical multi-connector head module


	Description	Protection	Cable length	Weight (g)	Order code	
	Guillotine type			38	P2M2HEV0A	
		Multi-connection head module				
		Guillotine connector	IP65	2 m	335	P8LMH20M2A
		with flying leads		5 m	802	P8LMH20M5A
			9 m	1425	P8LMH20M9A	
	Standard Sub-D 25 type			60	P2M2HEV0D	
		Multi-connection head module				
		Sub-D 25 connector	IP40	3 m	435	P8LMH25M3A
		with flying leads		9 m	1425	P8LMH25M9A
		IP65	9 m	1425	P8LMH25B9A	

V series valve island : Electrical field bus head modules for AS-i protocol




Standard AS-i protocol (up to 31 nodes) electrical head modules


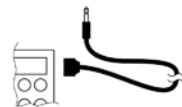
	Electrical module for 8 outputs max.	Input connections	Weight(g)	Order code
		<ul style="list-style-type: none"> V series islands may have up to 8 solenoid pilots 2 nodes per module, 4 I / 4 O per node 	no input	150
		8 M8 inputs	200	P2M2HBVA10808A
		8 inputs on 4 M12	200	P2M2HBVA10808B

	Electrical module for 4 outputs max.	Input connections	Weight(g)	Order code
		<ul style="list-style-type: none"> V series islands may have up to 4 solenoid pilots 1 node per module, 4 I / 4 O 	No inputs	150
		4 inputs on 4 M12	200	P2M2HBVA10404B

AS-i version 2-1 protocol (up to 62 nodes) electrical head modules

	Electrical module for 6 outputs max.	Input connections	Weight(g)	Order code
		<ul style="list-style-type: none"> V series islands may have up to 6 solenoid pilots 2 nodes per module, 4 I / 3 O per node 	none	150
		8 M8 Inputs	200	P2M2HBVA20608A
		8 inputs on 4 M12	200	P2M2HBVA20608B


AS-i head module accessories

	Description	Connector type	Weight (g)	Order code
	Cable quick connect connector	M8 Male	25	P8CS0803J
		M12 Male - A coding	25	P8CS1204J
		« Y » shape	25	P8CSY1212A
	Addressing cable 1 meter	M12 Male - Jack	100	P8LS12JACK

V series valve island : Electrical field bus head modules for device bus

Electrical modules for 16 outputs

(The V series modules may have up to 16 solenoid pilot valves)

Description	Bus Protocol	Bus In / Bus Out	Power supply	Weight (g)	Order code
 <p>Moduflex Bus Communication module</p>	Profibus DP	M12 - B coding	M12 - A coding	250	P2M2HBVP21600
	For GSD file, go to http://www.parker.com/pneu/moduflex				
	DeviceNet	M12 - A coding	M12 - A coding	250	P2M2HBVD21600
		M12 - B coding		250	P2M2HBVD11600
	For EDS file, go to http://www.parker.com/pneu/moduflex				
	CANopen	M12 - A coding	M12 - A coding	250	P2M2HBVC21600
		M12 - B coding	250	P2M2HBVC11600	
For EDS file, go to http://www.parker.com/pneu/moduflex					
InterBus-S	M23 - 9 Pins	M12 - A coding		300	P2M2HBVS11600

Device Bus connection accessories

Description	Bus Protocol	Connector type	Weight (g)	Order code
Power supply female straight connector	All	M12 - A coding	25	P8CS1205AA
	DeviceNet CANopen	M12 - B coding	25	P8CS1205AB
Bus IN female connector	DeviceNet CANopen	M12 - A coding	25	P8CS1205AA
	Profibus DP	M12 - B coding	25	P8CS1205AB
Bus OUT male connector	DeviceNet CANopen	M12 - A coding	25	P8CS1205BA
	Profibus DP	M12 - B coding	25	P8CS1205BB
Line termination	DeviceNet CANopen	M12 - A coding	25	P8BPA00MA
	Profibus DP	M12 - B coding	25	P8BPA00MB

P2M2HBVP21600



M12 - A coding connector



M12 - B coding connector

Individual connection valve islands : T series

In a T series valve island, electrical controls are individually connected to each valve module, onto its solenoid pilot.

As an alternative, air pilot valve modules are also available, to be controlled by individual pneumatic signals.



Valve island assembly

As shown by the above illustration, the valve modules are one by one screwed onto each other, starting from the head module. For this task, the single integrated screw is tightened with a torx T8 standard screwdriver. The pneumatic connectors may be clipped or unclipped at any stage. With a LED, a manual override and a labelling for each valve pilot (see above illustration), the island front face eases the "man / machine" dialog. The resulting valve island length is expressed by the drawing below, while further size details and mountings are presented on dimensions pages.

Valve island configuration

The following page presents all valve sizes and functions that may enter into a T series valve island and, for each valve size, a choice of clip-on pneumatic connectors : tubing size, straight, elbow... To receive its pressure supply and collect its exhaust, the island also requires a

pneumatic head and tail module set and sometimes an intermediate module set including 4 configuration plates for different functions. Valve modules may either be solenoid versions or air pilot versions. Mixing both versions into the same valve island is possible.

Valve pilot connections

1 - Solenoid valve modules

Electrical connectors



Each solenoid shows a M8 connection. Lockable clip-on connectors, IP67 protected, with LED, voltage surge protection and flying lead cable may be ordered for the required length.

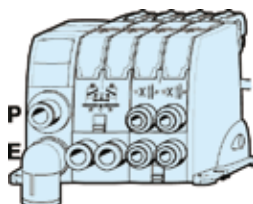
2 - Air pilot valve modules

4 mm OD tube



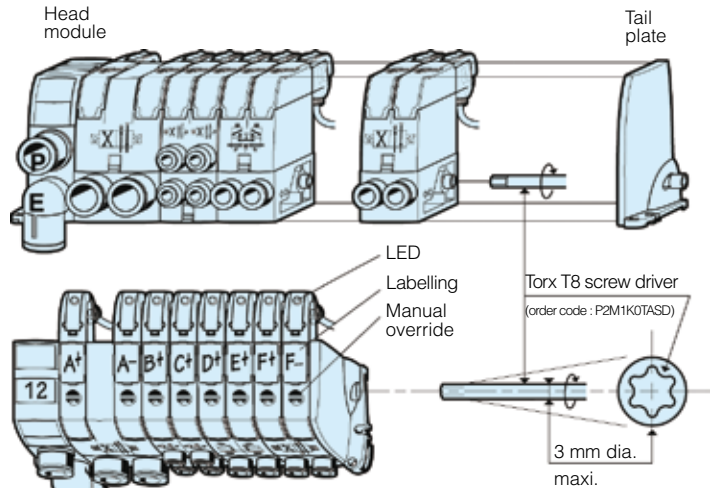
No connector has to be ordered : each pneumatic pilot port includes its integrated swivable elbow 4 mm OD tube push-in connector.

Typical T series short island for single or double acting small cylinders.



Valve island assembly

Island mounting and marking for easy man / machine dialog



Island assembly with a single screw per module

Modules and island ordering

Choice between 3 approaches :

1 - Basic modules ordering :

The following page shows these modules supplied without connector, together with the choice of clip-on connectors separately supplied (10 units packs). This approach gives the maximum flexibility.

2 - Complete modules ordering :

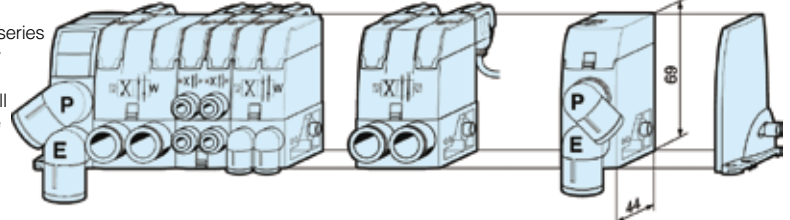
Page 265 shows the ordering chart for modules supplied with their connectors.

3 - Assembled island ordering :

Page 268 shows the valve island configurator CD-Rom to specify a valve island that may be delivered assembled.












Pneumatic head module :	Valve module size 1 :	Valve module size 2 :	Intermediate module :	Tail plate :
■ width : 32 mm	■ width : 25 mm	■ width : 37.5 mm	■ width : 25 mm	■ width : 16 mm

Typical T series high flow island for both small and large cylinders.





