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# airtec

## Air service units



# Series Y Air service units

1/4 NPTF to 1 NPTF



## Series FY

Filter,  
1/4 NPTF to 1 NPTF

12.072

## Series RY/RYP

Pressure regulator/  
precision regulator,  
1/4 NPTF to 1 NPTF

12.077



## Series FRY

Filter/regulator,  
1/4 NPTF to 1 NPTF

12.081

## Series OY

Lubricator,  
1/4 NPTF to 1 NPTF

12.084



## Series FROY

Filter, Regulator, Lubricator  
combination,  
1/4 NPTF to 1 NPTF

12.086

## Series KY

Ball valve,  
1/4 NPTF to 1 NPTF

12.089



# Series Y Air service units

1/4 NPTF to 1 NPTF



## Series NY

Non-return valve,  
1/4 NPTF to 1/2 NPTF  
12.091

## Series VMY

3/2-way inline valve,  
1/4 NPTF to 1 NPTF  
12.095



## Series DAY

Soft start valve,  
1/4 NPTF to 1 NPTF  
12.097

## Series TY

Distribution block and  
pressure switch,  
1/4 NPTF to 3 NPTF  
12.099



## Accessories for Series Y

12.102

## Series RD

Precision pressure  
regulator,  
1/4 NPTF to 1/2 NPTF  
12.107

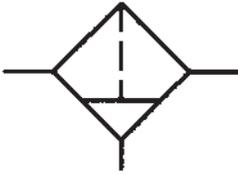


## Technical information

12.109

## Terms and conditions of Sale

12.113



**Order code**

**FY-912-00-5-1201**

**Series**

- FY\*** = standard 5 µm
- FYA** = activated carbon filter 0.005 µm
- FYF** = coalescing filter 0.3 µm
- FYM** = micro filter 0.01 µm

**Size**

- 914 = 1/4 (Y1)
- 937 = 3/8 (Y1)
- 938 = 3/8 (Y2)
- 912 = 1/2 (Y2)
- 934 = 3/4 (Y3)
- 910 = 1 (Y3)

**Filter element**

- 5\*** = 5 µm
- 3** = 0.3 µm
- 1** = 0.01 µm
- A** = activated carbon filter

**Options for digit No. 2, 3, 4**

- 201\*** = semi-automatic drain
- 301** = auto drain, opened without pressure
- 401** = auto drain, closed without pressure

**Pressure range**

- 00 = standard

**Options for digit No. 1**

- 1\*** = polycarbonate bowl with PA-guard
- 3** = metal bowl with sight glass

**Design and function**

The FYA series is only available as option 1001 or 2001. The bowl is always without drain.

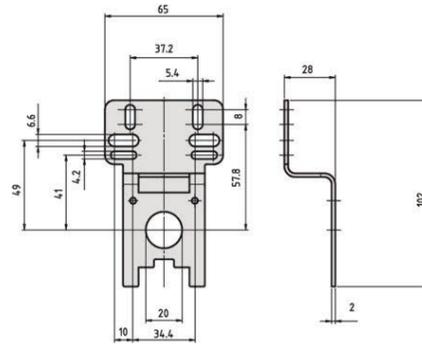
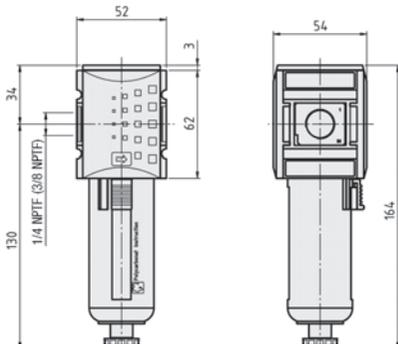
Order number Please complete according to order code.	FY-914-00-...	FY-937-00-...	FY-938-00-...	FY9-12-00-...	FY-934-00-...	FY-910-00-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF	1 NPTF**
<b>Series</b>	Y1		Y2		Y3	
<b>Nominal size*</b>	2200 NI/min (2.236 Cv)	2400 NI/min (2.44 Cv)	3500 NI/min (3.557 Cv)		13000 NI/min (13.22 Cv)	
<b>Mounting</b>	vertically, drain plug at bottom					
<b>Input range</b>	0.5 ... 16 bar (7.25 ... 232 psi) Min. 1.5 bar with auto drain		0.5 ... 16 bar (7.25 ... 232 psi) 1.5 ... 12 bar with auto drain		1.5 ... 16 bar (21.75 ... 232 psi)	
<b>Temperature range</b>	- 10 °C ... + 50 °C (+ 14 °F ... + 122 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Bowl volume</b>	max. 28 cm <sup>3</sup>		max. 49 cm <sup>3</sup>		max. 87 cm <sup>3</sup>	
<b>Weight*</b>	0.212 kg (0.467 lb.)		0.361 kg (0.796 lb.)		0.700 kg (1.543 lbs.)	

\* = standard type

\*\* = max. internal air consumption 1.5 l/min. Regulator vents.

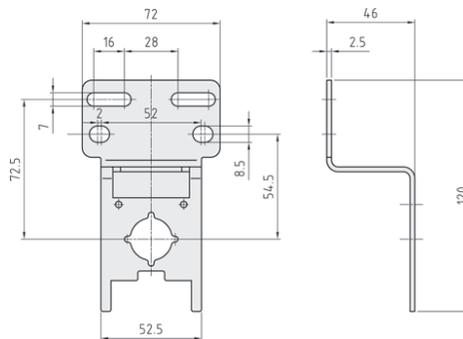
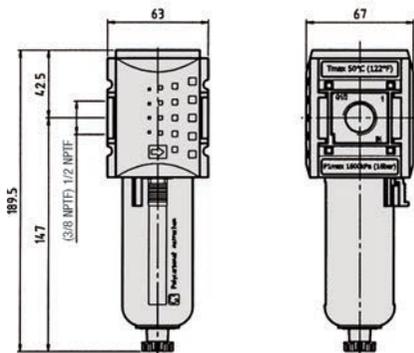
**FY-914, FY-937**

**WYP-01** see page 12.102



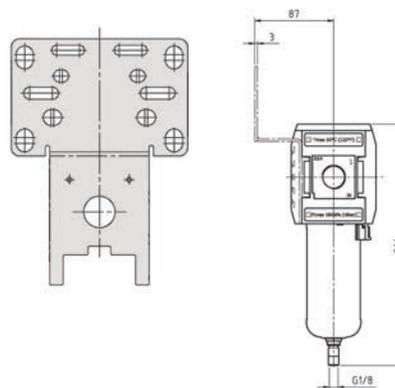
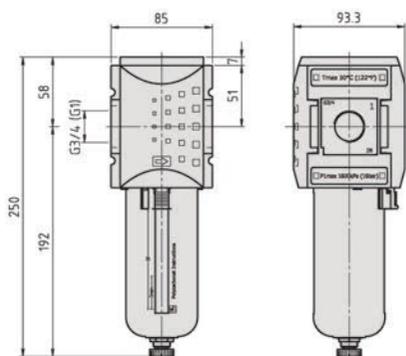
**FY-938, FY-912**

**WYP-02** see page 12.102



**FY-934, FY-910**

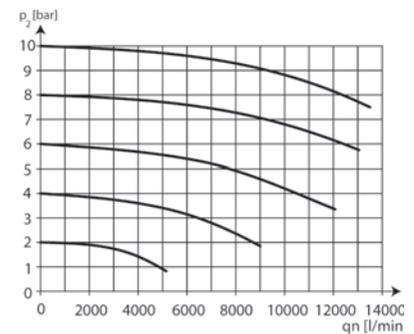
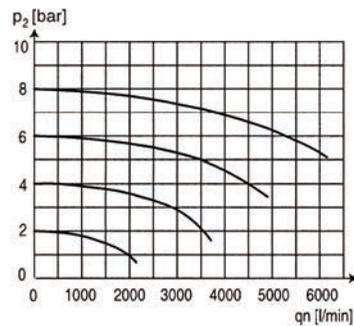
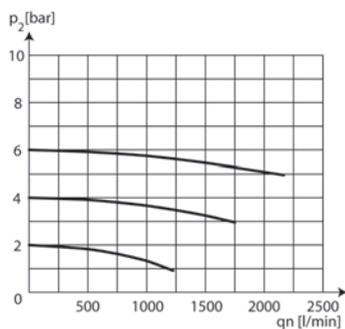
**WYP-03** see page 12.102



**Flow characteristic FY-914, FY-937**

**Flow characteristic FY-938, FY-912**

**Flow characteristic FY-934, FY-910**



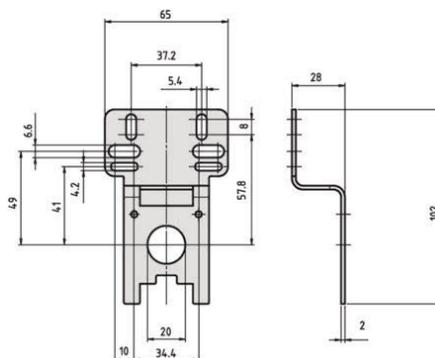
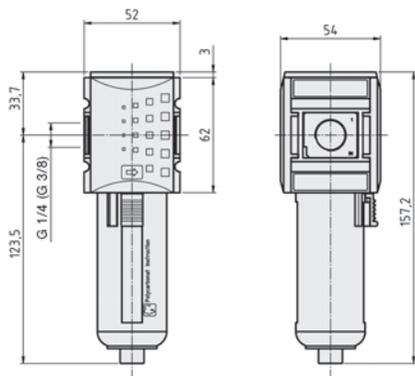
# Series Y

Filter, model FYA – Active carbon filter  
1/4 NPTF – 1 NPTF



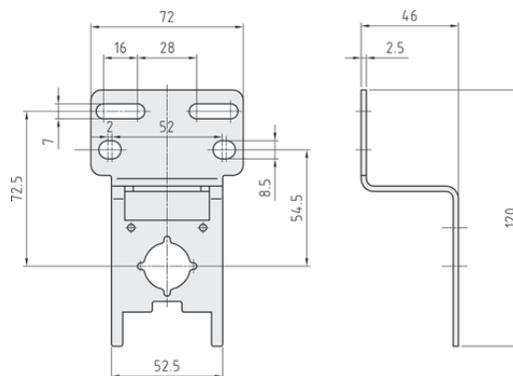
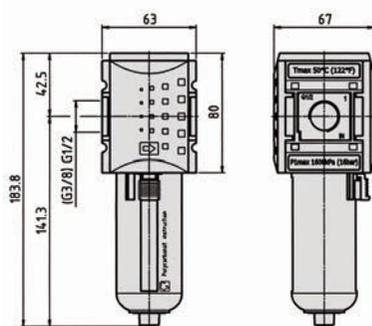
## FYA-914, FYA-937

WYP-01 see page 12.102



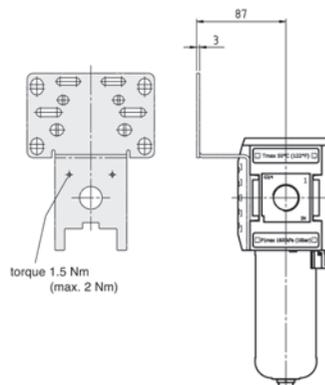
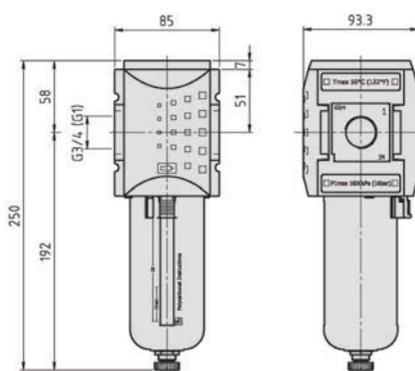
## FYA-938, FYA-912

WYP-02 see page 12.102



## FYA-934, FYA-910

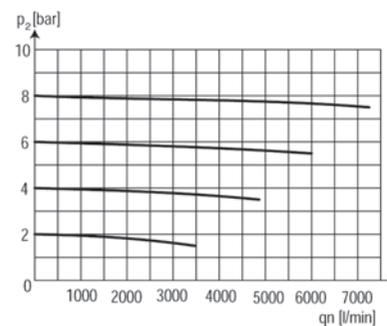
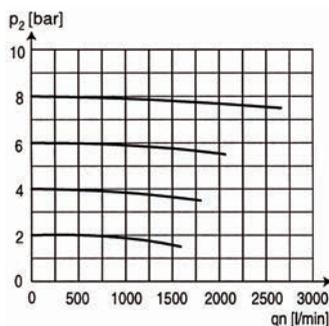
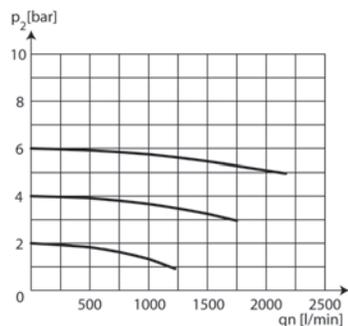
WYP-03 see page 12.102



## Flow characteristic FYA-914, FYA-937

## Flow characteristic FYA-938, FYA-912

## Flow characteristic FYA-934, FYA-910



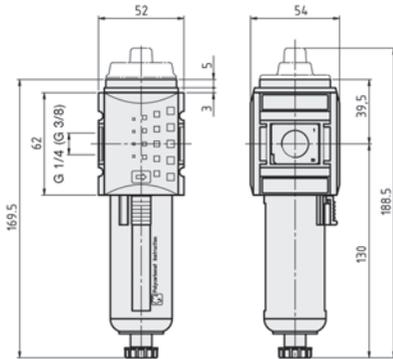
# Series Y

Filter, model FYF – Coalescing filter (pre-filter)  
1/4 NPTF – 1 NPTF

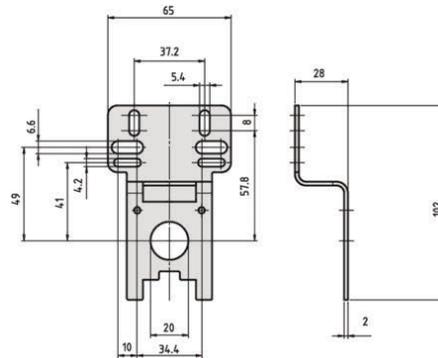


## FYF-914, FYF-937

WYP-01 see page 12.102

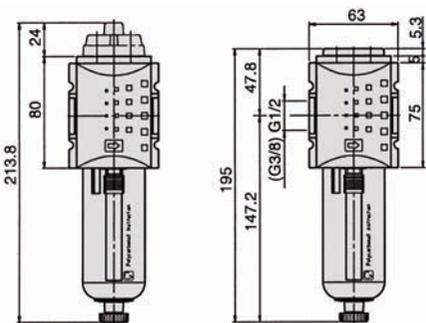


Fine filter with differential pressure display

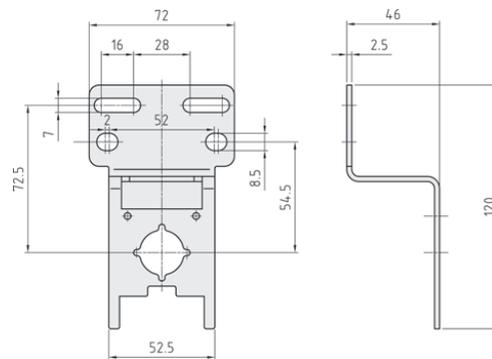


## FYF-938, FYF-912

WYP-02 see page 12.102

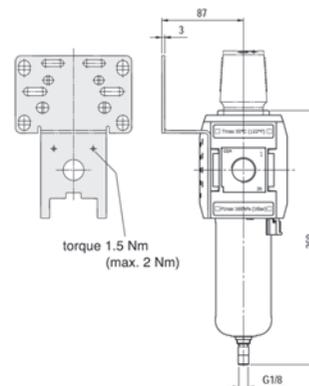
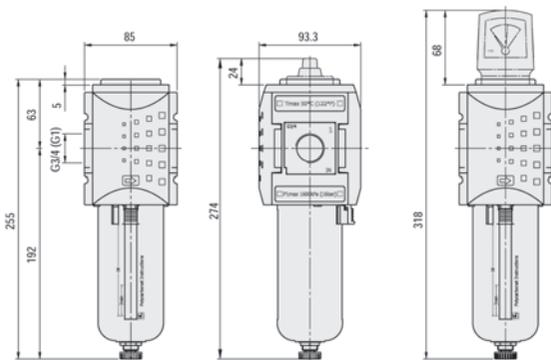


Fine filter without differential pressure display



## FYF-934, FYF-910

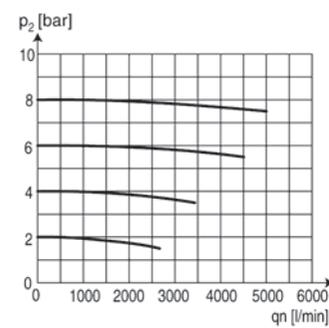
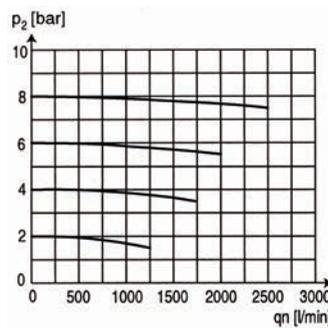
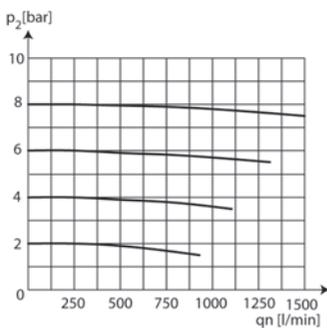
WYP-03 see page 12.102



### Flow characteristic FYF-914, FYF-937

### Flow characteristic FYF-938, FYF-912

### Flow characteristic FYF-934, FYF-910



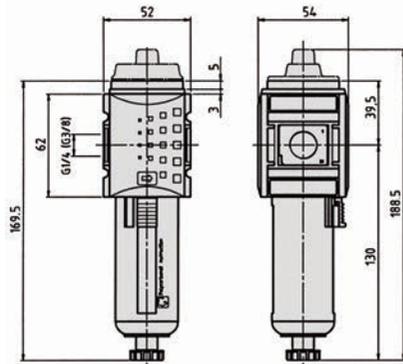
# Series Y

Filter, model FYM – Micro filter  
1/4 NPTF – 1 NPTF

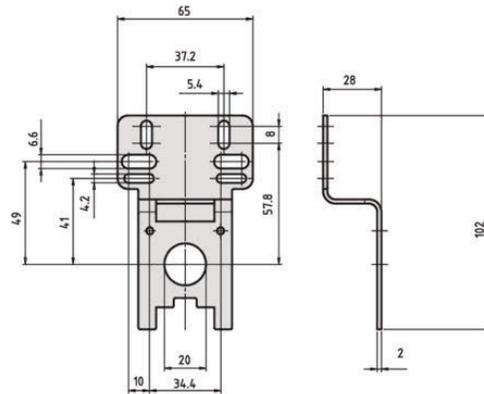


## FYM-914, FYM-937

## WYP-01 see page 12.102

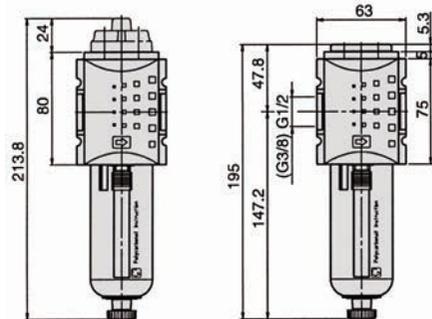


Fine filter with differential pressure display

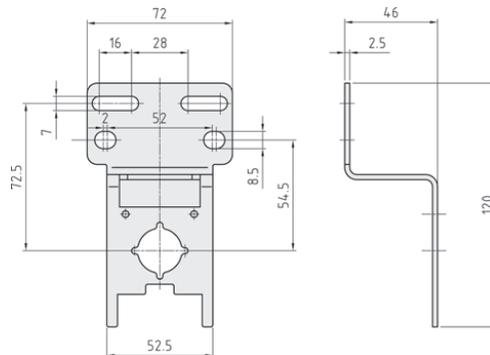


## FYM-938, FYM-912

## WYP-02 see page 12.102

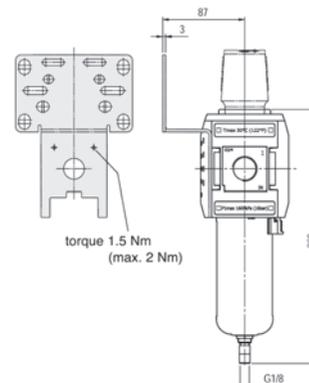
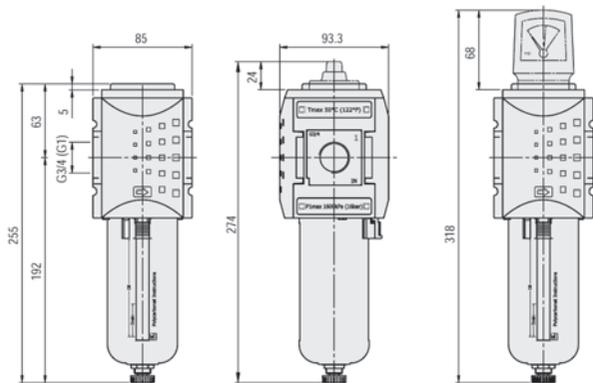


