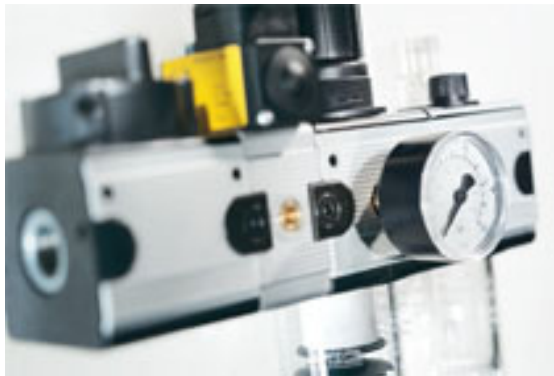


AIR TREATMENT FRL Series MULTI-FIX

1. GENERAL OVERVIEW



Description

FRL-units purify the air and remove corrosive moisture and abrasive solids from the airstream. They also regulate and reduce main line pressure and provide lubrication for various pneumatic control equipment.
(eg. air tools, cylinders and systems)

Installation

By selecting the correct equipment and focus on the correct regulations, improved service life will result in a reduction in

downtime of pneumatic systems.

These service-units must be mounted vertically and as near as possible to the pneumatic control element or system.

Filter

Compressed air contains moisture and abrasive solids which if left unheaded would have an adverse effect on pneumatic control equipment.

The filter element must be cleaned at regular service intervals to avoid any excessive pressure drop across the unit. It is also recommended to control excess condensate builds up in the filter bowl and switching off, removing and cleaning the bowl or ensuring that the automatic drain is functioning correctly.

Various filter elements can be fitted depending on the particular application or environment. The standard grade of filtration is to 40µm (DIN 4003), however a range of alternatives are also available.

Regulator

The regulator regulates the primary pressure (PE) using a control spring & diaphragm. This keeps the secondary pressure (PA) steady to a required level to operate downstream equipment & tooling.

Lubricator

The lubricator creates an airborne fog or mist that passes downstream to lubricate compressed air equipment & tooling. Most modern pneumatic control equipment is designed to function "lube free" however when using lubrication on air tooling service life is greatly improved.

Oil consumption : +/- 1-2 drops (standard) (at an air flow of $q_v = 1000 \text{ NI/min}$)

It is possible to fill the lubricator units under pressure by means of a vent plug screw. Slowly unscrew the vent plug relieving the bowl pressure and fill the lubricating oil and re-tighten the vent plug screw.

Recommended lubrication : HL 25 DIN 51524 - ISO VG 32

General

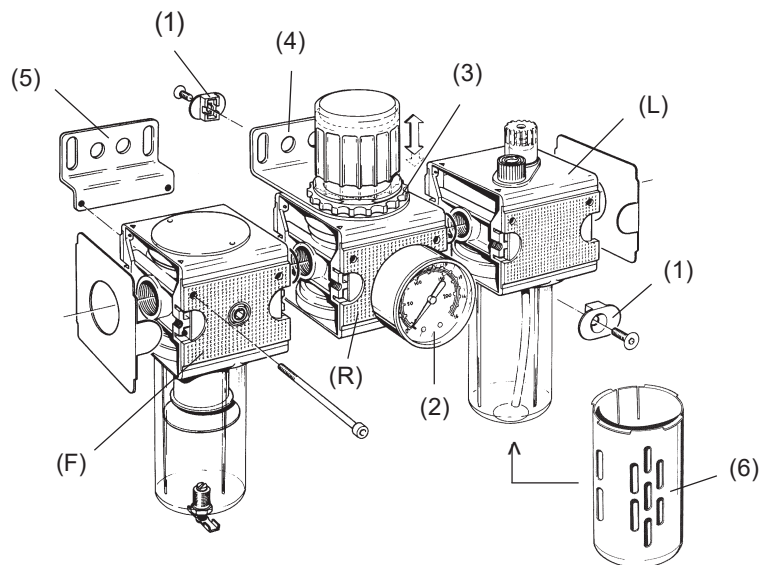
Care should be taken when cleaning polycarbonate bowls. Tric based agents such as Benzol, Aceton and all fluids which contain plasticizer should not be used under any circumstances.

Max. working pressure filter & lubricator with polycarbonate bowl : 16 bar / metal bowl : 25 bar

Max. primary pressure (PE) for regulator : 16 bar, Max. temperature : 60°C



HOW TO ORDER COMPLETE FRL UNITS?



FRL (3 PARTS)



Series Type	0		1		3		5	
	00	01	11	12	33	34	54	55
Port	1/8"	1/4"	1/4"	3/8"	1/2"	3/4"	3/4"	1"
Filter (F)	F00HA (see page 3.02.05)	F01HA (see page 3.02.05)	F11HA (see page 3.02.05)	F12HA (see page 3.02.05)	F33HA (see page 3.02.05)	F34HA (see page 3.02.05)	F54HA (see page 3.02.05)	F55HA (see page 3.02.05)
Regulator (R)	R00 (see page 3.02.09)	R01 (see page 3.02.09)	R11 (see page 3.02.09)	R12 (see page 3.02.09)	R33 (see page 3.02.09)	R34 (see page 3.02.09)	R54 (see page 3.02.09)	R55 (see page 3.02.09)
Lubricator (L)	L00 (see page 3.02.13)	L01 (see page 3.02.13)	L11 (see page 3.02.13)	L12 (see page 3.02.13)	L33 (see page 3.02.13)	L34 (see page 3.02.13)	L54 (see page 3.02.13)	L55 (see page 3.02.13)
Coupling kit (1)	KP00 (see page 3.04.01)	KP00 (see page 3.04.01)	KP11 (see page 3.04.01)	KP11 (see page 3.04.01)	KP33 (see page 3.04.01)	KP33 (see page 3.04.01)	KP55 (see page 3.04.01)	KP55 (see page 3.04.01)
Gauge (2)	MANO-1/8" (see page 3.04.02)	MANO-1/8" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)
Panel mount nut (3)	DR0034 (see page 3.04.01)	DR0034 (see page 3.04.01)	DR0034 (see page 3.04.01)	DR0034 (see page 3.04.01)	C33-42 (see page 3.04.01)	C33-42 (see page 3.04.01)	-	-
Mounting bracket (4)	MW30 (see page 3.04.01)	MW30 (see page 3.04.01)	MW30 (see page 3.04.01)	MW30 (see page 3.04.01)	MW50 (see page 3.04.01)	MW50 (see page 3.04.01)	-	-
Mounting bracket (5)	-	-	ZW11 (see page 3.04.01)	ZW11 (see page 3.04.01)	ZW33 (see page 3.04.01)	ZW33 (see page 3.04.01)	ZW55 (see page 3.04.01)	ZW55 (see page 3.04.01)
Bowlguard (6)	-	-	C11-45 (see page 3.04.01)	C11-45 (see page 3.04.01)	C33-45 (see page 3.04.01)	C33-45 (see page 3.04.01)	C33-45 (see page 3.04.01)	C33-45 (see page 3.04.01)

Grey indicated types = standard port size = delivery from stock

CL (2 PARTS)



Series Type	0		1		3		5	
	00	01	11	12	33	34	54	55
Port	1/8"	1/4"	1/4"	3/8"	1/2"	3/4"	3/4"	1"
Filter-regulator (F+R)	C00HA (see page 3.02.03)	C01HA (see page 3.02.03)	C11HA (see page 3.02.03)	C12HA (see page 3.02.03)	C33HA (see page 3.02.03)	C34HA (see page 3.02.03)	C54HA (see page 3.02.03)	C55HA (see page 3.02.03)
Lubricator (L)	L00 (see page 3.02.13)	L01 (see page 3.02.13)	L11 (see page 3.02.13)	L12 (see page 3.02.13)	L33 (see page 3.02.13)	L34 (see page 3.02.13)	L54 (see page 3.02.13)	L55 (see page 3.02.13)
Coupling kit (1)	KP00 (see page 3.04.01)	KP00 (see page 3.04.01)	KP11 (see page 3.04.01)	KP11 (see page 3.04.01)	KP33 (see page 3.04.01)	KP33 (see page 3.04.01)	KP55 (see page 3.04.01)	KP55 (see page 3.04.01)
Gauge (2)	MANO-1/8" (see page 3.04.02)	MANO-1/8" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)	MANO-1/4" (see page 3.04.02)
Panel mount nut (3)	DR0034 (see page 3.04.01)	DR0034 (see page 3.04.01)	DR0034 (see page 3.04.01)	DR0034 (see page 3.04.01)	C33-42 (see page 3.04.01)	C33-42 (see page 3.04.01)	-	-
Mounting bracket (4)	MW30 (see page 3.04.01)	MW30 (see page 3.04.01)	MW30 (see page 3.04.01)	MW30 (see page 3.04.01)	MW50 (see page 3.04.01)	MW50 (see page 3.04.01)	-	-
Mounting bracket (5)	-	-	ZW11 (see page 3.04.01)	ZW11 (see page 3.04.01)	ZW33 (see page 3.04.01)	ZW33 (see page 3.04.01)	ZW55 (see page 3.04.01)	ZW55 (see page 3.04.01)
Bowlguard (6)	-	-	C11-45 (see page 3.04.01)	C11-45 (see page 3.04.01)	C33-45 (see page 3.04.01)	C33-45 (see page 3.04.01)	C33-45 (see page 3.04.01)	C33-45 (see page 3.04.01)

Grey indicated types = standard port size = delivery from stock

C COMPLETE

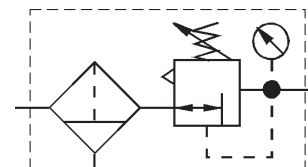
Code	C01COMPLETE 1/4"	C11COMPLETE 1/4"	C33COMPLETE 1/2"
Parts	C01HA + MANO DR0034 + MW30	C11HA + MANO DR0034 + MW30	C33HA + MANO C33-42 + MW50

Technical modifications keep in reserve !