Typical T series islands combining different valve flows and functions



Basic modules (without connector)

Valve Modules					Size 1	Size 2	
	Symbol	Description	Actuator	Weight (g)	Order code	Weight (g)	Order code
 <p>Size 1 Dual 4/2</p>		4/2 Spring return	Solenoid Air pilot	68 63	P2M1T4ES2C P2M1T4PS	74 69	P2M2T4ES2C P2M2T4PS
		4/2 Double pilot	Solenoid Air pilot	77 67	P2M1T4EE2C P2M1T4PP	83 73	P2M2T4EE2C P2M2T4PP
 <p>Size 1</p>		2 x 3/2 NC + NC with exhaust check valves	Solenoid Air pilot	80 70	P2M1TDEE2C P2M1TDPP	94 84	P2M2TDEE2C P2M2TDPP
		2 x 3/2 NO + NO with exhaust check valves	Solenoid Air pilot	80 70	P2M1TCEE2C P2M1TCPP	94 84	P2M2TCEE2C P2M2TCPP
		2 x 3/2 NC + NO with exhaust check valves	Solenoid Air pilot	80 70	P2M1TEEE2C P2M1TEPP	94 84	P2M2TEEE2C P2M2TEPP
 <p>Size 2</p>		2 x 4/2 Spring return with exhaust check valves	Solenoid Air pilot	88 78	P2M1TJEE2C P2M1TJPP		
		3/2 NC with exhaust check valves	Solenoid Air pilot	76 71	P2M1T3ES2C P2M1T3PS	90 70	P2M2T3ES2C P2M2T3PS
		4/3 Centre exhaust 2 x 3/2 NC + NC with exhaust check valves	Solenoid Air pilot	80 70	P2M1TGEE2C P2M1TGPP	94 84	P2M2TGEE2C P2M2TGPP

Island head and intermediate module sets

Valve Modules	Description	Weight (g)	Size 2 Order code
	Valve island pneumatic head and tail module set	64	P2M2HXT01
	Valve island intermediate supply module with a set of 4 configuration plates	64	P2M2BXT0A

Clip-On pneumatic connectors *

Valve Modules	Description	Tube OD	Weight (g)	Size 1 Order code	Weight (g)	Size 2 Order code
	Straight connector	G1/8"	2	FMDG1-1		
		4 mm	2	FMD04-1		
		6 mm	3	FMD06-1	3	FMD06-2
		8 mm			4	FMD08-2
		10 mm			5	FMD10-2
		12 mm			6	FMD12-2
	Elbow connector	G1/8"	3	CMDG1-1		
		4 mm	3	CMD04-1		
		6 mm	5	CMD06-1	5	CMD06-2
		8 mm			6	CMD08-2
		10 mm			7	CMD10-2
		12 mm			8	CMD12-2
	Silencer				5	MMDVA2
	Plug		3	PMDXX1	5	PMDXX2

* Fittings and plugs pack quantity : 10

Electrical connectors

Description	Connector type	Cable length	Weight (g)	Order code
Clip-on individual electrical connector, for each solenoid pilot IP67 protected, including LED, voltage surge protection and flying lead cable	M8 / 2 x Flying leads	2 meters	62	P8LS08L226C
		5 meters	155	P8LS08L526C
		9 meters	180	P8LS08L926C
Straight cable quick connect to thread connector, IP67 protected	M8		12	P8CS0803J
	M12		15	P8CS1204J



Stand-Alone Valve Modules : S series

Very useful to control isolated cylinders, these stand-alone valves module are compact and easy to mount on the machines with neat electrical and pneumatic connections.

As an alternative to electrical controls, valves with air pilots are also available, to be controlled by individual pneumatic signals.



Valve functions

The following page shows all valve sizes and functions and, for each valve size, a choice of clip-on pneumatic connectors : tubing size, straight, elbow, ...

Valve main connections

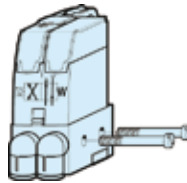
- Outlets to cylinders (ports 2 and 4) on one side.
- Supply P (port 1) and exhaust E (port 3) on the other side. At port 3, exhaust may be collected or receive a clip-on muffler.



Valve mounting

All valves may be mounted either with side screws or with their integrated retractable brackets.

Side screw mounting



The brackets are then retracted.

Optional foot mounting

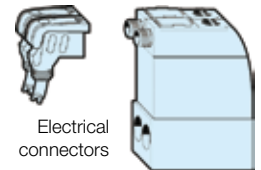


The brackets are then extended.

Valve pilot connections

1- Solenoid valve modules

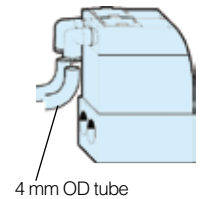
Each solenoid presents an M8 connection. Lockable clip-on connectors, IP 67 protected, with LED, voltage surge protection and flying lead cable may be ordered for the required length.



Electrical connectors

2- Air pilot valve modules

No connector has to be ordered : each pneumatic pilot port includes its integrated swivable elbow 4 mm OD tube push-in connector.



4 mm OD tube

Modules and island ordering

Choice between 2 approaches :

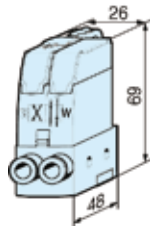
1 - Basic modules ordering :

The following page shows these modules supplied without connector, together with the choice of clip-on connectors separately supplied (10 units packs). This approach gives the maximum flexibility.

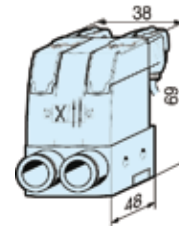
2 - Complete modules ordering :

Ordering chart for modules supplied with their pneumatic and electrical connectors and muffler.










Valve module size 1






Valve module size 2



Basic modules (without connector)


Valve Modules	Symbol	Description	Actuator	Weight (g)	Size 1	Weight (g)	Size 2
					Order code		Order code
 Size 1		4/2 Spring return	Solenoid Air pilot	72 67	P2M1S4ES2C P2M1S4PS	72 67	P2M2S4ES2C P2M2S4PS
		4/2 Double pilot	Solenoid Air pilot	87 77	P2M1S4EE2C P2M1S4PP	87 77	P2M2S4EE2C P2M2S4PP
		2 x 3/2 NC + NC with exhaust check valves	Solenoid Air pilot	85 75	P2M1SDEE2C P2M1SDPP	85 75	P2M2SDEE2C P2M2SDPP
 Size 2		2 x 3/2 NO + NO with exhaust check valves	Solenoid Air pilot	85 75	P2M1SCEE2C P2M1SCPP	85 75	P2M2SCEE2C P2M2SCPP
		2 x 3/2 NC + NO with exhaust check valves	Solenoid Air pilot	85 75	P2M1SEEE2C P2M1SEPP	85 75	P2M2SEEE2C P2M2SEPP
		3/2 NC with exhaust check valves	Solenoid Air pilot	85 75	P2M1S3ES2C P2M1S3PS	85 75	P2M2S3ES2C P2M2S3PS
		4/3 Centre exhaust 2 x 3/2 NC + NC without exhaust check valves	Solenoid Air pilot	85 75	P2M1SGEE2C P2M1SGPP	85 75	P2M2SGEE2C P2M2SGPP

Clip-On pneumatic connectors *

Valve Modules	Description	Tube OD	Weight (g)	Size 1	Weight (g)	Size 2
				Order code		Order code
 Straight connector		G1/8"	2	FMDG1-1		
		4 mm	2	FMD04-1		
		6 mm	3	FMD06-1	3	FMD06-2
		8 mm			4	FMD08-2
		10 mm			5	FMD10-2
		12 mm			6	FMD12-2
 Elbow connector		G1/8"	3	CMDG1-1		
		4 mm	3	CMD04-1		
		6 mm	5	CMD06-1	5	CMD06-2
		8 mm			6	CMD08-2
		10 mm			7	CMD10-2
		12 mm			8	CMD12-2
 Silencer Plug			3	MMDVA1	5	MMDVA2
			3	PMDXX1	5	PMDXX2

* Fittings and plugs pack quantity : 10

Electrical connectors

Description	Connector type	Cable length	Weight (g)	Order code
 Clip-on individual electrical connector, for each solenoid pilot IP67 protected, including LED, voltage surge protection and flying lead cable	M8 / 2 x Flying leads	2 meters	62	P8LS08L226C
		5 meters	155	P8LS08L526C
		9 meters	180	P8LS08L926C
Straight cable quick connect to thread connector, IP67 protected	M8		12	P8CS0803J
	M12		15	P8CS1204J

Peripheral Valve Modules : P series

Four additional peripheral modules complete the valve system in order to facilitate the installation of specific cylinder controls :

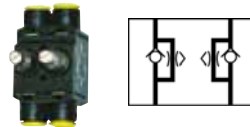
- Dual flow control, for cylinder speed adjusting;
- Dual pilot operated check valve, for cylinder positioning;
- Pressure regulator, for cylinder thrust adjusting;
- Vacuum generator, for vacuum pad controls.