Fine filter without differential pressure display



## FYM-934, FYM-910

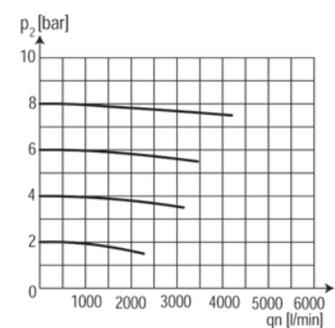
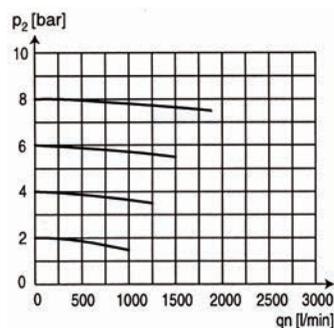
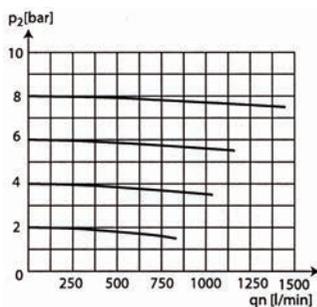
## WYP-03 see page 12.102



## Flow characteristic FYM-914, FYM-937

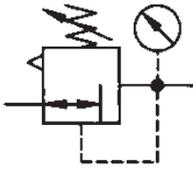
## Flow characteristic FYM-938, FYM-912

## Flow characteristic FYM-934, FYM-910



# Series Y

Pressure regulator, model RY  
1/4 NPTF – 1 NPTF



## Order code

RY-914-10-0-0021

### Series

RY = standard

### Size

914 = 1/4 (Y1)  
937 = 3/8 (Y1)  
938 = 3/8 (Y2)  
912 = 1/2 (Y2)  
934 = 3/4 (Y3)  
910 = 1 (Y3)

### Pressure range

04 = 0.2 ... 4 bar  
(2.9 ... 58 psi)  
08 = 0.5 ... 8 bar  
(7.25 ... 116 psi)  
**10\* = 0.5 ... 10 bar**  
(7.25 ... 145 psi)

### Options for digit No. n 1, 2, 3

000 = without gauge,  
flow from left to right  
001 = without gauge,  
flow from right to left  
**002\* = with gauge,  
flow from left to right**  
003 = with gauge,  
flow from right to left

### Options for digit No. 4

1 = standard

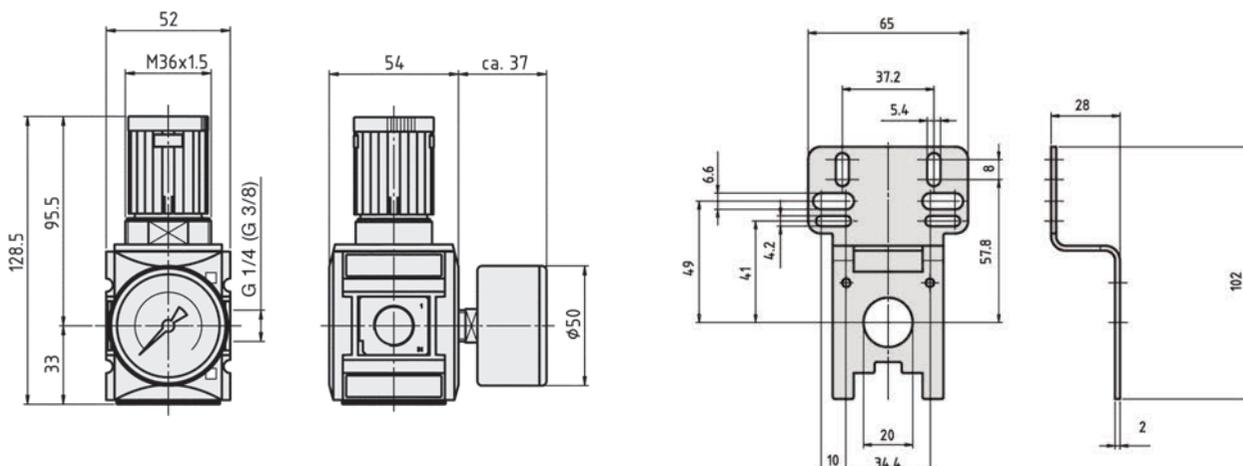
Order number Please complete according to order code.	RY-914-...	RY-937-...	RY-938-...	RY-912-...	RY-934-...	RY-910-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF**	1 NPTF**
<b>Series</b>	Y1		Y2		Y3	
<b>Mounting</b>	with bracket or in-line, horizontal or vertical					
<b>Input range</b>	max. 16 bar (max. 232 psi)					
<b>Output range*</b>	0.5 ... 10 bar (7.25 ... 145 psi)* (others see order code)					
<b>Flow rate</b>	2200 NI/min (2.236 Cv)	2700 NI/min (2.744 Cv)	4300 NI/min (4.37 Cv)		14500 NI/min (14.74 Cv)	
<b>Temperature range</b>	- 10 °C ... + 50 °C (+ 14 °F ... + 122 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Medium</b>	Compressed air in accordance with ISO 8573-1:2001, Class 7 4 – and free of aggressive additives					
<b>Weight without pressure gauge</b>	0.292 kg (0.644 lb.)		0.8 kg (1.764 lbs.)		0.997 kg (2.216 lbs.)	

\* = standard type

\*\* = max. internal air consumption 1.5 l/min. Regulator vents.

## RY-914, RY-937

## WYP-01 see page 12.102



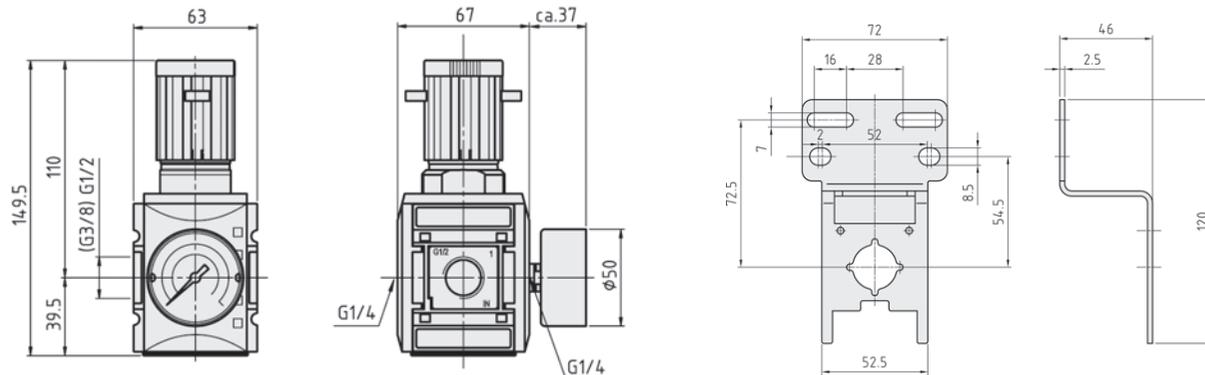
# Series Y

Pressure regulator, model RY  
1/4 NPTF – 1 NPTF



**RY-938, RY-912**

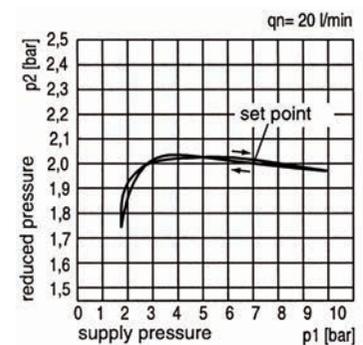
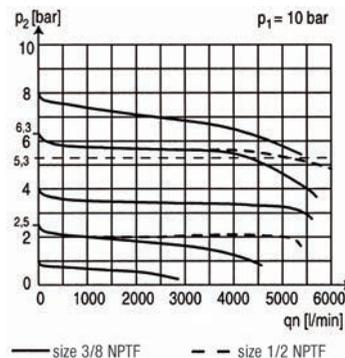
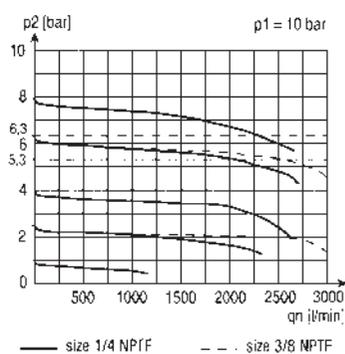
**WYP-02** see page 12.102



**Flow characteristic: RY-914, RY-937**

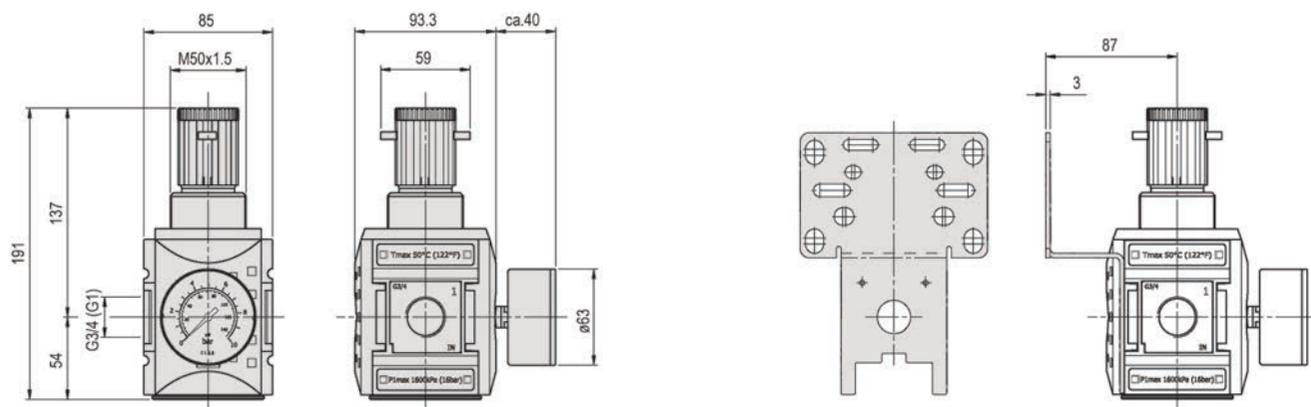
**Flow characteristic: RY-938, RY-912**

**Pressure characteristic**



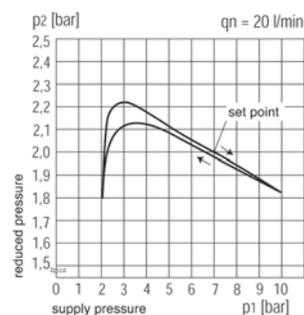
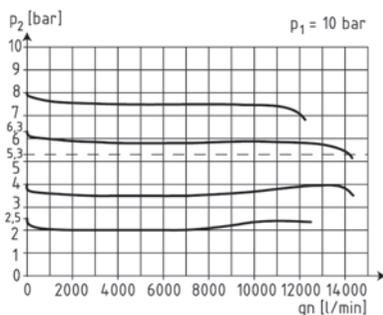
**RY-934, RY-910**

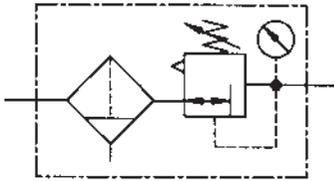
**WYP-03** see page 12.102



**Flow characteristic: RY-934, RY-910**

**Pressure characteristic**





**Order code**

FRY-914-10-5-1221

**Series**

**Size**

- 914 = 1/4 (Y1)
- 937 = 3/8 (Y1)
- 938 = 3/8 (Y2)
- 912 = 1/2 (Y2)
- 934 = 3/4 (Y3)
- 910 = 1 (Y3)

**Pressure range**

- 04 = 0.2 ... 4 bar  
(2.9 ... 58 psi)
- 08 = 0.5 ... 8 bar  
(7.25 ... 116 psi)
- 10\* = 0.5 ... 10 bar**  
(7.25 ... 145 psi)

**Options for digit No. 1**

- 1\* = polycarbonate bowl with PA-guard**
- 3 = metal bowl with sight glass

**Options for digit No. 3**

- 0 = without gauge, flow from left to right
- 1 = without gauge, flow from right to left
- 2\* = with gauge, flow from left to right**
- 3 = with gauge, flow from right to left

**Options for digit No. 2**

- 2\* = semi-automatic drain**
- 3 = auto drain, NO at operating pressure 0 bar
- 4 = auto drain, NC at operating pressure 0 bar

**Options for digit No. 4**

- 1 = standard

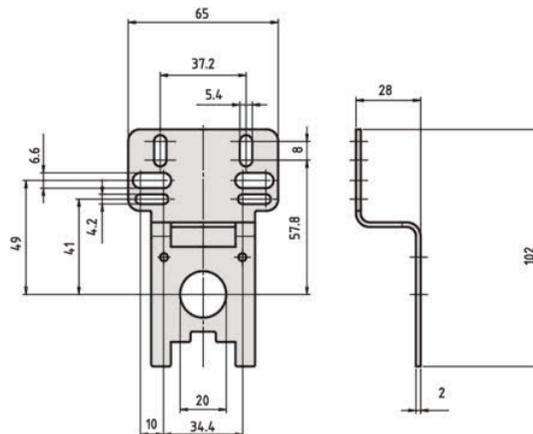
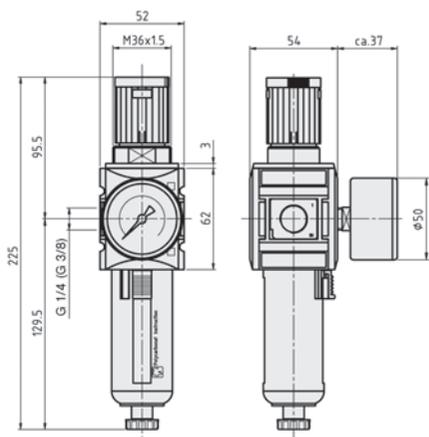
Order number Please complete according to order code.	FRY-914-...	FRY-937-...	FRY-938-...	FRY-912-...	FRY-934-...	FRY-910-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF**	1 NPTF**
<b>Series</b>	Y1		Y2		Y3	
<b>Mounting</b>	vertically, drain plug at bottom					
<b>Input range</b>	max. 16 bar (max. 232 psi) 1.5 ... 10 bar with auto drain		max. 16 bar (max. 232 psi) 1.5 ... 12 bar with auto drain		max. 16 bar (max. 232 psi) 1.5 ... 10 bar with auto drain	
<b>Output range*</b>	0.5 ... 10 bar (7.25 ... 145 psi)* (others see order code)					
<b>Flow rate</b>	2600 NI/min (2.642 Cv)		4300 NI/min (4.37 Cv)	5200 NI/min (5.285 Cv)	14500 NI/min (14.74 Cv)	
<b>Filter element</b>	5 µm					
<b>Bowl volume</b>	28 cm <sup>3</sup>		49 cm <sup>3</sup>		87 cm <sup>3</sup>	
<b>Temperature range</b>	50 °C (122 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Medium</b>	Compressed air in accordance with ISO 8573-1:2001, Class 7 4 – and free of aggressive additives					
<b>Weight without pressure gauge*</b>	0.360 kg (0.794 lb.) 0.530 kg lockable (1.168 lbs.)		0.850 kg (1.874 lb.) 1.050 kg lockable (2.315 lbs.)		0.990 kg (2.18 lb.)	

\* = standard type

\*\* = max. internal air consumption 1.5 l/min. Regulator vents.

