GHM Messtechnik GmbH – Sales Center International
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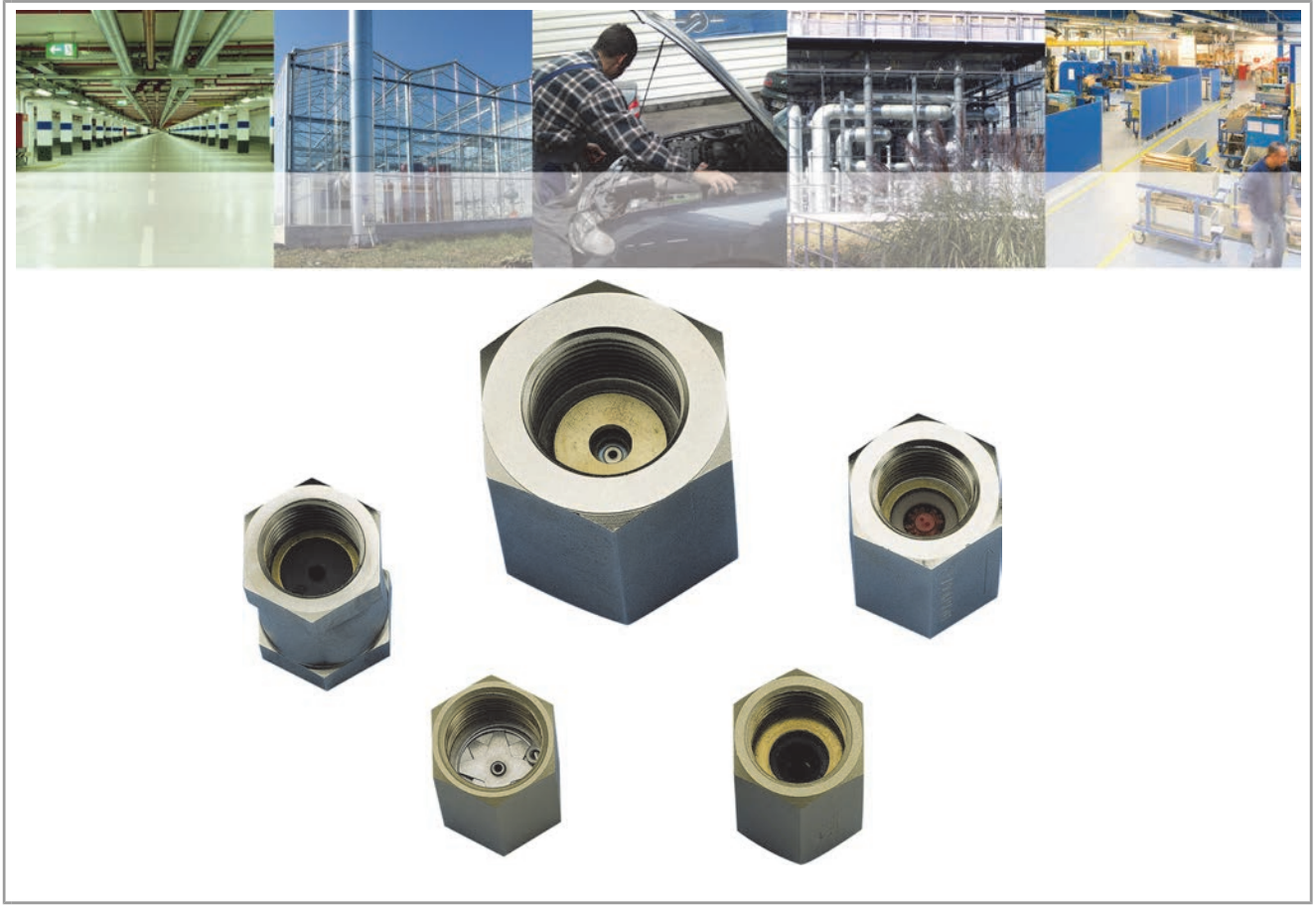
Flow - diaphragm / limiter



Characteristics

System	Flow Diaphragm limiter
Nominal widths	DN 15 - 80
Controlled quantity	0.5..210 l/min
Media	Water Oils
Pressure resistance	Max. 200 bar
Temperature	0..+300 °C

Applications

- **Central feed**
- **Water treatment**
- **Irrigation**
- **Sanitation installations**

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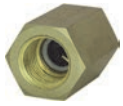
Function and benefits

The medium creates a differential pressure on the diaphragm which causes metal or elastomer elements to be pressed together. This creates a reduction in cross-section which restricts the flow to a fixed value.