Module function selection

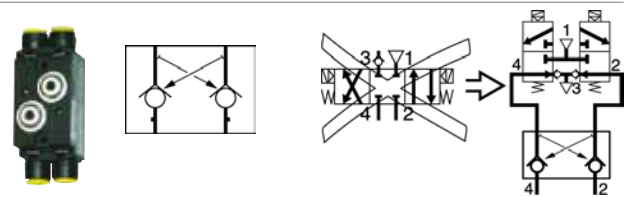
Dual flow control

By controlling the exhaust flows of a double acting cylinder, this module can adjust both speeds : forward and backward.



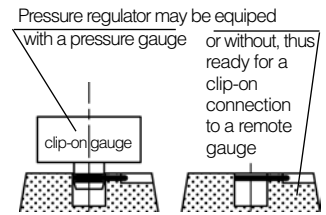
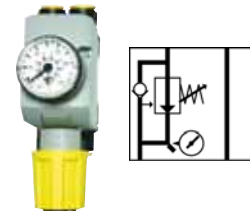
Dual pilot operated check valve

Combined with a double 3/2 NC + NC valve, this module will block flows and stop cylinder movement as soon as the valve outputs are both exhausted. Better than a 3 position closed centre valve, it provides accurate positioning when mounted close to the cylinder.



Pressure regulator

The thrust developed by a cylinder often requires adjustment by controlling the pressure to the front or back of the piston. This pressure regulator module enables manual adjustment of pressure on one side of the piston, with visual indication provided by the pressure gauge.

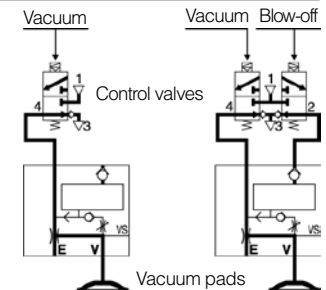
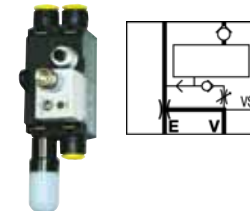


Vacuum generator

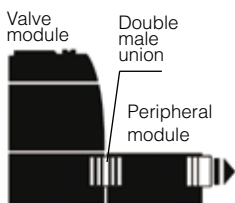
This multi-purpose module controls vacuum pads with a choice between two basics schematics :

- Controlled with only one 3/2 NC valve, the vacuum generator provides vacuum to the pads during valve actuation and then blow-off supplied from an integrated chamber.
- Controlled with a double 3/2 NC + NC, the vacuum generator provides vacuum during the first valve actuation, and then strong blow-off from the second valve.

Integrated blow-off flow controller. Optional plug-in vacuum sensor.



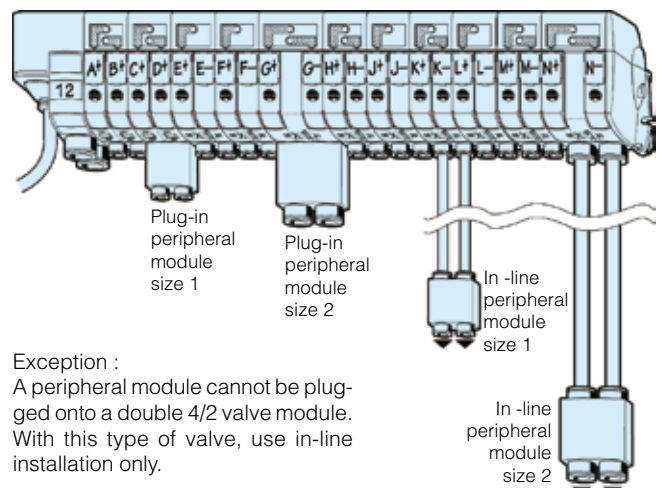
Module installation selection



Stand alone valve complete with a plug-in peripheral module

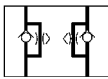
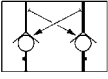
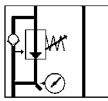
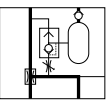


- Peripheral modules may either be mounted :
- Plugged into the valve module through double male unions;
 - Or in line, close to the cylinder to control it better.








Exception : A peripheral module cannot be plugged onto a double 4/2 valve module. With this type of valve, use in-line installation only.

Basic peripheral modules (without connector)




Peripheral Modules		Size 1		Size 2			
Symbol	Description	Weight (g)	Order code	Weight (g)	Order code		
	Dual flow control	50	P2M1PXFA	50	P2M2PXFA		
	Dual P.O. check valve	50	P2M1PXCA	50	P2M2PXCA		
	Pressure regulator	Pressure range	Gauge				
		0 - 2 bar	0 - 4 bar	135	P2M1PXSR	135	P2M2PXSR
			Without	105	P2M1PXST	165	P2M2PXST
		0 - 4 bar	0 - 7 bar	135	P2M1PXSM	135	P2M2PXSM
			Without	105	P2M1PXSL	165	P2M2PXSL
		0 - 8 bar	0 - 11 bar	135	P2M1PXSG	135	P2M2PXSG
	Without	105	P2M1PXSN	165	P2M2PXSN		
	90% Vacuum generator	30	P2M1PXVA				

Clip-On pneumatic connectors *

Valve Modules		Size 1		Size 2		
Description	Tube OD	Weight (g)	Order code	Weight (g)	Order code	
	Straight connector	G1/8"	2	FMDG1-1		
		4 mm	2	FMD04-1		
		6 mm	3	FMD06-1	3	FMD06-2
		8 mm			4	FMD08-2
		10 mm			5	FMD10-2
		12 mm			6	FMD12-2
	Elbow connector	G1/8"	3	CMDG1-1		
		4 mm	3	CMD04-1		
		6 mm	5	CMD06-1	5	CMD06-2
		8 mm			6	CMD08-2
		10 mm			7	CMD10-2
		12 mm			8	CMD12-2
	Double male union	5	HMDXX1	8	HMDXX2	
	Silencer	3	MMDVA1			
	Plug	3	PMDXX1	5	PMDXX2	

* Fittings and plugs pack quantity : 10

Clip-on accessories

Description	Connection	Pressure range	Weight (g)	Order code
	Clip-on	0 to 4 bar	30	P2M1K0GT
		0 to 7 bar	30	P2M1K0GL
		0 to 11 bar	30	P2M1K0GN
	Diam. 4 mm tube	0 to -1 bar	25	MPS-V8T4-AG
	Diam. 6 mm tube	0 to -1 bar	25	MPS-V8T-AG
	G 1/8" male	0 to -1 bar	45	MPS-V34G-PCI

Complete module ordering, as compared to basic module ordering

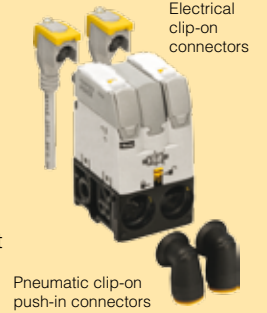
Complete modules

Ordered from the following pages, the complete modules are supplied all equipped with their electrical and pneumatic connectors. Only one order line is necessary, and each module comes complete, with just the necessary chosen connectors.