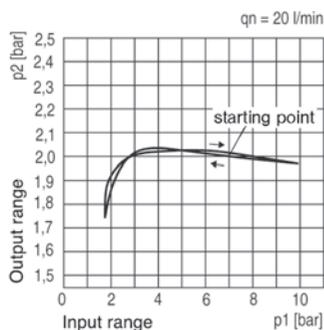
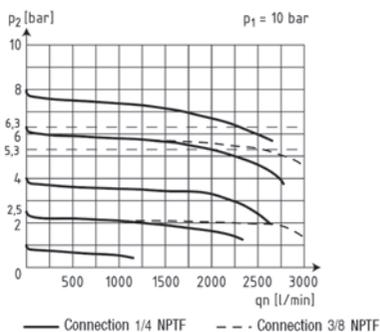
**FRY-914, FRY-937**

**WYP-01** see page 12.102



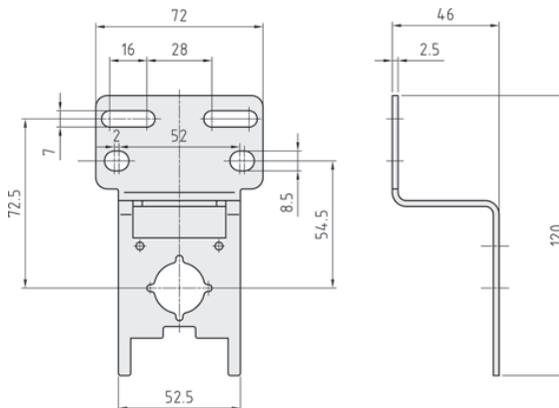
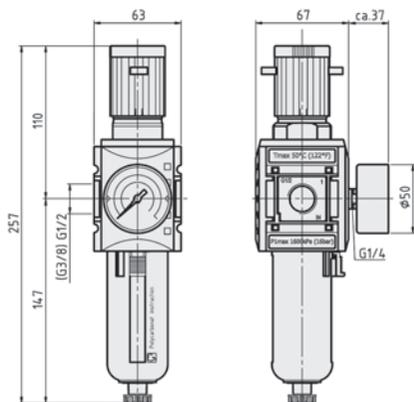
**Flow characteristic FRY-914, FRY-937**

**Pressure characteristic**



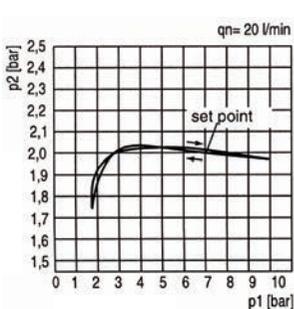
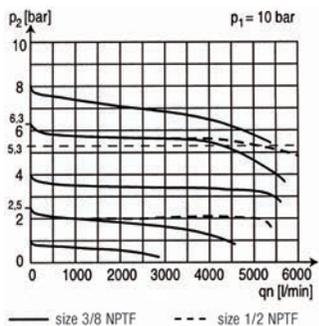
**FRY-938, FRY-912**

**WYP-02** see page 12.102



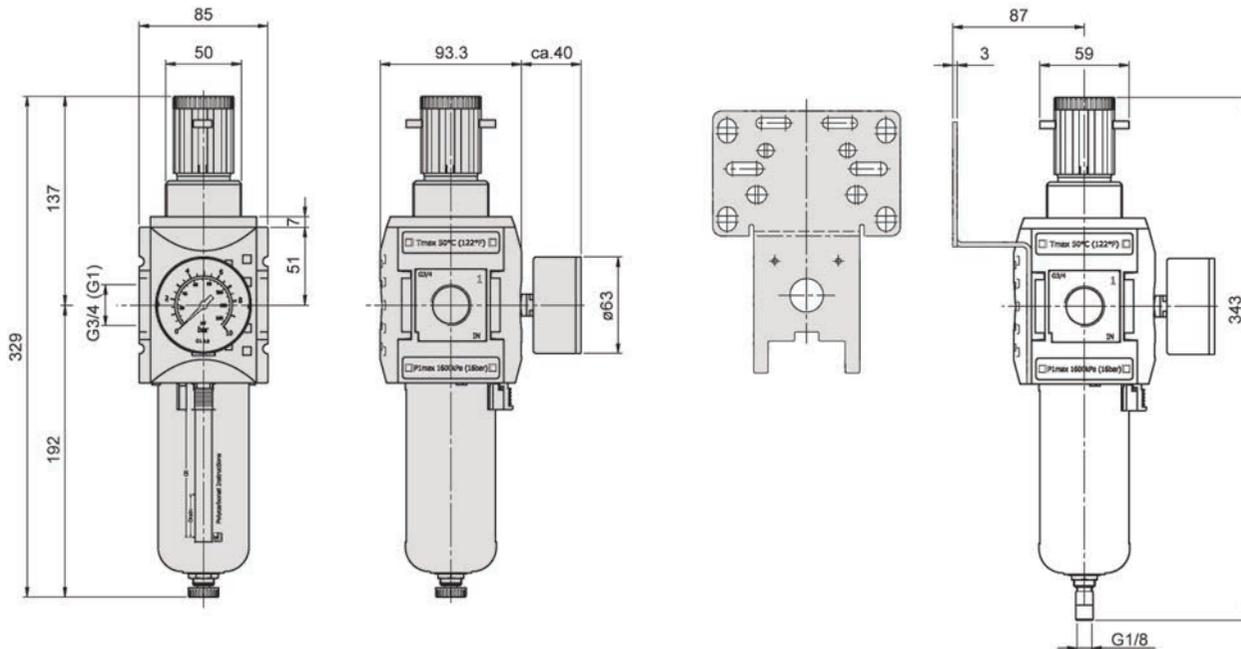
**Flow characteristic FRY-938, FRY-912**

**Pressure characteristic**

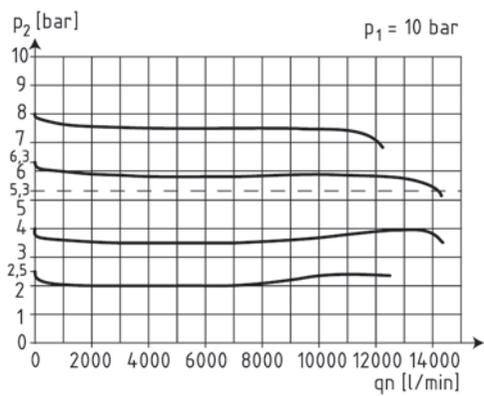


**FRY-934, FRY-910**

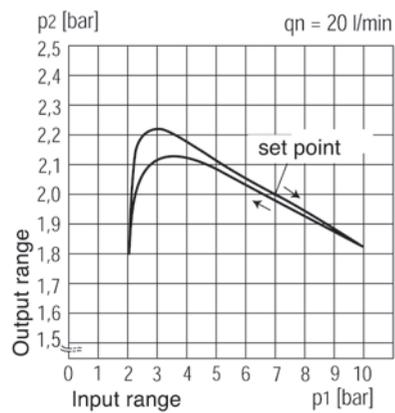
**WYP-03** see page 12.102



**Flow characteristic FRY-938, FRY-912**



**Pressure characteristic**





**Order code**

OY-914-00-0-1001

**Series**

**Size**

**Pressure range**

**Options**

- 914 = 1/4 (Y1)
- 937 = 3/8 (Y1)
- 938 = 3/8 (Y2)
- 912 = 1/2 (Y2)
- 934 = 3/4 (Y3)
- 910 = 1 (Y3)

00 = standard

- 1001\* = Grivory (PA66) bowl with PA-guard
- 3001 = metal bowl with sight glass

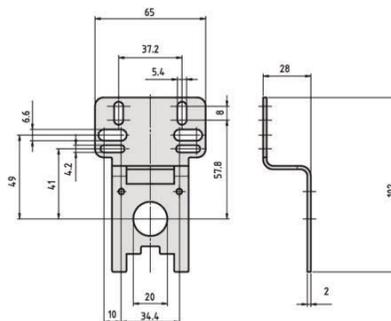
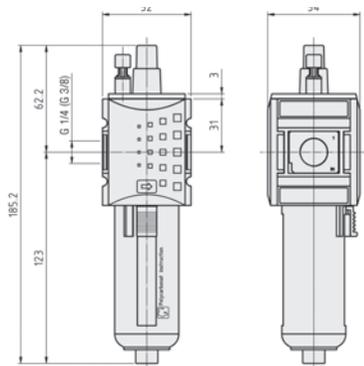
Order number Please complete according to order code.	OY-914-00-0-...	OY-937-00-0-...	OY-938-00-0-...	OY-912-00-0-...	OY-934-00-0-...	OY-910-00-0-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF**	1 NPTF**
<b>Series</b>	Y1		Y2		Y3	
<b>Mounting</b>	vertically					
<b>Input range</b>	max. 16 bar, max. 20 bar with metal bowl (max. 232 psi, max. 290 psi)					
<b>Flow rate*</b>	2800 NI/min (2.845 Cv)	3100 NI/min (3.15 Cv)	8000 NI/min (8.13 Cv)		14500 NI/min (14.74 Cv)	
<b>Bowl volume</b>	40 cm <sup>3</sup>		80 cm <sup>3</sup>		181 cm <sup>3</sup>	
<b>Type of oil</b>	HL 25 according to DIN 51524 – ISO VG 32					
<b>Temperature range</b>	0 °C ... + 50 °C (+ 32 °F ... + 122 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Weight*</b>	0.230 kg (0.507 lb.)		0.690 kg (1.521 lbs.)		0.762 kg (1.680 lbs.)	

\* = standard type

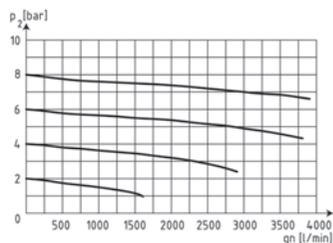
\*\* = max. internal air consumption 1.5 l/min. Regulator vents.

**OY-914, OY-937**

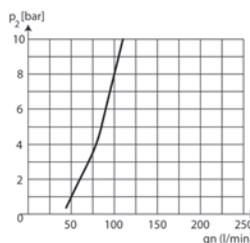
**WYP-01** see page 12.102



**Flow characteristic OY-914, OY-937**

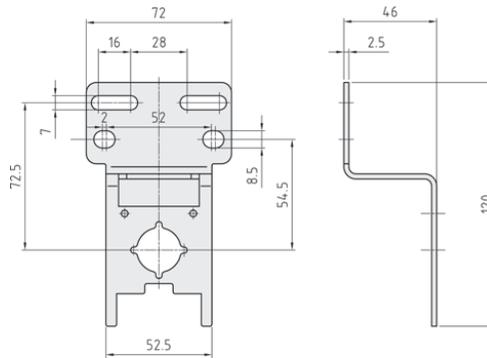
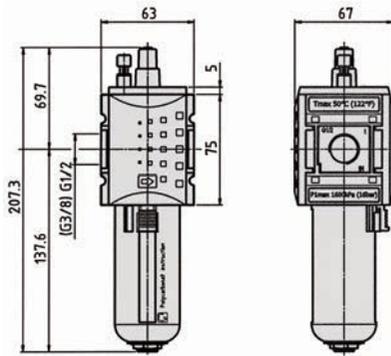


**Lubricator: response pressure**

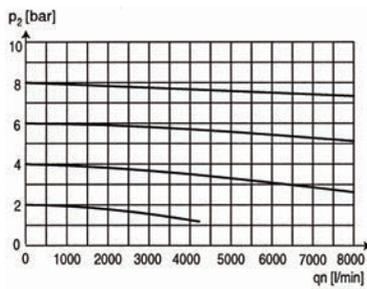


**OY-938, OY-912**

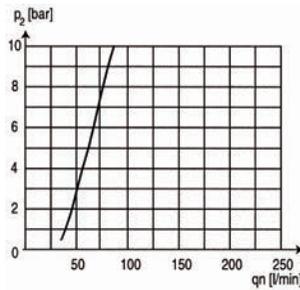
**WYP-02** see page 12.102



**Flow characteristic OY-938, OY-912**

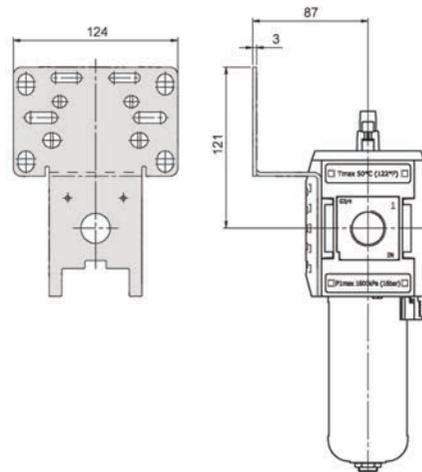
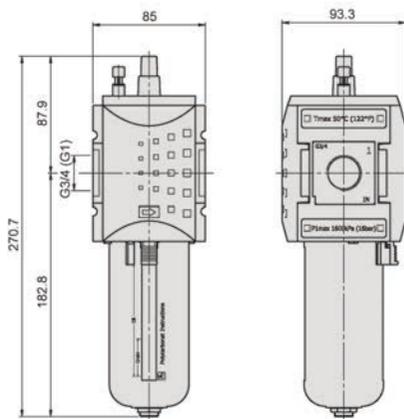


**Lubricator: response pressure**

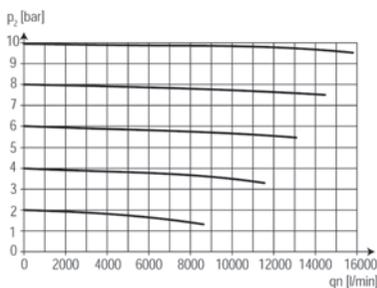


**OY-934, OY-910**

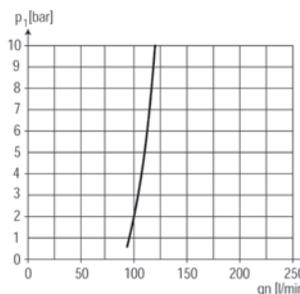
**WYP-03** see page 12.102



**Flow characteristic OY-934, OY-910**



**Lubricator: response pressure**



# Series Y

Filter, Regulator, Lubricator combination, model FROY  
1/4 NPTF – 1 NPTF



## Order code

FROY-914-10-5-1221

### Series

### Connection size

914 = 1/4 (Y1)  
937 = 3/8 (Y1)  
938 = 3/8 (Y2)  
912 = 1/2 (Y2)  
934 = 3/4 (Y3)  
910 = 1 (Y3)

### Pressure range

04 = 0.2 ... 4 bar  
(2.9 ... 58 psi)  
08 = 0.5 ... 8 bar  
(7.25 ... 116 psi)  
**10\* = 0.5 ... 10 bar**  
(7.25 ... 145 psi)

### Options for digit No. 1

**1\* = polycarbonate bowl with PA-guard**  
3 = metal bowl with sight glass

### Options for digit No. 3

0 = without gauge, flow from left to right  
1 = without gauge, flow from right to left  
**2\* = with gauge, flow from left to right**  
3 = with gauge, flow from right to left

### Options for digit No. 2

**2\* = semi-automatic drain**  
3 = auto drain, NO at operating pressure 0 bar  
4 = auto drain, NC at operating pressure 0 bar

### Options for digit No. 4

1 = standard

Order number Please complete according to order code.	FROY-914-...	FROY-937-...	FROY-938-...	FROY-912-...	FROY-934-...	FROY-910-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF**	1 NPTF**
<b>Series</b>	Y1		Y2		Y3	
<b>Mounting</b>	vertically, drain plug at bottom					
<b>Input range</b>	max. 16 bar (max. 232 psi) 1.5 ... 10 bar with auto drain		max. 16 bar (max. 232 psi) 1.5 ... 12 bar with auto drain		max. 16 bar (max. 232 psi) 1.5 ... 10 bar with auto drain	
<b>Output range*</b>	0.5 ... 10 bar (7.25 ... 145 psi)* (others see order code)					
<b>Flow rate</b>	2000 NI/min (2.032 Cv)	2600 NI/min (2.642 Cv)	4300 NI/min (4.37 Cv)	5200 NI/min (5.285 Cv)	12000 NI/min (12.2 Cv)	
<b>Filter element</b>	5 µm					
<b>Bowl volume</b>	Filter regulator: 28 cm <sup>3</sup> Lubricator: 40 cm <sup>3</sup>		Filter regulator: 49 cm <sup>3</sup> Lubricator: 80 cm <sup>3</sup>		Filter regulator: 87 cm <sup>3</sup> Lubricator: 181 cm <sup>3</sup>	
<b>Temperature range</b>	50 °C (+ 122 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Medium</b>	Compressed air in accordance with ISO 8573-1:2001, Class 7 4 – and free of aggressive additives					
<b>Weight without pressure gauge*</b>	0.633 kg (1.395 lbs.) 0.673 kg (1.484 lbs.) lockable		1.010 kg (2.227 lbs.) 1.050 kg (2.315 lbs.) lockable		1.827 kg (4.024 lbs.)	

\* = standard type

\*\* = max. internal air consumption 1.5 l/min. Regulator vents.

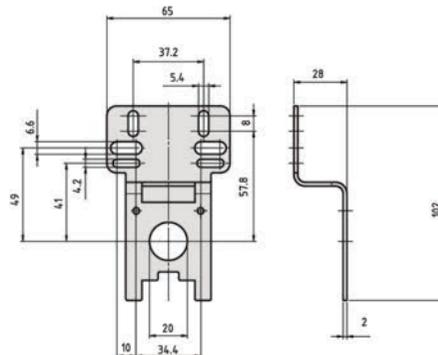
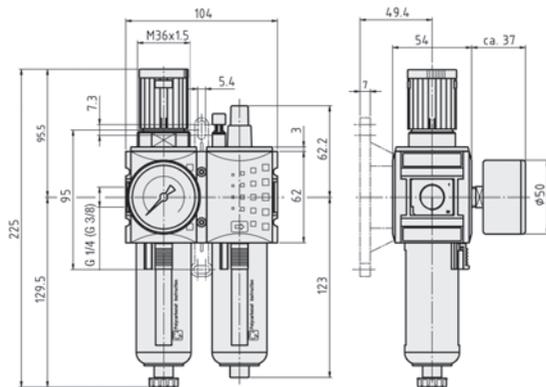
# Series Y

Filter, Regulator, Lubricator combination, model FROY  
1/4 NPTF – 1/2 NPTF

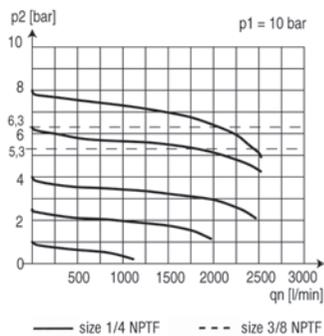


## FROY-914, FROY-937

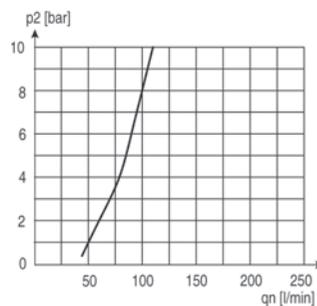
WYP-01 see page 12.102



### Flow characteristic FROY-914, FROY-937

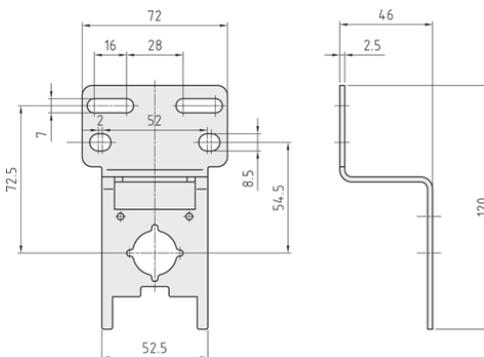
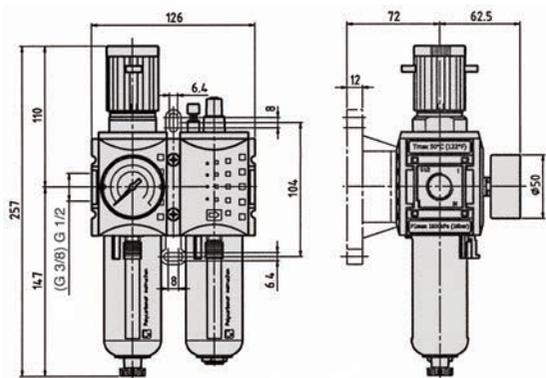


### Lubricator: response pressure

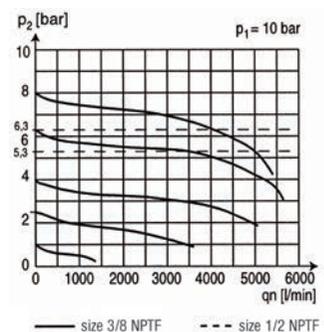


## FROY-938, FROY-912

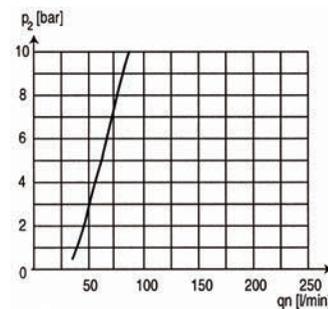
WYP-02 see page 12.102



### Flow characteristic FROY-938, FROY-912



### Lubricator: response pressure

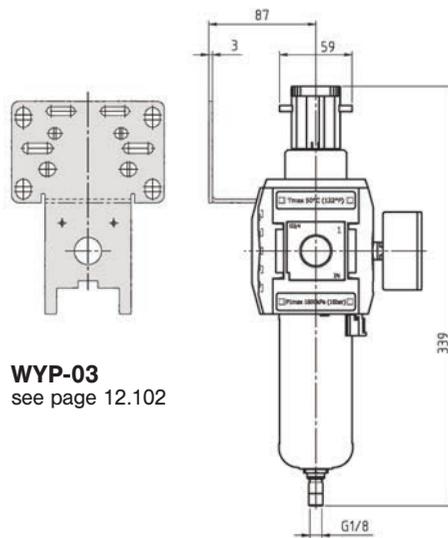
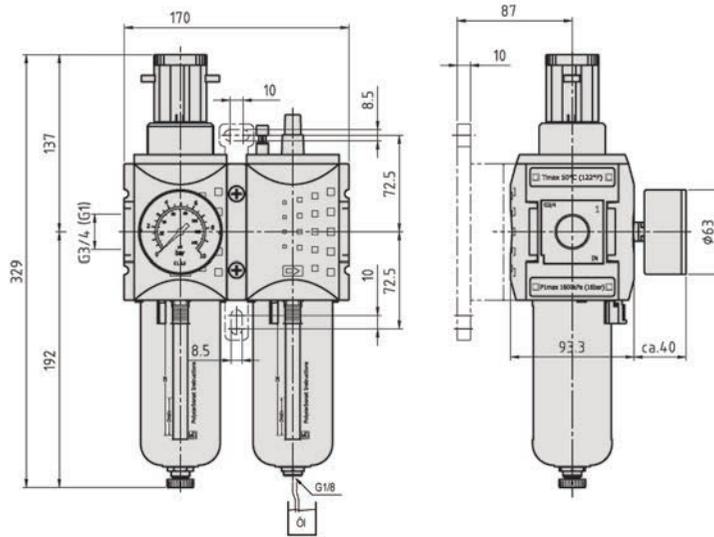