(2020/10)

2. MULTI-FIX FILTER-REGULATORS

ITEM	C00	C01	C11	C12	C33	C34	C54	C55	Application information - easy block assembly for components to be connected in series - interlocking of several individual devices requires coupling kit(s) KP00, KP11, KP33 or KP55 - interlocking of several individual devices with narrow distributor Z11, Z33 or Z55 requires coupling kit(s) KP11Z, KP33Z or KP55Z - handweel can be locked by depressing - filter transmittance according to ISO 4003, glass bead test - field installation of bowl guard without tools
Port size	G 1/8"	G 1/4"	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 3/4"	G 1"	
Description	Air line regulator with diaphragm and relieving feature, centrifugal force principle with sintered filter						Idem... + pilot controlled		
Mounting	Vertically, drain plug at bottom								
Supply pressure	Pe max. 16 bar (* see Drain Model), 12 bar with KP00 Pe min. 1,5 bar with semi-automatic and auto drain								
Reduced pressure	Pa 0,5-10 bar Pa 0,1-3 / 0,2-6 bar		Standard : Pa 0,5-10 bar Optional : Pa 0,1-3 bar / 0,2-6 bar / 0,5-16 bar						
Filter element	Standard : 5 µm						Standard : 40 µm Opt : 8 µm		
Temp.	Max. 60°C (other temperature ranges upon request)								
Air cons.							0,5 l/min (max.)		
Bowl volume	Max. 16 cm³		Max. 25 cm³		Max. 50 cm³		Max. 125 cm³		
Drain model	Standard: semi-automatic drain Optional: auto drain AM10 (Pe max.16 bar) Optional: auto drain AM5 (Pe max.12 bar)								
Fixing	Panel mount (DR0034) Mounting bracket (MW30)		Panel mount (DR0034) Mounting bracket (MW30) 2 holes in the body		Panel mount (C33-42) Mounting bracket (MW50) 2 holes in the body		Mounting bracket (ZW55) In pipe line		
Weight	0,280 kg 0,385 kg with keylock		0,477 kg (0,392 kg without gauge) 0,592 kg with keylock		1,076 kg (0,991 kg without gauge) 1,185 kg with keylock		2,150 kg (2,050 kg without gauge) 2,260 kg with keylock		



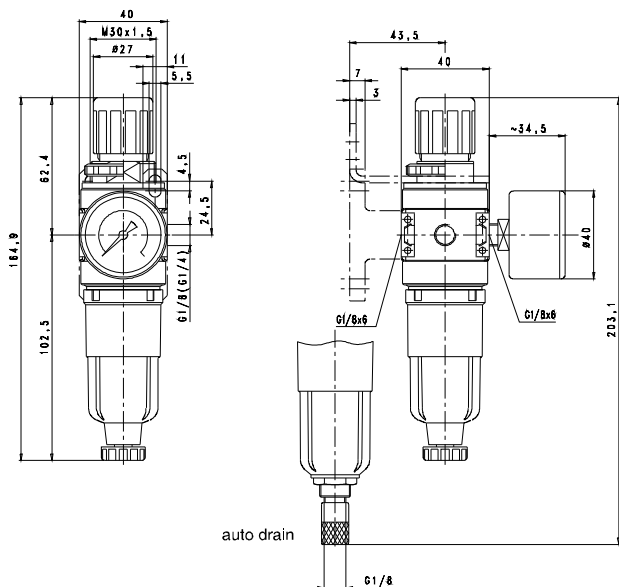
ordering indication

C. ** *			
type			
1 port size		2 option	
Port size 00 G 1/8" 11 G 1/4" 33 G 1/2" 54 G 3/4" 01 G 1/4" 12 G 3/8" 34 G 3/4" 55 G 1"			
Options K keylock HA semi-automatic drain AM auto drain H metal bowl with sight glass			