Stainless steel diaphragm **Elastomer diaphragm**

1 bar 8 bar 1 bar 8 bar

Device overview

Device		Nominal width	Connection	Con-trolled value l/min	Materials		Pressure resis-tance in bar	Medium tempera-ture	Medium	Page
					Housing	Di-aphragm				
KM-...G		DN 15..20	Female thread G $^1/_2$..G $^3/_4$	1..30	Brass or stainless steel	stainless steel	PN 200	0..300 °C	Water, oils	**3**
KM-...A		DN 20 - 80	Male thread G $^3/_4$ A..G 3 A	1..210	Brass or stainless steel	stainless steel	-	0..200 °C	Water	**4**
WK		DN 15..25	Female thread G $^1/_2$, G 1	3..15	Brass or stainless steel	Elastomer	PN 100	0..65 °C	Water	**5**
WP		DN 15	Female thread G $^1/_2$	0.5..20	Brass	Elastomer	PN 16	0..70 °C	Water	**6**
WT		DN 15	Female thread G $^1/_2$	5..13.5	Brass	Elastomer	PN 100	0..100 °C	Water	**7**

Errors and technical modifications reserved.

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Flow limiter KM-...G

- **Metal construction**
- **Installation location as desired**
- **No need for auxiliary power**

Characteristics

The constant flow is created by two crossways stainless steel spring plates which close or open an annular gap located behind them to a greater or lesser degree, according to the flow value.

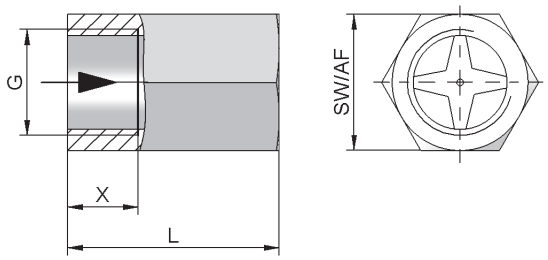
Flow value%
of controlled value

Technical data

Nominal width	DN 15..20			
Process connection	female thread G $^1/_2$..G $^3/_4$			
Controlled values Tolerance	Controlled value	G $^1/_2$	G $^3/_4$	Tolerance
	1 l/min	●		±0.2 l/min
	2 l/min	●		±0.2 l/min
	3 l/min	●		±0.4 l/min
	4 l/min	●	●	±0.4 l/min
	6 l/min	●	●	±0.5 l/min
	8 l/min	●	●	±0.5 l/min
	10 l/min	●	●	±0.7 l/min
	12 l/min	●	●	±0.7 l/min
	16 l/min	●	●	±1.2 l/min
	20 l/min		●	±1.2 l/min
	25 l/min		●	±1.5 l/min
	30 l/min		●	±1.5 l/min
Differential pressure	1.5..10 bar			
Pressure resistance	PS 200 bar			
Media temperature	0..300 °C			
Ambient temperature	0..300 °C			
Medium	water, viscous media up to 30 mm²/s			
Materials medium-contact	*Brass construction:* CW614N nickelled, 1.4310, 1.4122	*Stainless steel construction:* 1.4301, 1.4310, 1.4122		
Weight	see table "Dimensions and weights"			
Installation location	as desired			

Dimensions and weights

G	Nominal width	Type	L	SW	X	Weight kg
G $^1/_2$	DN 15	KM-015G.	40	27	14	0.13
G $^3/_4$	DN 20	KM-020G.	50	36	16	0.30



Ordering code

	1.	2.	3.	4.
KM -		**G**		

For combination option, see table "Technical data"