# Series Y

Filter, Regulator, Lubricator combination, model FROY  
 3/4 NPTF – 1 NPTF

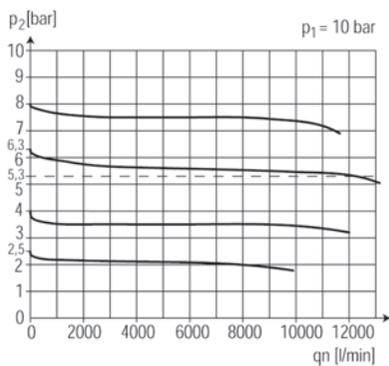


## FROY-934, FROY-910

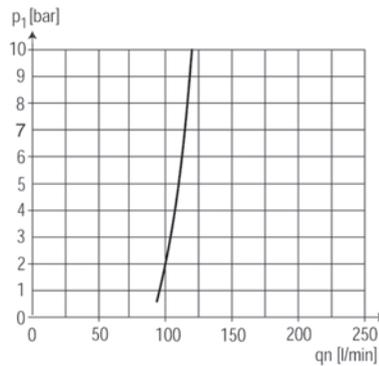


**WYP-03**  
 see page 12.102

### Flow characteristic FROY-934, FROY-910



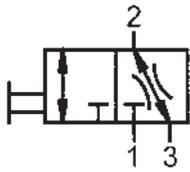
### Lubricator: response pressure



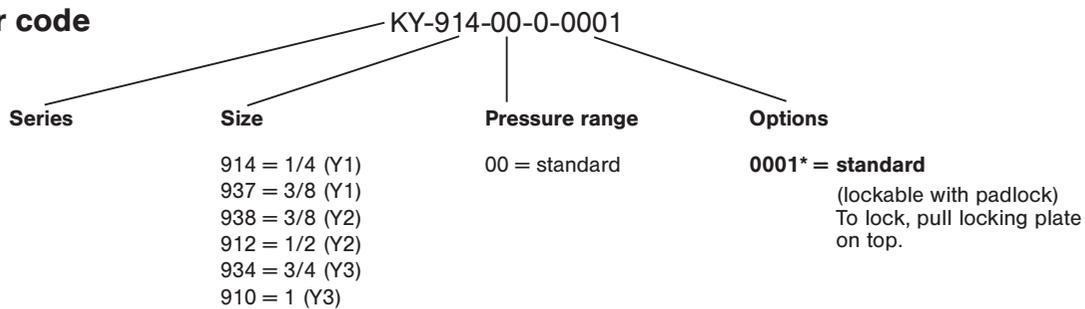
# Series Y

Lockable ball valve, model KY

1/4 NPTF – 1 NPTF



## Order code



## Design and function

3/2-way ball valve for the shut-off of downstream air.

Easy block assembly for components to be connected in series.

The components of series Y can easily be connected by using the coupling kit KPY.

Order number Please complete according to order code.	KY-914-00-0-...	KY-937-00-0-...	KY-938-00-0-...	KY-912-00-0-...	KY-934-00-0-...	KY-910-00-0-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF**	1 NPTF**
<b>Series</b>	Y1		Y2		Y3	
<b>Mounting</b>	with bracket or in-line, horizontal or vertical					
<b>Input range</b>	max. 16 bar (max. 232 psi)					
<b>Flow rate</b>	2000 NI/min (2.032 Cv)		4300 NI/min (4.37 Cv)	5200 NI/min (5.285 Cv)	14500 NI/min (14.74 Cv)	
<b>Temperature range</b>	0 °C ... + 50 °C (+ 32 °F ... + 122 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Weight*</b>	0.200 kg (0.441 lb.)		0.820 kg (1.808 lbs.)		0.825 kg (1.82 lbs.)	

\* = standard type

\*\* = max. internal air consumption 1.5 l/min. Regulator vents.

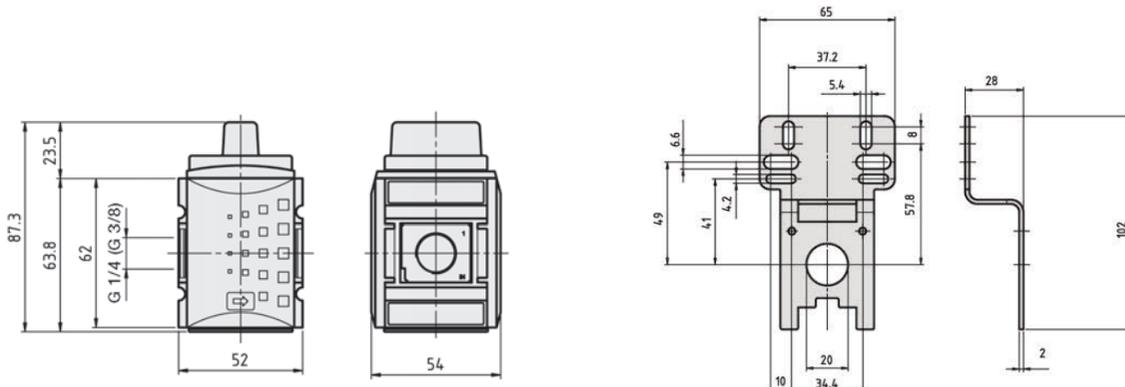
# Series Y

Lockable ball valve, model KY  
1/4 NPTF – 1 NPTF



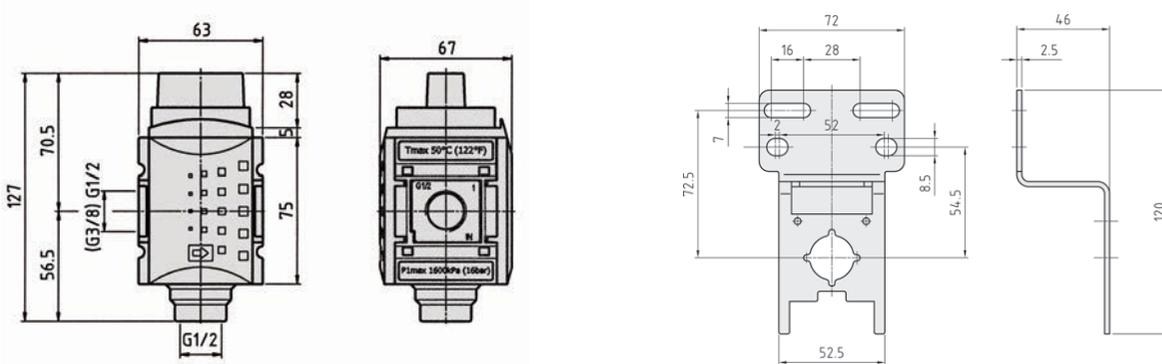
KY-914, KY-937

WYP-01 see page 12.102



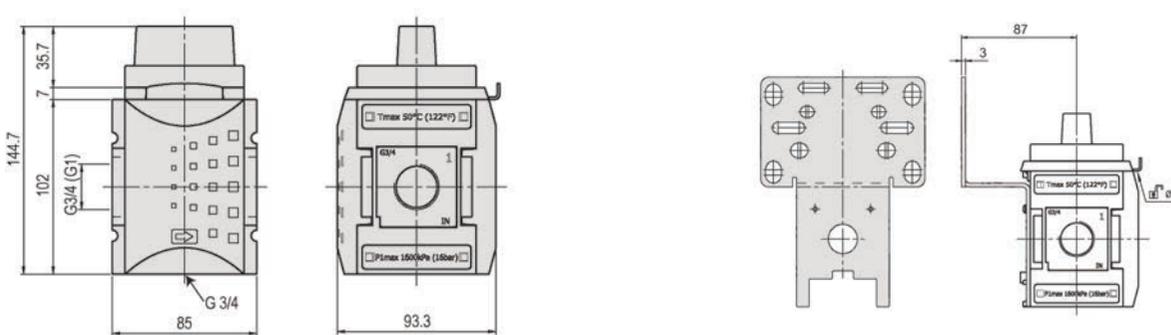
KY-938, KY-912

WYP-02 see page 12.102

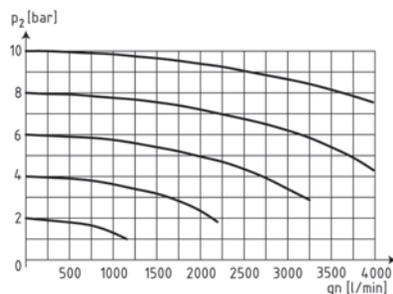


KY-934, KY-910

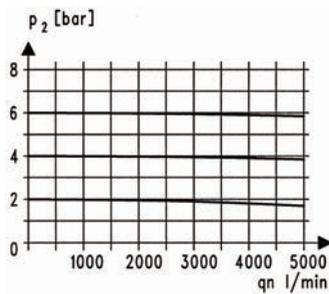
WYP-03 see page 12.102



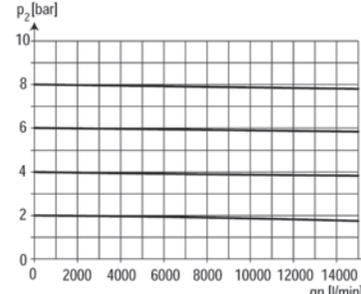
Flow characteristic KY-914, KY-937



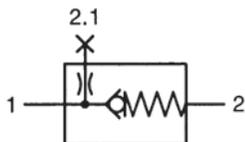
Flow characteristic KY-938, KY-912



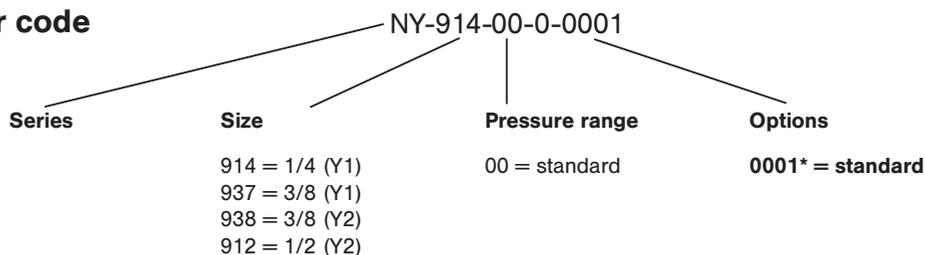
Flow characteristic KY-934, KY-910



**Series Y**  
**Non-return valve, model NY**  
**1/4 NPTF – 1/2 NPTF**



**Order code**



Order number Please complete according to order code.	NY-914-00-0-...	NY-937-00-0-...	NY-938-00-0-...	NY-912-00-0-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF
<b>Series</b>	Y1		Y2	
<b>Mounting</b>	with bracket or in-line, horizontal or vertical			
<b>Input range</b>	max. 16 bar (max. 232 psi)			
<b>Flow rate</b>	1250 NI/min (1.27 Cv)		5000 NI/min (5.08 Cv)	
<b>Temperature range</b>	0 °C ... + 60 °C (+ 32 °F ... + 140 °F)			
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)			
<b>Weight*</b>	0.250 kg (0.551 lb.)		0.320 kg (0.705 lb.)	

\* = standard type

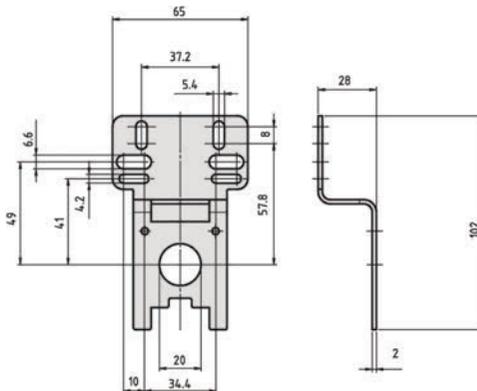
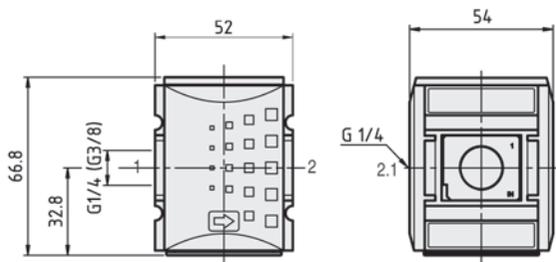
# Series Y

Non-return valve, model NY  
1/4 NPTF – 1/2 NPTF



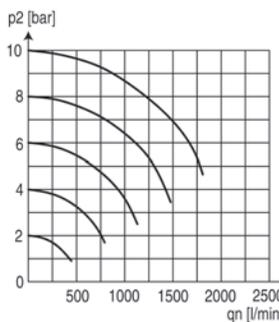
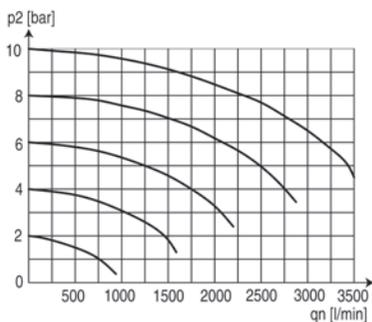
NY-914, NY-937

WYP-01 see page 12.102



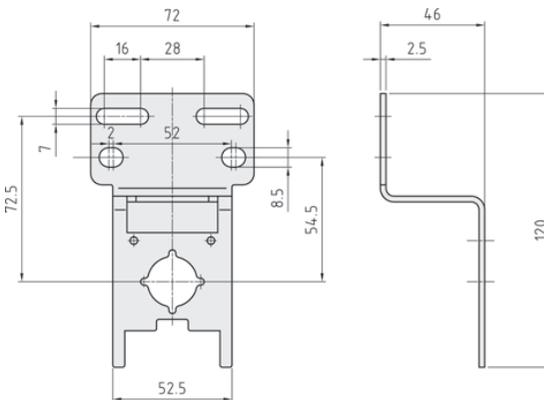
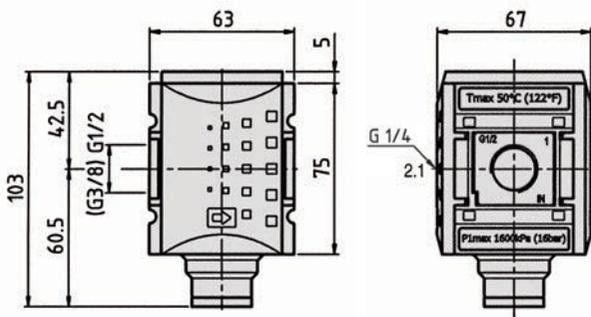
Flow characteristic NY-914, NY-937  
nominal flow from 1 → 2

Flow characteristic NY-914, NY-937  
nominal flow from 1 → 2.1



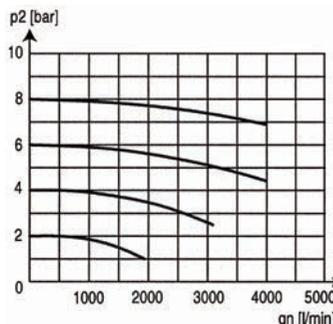
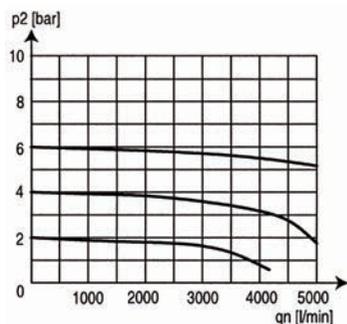
NY-938, NY-912

WYP-02 see page 12.102



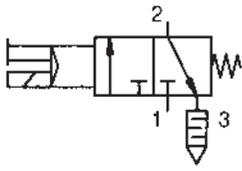
Flow characteristic NY-938, NY-912  
nominal flow from 1 → 2

Flow characteristic NY-938, NY-912  
nominal flow from 1 → 2.1



# Series Y

3/2-way inline valve, model VMY  
1/4 NPTF – 1 NPTF



## Order code

VMY-914-00-0-000A

Series	Size	Pressure range	Options*
914 = 1/4 (Y1)	937 = 3/8 (Y1)	00 = standard	A = 24 V DC      D = 115 V AC
938 = 3/8 (Y2)	912 = 1/2 (Y2)		E = 230 V AC      F = pneumatically operated
934 = 3/4 (Y3)	910 = 1 (Y3)		* The coil is not exchangeable please consider when ordering.

## Design and function

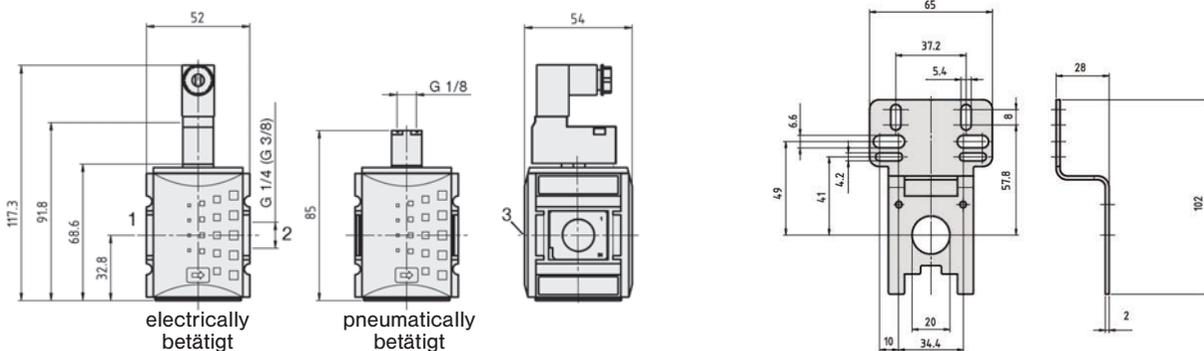
Solenoid or pneumatically operated 3/2-way poppet valve with spring return. The solenoid and plug socket are supplied with the unit. Easy block assembly for components to be connected in series. The components of series Y can be easily connected by using the coupling kit KPY.

Order number Please complete according to order code.	VMY-914-00-0-...	VMY-937-00-0-...	VMY-938-00-0-...	VMY-912-00-0-...	VMY-934-00-0-...	VMY-910-00-0-...
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF*	1 NPTF*
<b>Series</b>	Y1		Y2		Y3	
<b>Mounting</b>	with bracket or in-line, horizontal or vertical					
<b>Pressure range</b>	2 ... 10 bar (29 ... 145 psi)					
<b>Duty cycle</b>	100 %					
<b>Degree of protection</b>	IP 65 according to EN 60529					
<b>Flow rate</b>	1800 NI/min (1.829 Cv)	2000 NI/min (2.032 Cv)	4300 NI/min (4.37 Cv)	5200 NI/min (5.285 Cv)	12500 NI/min (12.71 Cv)	
<b>Temperature range</b>	0 °C ... + 50 °C (+ 32 °F ... + 122 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Weight</b>	0.196 kg (0.432 lb.)		1.050 kg (2.315 lbs.)		0.677 kg (1.49 lbs.)	