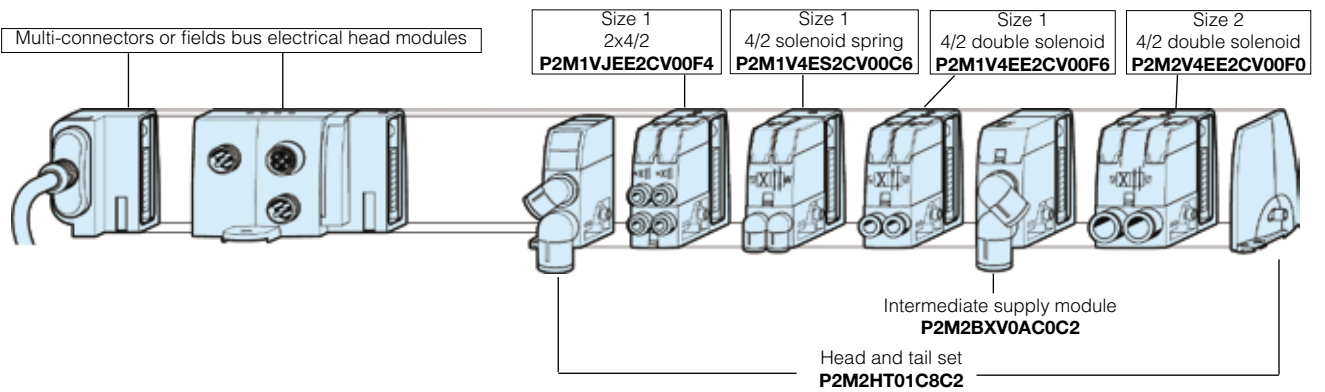
Basic modules

Ordered from the previous pages, the basic modules are to be equipped with their connectors. Their clip-on assembly to the module is easy. The main advantage is flexibility : connector type and size may be chosen at the last moment, to fit better the machine needs.



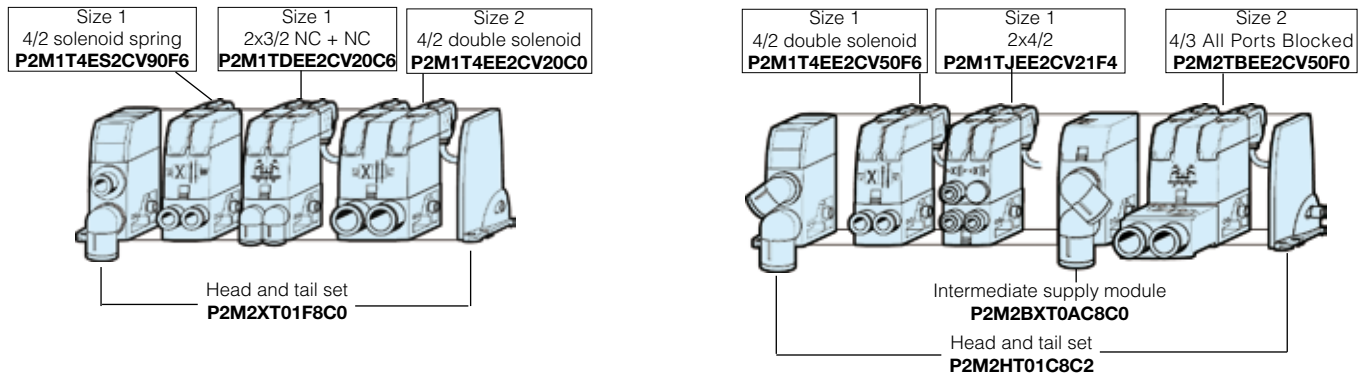
V series

See opposite page for complete module order code chart



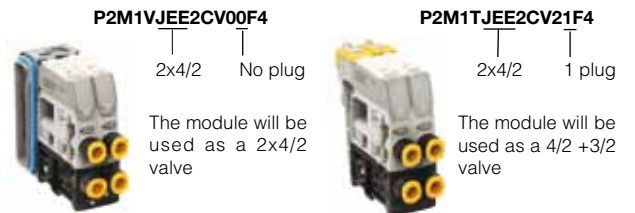
T series

See opposite page for complete module order code chart




Special case : the 2 x 4/2 mini-module plug configuration

For micro-cylinders, this very compact 2 x 4/2 module (order code. JEE) may also be used to obtain 3/2 valves, either Normally Closed or Normally Open. To do so, the complete module may be supplied with plugs that may replace some of the plug-in connectors. To order, use the top chart from opposite page.



Complete Moduflex modules, equipped with their electrical and pneumatic connectors, may be ordered. To do so, use the below chart to define the complete module order codes.

Valve modules



1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P 2 M 1 V 4 E E 2 C V 0 0 F 6

Minimum ordering quantity : 10 pieces

Size	
1	Size 1
2	Size 2

Series	
V	Integrated connections
T	Individual connectors

Electrical connections	
V Series	
V0	Integrated connection
T Series	
00	No cable
V2	2 m cable
V5	5 m cable
V9	9 m cable

Pneumatic connectors Ports 2 & 4	
Size 1 modules	
F4	Straight 4 mm OD
C4	Elbow 4 mm OD
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
Size 2 modules	
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
F8	Straight 8 mm OD
C8	Elbow 8 mm OD
F0	Straight 10 mm OD
C0	Elbow 10 mm OD

Valve Function - Solenoid Versions *	
4 ES	4/2 Solenoid spring
4 EE	4/2 Double solenoid
D EE	2 x 3/2NC + NC (with exhaust check valve)
C EE	2 x 3/2 NO + NO (with exhaust check valve)
E EE	2 x 3/2 NC + NO (with exhaust check valve)
3 ES	3/2 NC (with exhaust check valve)
G EE	4/3 centre exhaust (= 2x3/2 without exhaust check valve)
B EE	2x3/2 + clipped dual PO check (= 4/3 APB)

Plug configurations	
0	No plug

Only for JEE 2x4/2 modules	
0	0 plug (2x 4/2)
1	1 plug (4/2 + 3/2)
2	2 plugs (2x3/2 or 1x4/2)
3	3 plugs (1x3/2)

Size 1 only	JEE	2x4/2 with exhaust check valve with plug configuration




* For T series only, air pilot versions p21, as basic modules.

Head/Tail & Intermediate Modules

Minimum ordering quantity : 10 pieces

1 2 3 4 5 6 7 8 9 10 11 12 13

P 2 M 2 H X T 0 1 F 0 C 2

Head and intermediate module		
	HXT01	V and T series Pneumatic head and tail set
	BXV0A	V series intermediate supply module with a set of 4 configuration plates
	BXT0A	T series intermediate supply module with a set of 4 configuration plates

Pressure port connector	
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
F8	Straight 8 mm OD
C8	Elbow 8 mm OD
F0	Straight 10 mm OD
C0	Elbow 10 mm OD
F2	Straight 12 mm OD
C2	Elbow 12 mm OD
PP	Plug
MM	Muffler

Exhaust port connector	
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
F8	Straight 8 mm OD
C8	Elbow 8 mm OD
F0	Straight 10 mm OD
C0	Elbow 10 mm OD
F2	Straight 12 mm OD
C2	Elbow 12 mm OD
PP	Plug
MM	Muffler

Complete Moduflex stand alone valves, equipped with their electrical and pneumatic connectors, may be ordered. To do so, use the below chart to define the complete module order codes.

Stand alone valve modules

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

P 2 M 1 S 4 E E 2 C V 5 A F 6

Minimum ordering quantity : 10 pieces

Size	
1	Size 1
2	Size 2

Series	
S	Stand alone valve modules

Electrical connector	
00	No cable
V2	2 m cable
V5	5 m cable
V9	9 m cable

Valve Function - Solenoid Versions *	
4ES	4/2 Solenoid spring
4EE	4/2 Double solenoid
DEE	2 x 3/2NC + NC (with exhaust check valve)
CEE	2 x 3/2 NO + NO (with exhaust check valve)
EEE	2 x 3/2 NC + NO (with exhaust check valve)
3ES	3/2 NC (with exhaust check valve)
GEE	4/3 centre exhaust (= 2x3/2 without exhaust check valve)
BEE	2x3/2 + clipped dual PO check (= 4/3 APB)

Pneumatic connectors				
Ports 1 & 3		Outlet ports 2 & 4		Tube OD
A	Straight & straight	F	Straight & straight	Size 1 modules
B	Elbow & elbow	C	Elbow & elbow	4 4 mm OD
C	Straight & muffler	0	No connector for plug-in P module	6 6 mm OD
D	Elbow & muffler			Size 2 modules
				6 6 mm OD
				8 8 mm OD
				0 10 mm OD

Size 1
4/2 solenoid spring
P2M1S4ES2CV5CC6



Size 1
2x3/2 NC + NC
P2M1SDEE2CV2BC6



Size 2
4/2 double solenoid
P2M2S4EE2CV9CC8




Size 2
2x3/2 NC + NC
P2M2SDEE2CV2CC0



Size 2
4/3 All Ports Blocked
P2M2SBEE2CV2AF0

Complete Moduflex peripheral module, equipped with their pneumatic connectors, may be ordered. To do so, use the below chart to define the complete module order codes.