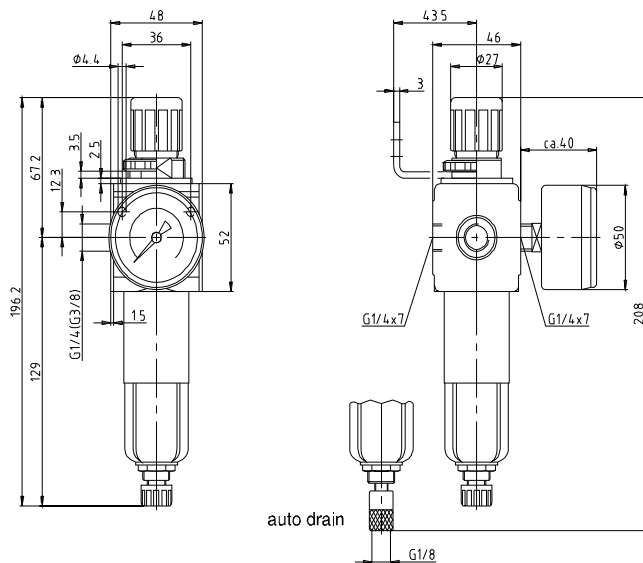
example: **C11HHA**

Gauge Not Included

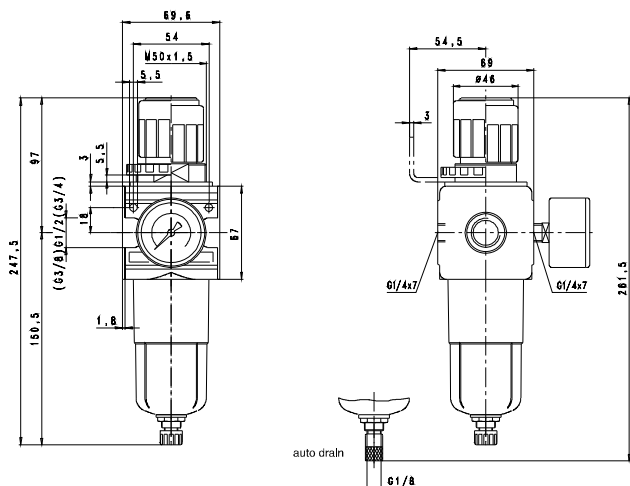
Dimensions (mm) C00, C01



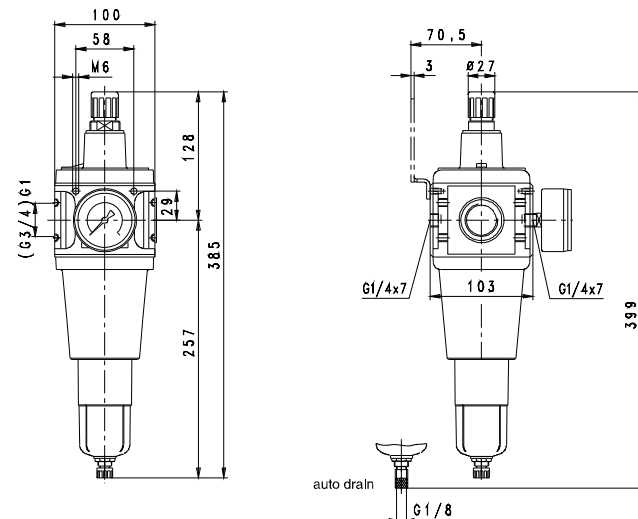
Dimensions (mm) C11, C12



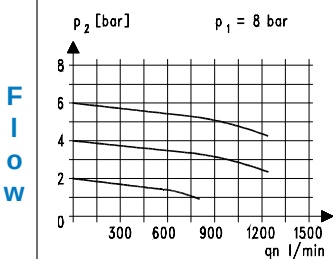
Dimensions (mm) C33, C34



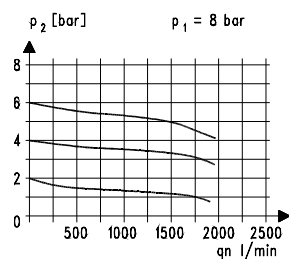
Dimensions (mm) C54, C55



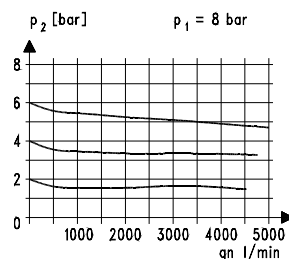
C00, C01



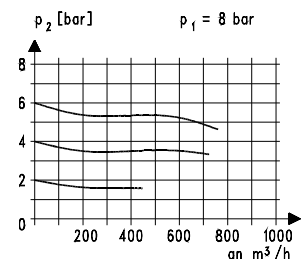
C11, C12



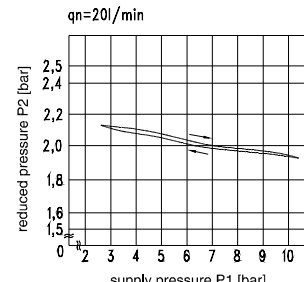
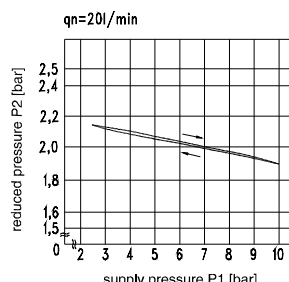
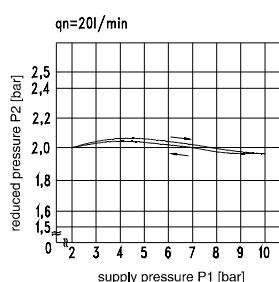
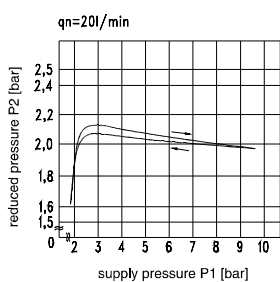
C33, C34



C54, C55



Pressure

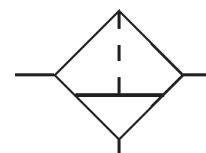


Technical modifications keep in reserve !

(2020/10)

3. MULTI-FIX FILTERS

ITEM	F00	F01	F11	F12	F33	F34	F54	F55	Application information - easy block assembly for components to be connected in series - interlocking of several individual devices requires coupling kit(s) KP00, KP11, KP33 or KP55 - interlocking of several individual devices with narrow distributor Z11, Z33 or Z55 requires coupling kit(s) KP11Z, KP33Z or KP55Z - filter transmittance according to ISO 4003, glass bead test - field installation of bowl guard without tools
Port size	G 1/8"	G 1/4"	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 3/4"	G 1"	
Description	Centrifugal force principle with sintered filter								
Mounting	Vertically, drain plug at bottom								
Supply pressure	Pe max. 16 bar (* see Drain Model), 12 bar with KP00, 20 bar with metal bowl Pe min. 1,5 bar with semi-automatic and auto drain								
Filter element	Standard : 5 µm						Standard : 40 µm Opt : 8 µm		
Temp.	Max. 60°C (other temperature ranges upon request)								
Bowl volume	Max. 16 cm³		Max. 25 cm³		Max. 50 cm³		Max. 125 cm³		
Drain model	Standard: semi-automatic drain Optional: auto drain AM10 (Pe max.16 bar) Optional: auto drain AM5 (Pe max.12 bar)								
Fixing	In pipe line Mounting bracket (ZW55)		Mounting bracket (ZW11)		Mounting bracket (ZW33)				
Weight	line 0,210 kg		2 holes in the body 0,275 kg		2 holes in the body 0,798 kg		In pipe 1,650 kg		

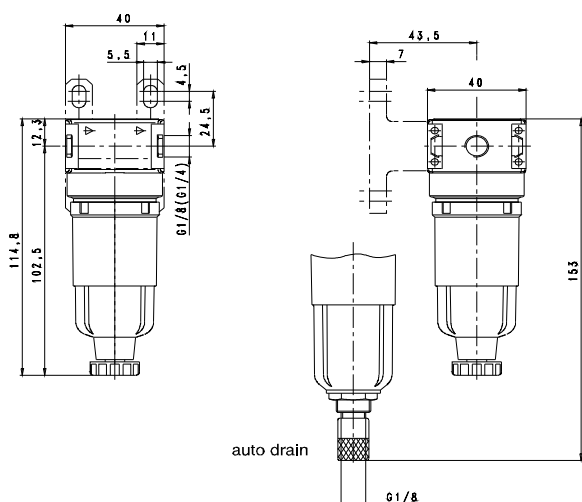


ordering indication

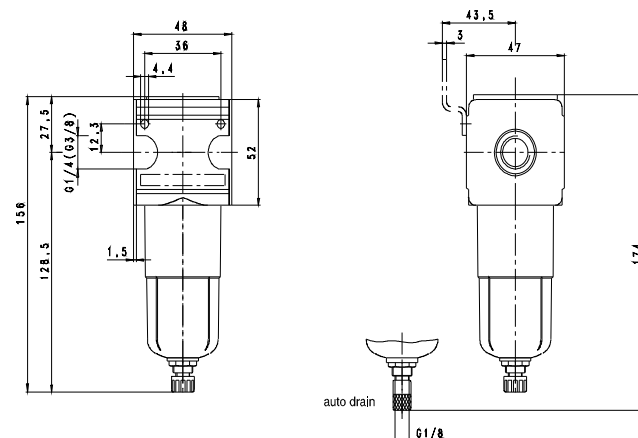
F. * *			
type			
1 port size		2 option	
Port size 00 G 1/8" 11 G 1/4" 33 G 1/2" 54 G 3/4" 01 G 1/4" 12 G 3/8" 34 G 3/4" 55 G 1"			
Options HA semi-automatic drain AM auto drain H metal bowl with sight glass			

example: **F11HHA**

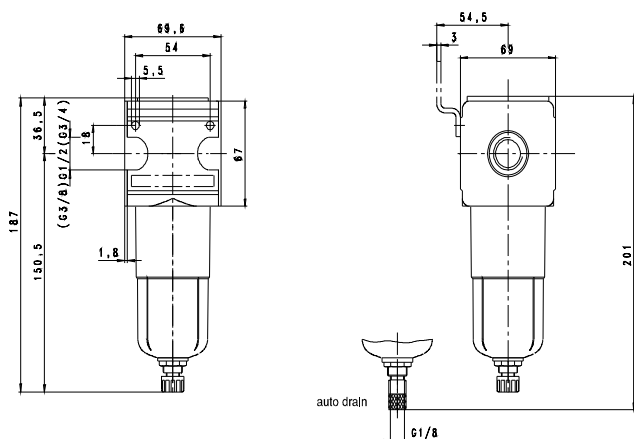
Dimensions (mm) F00, F01



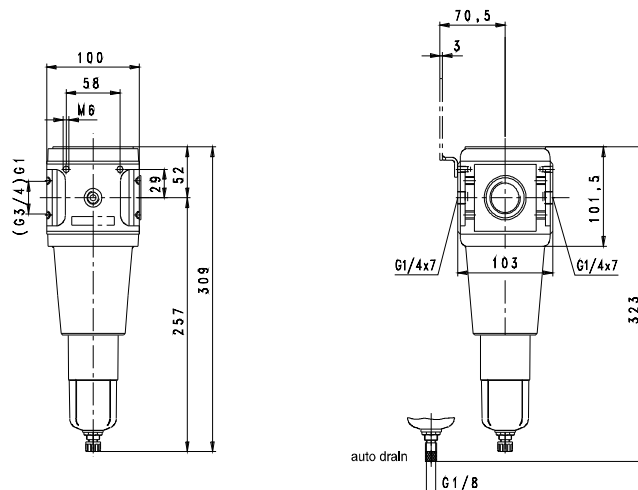
Dimensions (mm) F11, F12



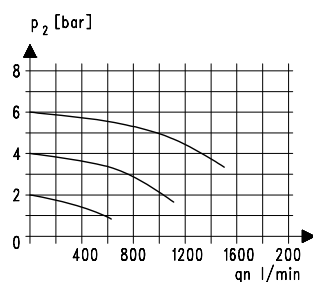
Dimensions (mm) F33, F34



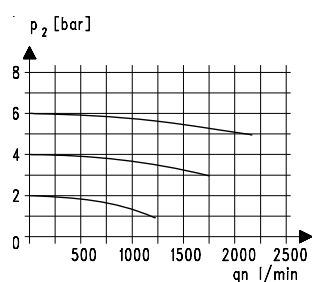
Dimensions (mm) F54, F55



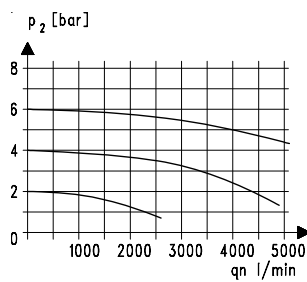
Flow characteristics F00, F01



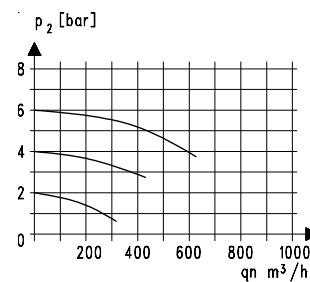
Flow characteristics F11, F12



Flow characteristics F33, F34



Flow characteristics F54, F55



Technical modifications keep in reserve !