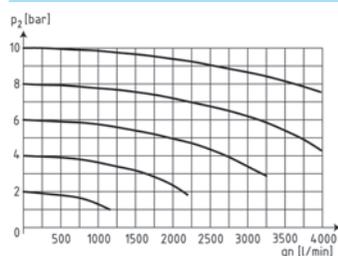
\* = max. internal air consumption 1.5 l/min. Regulator vents.

## VMY-914, VMY-937

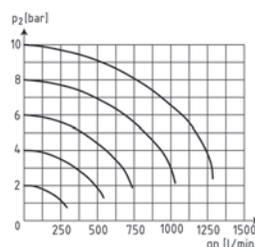
## WYP-01 see page 12.102



## Flow characteristic VMY-914, VMY-937



## Rear exhaust flow characteristic



# Series Y

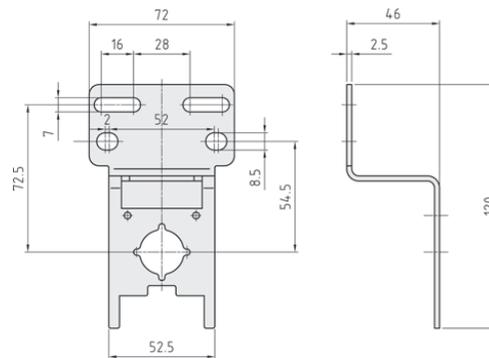
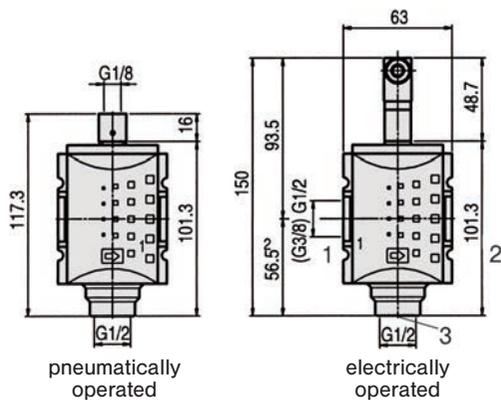
3/2-way inline valve, model VMY

1/4 NPTF – 1 NPTF



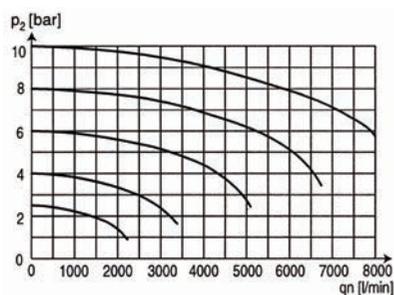
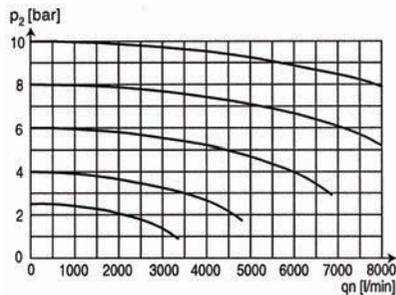
## VMY-938, VMY-912

## WYP-02 see page 12.102



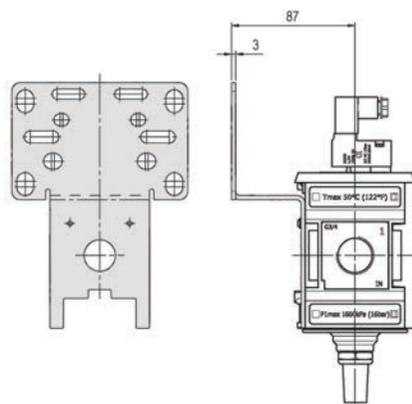
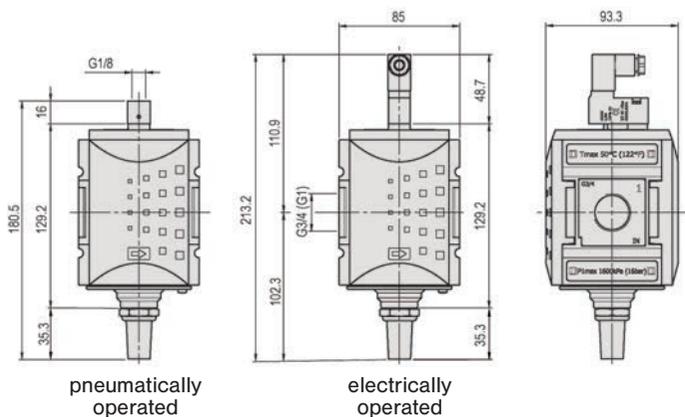
## Flow characteristic VMY-938, VMY-912

## Rear exhaust flow characteristic



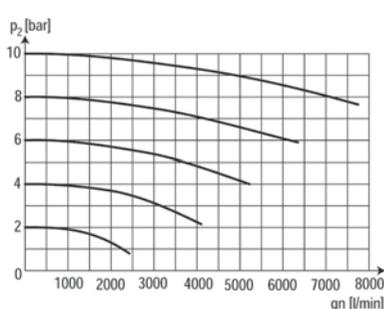
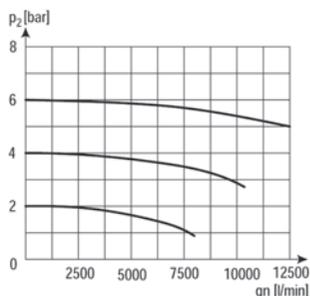
## VMY-934, VMY-910

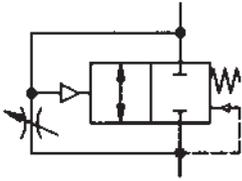
## WYP-03 see page 12.102



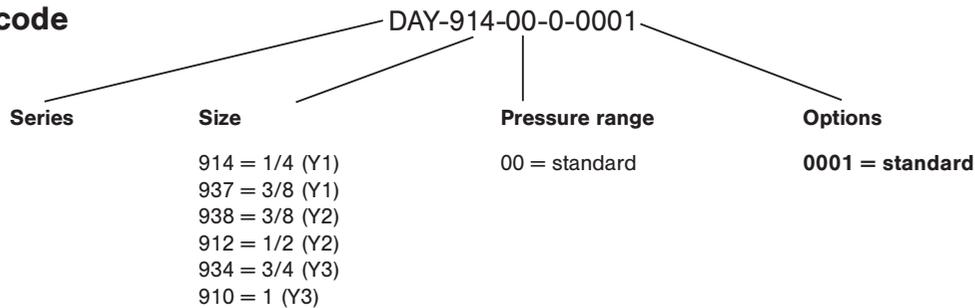
## Flow characteristic VMY-934, VMY-910

## Rear exhaust flow characteristic





**Order code**



**Design and function**

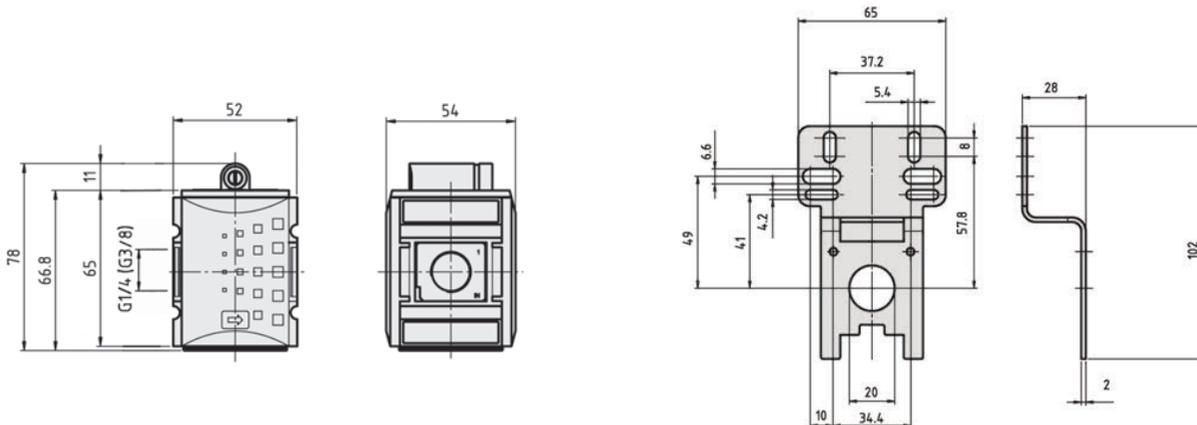
Soft start valve with adjustable filling time. This valve can be used to slowly increase the system pressure through an adjustable throttle. When 50 % of the incoming pressure is achieved the valve opens completely.  
 The components of series Y can be easily connected by using the coupling kit KPY.

Order number	DAY-914-00-0-0001	DAY-937-00-0-0001	DAY-938-00-0-0001	DAY-912-00-0-0001	DAY-934-00-0-0001	DAY-910-00-0-0001
Connection size	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF*	1 1/4 NPTF*
Series	Y1		Y2		Y3	
Mounting	with bracket or in-line, horizontal or vertical					
Pressure range	2 ... 16 bar (29 ... 232 psi)				2.5 ... 16 bar (36.25 ... 232 psi)	
Flow rate	1800 NI/min (1.829 Cv)	2000 NI/min (2.032 Cv)	4300 NI/min (4.37 Cv)	5200 NI/min (5.285 Cv)	10000 NI/min (10.17 Cv)	
Temperature range	0 °C ... + 50 °C (+ 32 °F ... + 122 °F)					
Materials	Housing: Grivory (PA66); Connection: Grivory (PA66)					
Weight	0.180 kg (0.397 lb.)		0.330 kg (0.727 lb.)		0.430 kg (0.95 lb.)	

\* = max. internal air consumption 1.5 l/min. Regulator vents.

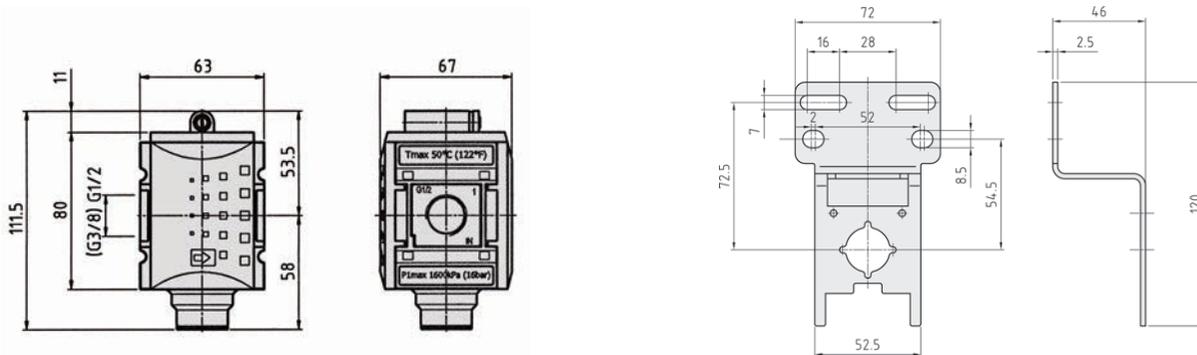
**DAY-914, DAY-937**

**WYP-01** see page 12.102



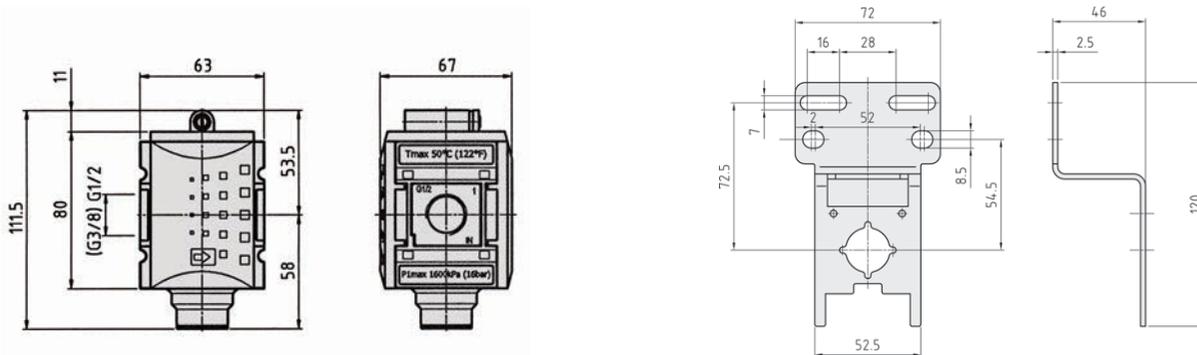
**DAY-938, DAY-912**

**WYP-02** see page 12.102



**DAY-934, DAY-910**

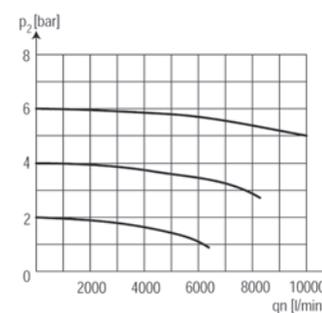
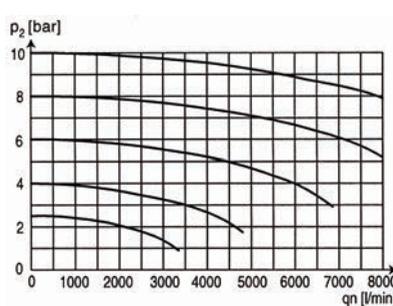
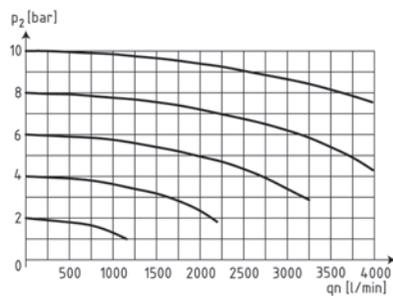
**WYP-03** see page 12.102



**Flow characteristic DAY-914, DAY-937**

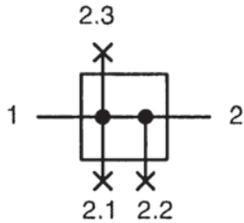
**Flow characteristic DAY-938, DAY-912**

**Flow characteristic DAY-934, DAY-910**

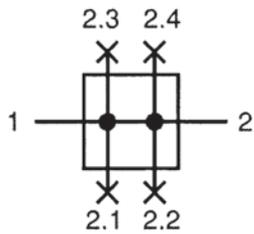


# Series Y

Distribution block, model TY  
1/4 NPTF – 1 NPTF



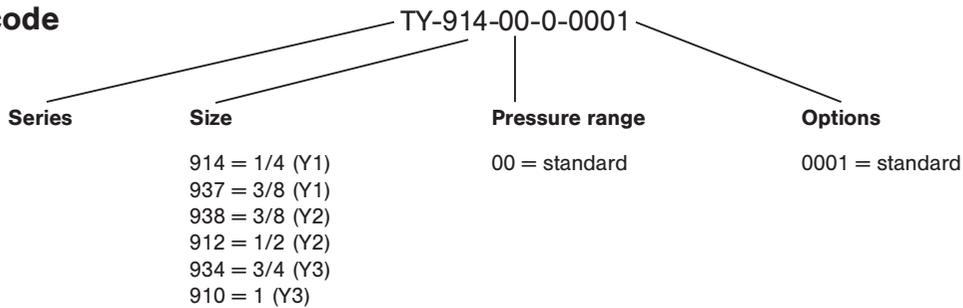
Series Y1



Series Y2



## Order code



Order number	TY-914-00-0-0001	TY-937-00-0-0001	TY-938-00-0-0001	TY-912-00-0-0001	TY-934-00-0-0001	TY-910-00-0-0001
<b>Connection size</b>	1/4 NPTF	3/8 NPTF	3/8 NPTF	1/2 NPTF	3/4 NPTF*	1 NPTF*
<b>Outlets</b>	4 x 1/4 NPTF	1 x 3/8 NPTF 3 x 1/4 NPTF	3 x 3/8 NPTF 1 x 1/4 NPTF 1 x 1/2 NPTF	2 x 1/2 NPTF 2 x 3/8 NPTF 1 x 1/4 NPTF	4 x 3/4 NPTF	2 x 1 NPTF 2 x 3/4 NPTF
<b>Series</b>	Y1		Y2		Y3	
<b>Mounting</b>	with bracket or in-line, horizontal or vertical					
<b>Pressure range</b>	0 ... 16 bar (0 ... 232 psi)					
<b>Flow rate</b>	2700 NI/min (2.744 Cv)	3600 NI/min (3.659 Cv)	7250 NI/min (7.368 Cv)	11000 NI/min (11.179 Cv)	18000 NI/min (18.3 Cv)	
<b>Temperature range</b>	0 °C ... + 60 °C (+ 32 °F ... + 140 °F)					
<b>Materials</b>	Housing: Grivory (PA66); Connection: Grivory (PA66)					
<b>Weight</b>	0.250 kg (0.551 lb.)				0.648 kg (1.43 lbs.)	

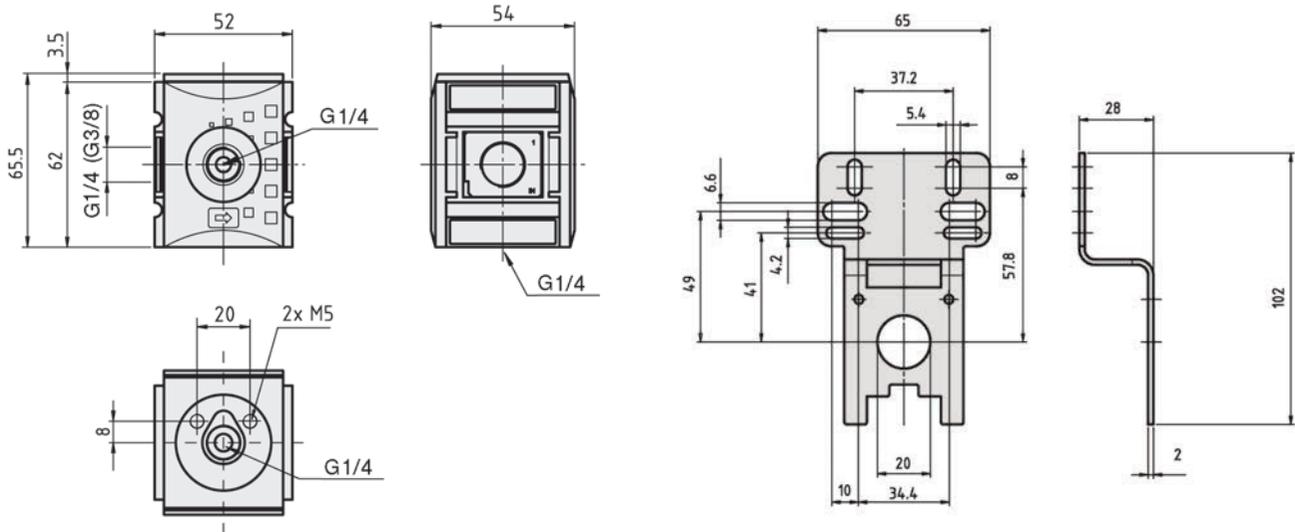
\* = max. internal air consumption 1.5 l/min. Regulator vents.

