

# **Flow indicator** **RIZUR-VIP**



## Intended use and application area

Sight flow indicators RIZUR-VIP are designed for the sight flow control, as well as quantity and quality control of the medium (liquid, gas, transparent, semi-transparent, coloured) in the temperature conditions of  $-60\text{ }^{\circ}\text{C} \dots +280\text{ }^{\circ}\text{C}/+500\text{ }^{\circ}\text{C}$  (depending on the design variant). The indicator can also help to determine the presence or absence of the media, monitor its colour and transparency. The equipment can be mounted vertically and horizontally.

The direction of the flow is indicated by an arrow on the housing. Sight flow indicators are manufactured with nominal width of 15...500 mm and can be used in the systems with pressure 1,6 MPa, 2,5 MPa, 4,0 MPa (depending on the design variant), as well as up to 6,3 MPa, 10,0 MPa, 16,0 MPa (are possible upon a request).

Sight flow indicators are used for a broad spectrum of control tasks: during transportation and storage of oil and gas products, in the water-supply and drainage systems, for the operation control of the pumping equipment, delivery of the liquid materials in the food industry, etc.



- **ООО «NPO RIZUR» designs and manufactures flow indicators of any non-standard configurations in accordance with the customer's technical requirements.**

## Design description and functions

The sight flow indicator consists of corrosion-resistant steel housing (or any other alloy) 08H17N13M2 (an analogue of AISI 316L). It's possible to control the medium through the observation windows (one or more) on the housing. Due to the graphite or fluoroplast insulation the instrument is completely hermetically sealed. Material choice for this padding depends on the technological process conditions. For the improvement in the flow visibility when working with transparent and clear compositions, instruments of the RIZUR-VIP series are equipped with additional mechanisms. Inside the housing, there can be an impeller (rotary table), a flap (vane) or balls.

Accordingly, the media flow passing through the device makes the impeller turn, the flap – to move back, and the balls – to move around. The stronger the flow – the quicker these processes occur. Impeller, a flap, and balls help identify low-speed flows and medium movement at a distance.



## Flow indicator RIZUR-VIP-1

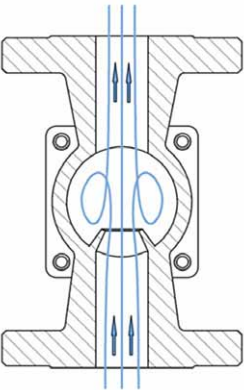
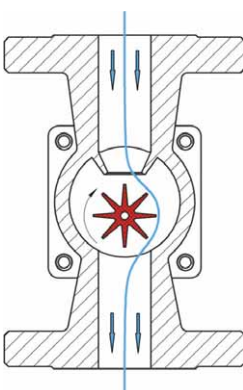
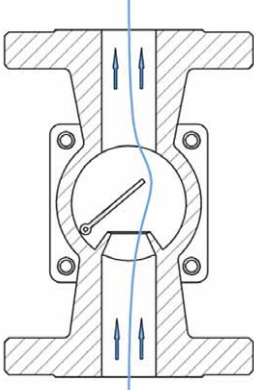


- All mounting positions are possible
- Minimum operation temperature -60 °C
- Average service life - more than 25 years
- Non-standard designs are possible

### Technical specifications

<b>Housing</b>	Stainless steel 03H16N15M3 (an analogue of AISI 316L) Stainless steel 08H17N13M2 (an analogue of AISI 316) Stainless steel 08H18N10 (an analogue of AISI 304) Brass Carbon steel
<b>Observation window</b>	Tempered glass (+150 °C, 1,6 MPa) Borosilicate glass (+280 °C, 16 MPa) Fused quartz glass (+500 °C, 16 MPa)
<b>Insulation</b>	PTFE (+260 °C) Graphite (+500 °C)
<b>Inside nominal diameter</b>	DN15 – DN200 DN 250 and bigger (upon an agreement with the manufacturer)
<b>Process connection</b>	For welding Threaded Flange acc. to GOST, DIN, ANSI
<b>Maximum process temperature</b>	+150 °C +280 °C +500 °C (upon an agreement with the manufacturer)
<b>Maximum pressure</b>	1,6 MPa 2,5 MPa 4,0 MPa 6,3 MPa (upon a customer's request) 10,0 MPa (upon a customer's request) 16,0 MPa (upon a customer's request)
<b>Impeller</b>	PTFE (for the temperatures up to +260 °C)
<b>Flap</b>	Stainless steel 08H17N13M2 (an analogue of SS 316L)
<b>Flow direction</b>	Indicated with an arrow
<b>Optional</b>	Scale Observation window backlight
<b>Warranty period</b>	12 months

### Examples of the media passing

Flow indicator with an observation window	Flow indicator with an impeller	Flow indicator with a flap
		

## Sight flow indicators

### RIZUR-VIP-1



Design version of the housing  
RIZUR-VIP-1-F for DN15-DN50



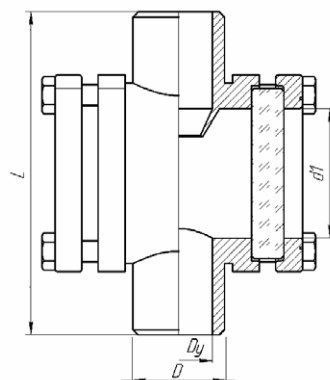
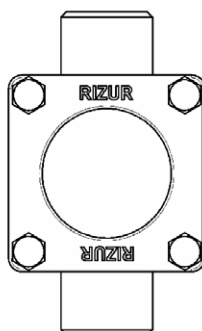
Design version of the housing  
RIZUR-VIP-1-F for DN65-DN200