Dual flow control, dual pilot operated check valve, and pressure regulator peripheral modules



Minimum ordering quantity : 10 pieces

1 2 3 4 5 6 7 8 9 10 11 12

P 2 M 1 P X F A J J F 6


Size	
1	Size 1
2	Size 2

Peripheral module function	
F A	Dual flow control
C A	Dual P.O. check valve
Pressure regulators	
S R	0-2 bar, with pressure gauge
S M	0-4 bar, with pressure gauge
S G	0-8 bar, with pressure gauge

Inlet port pneumatic connectors	
Size 1 modules	
F4	Straight 4 mm OD
C4	Elbow 4 mm OD
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
Size 2 modules	
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
F8	Straight 8 mm OD
C8	Elbow 8 mm OD
F0	Straight 10 mm OD
C0	Elbow 10 mm OD

Outlet port pneumatic connectors	
Size 1 modules	
F4	Straight 4 mm OD
C4	Elbow 4 mm OD
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
Size 2 modules	
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
F8	Straight 8 mm OD
C8	Elbow 8 mm OD
F0	Straight 10 mm OD
C0	Elbow 10 mm OD

Vacuum generator peripheral module



Minimum ordering quantity : 10 pieces

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

P 2 M 1 P X V A F 6 A F 6 C M A

Size	
1	Size 1

Peripheral module function	
V A	Vacuum generator

Exhaust port (3) *	
F4	Straight 4 mm OD
C4	Elbow 4 mm OD
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
MA	Clip-on muffler

Pressure & Blow-off port connectors	
JJ	Clip-on double male union
F4	Straight 4 mm OD
C4	Elbow 4 mm OD
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
F1	Straight threaded 1/8"
C1	Elbow threaded 1/8"

Vacuum and Vacuum Sensor port connectors	
F4	Straight 4 mm OD
C4	Elbow 4 mm OD
F6	Straight 6 mm OD
C6	Elbow 6 mm OD
F1	Straight threaded 1/8"
C1	Elbow threaded 1/8"

A	2 clip-on male union
A	2 push-in connectors
B	1 push-in connector 1 plug on blow-off port
A	2 similar connectors
B	1 connector on vacuum port 1 plug on vacuum sensor port
D	1 Connector on Vacuum Port 1 Dig/Ana Vacuum Sensor MPS-V34G-PCI
E	1 Connector on Vacuum Port 1 Analog Vacuum Sensor MPS-V8T-AG

Moduflex Valve Island Configurator

This software facilitates any valve island configuration and its bill ordering through basic or complete modules.

Pre-assembled valve island ordering

As an option, so defined with the configurator, any Moduflex Valve island may be ordered as pre-assembled.



Island configuration practice

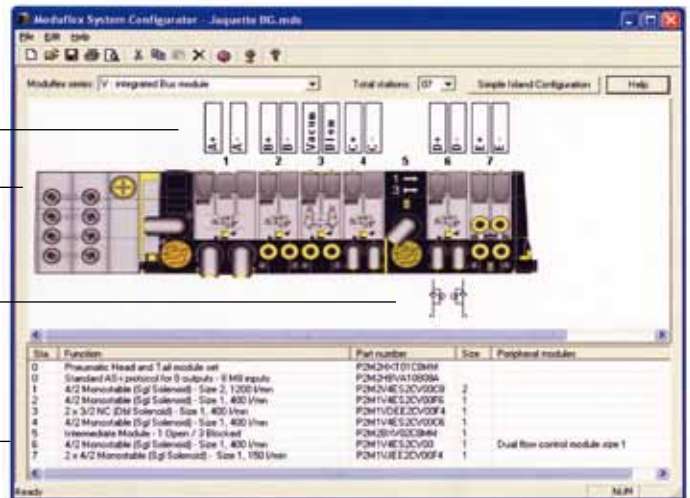
An easy step by step procedure, finalized with the complete valve island print, composition report and 2D drawing.

Valve island modules identification

Valve island graphic description

including pneumatic function module symbol, outlet port connector, pneumatic and electrical head module,...

Additional peripheral modules



Valve island composition

including each module description and order code

An easy to use software for a complete ordering tool

The Moduflex Valve Island Configurator software offers an easy way to, step by step, configure the required valve island for the application.

Valve island print with symbols and markings

Once the valve island configured, picture of the configuration allows a visual control.



4 pages report :

A complete 4 pages report can be edit, giving :

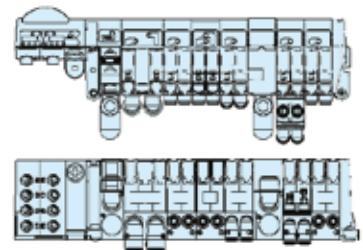
Page 1	Page 2	Page 3	Page 4
Complete list of "basic modules" pneumatic connectors, mufflers and electrical connectors	Complete list of components splitted slice by slice	Detail list of "complete module" with module width and total valve island length	Warnings and advices depending on the configuration

Multi-language CD-Rom order code :

PDE2536CDV3.1-ev

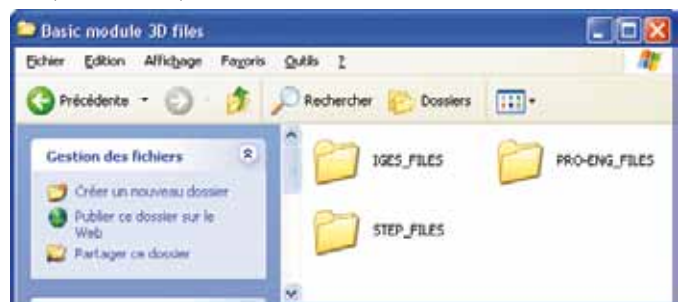
2D drawing :

A direct valve island configuration exportation function to .dxf format included.



3D drawing library :

3 formats are available on the CD for each basic module, electrical components and pneumatic connectors.



3D e-configurator software :

Also available, a 3D e-configurator on : <http://www.parker.com/pneu/moduflex>

1 - Multi-connector or sub-D 25 valve island

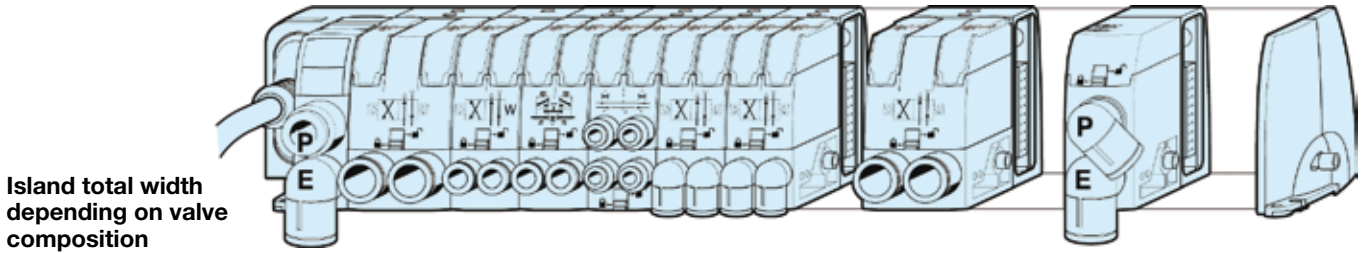
Multi-connector or sub-D 25 electrical head module width : 15 mm