**Series Y**  
**Distribution block, model TY**  
**1/4 NPTF - 1 NPTF**



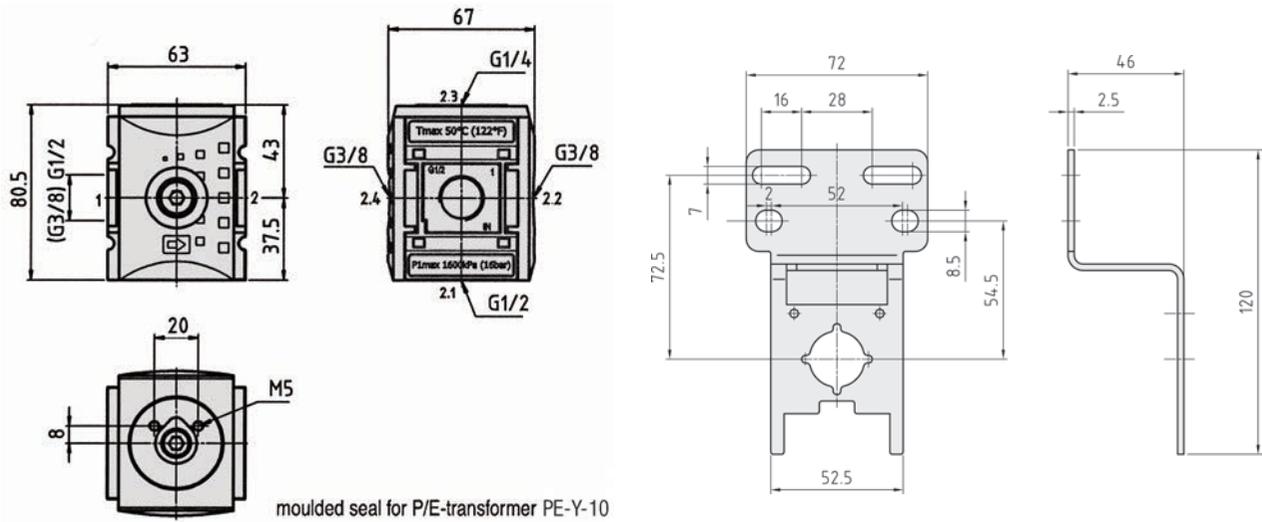
**TY-914, TY-937**

**WYP-01** see page 12.102



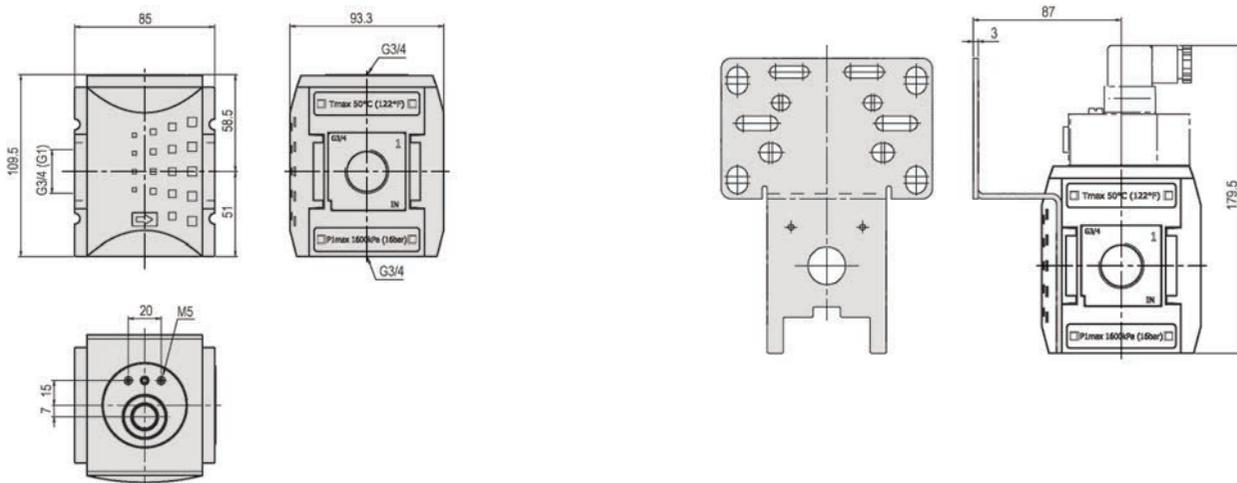
**TY-938, TY-912**

**WYP-02** see page 12.102

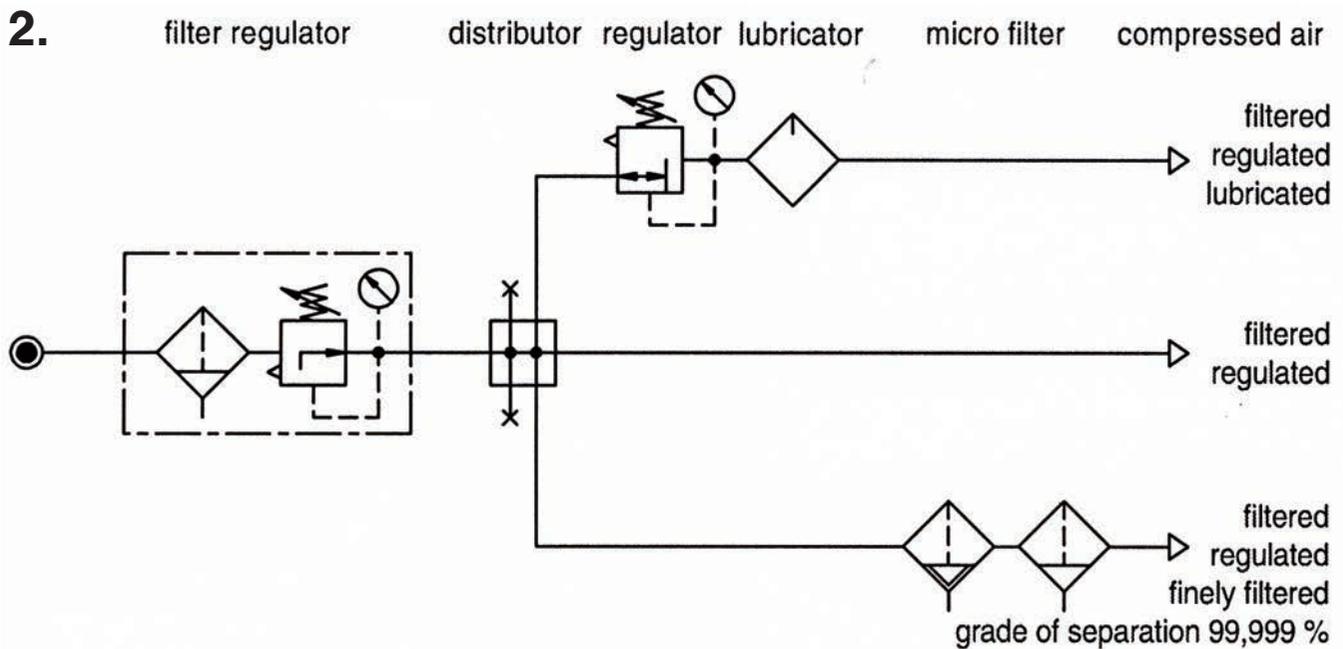
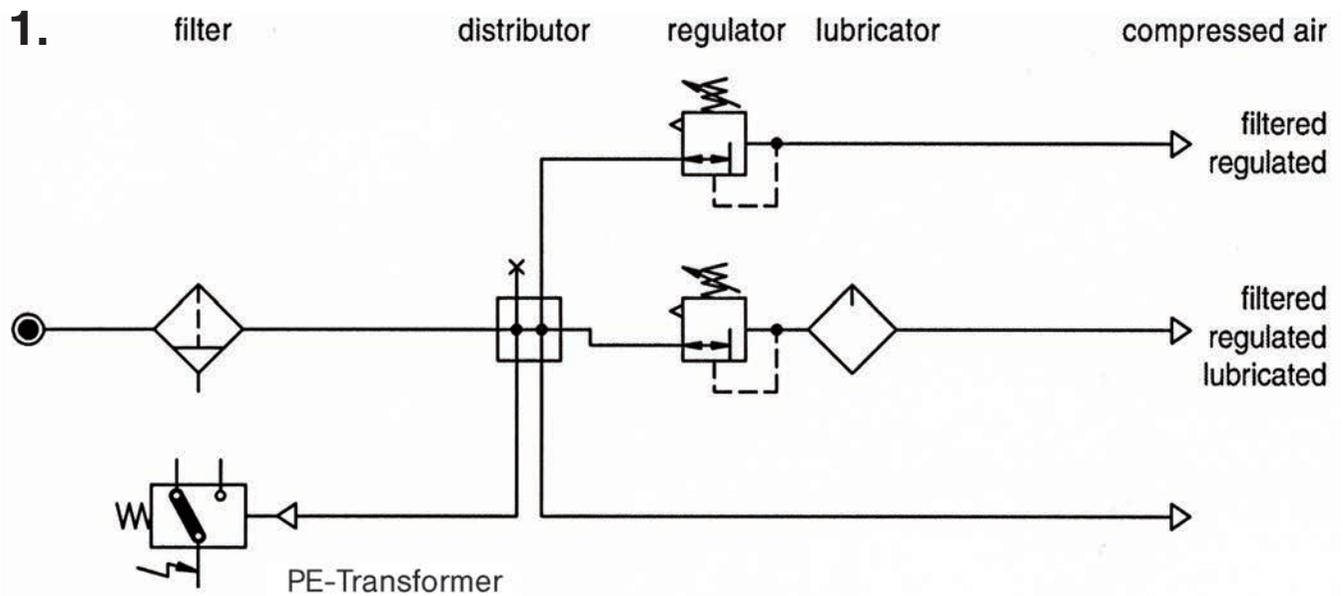


**TY-934, TY-910**

**WYP-03** see page 12.102



Areas of application for TY-914, TY-937, TY-938, TY-912, TY-934, TY-910



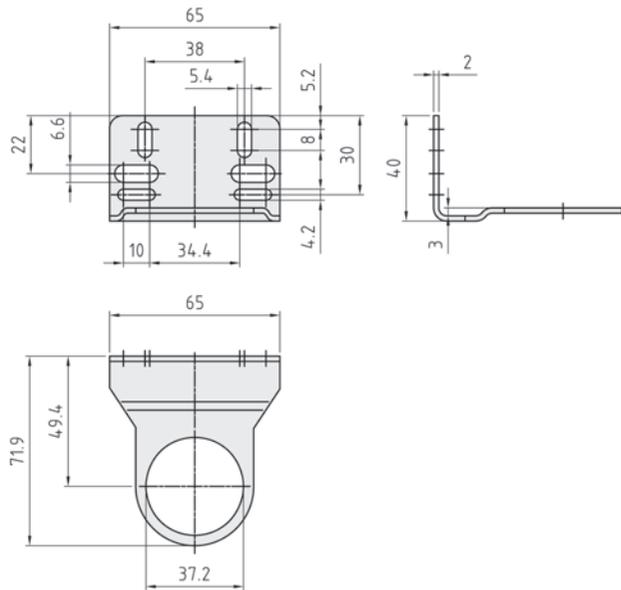
# Series Y

Accessories for air service units

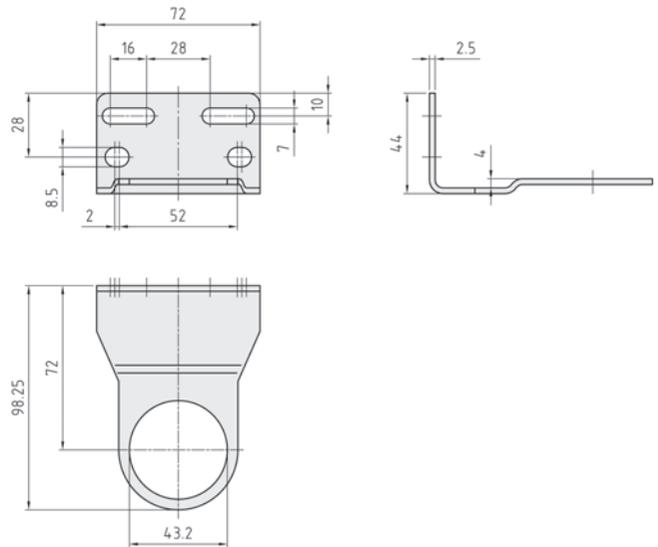
1/4 NPTF - 1 NPTF



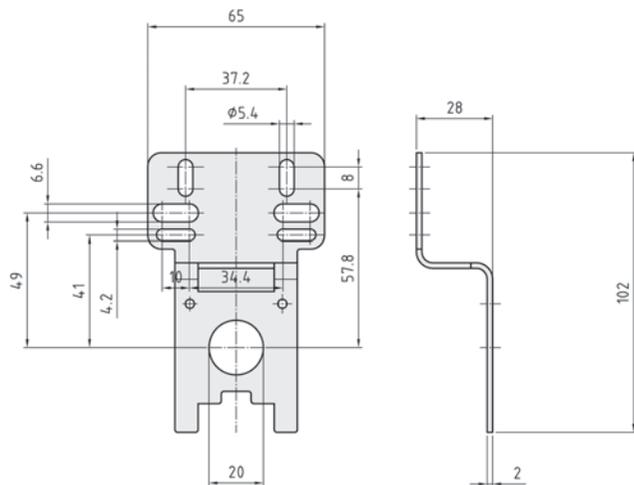
## Mounting brackets WYL-01



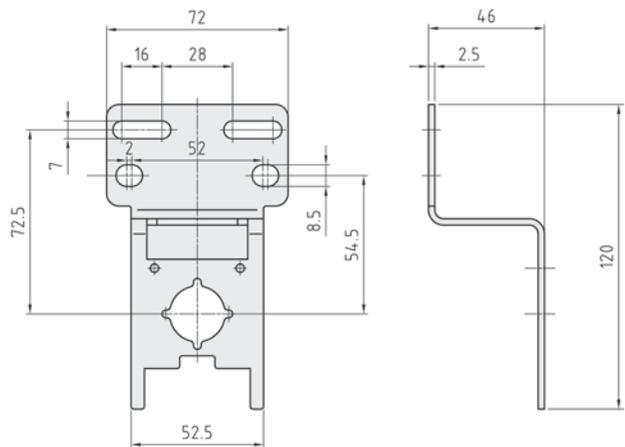
## Mounting brackets WYL-02



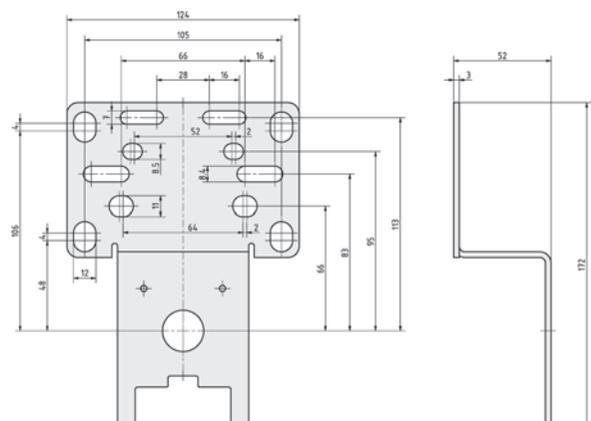
## Mounting brackets WYP-01



## Mounting brackets WYP-02



## Mounting brackets WYP-03



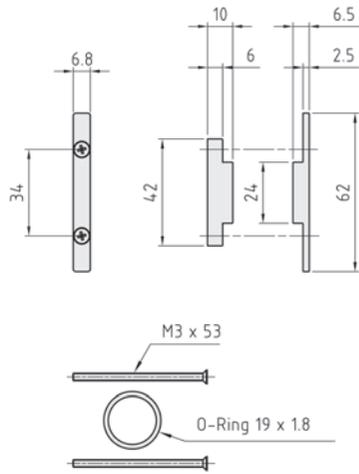
# Series Y

Accessories for air service units

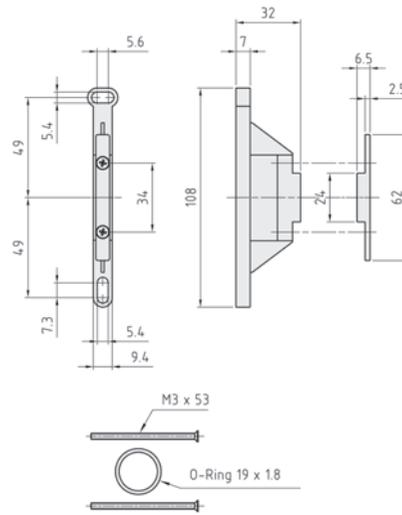
1/4 NPTF - 1 NPTF



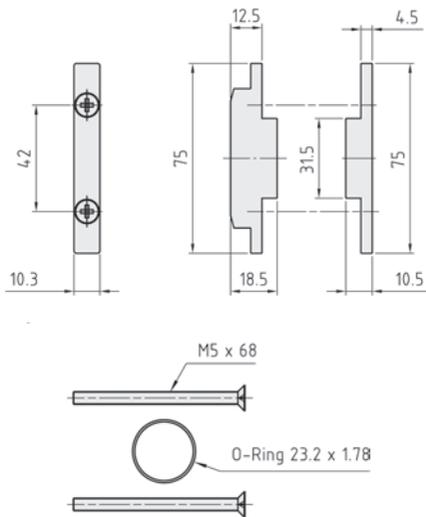
## Coupling kits KPY-01-K



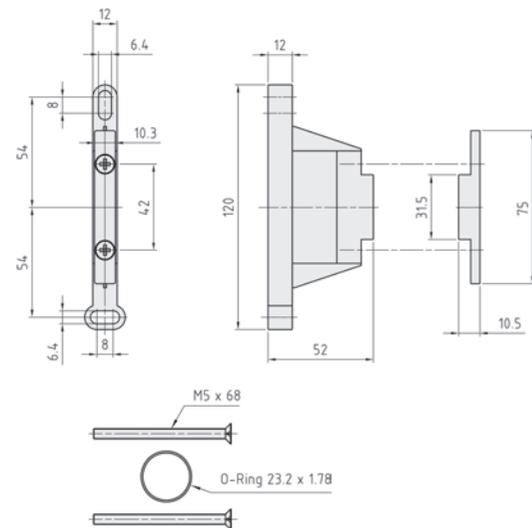
## Coupling kits for wall mounting KPY-01-W



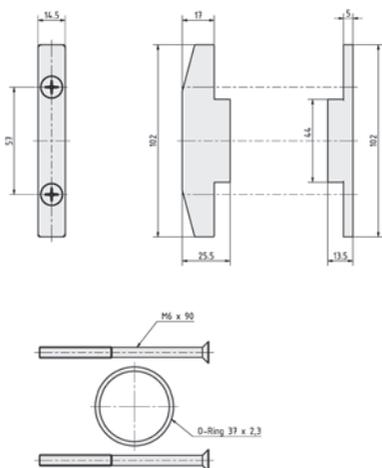
## Coupling kits KPY-02-K



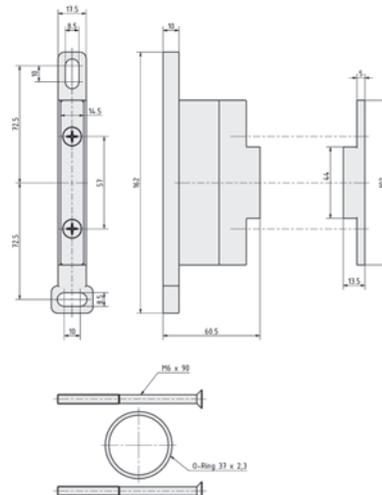
## Coupling kits for wall mounting KPY-02-W



## Coupling kits KPY-03-K



## Coupling kits for wall mounting KPY-03-W



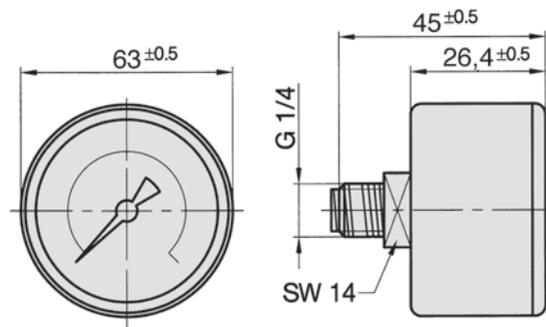
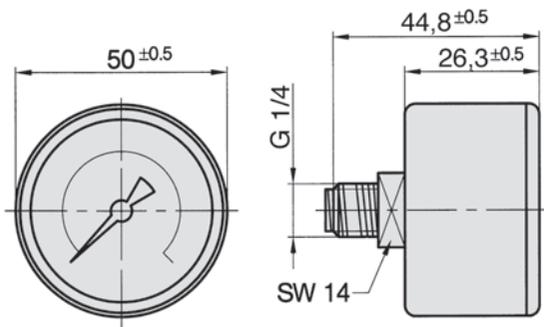
# Series Y

Accessories for air service units  
1/4 NPTF – 1 NPTF



## Pressure gauge MXA-50

## Pressure gauge MXA-63



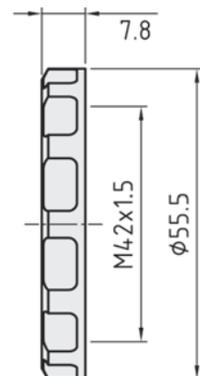
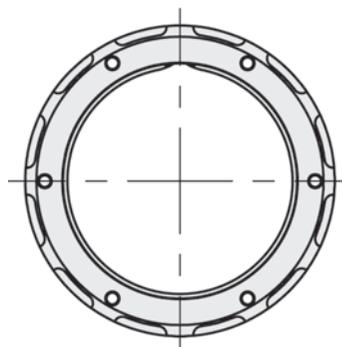
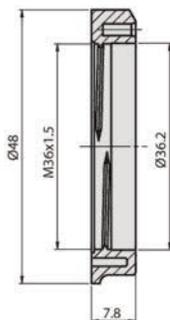
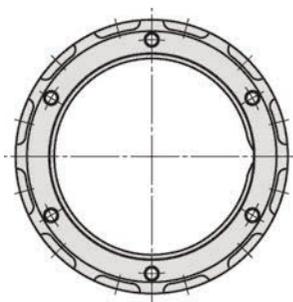
Sealing for assembly of gauge is included.