Design version of the housing  
RIZUR-VIP-1-P for DN65-DN200

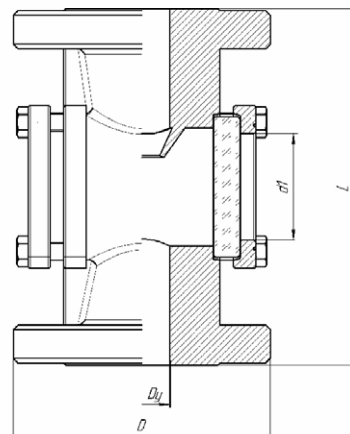
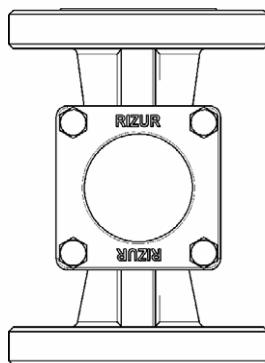
#### Dimensions for RIZUR-VIP-1-P (for welding)

DN	D, mm	L, mm	d1, mm
15	22	130	32
20	28	150	32
25	34	160	48
32	42	180	48
40	49	220	65
50	61	230	80
65	77	290	80
80	90	310	100
100	115	350	125
125	141	400	150
150	170	480	175
200	222	600	175



#### Dimensions for RIZUR-VIP-1-F (for flange connection)

DN	D, mm	L, mm	d1, mm
15	95	130	32
20	105	150	32
25	115	160	48
32	140	180	48
40	150	220	65
50	165	230	80
65	185	290	80
80	200	310	100
100	200 (235)*	350	125
125	250 (270)*	400	150
150	285 (300)*	480	175
200	340 (360/375)*	600	175



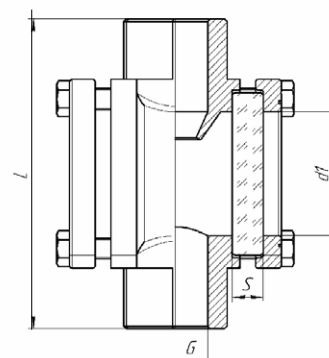
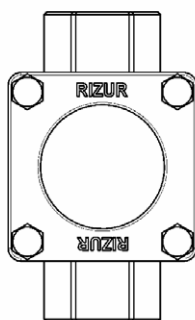
Dimensions «D», specified in ( ), are for the design variants PN25/PN40

## Sight flow indicators RIZUR-VIP-1-R (threaded)



### Dimensions for RIZUR-VIP-1-R (threaded)

G	L	d1
1/4"	100	32
3/8"		
1/2"		
3/4"	120	48
1"		
1 1/4"	160	65
1 1/2"		
2"	230	80



Design version of the housing  
RIZUR-VIP-1-R with an impeller



Design version of the housing  
RIZUR-VIP-1-R with a flap

# Order code for the flow indicator

## RIZUR-VIP-1

Ordering information **RIZUR-VIP-1-F-A/20/16-O-NN-O-F-N-1,0/25**

1 2 3 4 5 6 7 8 9

1. Model	
RIZUR-VIP-1 Sight flow indicator	
2. Design variant	
F	Flange
V	Male thread
R	Female thread
P	For welding
3. Process connection	
Flange	
XX/___/___	Flange acc. to GOST 33259-2015
A	Technical execution A – Flat (Notes: - only for PN1, PN 2,5 and PN 6)
B	Technical execution B – Raised face
C	Technical execution C, L – Tongue face
D	Technical execution D, M – Groove face
E	Technical execution E – Spigot face
F	Technical execution F – Recess face
J	Technical execution J – For an oval gasket
K	Technical execution K – For a lens ring gasket
S	Other design variant (specified in writing outside the order code)
___/XX/___	Nominal pipe size, mm
15	DN15
20	DN20
25	DN25
32	DN32
40	DN40
50	DN50
65	DN65
80	DN80
100	DN100
125	DN125
150	DN150
200	DN200
S	Other design variant (specified in writing outside the order code)
___/___/XX	Nominal pressure, MPa
16	PN 1,6
25	PN 2,5
40	PN 4,0
63	PN 6,3 (upon a customer's request)
100	PN 10,0 (upon a customer's request)
160	PN 16,0 (upon a customer's request)
S	Other design variant (specified in writing outside the order code)

Threaded	
D2	G 1/4"
D3	G 3/8"
D4	G 1/2"
D5	G 3/4"
D6	G 1"
D7	G 1 1/4"
D8	G 1 1/2"
D9	G 2"
S	Other design variant (specified in writing outside the order code)
For welding	
P15	DN15
P20	DN20
P25	DN25
P32	DN32
P40	DN40
P50	DN50
S	Other design variant (specified in writing outside the order code)
4. Media flow indication	
O	Observation window
K	Impeller
Z	Flap
5. Housing material	
NN	Stainless steel 03H16N15M3 (an analogue of AISI 316L)
NS	Stainless steel 08H18N10 (an analogue of AISI 304)
S	Other material (upon an agreement with the manufacturer)
6. Painting	
O	Without painting
XXXX	Painted (colour is acc. to RAL)
7. Insulation	
F	PTFE
T	Graphite
8. Options	
N	Without additions
Sh	Scale
P	Observation window backlighting
S	Other design variant (specified in writing outside the order code)
9. Media parameters	
XX/XX	Operating pressure, MPa/ Operating temperature, °C