1.	**Nominal width**			
	015	DN 15 - G $^1/_2$		
	020	DN 20 - G $^3/_4$		
2.	**Process connection**			
	G	female thread		
3.	**Connection material**			
	M	brass		
	K	stainless steel		
4.	**Controlled value H_2O**			
	001	1 l/min		●
	002	2 l/min		●
	003	3 l/min		●
	004	4 l/min	●	●
	006	6 l/min	●	●
	008	8 l/min	●	●
	010	10 l/min	●	●
	012	12 l/min	●	●
	016	16 l/min	●	●
	020	20 l/min	●	
	025	25 l/min	●	
	030	30 l/min	●	

Options

- Inlet side, female thread / outlet side male thread
- Special values
- Selection
- Bypass

Ordering information

- Specify direction of flow, medium, and controlled value.
- For viscous media specify viscosity, temperature, and medium (e.g. ISO VG 10) (enquire about controlled value).

Flow limiter KM-...A

- **Male thread**

- **Metal construction**
- **Installation location as desired**
- **No need for auxiliary power**

Characteristics

The constant flow is created by two crossways stainless steel spring plates which close or open an annular gap located behind them to a greater or lesser degree, according to the flow value.
The controlled value results from the addition of the individual control inputs.

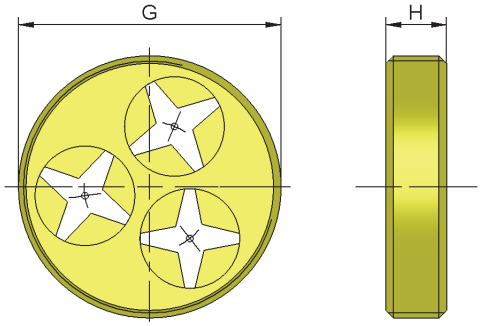
Flow value%
of controlled value

Technical data

Nominal width	DN 32..80		
Process connection	male thread G $^3/_4$ A..G 3 A		
Controlled values	Connection	Controlled value	Control inputs
	G $^3/_4$ A	1.. 30 l/min	1
	G $1^1/_2$ A	2.. 90 l/min	2..3
	G 2 A	3..120 l/min	3..4
	G $2^1/_2$ A	5..150 l/min	5
	G 3 A	6..210 l/min	6..7
	Example: The controlled value of 55 l/min is achieved using a limiter with two control inputs of 30 l/min + 25 l/min.		
Control inputs	individual controlled values for the control inputs		
	1 l/min	6 l/min	16 l/min
	2 l/min	8 l/min	20 l/min
	3 l/min	10 l/min	25 l/min
	4 l/min	12 l/min	30 l/min
Tolerance	to 2 l/min: ±15 % of nominal value from 3 l/min: ±10 % of nominal value		
Differential pressure	2..10 bar		
Media temperature	0..200 °C		
Ambient temperature	0..200 °C		

Medium	water	
Materials medium-contact	*Brass construction:* CW614N nickelled, 1.4310, 1.4301; 1.4121	*Stainless steel construction:* 1.4571, 1.4310, 1.4301; 1.4121
Weight	see table "Dimensions and weights"	
Installation location	as desired	

Dimensions and weights



G	Nominal width	Type	H	Control inputs	Weight kg
G $^3/_4$ A	DN 20	KM-020A.	12	1	0.04
G $1^1/_2$ A	DN 40	KM-040A.	12	2..3	0.11
G 2 A	DN 50	KM-050A.	15	3..4	0.20
G $2^1/_2$ A	DN 65	KM-065A.	15	5	0.30
G 3 A	DN 80	KM-080A.	15	6..7	0.38

Ordering code

KM - 1. [ ] 2. [A] 3. [ ] 4. [ ]

1.	**Nominal width**						
	020	DN 20 - G $^3/_4$ A					
	040	DN 40 - G $1^1/_2$ A					
	050	DN 50 - G 2 A					
	065	DN 65 - G $2^1/_2$ A					
	080	DN 80 - G 3 A					
2.	**Process connection**						
	A	male thread					
3.	**Connection material**						
	M	brass					
	K	stainless steel					
4.	**Controlled value H_2O**						
	001	001..030 l/min					●
		002..090 l/min				●	
	..	003..120 l/min			●		
		005..150 l/min		●			
	210	006..210 l/min	●				

Options

- Special values

Ordering information

- Specify direction of flow, medium, and controlled value.
- For viscous media specify viscosity, temperature, and medium (e.g. ISO VG 10) (enquire about controlled value).

