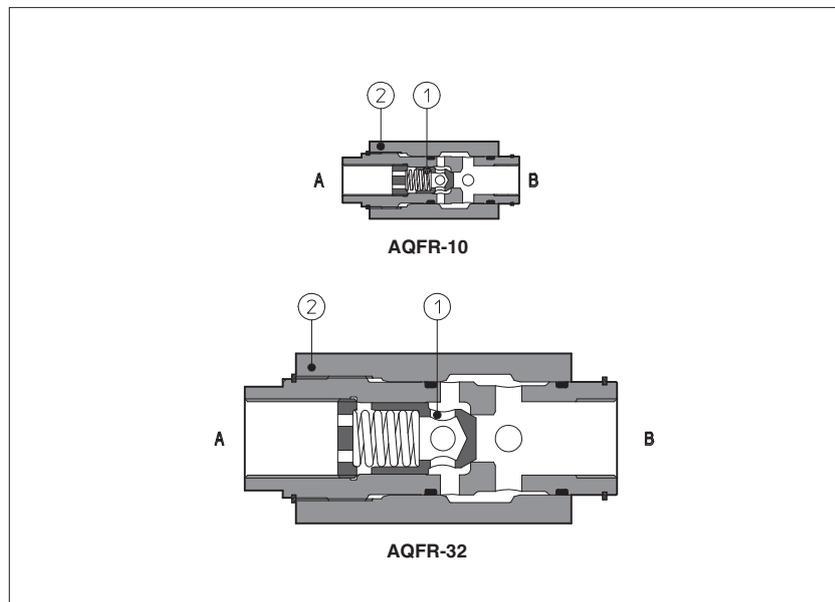


# Flow restrictor valves type AQFR

in-line mounting - from G 3/8" to G 1 1/4" threaded ports



**AQFR** are not compensated flow throttling valves with a built-in check valve ① to allow the free flow in the opposite direction.

The flow adjustment is done by turning the external exagon ②. Clockwise rotation increases the throttling (reduced passage). The regulated flow is a function of the pressure drop existing between the inlet and outlet ports.

They are available in five sizes: from 3/8" to 1 1/4" GAS with flow up 30, 50, 80, 160, 250 l/min respectively and pressure up to 400/350 bar (depending on size).

Max flow: **250 l/min**  
Max pressure: **400 bar**

## 1 MODEL CODE

<b>AQF</b>	<b>R</b>	-	<b>10</b>
Throttling valve in-line mounting			
R = with check valve for free reverse flow			
Size and ports dimensions:			
<b>10</b> = G 3/8"	<b>15</b> = G 1/2"	<b>20</b> = G 3/4"	<b>25</b> = G 1" <b>32</b> = G 1 1/4"

<b>**</b>	/	<b>*</b>
Seals material, see section 3:		
- = NBR		
PE = FKM		
BT = HNBR		
Series number		

## 2 HYDRAULIC CHARACTERISTICS

Hydraulic symbol					
Valve model	<b>AQFR-10</b>	<b>AQFR-15</b>	<b>AQFR-20</b>	<b>AQFR-25</b>	<b>AQFR-32</b>
Max recommended flow [l/min]	30	50	80	160	250
Max pressure [bar]	400	350			

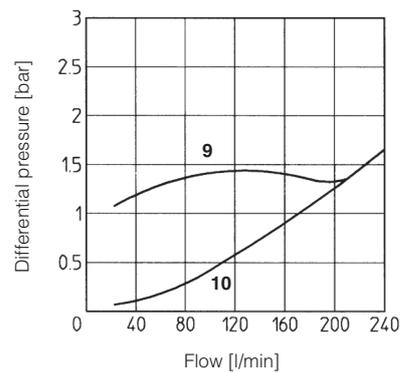
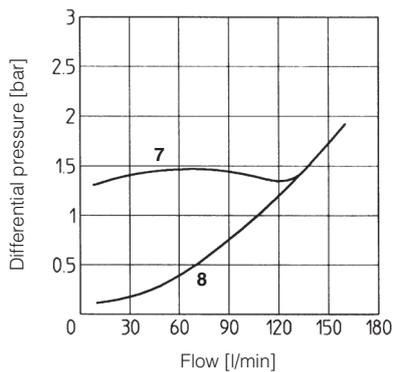
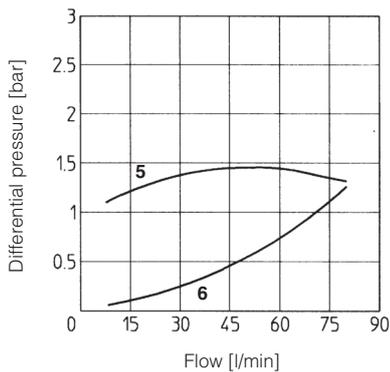
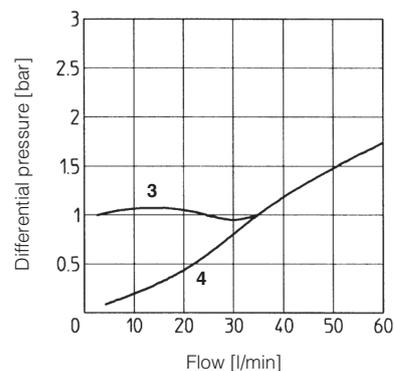
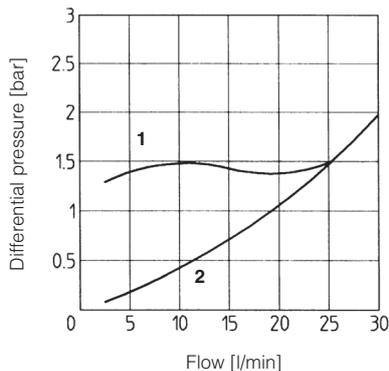
## 3 MAIN CHARACTERISTICS, SEALS AND FLUIDS - for other fluids not included in below table, consult our technical office