Order number	MXA-50-10-14	MXA-63-10-14	MXA-50-16-14	MXA-63-16-14
<b>Ranges</b>	0 ... 10 bar (0 ... 145 psi)		0 ... 16 bar (0 ... 232 psi)	
<b>Application</b>	Constant load 3/4 x scale value Alternating load 2/3 x scale value			
<b>Materials</b>	Body : Plastic, highly shock resistant, black (ABS) Window : Plexiglass, convex, clipped-on Dial : Plastic, white with stop pin, scale black/red Pointer : Plastic, black Movement : CuZn alloy Measuring element: Cu alloy			
<b>Temperature range</b>	- 20 °C ... + 60 °C (- 4 °F ... + 140 °F)			
<b>Accuracy class</b>	2.5 according to EN 837-1			
<b>Temperature drift</b>	0.4 % / 10 K if deviation from normal temperature 20 °C (68 °F).			
<b>Weight</b>	0.071 kg (0.156 lb.)	0.08 kg (0.18 lb.)	0.071 kg (0.156 lb.)	0.08 kg (0.18 lb.)

## Mounting nut RMY-01

## Mounting nut RMY-02

material: plastic



## Series Y

Accessories for air service units

1/4 NPTF – 1 NPTF



### Series Y1



metal bowl with condensate drain  
**BE-Y1-HA**, semi-automatic  
**BE-Y1-AM-NC**, automatic normally closed  
**BE-Y1-AM-NO**, automatic normally open



metal bowl without drain,  
for activated carbon filter  
**BE-Y1-KF**



metal bowl without drain,  
for lubricator  
**BE-Y1-L**

### Series Y2



metal bowl with condensate drain  
**BE-Y2-HA**, semi-automatic  
**BE-Y2-AM-NC**, automatic normally closed  
**BE-Y2-AM-NO**, automatic normally open

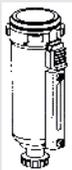


metal bowl without drain,  
for activated carbon filter  
**BE-Y2-KF**



metal bowl without drain,  
for lubricator  
**BE-Y2-L**

### Series Y3



metal bowl with condensate drain  
**BE-Y3-HA**, semi-automatic  
**BE-Y3-AM-NC**, automatic normally closed  
**BE-Y3-AM-NO**, automatic normally open



metal bowl without drain,  
for activated carbon filter  
**BE-Y3-KF**

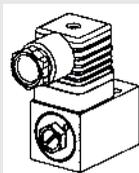


metal bowl without drain,  
for lubricator  
**BE-Y3-L**

### Series Y1, Y2, Y3



auto drain  
**AM-Y-NC** normally closed  
**AM-Y-NO** normally open



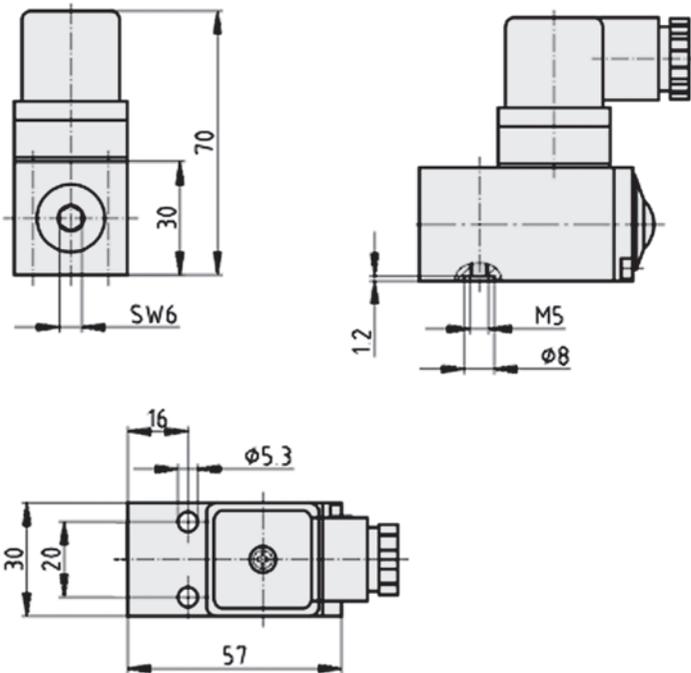
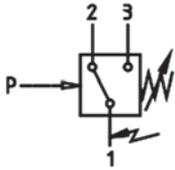
transformer  
**PE-Y-10**



lock  
**VH-Y-32** with key  
**VH-Y-31** without key

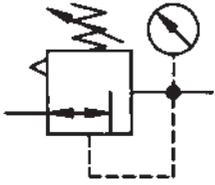
# Series Y

Pressure switch, model PE-Y-10

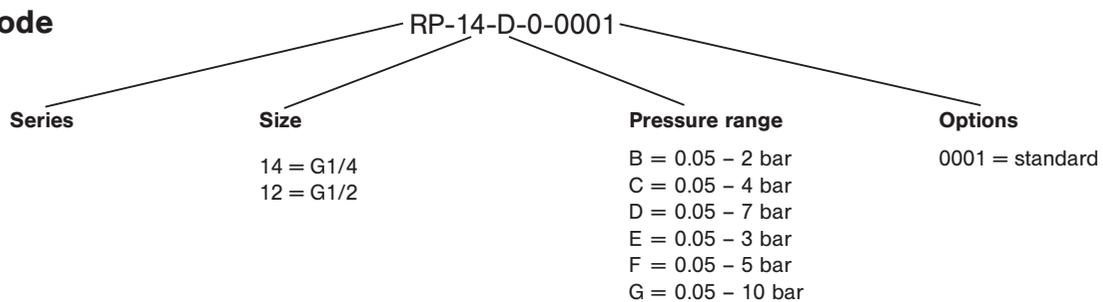


direct-current switch-power		
[V]	resistive load [A]	inductive load [A]
30	5	3
115	0.40	0.05
250	0.25	0.02
alternating-current switch-power		
[V]	resistive load [A]	inductive load [A]
115	5	3
250	5	3

<b>Order number</b>	<b>PE-Y-10</b>
<b>Media</b>	air, non corrosive gases and fluids
<b>Description</b>	diaphragm
<b>Mounting</b>	arbitrary
<b>Working range of pressure</b>	0,5 – 10 bar (7.25 to 145 PSI) (overpressure 80 bar (1.160 PSI) )
<b>Switch difference</b>	4 % – 10 %
<b>Temperature range</b>	– 10 °C ... + 80 °C (+ 14 °F ... + 176 °F)
<b>Electr. connection</b>	plug connection DIN 43650, form A
<b>Circuit element</b>	micro-switch, one wire change over
<b>Type of isolation</b>	IP 65
<b>Switch function</b>	at increasing pressure terminal 1 – 3 NO terminal 1 – 2 NC
<b>Fixing</b>	flange connection
<b>Weight</b>	0.172 kg (0.379 lb)



**Order code**



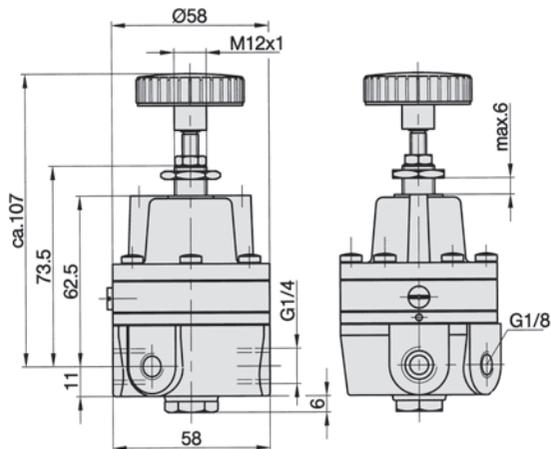
Series 14 is only available for pressure ranges B, C and D.  
 Series 12 is only available for pressure ranges D, E, F and G.

**Design and function**

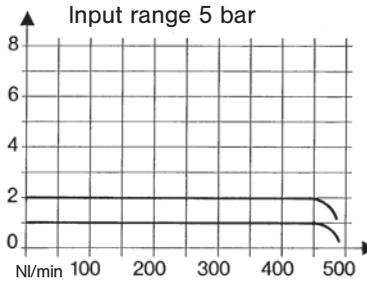
Regulator with diaphragm and relieving feature. This regulator should be used with finely filtered air only. Especially for the use in control and processing applications.

Order number	RP-14-...	RP-12-...
Please complete gemäß Bestellschlüssel.		
<b>Connection size</b>	G1/4	G1/2
<b>Gauge connection size</b>	G1/8	G1/4
<b>Medium</b>	compressed air sintered 0.01 µm, oilfree	
<b>Mounting</b>	arbitrary	
<b>Input range</b>	2 ... 16 bar (29 ... 232 psi)	
<b>Own air consumption</b>	< 2.2 NI/min at 5 bar input pressure	< 1.5 NI/min at 5 bar input pressure
	< 3 NI/min at 7 bar input pressure	< 2 NI/min at 7 bar input pressure
	< 4.1 NI/min at 10 bar input pressure	< 4 NI/min at 10 bar input pressure
		< 6 NI/min at 12 bar input pressure
<b>Temperature range</b>	0 °C ... + 60 °C (+ 32 °F ... + 140 °F)	
<b>Weight</b>	0.600 kg (1.323 lbs.)	1.500 kg (3.307 lbs.)

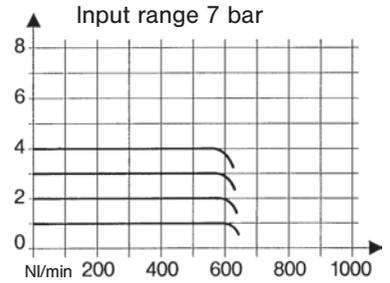
**RP-14**



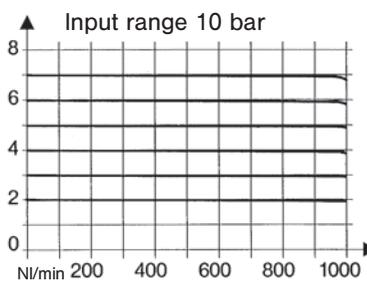
**flow characteristics 0,05 – 2 bar (B)**



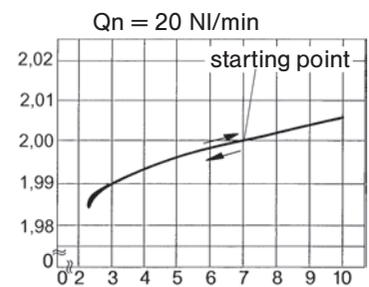
**flow characteristics 0,05 – 4 bar (C)**



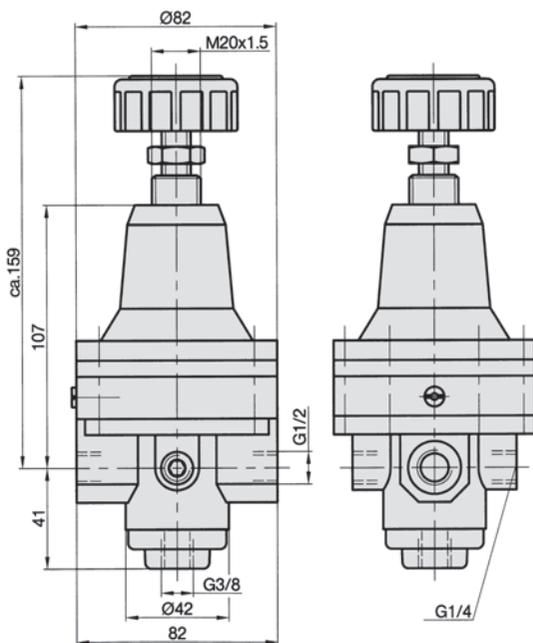
**flow characteristics 0,05 – 7 bar (D)**



**pressure characteristic**



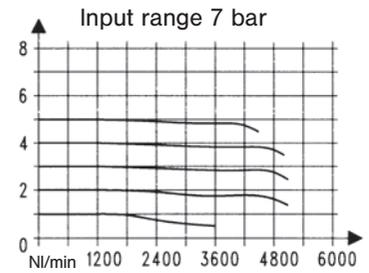
**RP-12**



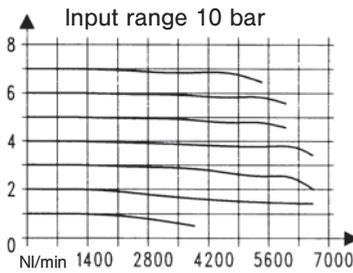
**flow characteristics 0,05 – 3 bar (E)**



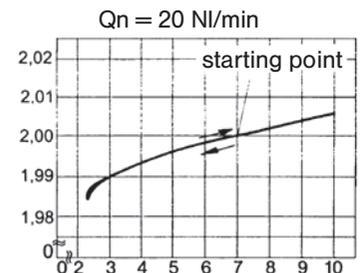
**flow characteristics 0,05 – 5 bar (F)**



**flow characteristics 0,05 – 7 bar (D)**



**pressure characteristic**



## Technical information

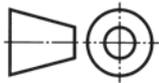
### A Drawings

The method of projection within this catalogue is the first angle projection according to DIN ISO 5456-2.



**First angle projection** (Used in this catalogue)

Is based on the idea that the body is turned to the side. This means that a view from left is on the right hand side of the main view.



**Third angle projection**

Normally used in USA and english speaking countries. Specify that a view from right has to be on the right hand side of the main view.

All dimensions in the drawings are generally in millimeters (mm) if not stated otherwise. The abbreviations SW, WS, or CH are the short form of wrench size.

### B Length

The following table assists in the conversion of the used mm dimension to inches.

For precise calculation please use the following formula:

mm to inch 1 mm = 0.03937 inch

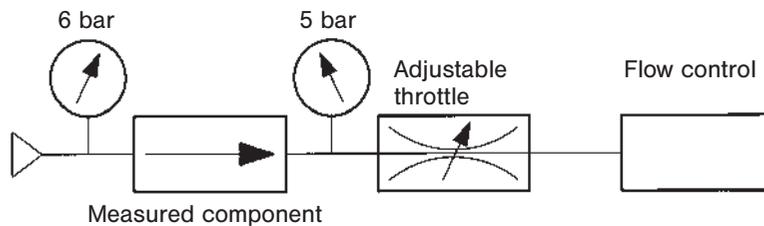
inch to mm 1 inch = 25.4 mm

mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
0.1	0.0039	3.8	0.1496	7.5	0.2953	11.2	0.4409	14.9	0.5866	290	11.417
0.2	0.0079	3.9	0.1535	7.6	0.2992	11.3	0.4449	15.0	0.5906	300	11.811
0.3	0.0118	4.0	0.1575	7.7	0.3031	11.4	0.4488	20.0	0.7874	310	12.205
0.4	0.0157	4.1	0.1614	7.8	0.3071	11.5	0.4528	25.0	0.9843	320	12.598
0.5	0.0197	4.2	0.1654	7.9	0.3110	11.6	0.4567	30.0	1.1811	330	12.992
0.6	0.0236	4.3	0.1693	8.0	0.3150	11.7	0.4606	35.0	1.3780	340	13.386
0.7	0.0276	4.4	0.1732	8.1	0.3189	11.8	0.4646	40.0	1.5748	350	13.780
0.8	0.0315	4.5	0.1772	8.2	0.3228	11.9	0.4685	45.0	1.7717	360	14.173
0.9	0.0354	4.6	0.1811	8.3	0.3268	12.0	0.4724	50.0	1.9685	370	14.567
1.0	0.0394	4.7	0.1850	8.4	0.3307	12.1	0.4764	55.0	2.1654	380	14.961
1.1	0.0433	4.8	0.1890	8.5	0.3346	12.2	0.4803	60.0	2.3622	390	15.354
1.2	0.0472	4.9	0.1929	8.6	0.3386	12.3	0.4843	65.0	2.5591	400	15.748
1.3	0.0512	5.0	0.1969	8.7	0.3425	12.4	0.4882	70.0	2.7559	410	16.142
1.4	0.0551	5.1	0.2008	8.8	0.3465	12.5	0.4921	75.0	2.9528	420	16.535
1.5	0.0591	5.2	0.2047	8.9	0.3504	12.6	0.4961	80.0	3.1496	430	16.930
1.6	0.0630	5.3	0.2087	9.0	0.3543	12.7	0.5000	85.0	3.3465	440	17.323
1.7	0.0669	5.4	0.2126	9.1	0.3583	12.8	0.5039	90.0	3.5433	450	17.717
1.8	0.0709	5.5	0.2165	9.2	0.3622	12.9	0.5079	95.0	3.7402	460	18.110
1.9	0.0748	5.6	0.2205	9.3	0.3661	13.0	0.5118	100	3.937	470	18.504
2.0	0.0787	5.7	0.2244	9.4	0.3701	13.1	0.5157	110	4.331	480	18.898
2.1	0.0827	5.8	0.2283	9.5	0.3740	13.2	0.5197	120	4.724	490	19.291
2.2	0.0866	5.9	0.2323	9.6	0.3780	13.3	0.5236	130	5.119	500	19.685
2.3	0.0906	6.0	0.2362	9.7	0.3819	13.4	0.5276	140	5.512	510	20.079
2.4	0.0945	6.1	0.2402	9.8	0.3858	13.5	0.5315	150	5.906	520	20.472
2.5	0.0984	6.2	0.2441	9.9	0.3898	13.6	0.5354	160	6.230	530	20.866
2.6	0.1024	6.3	0.2480	10.0	0.3937	13.7	0.5394	170	6.693	540	21.260
2.7	0.1063	6.4	0.2520	10.1	0.3976	13.8	0.5433	180	7.087	550	21.654
2.8	0.1102	6.5	0.2559	10.2	0.4016	13.9	0.5472	190	7.480	560	22.047
2.9	0.1142	6.6	0.2598	10.3	0.4055	14.0	0.5512	200	7.874	570	22.441
3.0	0.1181	6.7	0.2638	10.4	0.4094	14.1	0.5551	210	8.268	580	22.835
3.1	0.1220	6.8	0.2677	10.5	0.4134	14.2	0.5591	220	8.661	590	23.228
3.2	0.1260	6.9	0.2717	10.6	0.4173	14.3	0.5630	230	9.056	600	23.622
3.3	0.1299	7.0	0.2756	10.7	0.4213	14.4	0.5669	240	9.449	700	27.559
3.4	0.1339	7.1	0.2795	10.8	0.4252	14.5	0.5709	250	9.843	750	29.528
3.5	0.1378	7.2	0.2835	10.9	0.4291	14.6	0.5748	260	10.236	800	31.496
3.6	0.1417	7.3	0.2874	11.0	0.4331	14.7	0.5787		10.630	900	35.433
3.7	0.1457	7.4	0.2913	11.1	0.4370	14.8	0.5827	280	11.024	1000	39.370

## Technical information

### C Flow rate

The flow rate values given in the AIRTEC catalogue are in NI/min. and based on a pressure drop from a pressure inlet 6 bar (87 psi) to a pressure outlet of 5 bar (72.5 psi). The flow rates are measured with the following experimental circuit.