Head and tail pneumatic module set width : 48 mm

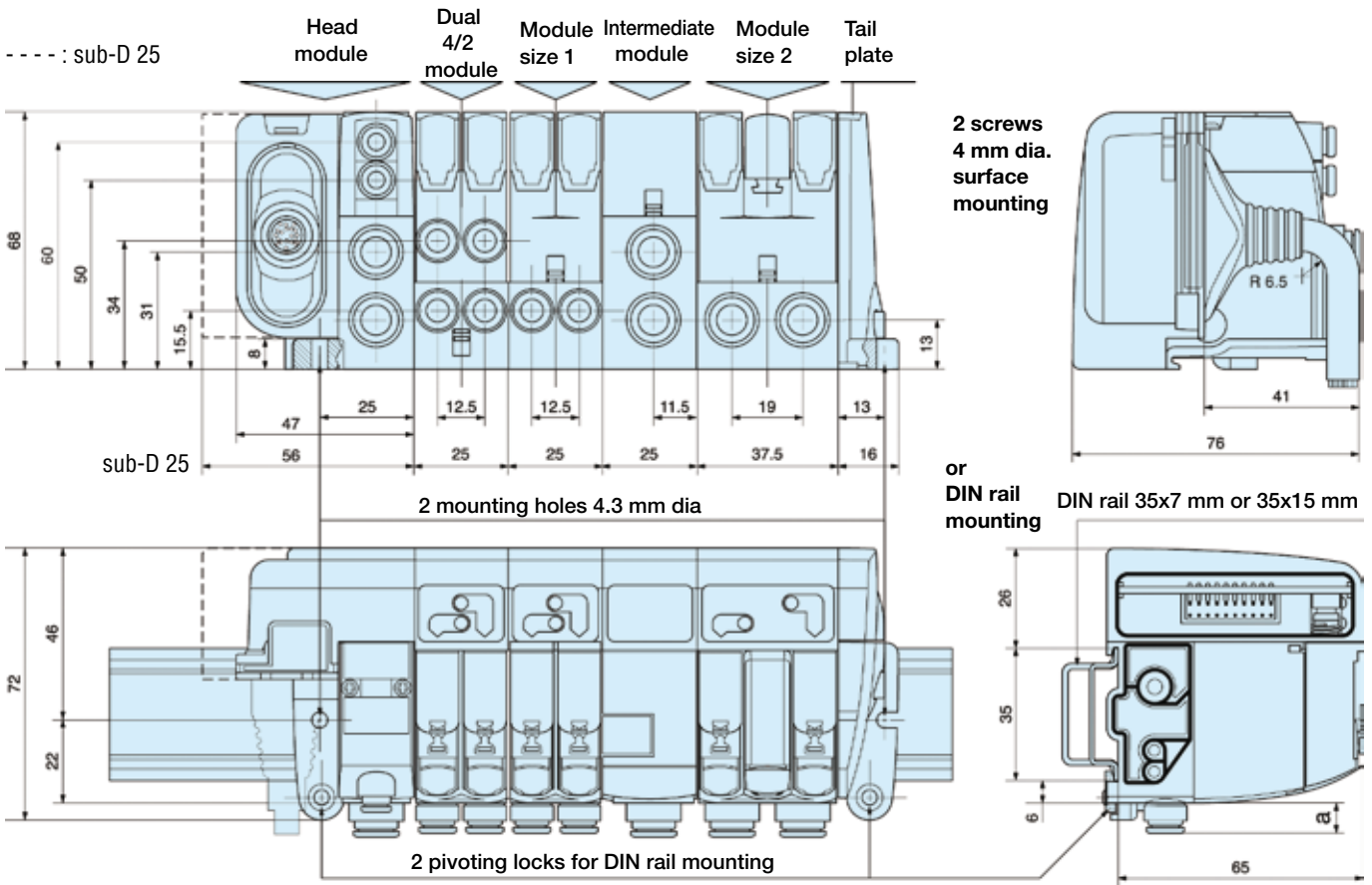
Modules size 1 width : 25 mm

Modules size 2 width : 37.5 mm

Intermediate module width : 25 mm



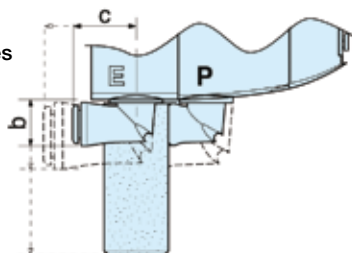
Island total width depending on valve composition



Special case : 4/3 closed centre function within island version : Add the dimensions of the dual P.O. check valve module plugged into the island.

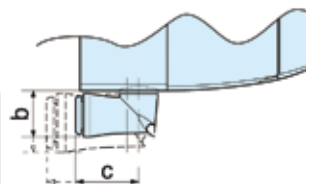
Island head and intermediate modules

	a	b	c
6 mm tube OD	8	13	16
8 mm tube OD	9	16	19
10 mm tube OD	13	18	22
12 mm tube OD	13	19	25
muffler		40	



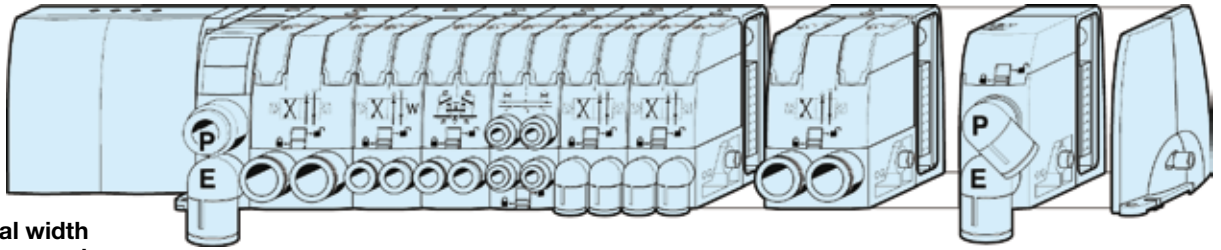
Island valves modules

	OD tube	a	b	c
Size 1 modules	4 mm	8	10	12
	6 mm	8	13	16
Size 2 modules	8 mm	9	16	19
	10 mm	13	18	22