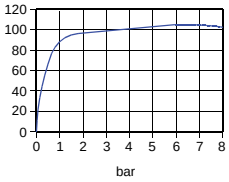
Flow limiter WK

- **Installation location as desired**
- **No need for auxiliary power**

Characteristics

Mechanical flow limiter for fluid media. If the volume flow is tending to increase, an elastomer is compressed. This achieves an almost constant flow value.

Flow value%
of controlled value

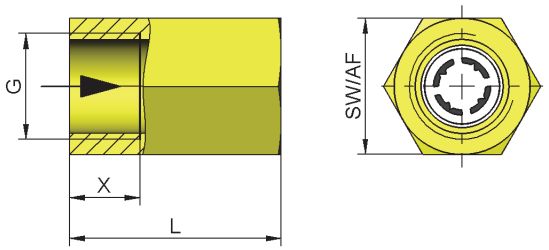


Technical data

Nominal width	DN 15..25		
Connection type	internal thread G $^1/_2$..G 1		
Controlled values	1 l/min	5 l/min	10 l/min
	2 l/min	6 l/min	12 l/min
	3 l/min	8 l/min	15 l/min
Differential pressure	2..10 bar		
Tolerance	±15 % (3,0 l/min ±20 %, 2,0 l/min ±30 %, 1,0 l/min ±50 %)		
Pressure resistance	PN 100 bar		
Media temperature	0..65 °C		
Ambient temperature	0..65 °C		
Medium	water		
Materials media-contact	*Brass construction:* CW614N, POM, NBR, 1.4571		*Stainless steel construction:* 1.4305, POM, NBR, 1.4571
Weight	see table "Dimensions and weights"		
Installation location	as desired		

Dimensions and weights

G	Nominal width	Type	L	SW	X	Weight kg
G $^1/_2$	DN 15	WK-015G.	40	30	12	0.18
G $^3/_4$	DN 20	WK-020G.	40	36	12	0.18
G 1	DN 25	WK-025G.	60	46	20	0.70



Ordering code

	1.	2.	3.	4.
WK -		**G**		

1.	**Nominal width**	
	015	DN 15 - G $^1/_2$
	020	DN 20 - G $^3/_4$
	025	DN 25 - G 1
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	M	brass
	K	stainless steel
4.	**Controlled value H_2O**	
	001	1 l/min
	002	2 l/min
	003	3 l/min
	005	5 l/min
	006	6 l/min
	008	8 l/min
	010	10 l/min
	012	12 l/min
	015	15 l/min

Options

- Inlet side, internal thread / outlet side external thread
- Special values
- Selection
- Bypass

Ordering information

- Specify direction of flow, medium, and controlled value

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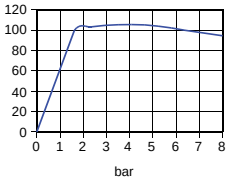
Flow limiter WP

- **Installation location as desired**
- **No need for auxiliary power**

Characteristics

Mechanical flow limiter for fluid media. If the volume flow is tending to increase, an elastomer is compressed. This achieves an almost constant flow value.