(2020/10)

4. MULTI-FIX FINE-FILTERS

ITEM	FX11	FV33	FX33	FA33	Application information - easy block assembly for components to be connected in series - interlocking of several individual devices requires coupling kit(s) KP11, KP33 or KP55 - interlocking of several individual devices with narrow distributor Z11, Z33 or Z55 requires coupling kit(s) KP11Z, KP33Z or KP55Z - filter transmittance according to ISO 4003, glass bead test - field installation of bowl guard without tools
Port size	G 1/4"	G 1/2"	G 1/2"	G 1/2"	
Description	Fine-filter 0,01µm	Pre-filter 0,3µm	Fine-filter 0,01µm	Activated carbon filter	
Mounting	Vertically, 2 holes in the body, drain plug at bottom				
Supply pressure	Pe max. 16 bar, Pe min. 0,5 bar, Pe min. 1,5 bar with auto drain	Pe max. 16 bar			
Particle separation	> 0,01µm 99,999 %	> 0,3µm 99,99 %	> 0,01µm 99,999 %		
Residual oil concent	0,01 mg/m³		0,01mg/m³	0,005 mg/m³	
Temp.	Max. 50°C (other temperature ranges upon request)				
Nominal discharge	280 l/min. (Pe 7 bar, delta P = 0,09 bar) *	Qn 500 l/m ¹)	Qn 720 l/m ²)	Qn 1500 l/m ³)	
Bowl volume	Max. 10 cm³	Max. 25 cm³			
Drain model	Standard: semi-automatic drain Opt.: auto drain (10b)			Optional: auto drain (Pe max.12 bar)	
Fixing	Mnt.bracket ZW11	Mounting bracket ZW33			
Weight	0,280 kg	0,800 kg			
Replacement Filter	8.1311.10.000 Filter Element	5.1333.16.000 Filter Element	8.1333.08.000 Filter Element	8.1333.11.000 Filter Element	

*) Reduction factor "F" for several operating pressures

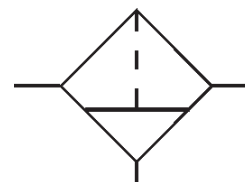
1) Delta P=0,02 bar

2) Delta P=0,09 bar

3) Delta P=0,2 bar

$Q=Q_n \cdot f$

Pü (bar)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
F	0,46	0,6	0,68	0,77	0,85	0,93	1	1,07	1,11	1,17	1,23	1,28	1,32	1,36	1,4	1,46



ordering indication

FX. 11	
FV. 33	*
FA. 33	
type	
1 port size	2 option

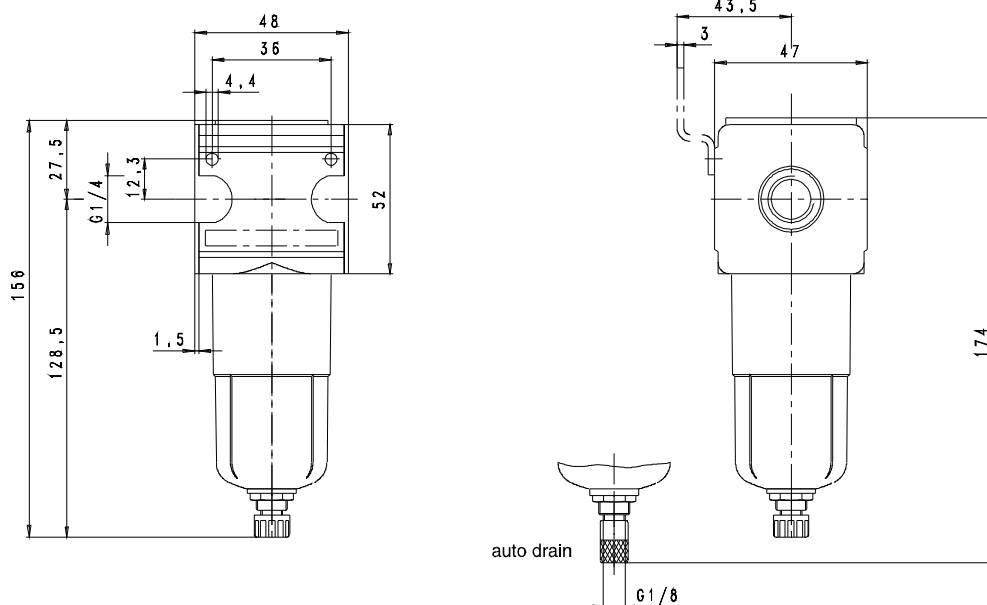
Port size
11 G 1/4" | 33 G 1/2"

Options

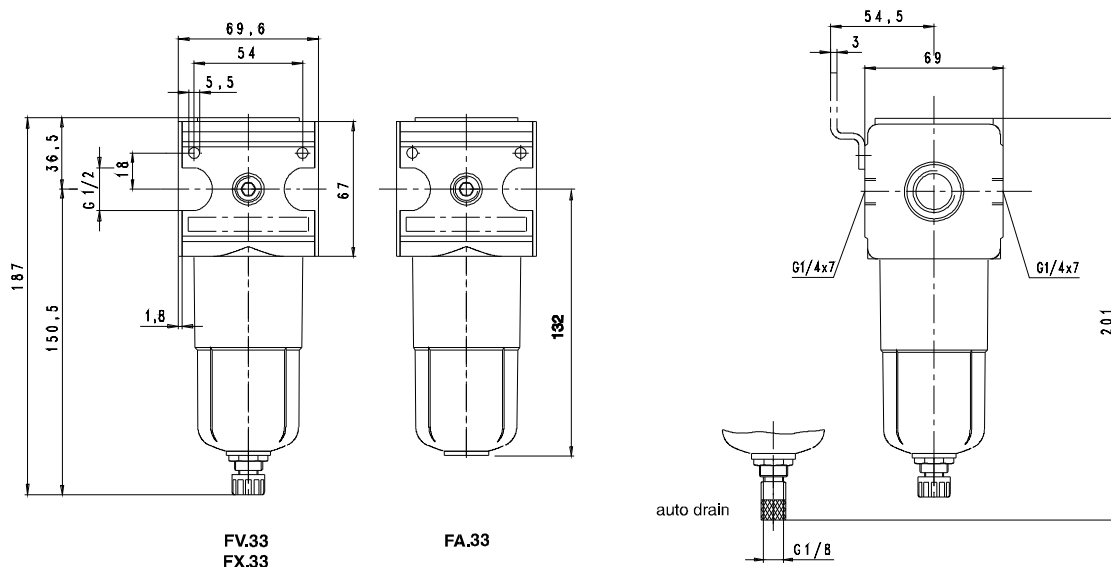
HA	semi-automatic drain
AM	auto drain
H	metal bowl with sight glass
G	differential gauge

example: **FX11HA**

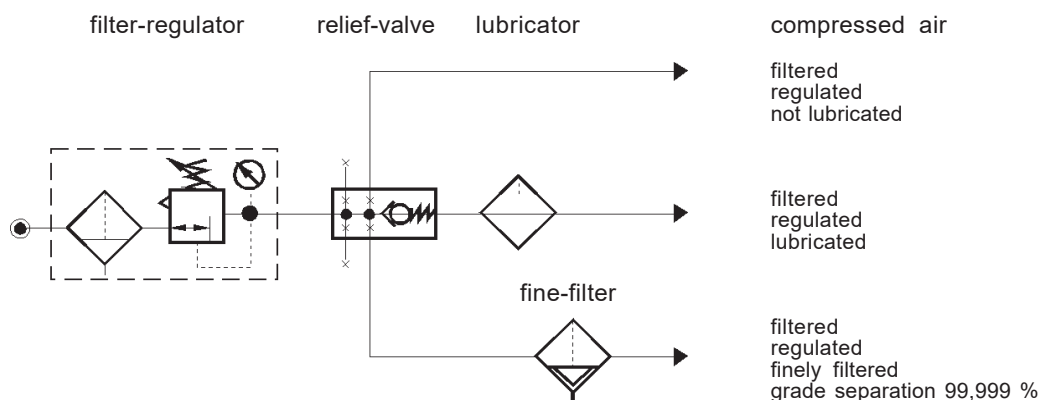
Dimensions (mm) FX11



Dimensions (mm) FV33, FX33, FA33



Extendible application FX11



Pre-filter FV33

High efficiency filter designed for the removal of oil, water and dirt from the compressed air system. Pore size 3 μm . Suitable applications : chemical industry, paint industry, pharmaceutical industry.