Assembly position	Any position		
Compliance	RoHS Directive 2011/65/EU as last update by 2015/65/EU REACH Regulation (EC) n°1907/2006		
Ambient temperature	Standard execution = -30°C ÷ +70°C; /PE option = -20°C ÷ +70°C; /BT option = -40°C ÷ +70°C		
Seals, recommended fluid temperature	NBR seals (standard) = -20°C ÷ +80°C, with HFC hydraulic fluids = -20°C ÷ +50°C FKM seals (/PE option) = -20°C ÷ +80°C HNBR seals (/BT option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C		
Recommended viscosity	15 ÷ 100 mm²/s - max allowed range 2,8 ÷ 500 mm²/s		
Max fluid contamination level	ISO4406 class 20/18/15 NAS1638 class 9, see also filter section at www.atos.com or KTF catalog		
<b>Hydraulic fluid</b>	<b>Suitable seals type</b>	<b>Classification</b>	<b>Ref. Standard</b>
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFDU, HFDR	ISO 12922
Flame resistant with water	NBR, HNBR	HFC	

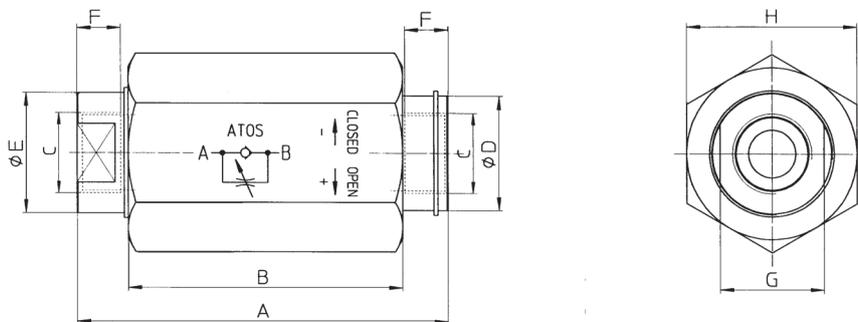
**4 DIAGRAMS** based on mineral oil ISO VG 46 at 50°C

**4.1 Q/Δp diagram through the chec valve for free flow B→A with the throttle valve fully open and fully closed**

- 1 = AQFR-10 fully closed
- 2 = AQFR-10 fully open
- 3 = AQFR-15 fully closed
- 4 = AQFR-15 fully open
- 5 = AQFR-20 fully closed
- 6 = AQFR-20 fully open
- 7 = AQFR-25 fully closed
- 8 = AQFR-25 fully open
- 9 = AQFR-32 fully closed
- 10 = AQFR-32 fully open



**5 DIMENSIONS [mm]**



Valve model	A	B	C	ØD	ØE	F	G	H	Mass [Kg]
<b>AQFR-10</b>	93	68	G 3/8"	28	25	13	24	41	0,7
<b>AQFR-15</b>	105	78	G 1/2"	32	30	15	27	46	1
<b>AQFR-20</b>	127	95,5	G 3/4"	36	34	17	32	55	1,6
<b>AQFR-25</b>	153	112	G 1"	48	45	19	42	75	3,5
<b>AQFR-32</b>	196	145	G 1 1/4"	63	60	21	55	90	6,5