Flow value%
of controlled value

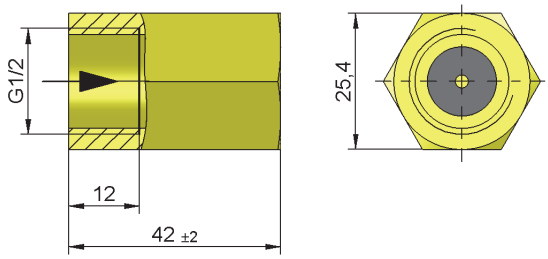


Technical data

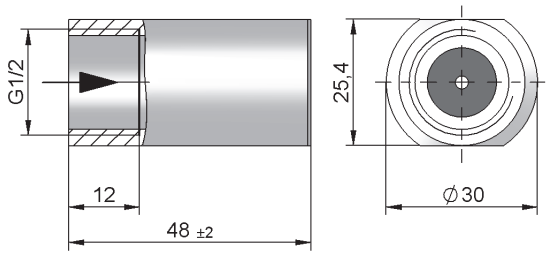
Nominal width	DN 15		
Process connection	female thread G $^1/_2$		
Controlled values	0.5 l/min	4.0 l/min	12.0 l/min
	1.0 l/min	5.0 l/min	15.0 l/min
	1.5 l/min	7.0 l/min	18.0 l/min
	2.0 l/min	8.0 l/min	20.0 l/min
	3.2 l/min	10.0 l/min	
Differential pressure	1..10 bar		
Tolerance	±10 %		
Pressure resistance	PN 16 bar		
Media temperature	0..+70 °C		
Ambient temperature	0..+70 °C		
Medium	water		
Materials medium-contact	CW614N, NBR		
Weight	0.2 kg		
Installation location	as desired		

Dimensions

Brass



Stainless steel



Ordering code

	1.	2.	3.	4.
WP -	**015**	**G**		

❑ = Special option

1.	**Nominal width**	
	015	DN 15 - G $^1/_2$
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	M	brass
	K	❑ stainless steel
4.	**Controlled value H_2O**	
	005	0.5 l/min
	010	1.0 l/min
	015	1.5 l/min
	020	2.0 l/min
	032	3.2 l/min
	040	4.0 l/min
	050	5.0 l/min
	070	7.0 l/min
	080	8.0 l/min
	100	10.0 l/min
	120	12.0 l/min
	150	15.0 l/min

Ordering information

- Specify direction of flow, medium, and controlled value

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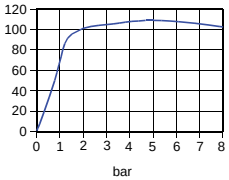
Flow limiter WT

- **Installation location as desired**
- **No need for auxiliary power**

Characteristics

Mechanical flow limiter for fluid media. If the volume flow is tending to increase, an elastomer is compressed. This achieves an almost constant flow value.

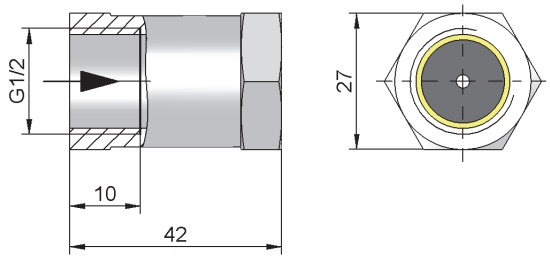
Flow value%
of controlled value



Technical data

Nominal width	DN 15
Process connection	female thread G $^1/_2$
Controlled values	5.0 l/min 7.5 l/min 13.5 l/min
Differential pressure	1.5..8 bar
Tolerance	±15 %
Pressure resistance	PN 100 bar
Media temperature	0..100 °C
Ambient temperature	0..70 °C
Medium	water
Materials medium-contact	CW614N nickelled NBR
Weight	0.2 kg
Installation location	as desired

Dimensions



Ordering code

	1.	2.	3.	4.
WT -	**015**	**G**	**M**	

1.	**Nominal width**	
	015	DN 15 - G $^1/_2$
2.	**Process connection**	
	G	female thread
3.	**Connection material**	
	M	brass
4.	**Controlled value H_2O**	
	050	5.0 l/min H_2O
	075	7.5 l/min H_2O
	135	13.5 l/min H_2O

Ordering information

- Specify direction of flow, medium, and controlled value.

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Product Overview

„Industrial Sensors and Instrumentation“

Temperature
Flow
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Humidity
Pressure
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„Process Instrumentation “Hygienic Design“

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Temperature
Flow
Level / Filling Height
Analysis

“Laboratory Instrumentation“

„Industrial Electronics“

Displays / Controller
Transmitter / Signal conditioning
Isolating converters
Safety and Monitoring Devices
Power Electronics
Calibration and Testing

“Measuring Data Acquisition“

Data Logging and Monitoring
Test Bench Measurement Technology
Renewable Energies