Fine-filter FX33

For special filter requirements to exacting standards. Pore size 0,01 μm . Suitable applications : food industry, pharmaceutical industry, paint industry.

Activated carbon filter FA33

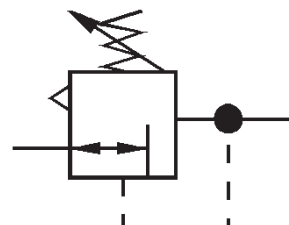
For removal of oil vapour and other hydrocarbons essential for certain industries eg. food, chemical and cosmetic manufacturing.

Technical modifications keep in reserve !

(2020/10)

5. MULTI-FIX REGULATORS

ITEM	R00	R01	R11	R12	R33	R34	R54	R55	Application information - easy block assembly for components to be connected in series - interlocking of several individual devices requires coupling kit(s) KP.00, KP.11, KP.33 or KP.55 - interlocking of several individual devices with narrow distributor Z. 11, Z.33 or Z.55 requires coupling kit(s) KP.11 Z, KP. 33 Z or KP.55 Z - handweel can be locked by depressing
Port size	G 1/8"	G 1/4"	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 3/4"	G 1"	
Description	Air line regulator with diaphragm and relieving feature						Idem... + pilot controlled		
Mounting	Arbitrary								
Supply pressure	Pe max. 16 bar, 12 bar with KP00		Pe max. 16 bar		Pe max. 16 bar		Pe max. 20 bar		
Reduced pressure	Pa 0,5-10 bar Pa 0,1-3 / 0,2-6 bar		Standard : Pa 0,5-10 bar Optional : Pa 0,1-3 bar / 0,2-6 bar / 0,5-16 bar						
Temp.	Max. 60°C (other temperature ranges upon request)								
Air cons.							0,5 l/min (max.)		
Fixing	Panel mount (DR0034) Mounting bracket (MW30)	Panel mount (DR0034) Mounting bracket (MW30) 2 holes in the body	Panel mount (C33-42) Mounting bracket (MW50) 2 holes in the body	Mounting bracket (ZW55) In pipe line					
Weight	0,260 kg 0,365 kg with keylock		0,415 kg (0,330 kg without gauge) 0,530 kg with keylock		0,935 kg (0,850 kg without gauge) 1,044 kg with keylock		1,554 kg (1,460 kg without gauge) 1,664 kg with keylock		



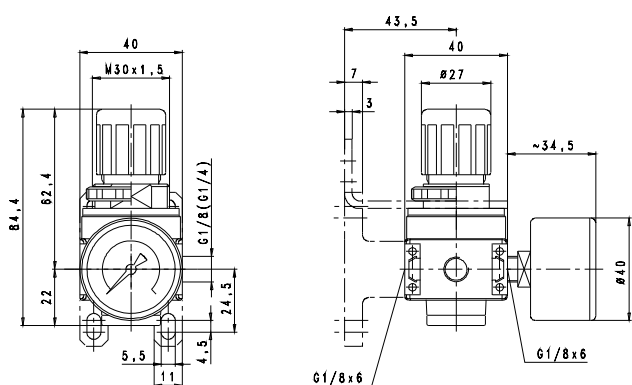
ordering indication

R. ** *		*	
type			
1	port size	2	option
Port size			
00 G 1/8"	11 G 1/4"	33 G 1/2"	54 G 3/4"
01 G 1/4"	12 G 3/8"	34 G 3/4"	55 G 1"
Options			
K keylock			

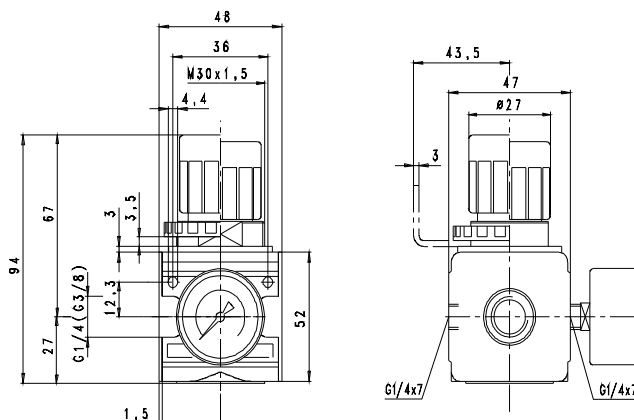
example: **R11K**

Gauge Not Included

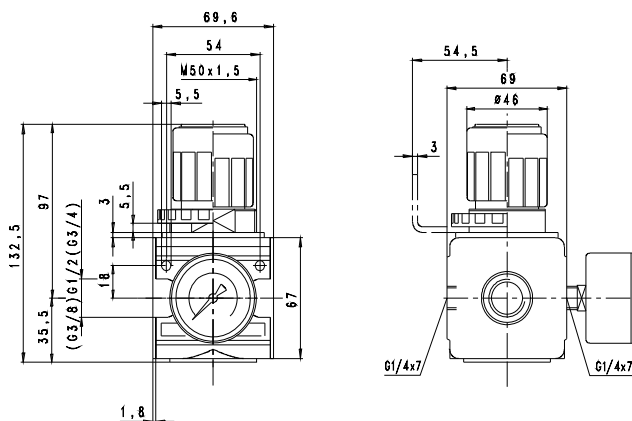
Dimensions (mm) R00, R01



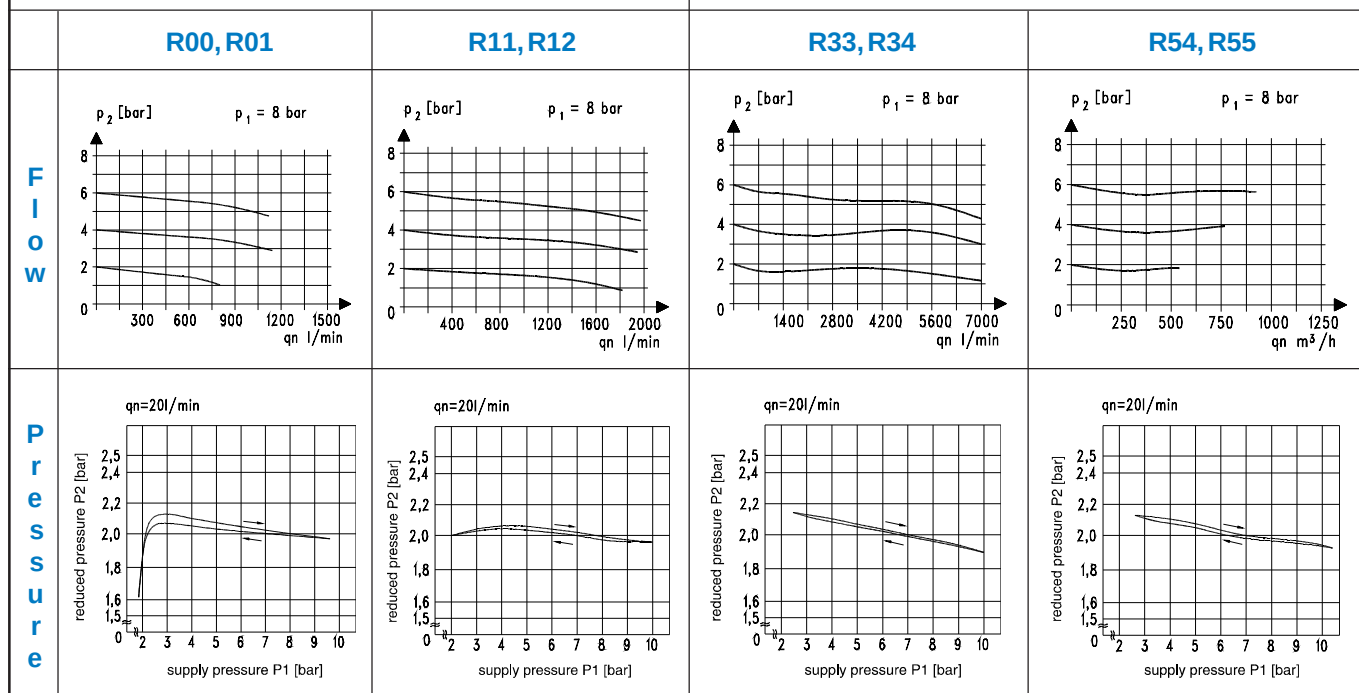
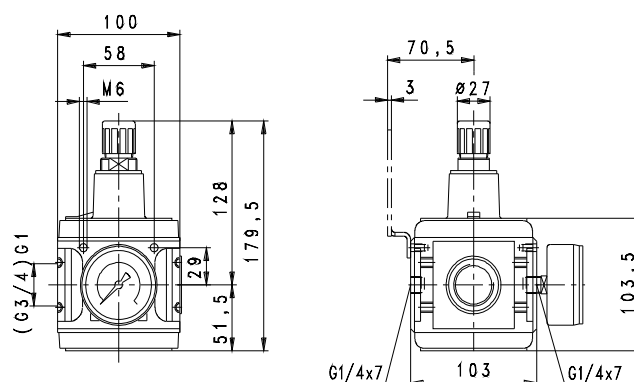
Dimensions (mm) R11, R12



Dimensions (mm) R33, R34



Dimensions (mm) R54, R55



Technical modifications keep in reserve !