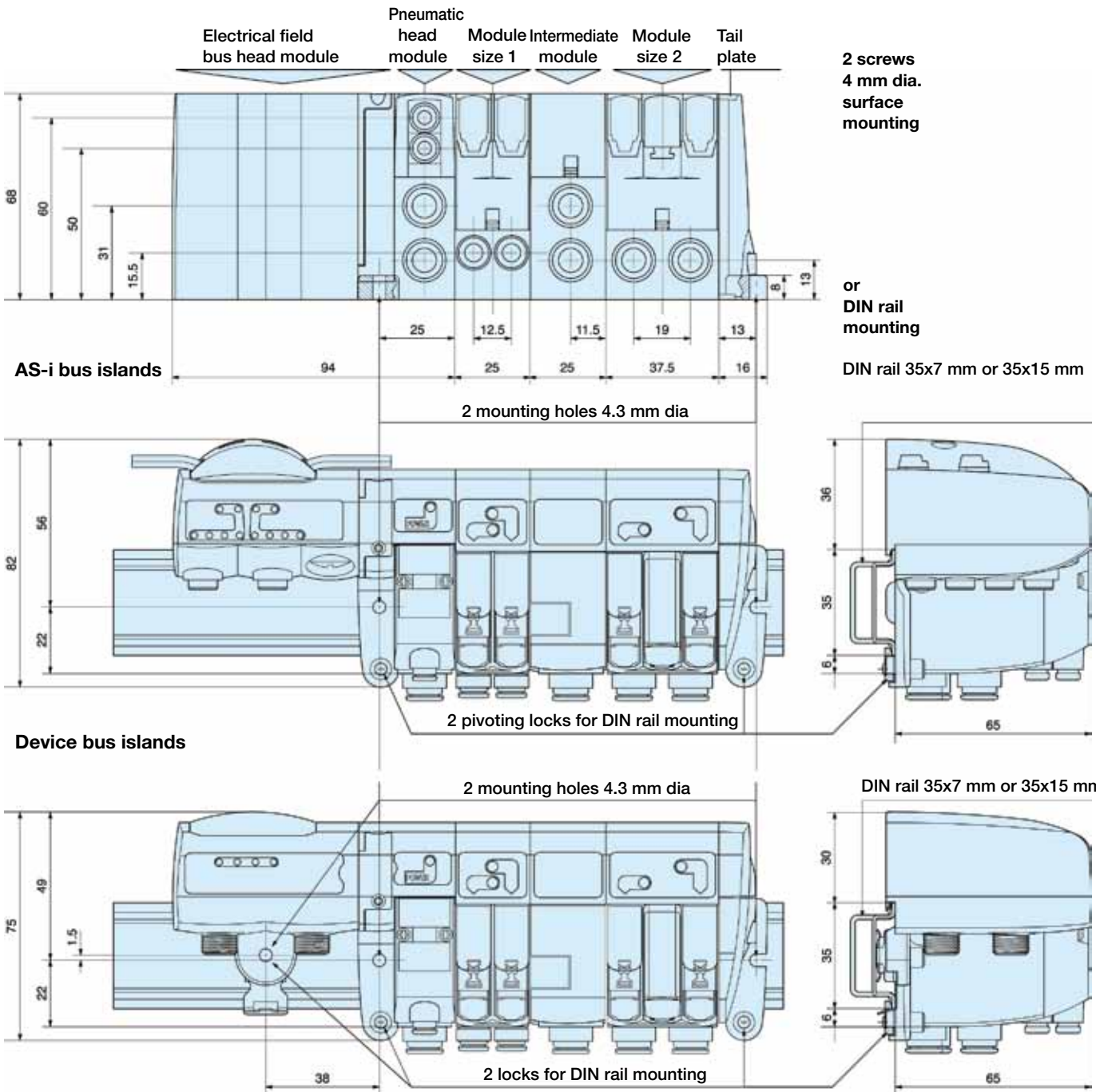


2 - Field bus connected islands

Electrical field bus head module width : 62 mm	Head and tail pneumatic module set width : 48 mm	Modules size 1 width : 25 mm	Modules size 2 width : 37.5 mm	Intermediate module width : 25 mm
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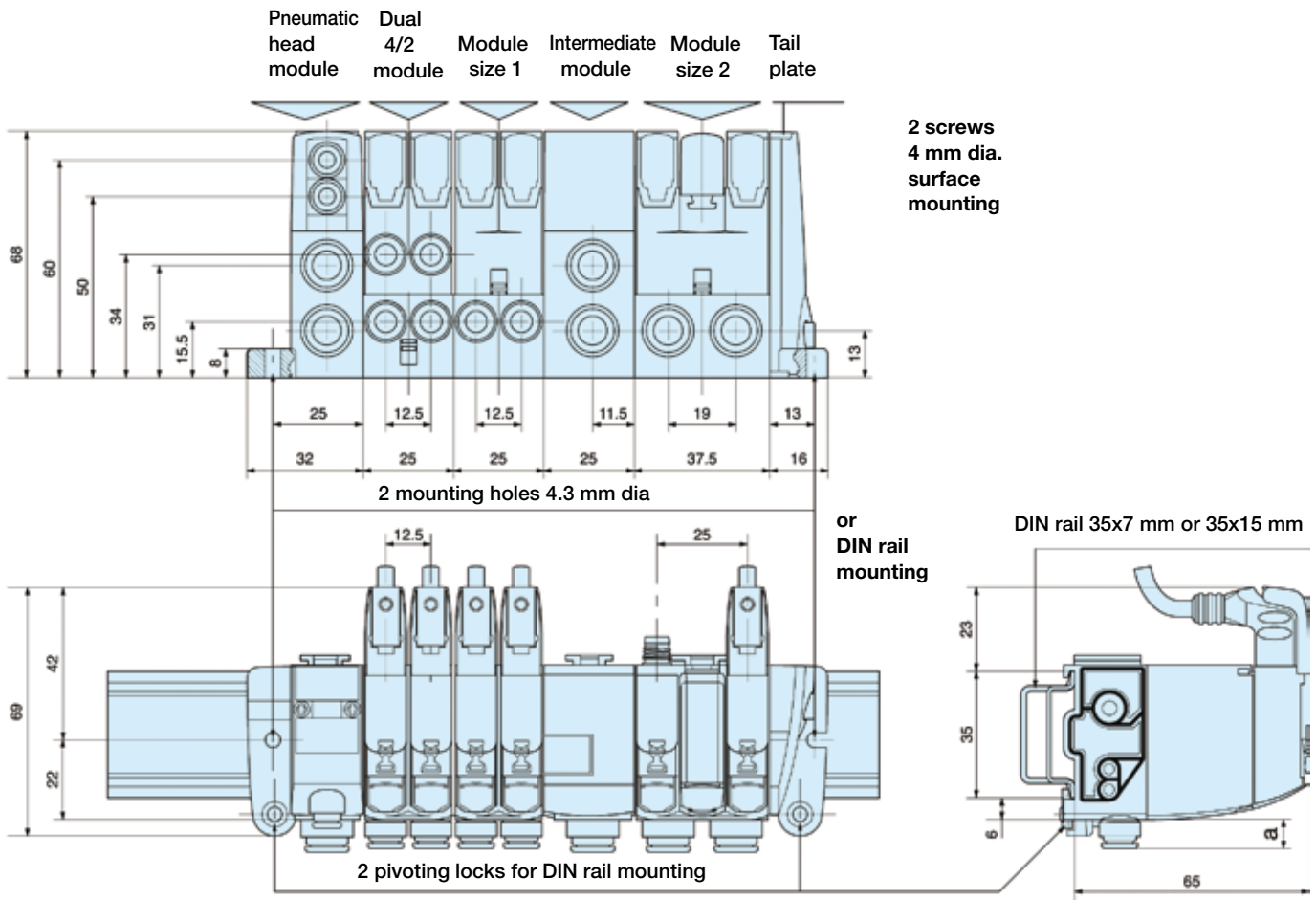
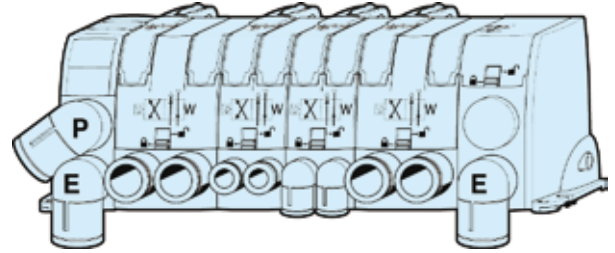
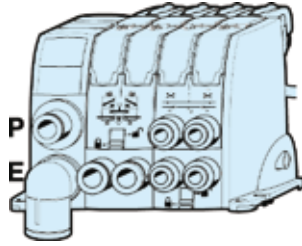


Island total width depending on valve composition



Island total width depending on valve composition

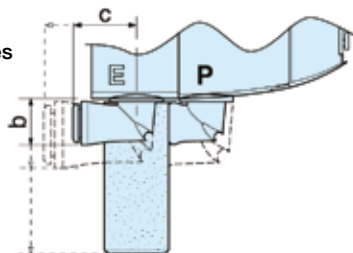
Pneumatic head and tail module	Modules size 1	Modules size 2	Intermediate module
width ⇒ 48 mm	25 mm	37.5 mm	25 mm



Special case : 4/3 closed centre function within island version :
Add the dimensions of the dual P.O. check valve module plugged into the island.

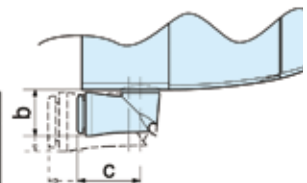
Island head and intermediate modules

	a	b	c
6 mm tube OD	8	13	16
8 mm tube OD	9	16	19
10 mm tube OD	13	18	22
12 mm tube OD	13	19	25
muffler		40	



Island valves modules

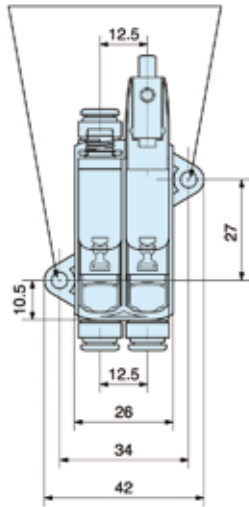
	OD tube	a	b	c
Size 1 modules	4 mm	8	10	12
	6 mm	8	13	16
Size 2 modules	8 mm	9	16	19
	10 mm	13	18	22



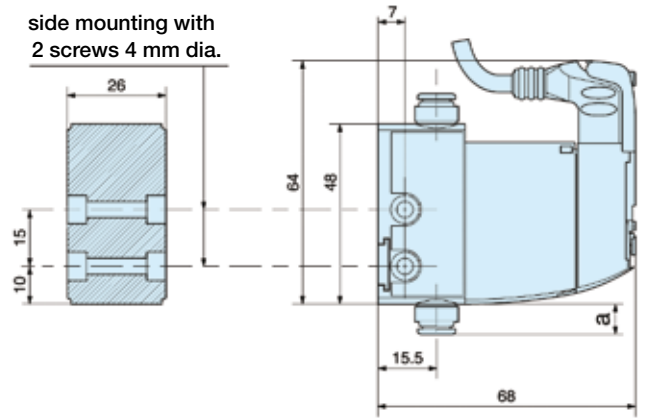
Stand-alone valve size 1



surface mounting with screws
 4 mm dia. into retractable brackets 3 mm thick



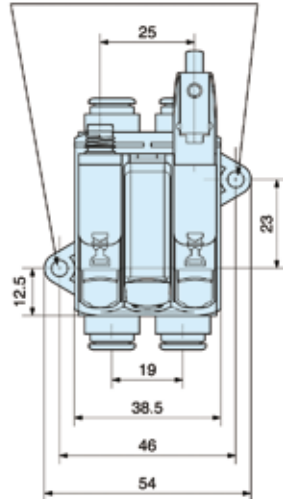
or side mounting with
 2 screws 4 mm dia.