The table below simplifies the calculation of Cv and Kv values.

For precise calculation please use the following formula:

$$\text{NI/min to } K_v = K_v = \text{NI/min} / 1100$$

$$\text{NI/min to } C_v = C_v = \text{NI/min} / 984$$

NI/min.	K <sub>v</sub>	C <sub>v</sub>
10	0.0091	0.0102
20	0.0182	0.0203
30	0.0273	0.0305
40	0.0364	0.0407
50	0.0455	0.0508
60	0.0545	0.0610
70	0.0636	0.0711
80	0.0727	0.0813
90	0.0818	0.0915
100	0.0900	0.1016
110	0.1000	0.1118
120	0.1091	0.1220
130	0.1182	0.1321
140	0.1273	0.1423
150	0.1364	0.1524
160	0.1455	0.1626
170	0.1545	0.1728
180	0.1636	0.1829
190	0.1727	0.1931
200	0.1818	0.2033
250	0.2273	0.2541
300	0.2727	0.3049
350	0.3182	0.3557
400	0.3636	0.4065
450	0.4091	0.4573
500	0.4545	0.5081
550	0.5000	0.5589
600	0.5455	0.6098
650	0.5909	0.6606
700	0.6364	0.7114
750	0.6818	0.7622
800	0.7273	0.8130
850	0.7727	0.8638
900	0.8182	0.9146
950	0.8636	0.9654
1000	0.9090	1.0163
1050	0.9545	1.0671
1100	1.0000	1.1179
1150	1.0450	1.1687
1200	1.0900	1.2195
1250	1.1364	1.2703
1300	1.1818	1.3211
1350	1.2273	1.3720
1400	1.2727	1.4228
1450	1.3182	1.4736

NI/min.	K <sub>v</sub>	C <sub>v</sub>
1500	1.3636	1.5244
1550	1.4091	1.5752
1600	1.4545	1.6260
1700	1.5455	1.7276
1800	1.6364	1.8293
1900	1.7273	1.9309
2000	1.8182	2.0325
2100	1.9091	2.1341
2200	2.0000	2.2358
2300	2.0909	2.3374
2400	2.1818	2.4390
2500	2.2727	2.5407
2600	2.3636	2.6423
2700	2.4545	2.7439
2800	2.5455	2.8455
2900	2.6364	2.9472
3000	2.7273	3.0488
3100	2.8182	3.1504
3200	2.9091	3.2520
3300	3.0000	3.3537
3400	3.0909	3.4553
3500	3.1818	3.5569
3750	3.4091	3.8110
4000	3.6364	4.0650
4250	3.8636	4.3191
4500	4.0909	4.5732
4750	4.3182	4.8272
5000	4.5455	5.0813
5250	4.7727	5.3354
5500	5.0000	5.5894
5750	5.2273	5.8435
6000	5.4545	6.0976
6250	5.6818	6.3516
6500	5.9091	6.6057
6750	6.1364	6.8598
7000	6.3636	7.1138
7250	6.5909	7.3679
7500	6.8182	7.6220
7750	7.0455	7.8760
8000	7.2727	8.1301
8250	7.5000	8.3841
8500	7.7273	8.6382
8750	7.9545	8.8923
9000	8.1818	9.1463

## Technical information

### D Pressure

The data contained in the AIRTEC catalogue for pressures are given in bar.  
The table below shows conversion to psi.

1 bar = 100 kPa = 14.5 psi = 10 N/cm<sup>2</sup>  
1 psi = 0.069 bar = 6896.5 Pa = 1 lb./sq. in.  
1 Pa = 0.00001 bar = 0.000145 psi = 1 N/m<sup>2</sup>

bar	psi	kPa	bar	psi	kPa	bar	psi	kPa
0.05	0.725	5	0.90	13.050	90	7.00	101.500	700
0.10	1.450	10	1.00	14.500	100	7.50	108.750	750
0.15	2.175	15	1.50	21.750	150	8.00	116.000	800
0.20	2.900	20	2.00	29.000	200	8.50	123.250	850
0.25	3.625	25	2.50	36.250	250	9.00	130.500	900
0.30	4.350	30	3.00	43.500	300	9.50	137.750	950
0.35	5.075	35	3.50	50.750	350	10.00	145.000	1000
0.40	5.800	40	4.00	58.000	400	10.50	152.250	1050
0.45	6.525	45	4.50	65.250	450	11.00	159.500	1100
0.50	7.250	50	5.00	72.500	500	11.50	166.750	1150
0.60	8.700	60	5.50	79.750	550	12.00	174.000	1200
0.70	10.150	70	6.00	87.000	600	14.00	203.000	1400
0.80	11.600	80	6.50	94.250	650	16.00	232.000	1600

### E Temperature

The temperature values given in the AIRTEC-catalogue are in °C.  
The following table assists in the conversion to °F or Kelvin (°K).

Formula °C to °F

$$\frac{C \times 9}{5} + 32 = °F$$

Formula °F to °C

$$(F - 32) \times \frac{5}{9} = °C$$

°C → °F		°C → °F	
-100	-148	75	167
-95	-139	80	176
-90	-130	85	185
-85	-121	90	194
-80	-112	100	212
-75	-103	110	230
-70	-94	120	248
-65	-85	130	266
-60	-76	140	284
-55	-67	150	302
-50	-58	160	320
-45	-49	170	338
-40	-40	180	356
-35	-31	190	374
-30	-22	200	392
-25	-13	210	410
-20	-4	220	428
-15	5	230	446
-10	14	240	464
-5	23	250	482
0	32	260	500
5	41	270	518
10	50	280	536
15	59	290	554
20	68	300	572
25	77	310	590
30	86	320	608
35	95	330	626
40	104	340	644
45	113	350	662
50	122	360	680
55	131	370	698
60	140	380	716
65	149	390	734
70	158	400	752

°F → °C		°F → °C	
-100	-73.3	70	21.1
-95	-70.6	75	23.9
-90	-67.8	80	26.7
-85	-65.0	90	32.2
-80	-62.2	100	37.8
-75	-59.4	110	43.3
-70	-56.7	120	48.9
-65	-53.9	130	54.4
-60	-51.1	140	60.0
-55	-48.3	150	65.6
-50	-45.6	160	71.1
-45	-42.8	170	76.7
-40	-40.0	180	82.2
-35	-37.2	190	87.8
-30	-34.4	200	93.3
-25	-31.7	210	98.9
-20	-28.9	220	104.4
-15	-26.1	230	110.0
-10	-23.3	240	115.6
-5	-20.6	250	121.1
0	-17.8	260	126.7
5	-15.0	270	132.2
10	-12.2	280	137.8
15	-9.4	290	143.3
20	-6.7	300	148.9
25	-3.9	310	154.4
30	-1.1	320	160.0
32	0.0	330	165.6
35	1.7	340	171.1
40	4.4	350	176.7
45	7.2	360	182.2
50	10.0	370	187.8
55	12.8	380	193.3
60	15.6	390	198.9
65	18.3	400	204.4

°C	°F	°K
-20	-4	253.15
-15	5	258.15
-10	14	263.15
-5	23	268.15
0	32	273.15
5	41	278.15
10	50	283.15
15	59	288.15
20	68	293.15
25	77	298.15
30	86	303.15
35	95	308.15
40	104	313.15
45	113	318.15
50	122	323.15
55	131	328.15
60	140	333.15
65	149	338.15
70	158	343.15
75	167	348.15
80	176	353.15
85	185	358.15
90	194	363.15
95	203	368.15
100	212	373.15
105	221	378.15
110	230	383.15
115	239	388.15
120	248	393.15
125	257	398.15
130	266	403.15
135	275	408.15
140	284	413.15
145	293	418.15
150	302	423.15

## Technical information

### F SI – Basic units

Description	Symbol	SI-unit	SI-name
Area	A	m <sup>2</sup>	square meter
Current intensity	I	A	Ampere
Energy (work)	W	J, Nm	Joule, Newton meter
Force	F	N	Newton
Length	l	m	meter
Mass	m	kg	kilogramme
Power	P	W	Watt
Pressure	p	Pa, bar	Pascal, bar
Speed	v	m/s	meter per second
Temperature	T	K	Kelvin
Time	t	s	second
Torque	M <sub>t</sub> , T	Nm	Newton meter
Volume	V	m <sup>3</sup>	cubic meter
Volume flow	Ḃ	m <sup>3</sup> /s	cubic meter per second

### G Conversion chart (European/USA standards)

<b>Area</b>	1 sq. in.	= 6.452 cm <sup>2</sup>	<b>Speed</b>	1 ft./s.	= 0,3048 m/s	
	1 cm <sup>2</sup>	= 0.155 sq. in.		1 m/s	= 3,281 ft./s	
	1 sq. ft.	= 0.0929 m <sup>2</sup>		<b>Temperature</b>	Δ 1 °C	= 1,7999 °F = 1 K
	1 m <sup>2</sup>	= 10.764 sq. ft.			Δ 1 °F	= 0,5556 °C = 0,5556 K
<b>Force</b>	1 lbf.	= 4.44822 N	0 °C	= 32 °F = 273,15 K		
	<b>Length</b>	1 mm	= 0.03937 in	<b>Volume</b>	1 cu. in.	= 16.387 cm <sup>3</sup>
1 in		= 25.4 mm	1 cm <sup>3</sup>		= 0.0610 cu. in.	
1 ft		= 12 in = 0.3048 m	1 cu. ft.		= 28.317 dm <sup>3</sup>	
1 m		= 3.281 ft	1 dm <sup>3</sup>		= 0.0353 cu. ft.	
1 yd		= 3 ft = 0.914398 m	1 US-gallon		= 3.785 l	
1 m		= 1.09362 yd	1 l		= 0.2642 US-gallon	
<b>Mass</b>	1 lb	= 0.4536 kg	<b>Pressure</b>	1 bar	= 14.5 psi = 100 kPa	
	1 kg	= 2.2046 lb		1 psi	= 0.069 bar	
	1 oz	= 28.35 g			= 6.8965 kPa	
	1 g	= 0.0353 oz		1 lb/sq. ft.	= 47.88 Pa	
				= 0.0004788 bar		
			1 bar	= 2089 lb/sq. ft.		
			1 Pa	= 0.0209 lb/sq. ft.		

# TERMS AND CONDITIONS OF SALE

## 1. Offer and Contract

Acceptance by Seller of Buyer's order is expressly made conditional on assent to these Terms and Conditions, either by written acknowledgement or by conduct of Buyer that recognizes the existence of the contract with respect to Goods described on this acknowledgement form.

These Terms and Conditions also serve as notice of Seller's objection to and rejection of any Terms and Conditions of purchase or sale included in Buyer's purchase order or other writing that are different from or additional to these Terms and Conditions.

Sales representatives are not authorized to bind Seller.

All written quotations automatically expire thirty (30) days from the date quoted unless otherwise specified.

## 2. Prices and Taxes

Prices are subject to change without notice at any time prior to acceptance of order on Seller's acknowledgement form. All prices are F.O.B. Chicago, Illinois unless otherwise agreed by Buyer and Seller in writing. Buyer agrees to pay all present and future U.S. federal, state and local tax obligations, including but not limited to sales, use and excise taxes. If Buyer claims that the Goods are exempt from any particular tax, Buyer must provide Seller with a tax exemption certificate acceptable to the tax authorities.

## 3. Cancellation Charges

No cancellations or changes of any kind in the purchase order shall be effective unless agreed to in writing by Seller. All changes are accepted subject to adjustment in prices and delivery dates. All cancellations are accepted subject to cancellation charges which will be determined by the Seller and will reflect, among other factors, the expenses already incurred and commitments made by the Seller, sales and administrative overhead and profits.

Seller shall have the absolute right to cancel the order upon (i) material breach of any of these Terms and Conditions by Buyer, or (ii) failure by Buyer to make any payment or (iii) insolvency of Buyer, the filing of voluntary petition in bankruptcy by Buyer, the filing of an involuntary petition to have the Buyer declared bankrupt, the appointment of a receiver or trustee for Buyer, the execution by Buyer of an assignment for the benefit of creditors, or (iv) the discontinuance of business by Buyer or the sale by Buyer of the bulk of its assets other than in the usual course of business. Upon cancellation, Seller shall be entitled to a cancellation charge as described above.

## 4. Shipment and Delivery

All delivery dates are estimates only. Seller's only obligation with respect to delivery dates shall be to use reasonable effort to meet same. All shipments shall be F.O.B. Chicago, Illinois unless otherwise agreed in writing between Buyer and Seller. Title and risk of loss shall pass to Buyer at the F.O.B. point. Unless otherwise agreed in writing, Seller will ship via surface transportation. Sell will not be liable for any delays, breakage, loss or damage after having made delivery in good order to the carrier. Seller reserves the right to insure all shipments at Buyer's expense.

## 5. Force Majeure, Waiver

Seller shall not be liable for any delay to make delivery or failure to deliver due to any clause or contingency beyond the control of Seller (including but not limited to accidents, breakdowns, strikes, riots, sabotage, insurrections, war, delay or interruptions in or failure of sources of materials, supplies, labor, energy or transportation, acts of God or orders of any court, governmental body, authority or agency). Seller may, at its option, allocate available supplies among its customers, including Buyer, in any manner that Seller decides is fair and reasonable, extend the delivery time or cancel the contract for such Goods, in whole or in part. Such allocation, extension of delivery time or cancellation shall not affect the right of Seller to cover for any unpaid Goods previously delivered. IN NO EVENT SHALL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER LOSS, DAMAGE OR EXPENSE OF ANY KIND INCLUDING LOSS OF PROFITS ARISING IN CONNECTION WITH SUCH FAILURE OR DELAY IN DELIVERY.

## 6. Terms of Payment

Unless otherwise expressly agreed between Buyer and Seller in writing, terms of payment are net thirty (30) days after date of shipment. Seller reserves the right to alter or suspend credit terms and require C.O.D. or advance payment, whenever Seller has reasonable doubt as to Buyer's creditworthiness. If Buyer becomes delinquent in payment or refuses to accept C.O.D. shipments, Seller shall have the right, in addition to any other rights it may have, to cancel any order of Buyer's, without further deliveries and declare all unpaid amounts for Goods previously delivered immediately due and payable. Each shipment shall be considered a separate and independent transaction and payment therefore shall be made accordingly. Amounts past due shall be subject to a late charge of 1.5% per month. All costs and expenses incurred by Seller as result of non-payment or delinquent payment by Buyer, including collections costs, interest, and reasonable attorneys fees shall be paid by the Buyer.

## 7. Claims and Remedies

All claims for loss or damage in transit are to be made by Buyer directly to the carrier. No deduction of any kind from the invoice amount shall be made. Buyer shall inspect all Goods immediately upon their arrival and shall immediately give written notice to Seller of any claim that the Goods do not conform to the terms of the contract. Seller shall have reasonable access to inspect any allegedly non-conforming Goods. Buyer waives any right to assert any claim against Seller arising from any non-conformity of Goods which would have been observable on reasonable inspection or testing within thirty (30) days after delivery.

Written notice of any alleged defect within the warranty period must be presented to Seller immediately upon Buyer's discovery of the defect and Seller must be allowed to inspect the Goods while they are in the alleged defective condition. Operation of the Goods must be suspended until written clearance is issued by Seller for continued operation provided that Seller, upon receipt of written notice of an alleged defect, proceeds without unreasonable delay to remedy any defects coming within the warranty.

## 8. Warranty, Disclaimer, Limitation of Liability

### General Warranty Terms Applicable To All Goods:

The above warranties by Seller do not extend to any Goods subject to (i) improper installation or storage, (ii) accident, damage, abuse or misuse, (iii) abnormal or unusual operating conditions or applications, (iv) operating conditions or applications above the rated capacity of the Goods, (v) operating conditions or applications not made known to Seller prior to the date of the agreement, or (vi) a purpose or application in any way different from that for which the Goods were designed. Seller's warranty does not extend to any Good or parts thereof that are not manufactured by Seller or that Buyer alters or modifies or that Buyer adds to or incorporates into Seller's Goods (including but not limited to controls, electronics, valves and other parts or equipment and only the warranty, if any, given by the manufacturer thereof, will apply. Seller's obligation under this warranty will not apply to any product which (i) is normally consumed in operations or (ii) has a normal life inherently shorter than the warranty period stated herein.

THE WARRANTY EXPRESSED HEREIN IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND IS IN LIEU OF ANY AND ALL OTHER OBLIGATIONS OR LIABILITY ON THE SELLER'S PART. UNDER NO CIRCUMSTANCES WILL SELLER BE LIABLE FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGES OR FOR ANY OTHER LOSS, DAMAGE OR EXPENSE OF ANY KIND, INCLUDING LOSS OF PROFITS, ARISING IN CONNECTION WITH THE CONTRACT OR WITH THE USE OR LIABILITY TO USE SELLER'S GOODS FURNISHED UNDER THE CONTRACT. SELLER'S SOLE LIABILITY AND BUYER'S SOLE REMEDY ARE LIMITED TO EITHER (i) REPAIR OR REPLACEMENT OF DEFECTIVE PARTS OR GOODS, OR (ii) AT THE SELLER'S OPTION, RETURN OF THE GOODS TO SELLER AND REFUND OF PURCHASE PRICE. SUCH REMEDY SHALL BE BUYER'S ENTIRE AND EXCLUSIVE REMEDY, IN THE EVENT OF BREACH OF WARRANTY OR NEGLIGENCE OF SELLER.

## 9. Confidentiality

All drawings, diagrams, specifications, and other materials furnished by Seller relating to the sale, installation, service or repair of Goods furnished hereunder and the information therein are proprietary to Seller. Buyer may not reproduce or distribute such materials without the written consent of Seller except to Buyer's employees who may use the material as part of their duties. All such materials relating to the Goods supplied by Seller (except information as may be established to be in the public domain or disclosed through judicial or government action) shall be received in confidence, and Buyer shall exercise reasonable care to hold all such information in confidence.

In the event Buyer's personnel visit Seller's plant or assembly facility or otherwise receive any proprietary or confidential information from Seller, said information shall be retained as confidential by Buyer and not disclosed to any third party without the written consent of Seller.

## 10. Limitation of Actions

Any cause of action arising from this agreement or the breach thereof must be commenced within one (1) year after the cause of action accrues.

## 11. Applicable Law

The law governing the agreement and any further agreement or contractual relation between Seller and Buyer shall be the law of the State of Illinois. The invalidity of any provision of this agreement shall not affect the validity of the remaining provisions.

## 12. Non-Assignment

Buyer's rights and obligations hereunder may not be assigned without prior written consent of Seller.

AIRTEC Pneumatics, Inc.