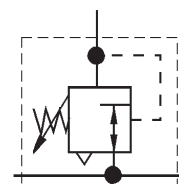
(2020/10)

6. MULTI-FIX MANIFOLD REGULATORS with pressure supply on both sides

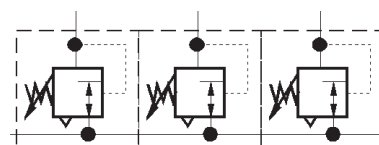
ITEM	RB11	RB33	Application information
Port size	G 1/4"	G 1/2"	
Description	Air line regulator with diaphragm and relieving feature		
Mounting	Arbitrary		
Supply pressure	Pe max. 16 bar		
Reduced pressure	Standard : Pa 0,5-10 bar Optional : Pa 0,1-3 bar / 0,2-6 bar / 0,5-16 bar		
Temp.	Max. 60°C (other temperature ranges upon request)		
Fixing	Panel mount (DR0034) Mounting bracket (MW30) 2 holes in the body	Panel mount (C33-42) Mounting bracket (MW50) 2 holes in the body	- easy block assembly for components to be connected in series - interlocking of several individual devices requires coupling kit(s) KP11 or KP33 - interlocking of several individual devices with narrow distributor Z11 or Z33 requires coupling kit(s) KP11Z or KP33Z - handweel can be locked by depressing - at long interlinkages is additional pressure supply with intermediate mounting of distributor T11 and Z11 or T33 and Z33 possible
Weight	0,415 kg (0,330 kg without gauge) 0,530 kg type with keylock	0,935 kg (0,850 kg without gauge) 1,044 kg type with keylock	



Gauge Not Included



example of application



ordering indication

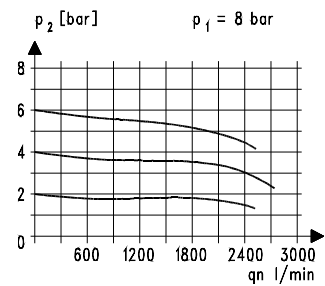
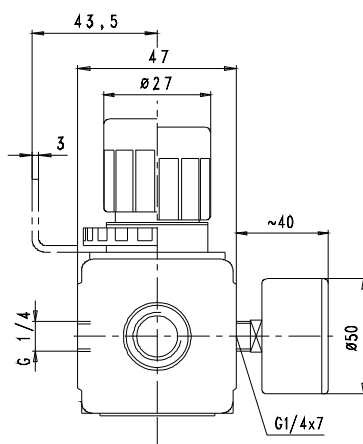
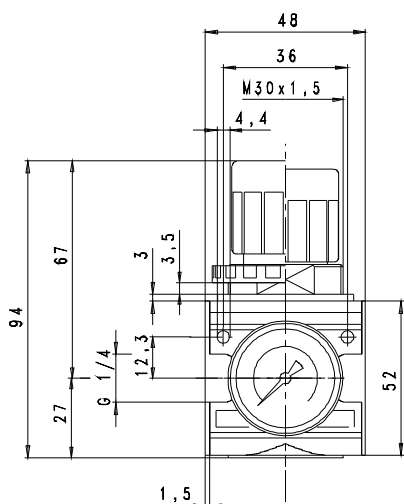
RB. ** *	
type	
1 port size	2 option

Port size
11 G 1/4" | 33 G 1/2" |

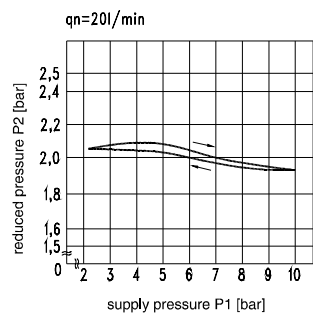
Options
K keylock

example: **RB11K**

Dimensions (mm) RB11

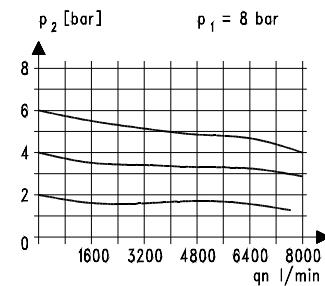
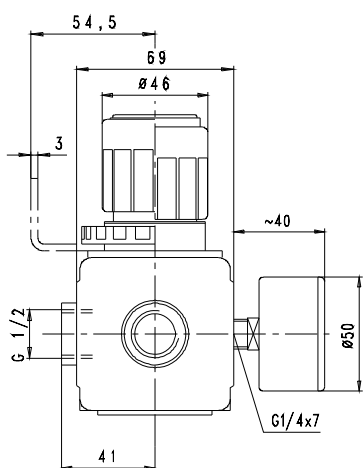
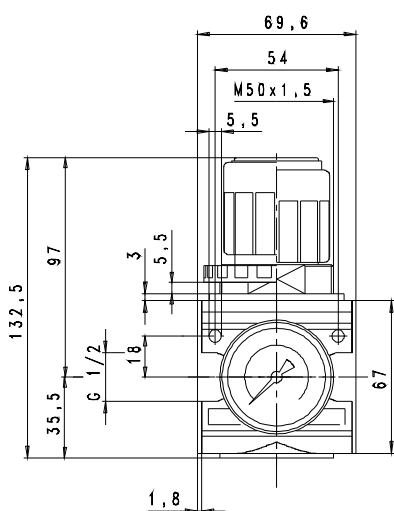


Flow

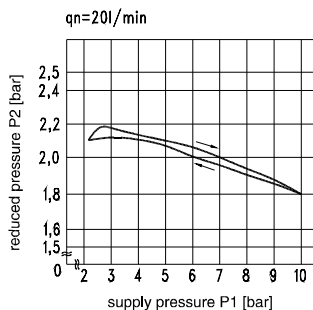


Pressure

Dimensions (mm) RB33

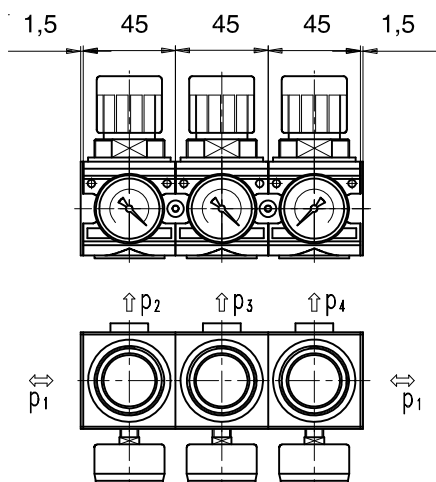


Flow

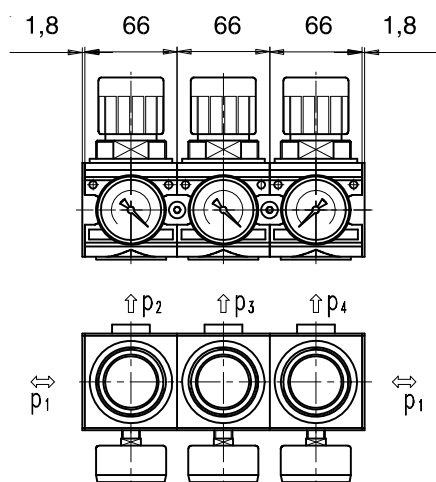


Pressure

Various application RB11



Various application RB33

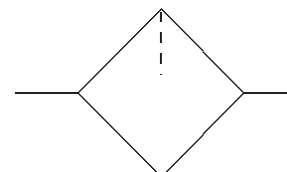


Technical modifications keep in reserve !