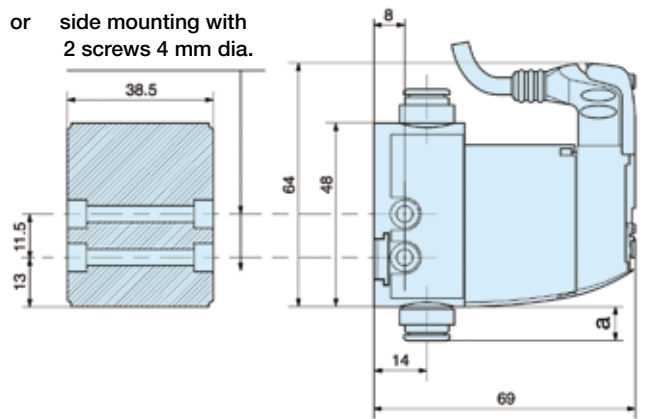
Stand-alone valve size 2



surface mounting with screws
 4 mm dia. into retractable brackets 3 mm thick



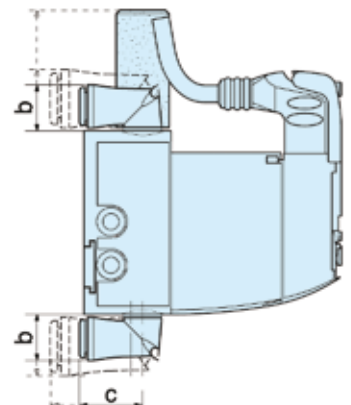
or side mounting with
 2 screws 4 mm dia.



Dimensions and mountings of the stand-alone valves 4/2, double and single 3/2, 4/3 vented centre and 4/3 pressure centre.

Special case : 4/3 closed centre. Add the dual P.O. check valve module that has been plugged in the basic valve.

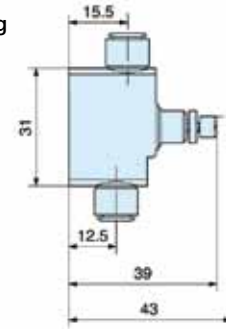
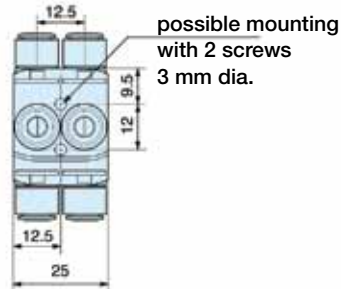
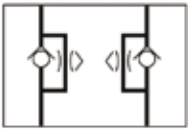
		a	b	c
Size 1 modules	4 mm tube OD	8	10	12
	6 mm tube OD	8	13	16
	muffler		31	
Size 2 modules	8 mm tube OD	9	16	19
	10 mm tube OD	13	18	22
	muffler		40	



Reminder : peripheral modules may either be plugged in a valve or mounted in line separate from the valve

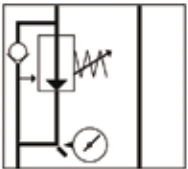


Dual flow control module size 1

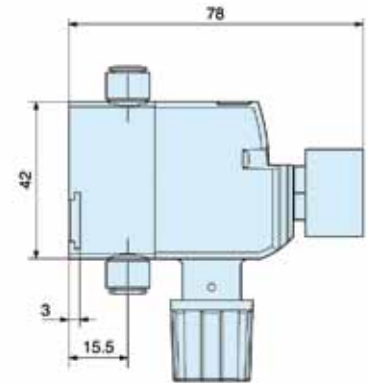
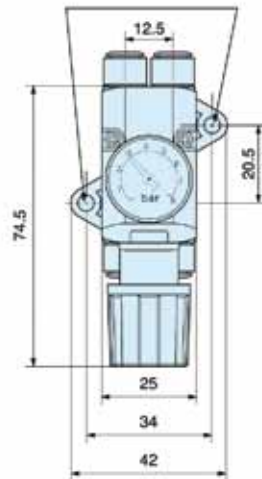


Pressure regulation module size 1

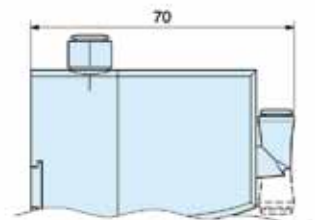
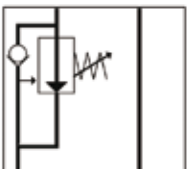
- with gauge



mounting with 2 screws 4 mm dia. on retractable brackets

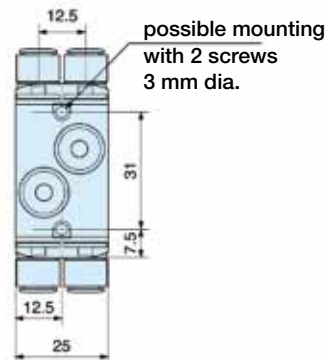
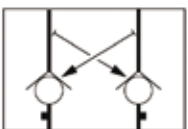


- without gauge

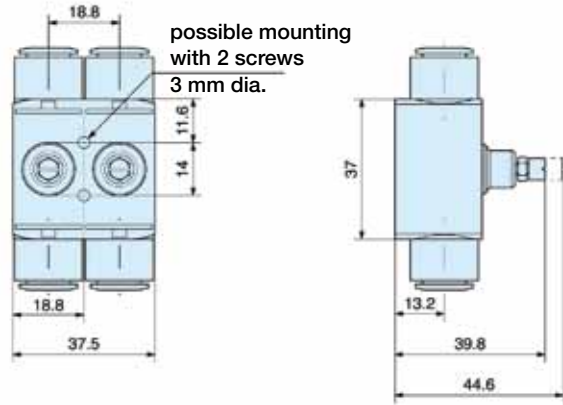
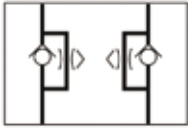


swivel elbow push-in connector 4 mm OD tube

Dual P.O. check valve module size 1

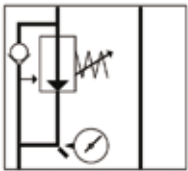


Dual flow control module size 2

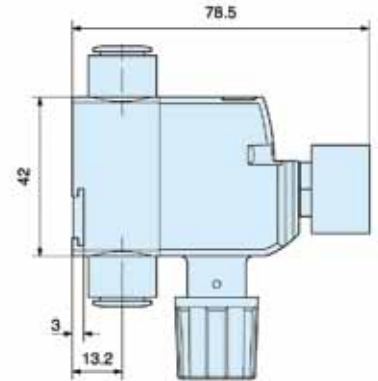
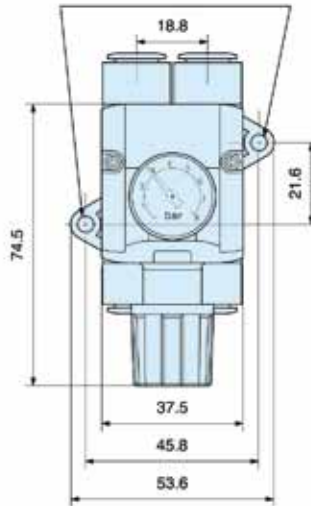


Pressure regulation module size 2

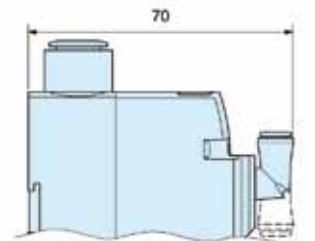
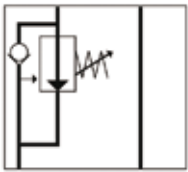
- with gauge



mounting with 2 screws 4 mm dia.
 on retractable brackets

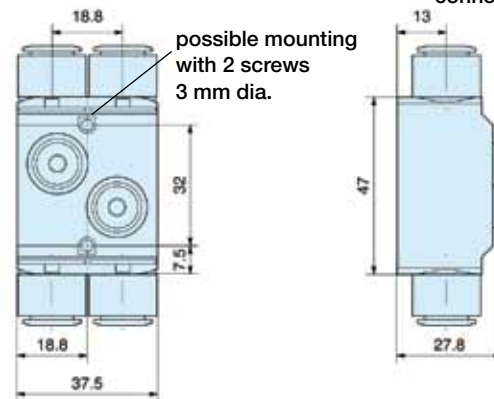
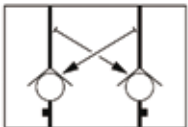


- without gauge



swivel elbow push-in
 connector 4 mm OD tube

Dual P.O. check valve module size 2



Vacuum generator module

In-line

With Moduflex valve