(2020/10)

7. MULTI-FIX LUBRICATORS

ITEM	L00	L01	L11	L12	L33	L34	L54	L55	Application information - easy block assembly for components to be connected in series - interlocking of several individual devices requires coupling kit(s) KP.00, KP.11, KP.33 or KP.55 - interlocking of several individual devices with narrow distributor Z. 11, Z.33 or Z.55 requires coupling kit(s) KP. 11 Z, KP. 33 Z or KP.55 Z - oil fill in is possible under pressure (not possible for L00 and L01) - field installation of bowl guard without tools
Port size	G 1/8"	G 1/4"	G 1/4"	G 3/8"	G 1/2"	G 3/4"	G 3/4"	G 1"	
Description	Proportional lubricator								
Mounting	Vertically								
Supply pressure	Pe max. 16 bar, 20 bar with metal bowl, 12 bar with KP00								
Temp.	Max. 50°C (other temperature ranges upon request)								
Bowl volume	Max. 35 cm ³		Max. 50 cm ³		Max. 125 cm ³		Max. 450 cm ³		
Oil dosage rate when qv=1000l/m	L00/L01 : 10-20 drops/min. (determining factor) Other L. : 1-2 drops/min. (determining factor)								
Kind of oil	HL 25 standardized to DIN 51524-ISO VG 32								
Fixing	In pipe line		Mounting bracket (ZW11) 2 holes in the body		Mounting bracket (ZW33) 2 holes in the body		Mounting bracket (ZW55) In pipe		
Weight	line 0,230 kg		0,327 kg		0,684 kg		1,500 kg		



ordering indication

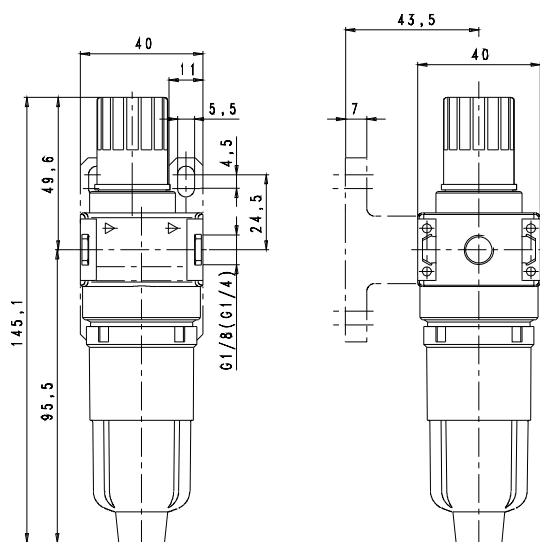
L. ** *		*	
type			
1	port size	2	option

Port size			
00 G 1/8"	11 G 1/4"	33 G 1/2"	54 G 3/4"
01 G 1/4"	12 G 3/8"	34 G 3/4"	55 G 1"

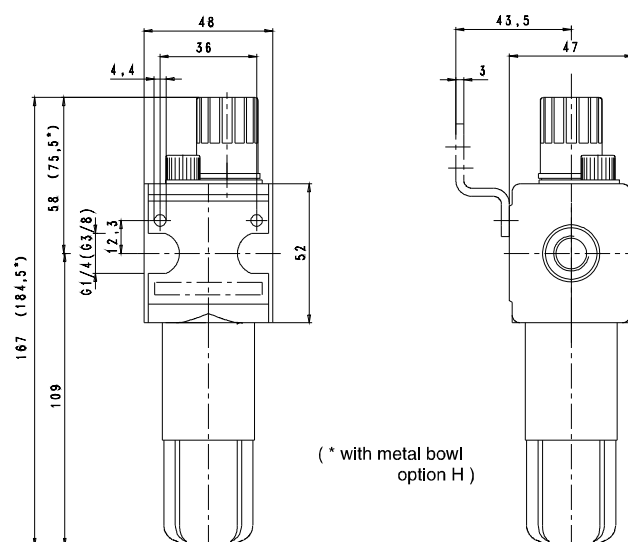
Options	
H	metal bowl with sight glass
N	electrical level controle

example: **L11H**

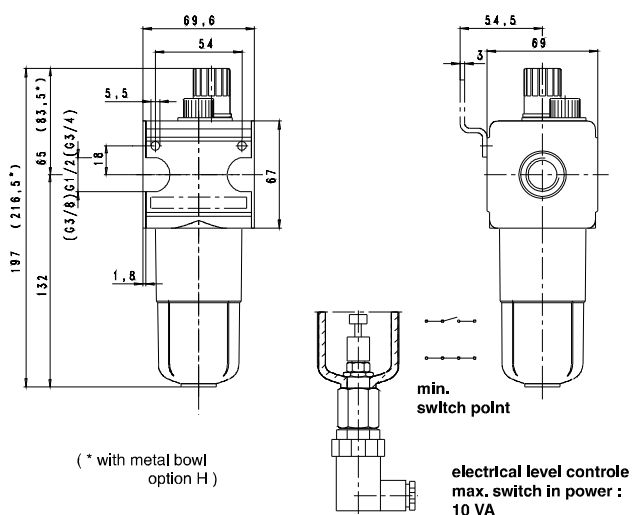
Dimensions (mm) L00, L01



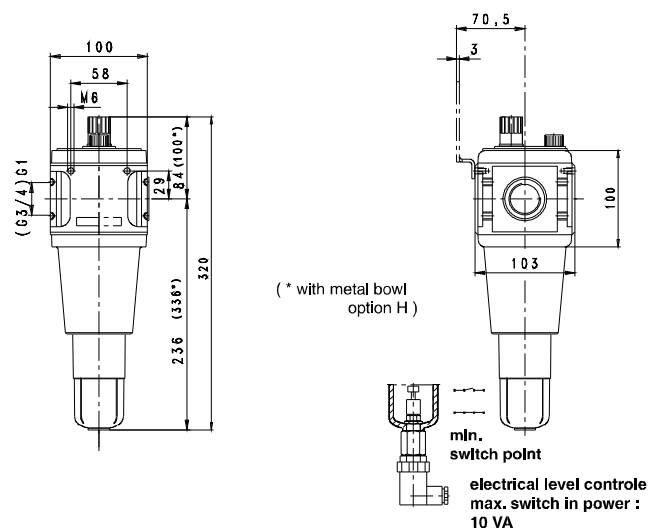
Dimensions (mm) L11, L12



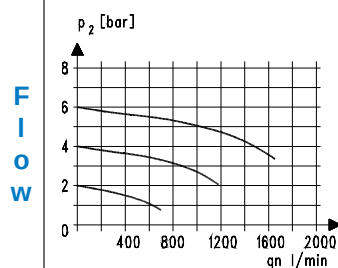
Dimensions (mm) L33, L34



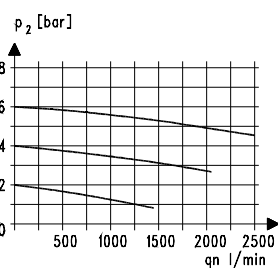
Dimensions (mm) L54, L55



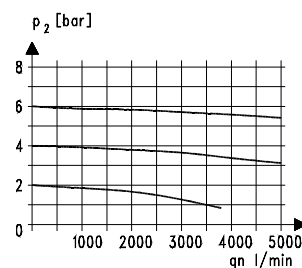
L00, L01



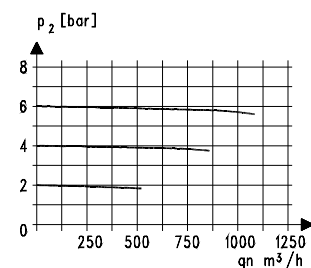
L11, L12



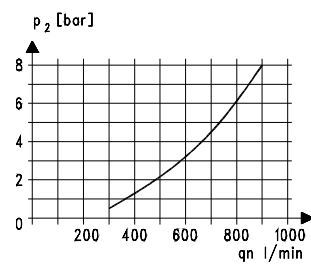
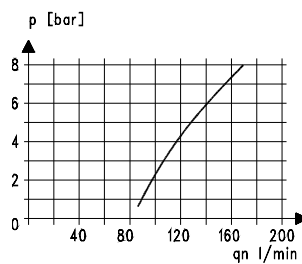
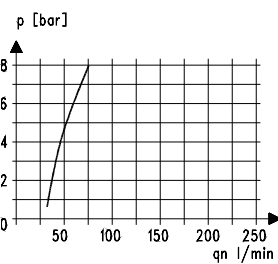
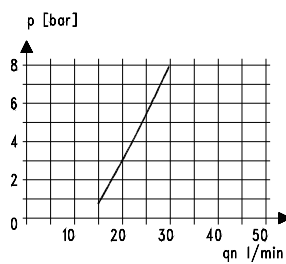
L33, L34



L54, L55



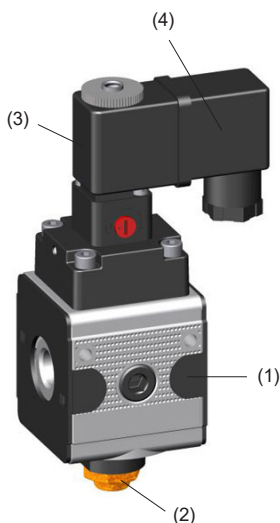
Pressure



Technical modifications keep in reserve !

(2020/10)

8. MULTI-FIX 3/2 VALVES



Cod.	Port size	Nominal discharge	Weight	Options
S11	G 1/4"	Qn 870 l/min.	0,446 kg.	I = Pneumatic
S33	G 1/2"	Qn 4000 l/min.	1,050 kg	I = Pneumatic
S54	G 3/4"	Qn 12500 l/min.	1,490 kg.	I = Pneumatic
S55	G 1"	Qn 12500 l/min.	1,490 kg.	I = Pneumatic

Electric manipulation (IP 65)	Pneumatic manipulation	filter-regulator distributor compressed-air plants or part of plants can be switched on or switched off and ventilated.
--------------------------------------	-------------------------------	---

- (1) CONTROL VALVE
 (2) SILENCER (included)
 (3) COIL (included; can also be ordered as spare part)
CODE 9.90XX.00.102 MC24 COIL 24VDC
 9.90XX.00.103 MC24 COIL 24VAC
 9.90XX.00.104 MC230 COIL 230VAC
 (4) CONNECTOR (included; can also be ordered as spare part)
CODE 9.90XX.00.026 MS11-26 CONNECTOR FOR COIL

Pressure - min 2 bar - max 10 bar

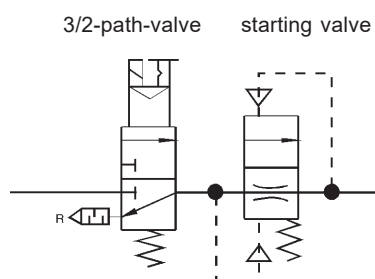
9. MULTI-FIX SOFT STARTING VALVES

After an emergency stop or breakdown of the machine is the position of the cylinders and the bistable valves not like the normal restposition. If you push the start button the machine brutally restarts due to lack of contre pressure. Cylinders move at high speed and full power till end-of-stroke.
 A soft starting valve brings the installation on pressure with a low adjustable flow. When a certain % of the incoming pressure is reached, the soft starting valve goes to full flow.



Cod.	Port size	Nominal discharge	Weight
A11F	G 1/4"	Qn 1000 l/min.	0,310 kg.
A33F	G 1/2"	Qn 4000 l/min.	0,685 kg.
A54F	G 3/4"	Qn 12000 l/min.	1,480 kg.
A55F	G 1"	Qn 12000 l/min.	1,480 kg.

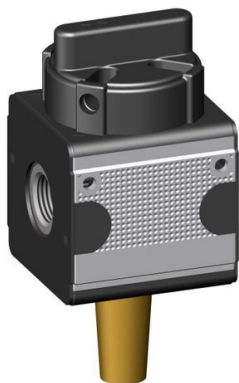
Duration of filling adjustable.



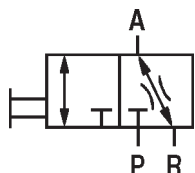
Extendible application

aeration of the mechanery over throttle setting of the starting valve.
 When $P_2 \Rightarrow 50\%$ opens P_1 full profile.
 Pressure release over R

10. MULTI-FIX BALL VALVES



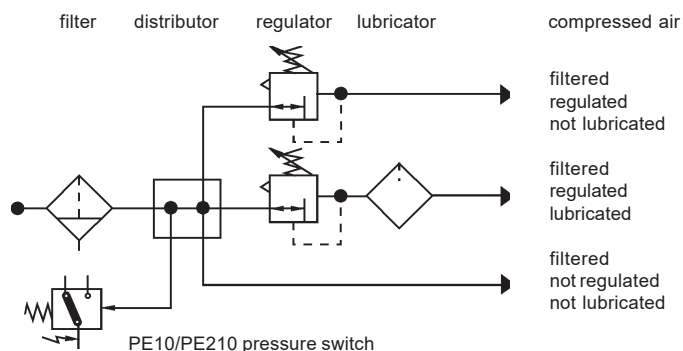
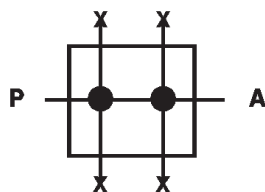
Cod.	Port size	Nominal discharge	Weight	Options
K00	G 1/8"	Qn 1800 l/min.	0,246 kg.	
K01	G 1/4"	Qn 1800 l/min.	0,246 kg.	
K11	G 1/4"	Qn 2800 l/min.	0,360 kg.	
K12	G 3/8"	Qn 2800 l/min.	0,360 kg.	
K33	G 1/2"	Qn 11000 l/min.	0,813 kg.	
K34	G 3/4"	Qn 11000 l/min.	0,813 kg.	
K54AP	G 3/4"	Qn 25000 l/min.	1,826 kg.	
K55AP	G 1"	Qn 25000 l/min.	1,826 kg.	
(threaded connection on 1 side)				
K54-2AP	G 3/4"	Qn 25000 l/min.	1,826 kg.	
K55-2AP	G 1"	Qn 25000 l/min.	1,826 kg.	
(threaded connections on both sides)				
K5-		Qn 25000 l/min.	1,826 kg.	
(without threaded connections)				



11. MULTI-FIX DISTRIBUTION MANIFOLD BLOCK



Cod.	Port size (P / A)	Other connections (x)	Nominal discharge (P -> A)	Options
Z11	G 1/4"	1/4", 1/4", 1/4", 1/8"	Qn 3300 l/min.	Can be equipped with pressure switch PE10 (flanged) or PE210 (1/8")
Z33	G 1/2"	3/8", 1/4", 1/4", 1/8"	Qn 11000 l/min.	
Z54AP	G 3/4"	1/2", 1/2", 1/8"	Qn 25000 l/min.	
Z55AP	G 1"	1/2", 1/2", 1/8"	Qn 25000 l/min.	
(threaded connection on 1 side)				
Z54-2AP	G 3/4"	1/2", 1/2", 1/8"	Qn 25000 l/min.	
Z55-2AP	G 1"	1/2", 1/2", 1/8"	Qn 25000 l/min.	
(threaded connections on both sides)				
Z5-		1/2", 1/2", 1/8"	Qn 25000 l/min.	
(without threaded connections)				



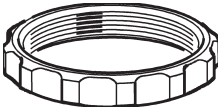
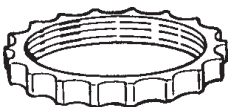
Technical modifications keep in reserve !

(2020/10)

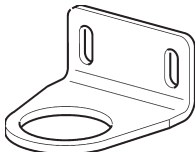
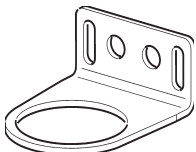
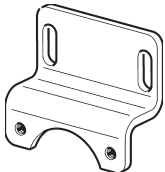
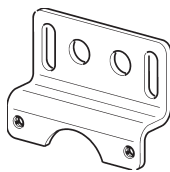
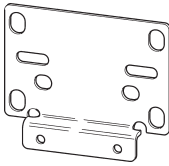
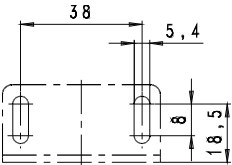
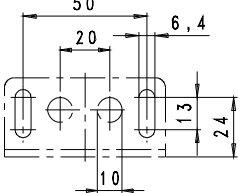
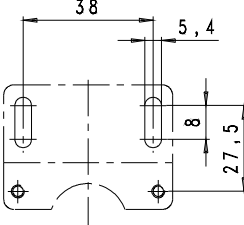
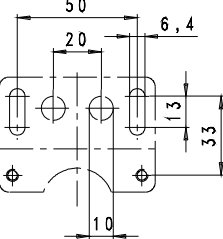
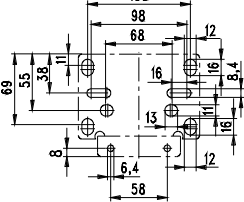
12. MULTI-FIX ACCESSORIES

1. MOUNTINGS

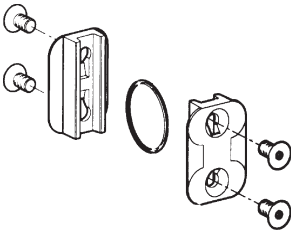
PANEL MOUNT NUTS

Cod. <i>DR0034</i>		Cod. <i>C33-42</i>	
Dimensions (M30 x 1,5)		Dimensions (M50 x 1,5)	

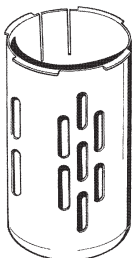
MOUNTING BRACKETS

<i>MW30</i>	<i>MW50</i>	<i>ZW11</i>	<i>ZW33</i>	<i>ZW55</i>
				
				

2. MULTI-FIX COUPLING KITS

	Cod.	Used by	
	KP00	Multi-fix series Size 0 : FRL0- / CL0-	
	KP11	Multi-fix series Size 1 : FRL1- / CL1-	
	KP11Z	Multi-fix series Size 1 : Z11	
	KP33	Multi-fix series Size 3 : FRL3- / CL3-	
	KP33Z	Multi-fix series Size 3 : Z33	
	KP55	Multi-fix series Size 5 : FRL5- / CL5-	
	KP55Z	Multi-fix series Size 5 : Z55	

3. MULTI-FIX BOWL GUARDS

	Cod.	Used by	
	C00-45	Multi-fix series Size 0 : C0- / F0- / L0-	
	C11-45	Multi-fix series Size 1 : C1- / F1- / L1-	
	C33-45	Multi-fix series Size 3 : C3- / F3- / L3-	
		Multi-fix series Size 5 : C5- / F5- / L5-	