

## Dear colleagues and costumers!

Group of companies "EMIS" - a leading manufacturer of equipment for metering and automation of technological processes, offers a catalog of modern devices and integrated systems.

The new 2012 catalog are well-established vortex, rotary, Coriolis flowmeters, rotameters, and several other instruments and related products. Instruments issued by our company are improving every year:

### • EMIS-VORTEX 200 RPM

Vortex Flowmeter. Finalized and in 2012 began production of vortex-vortex flow EMIS 200 RPM. It is intended for use in systems to maintain reservoir pressure. From the existing analogue device EMIS-VORTEX 200 PPD is more reliable at high pressures and polluted environments. Reliable operation is ensured by the special design of the flowmeter sensor

### • EMIS MAG-270

Magnetic Flowmeter Put into production EMIS electromagnetic flowmeter MAG-270. Unlike most domestic counterparts, the device is intended for use in various industrial sectors. A wide range of electrode materials and linings causes the application of the flowmeter to measure the flow of various, including aggressive environments.

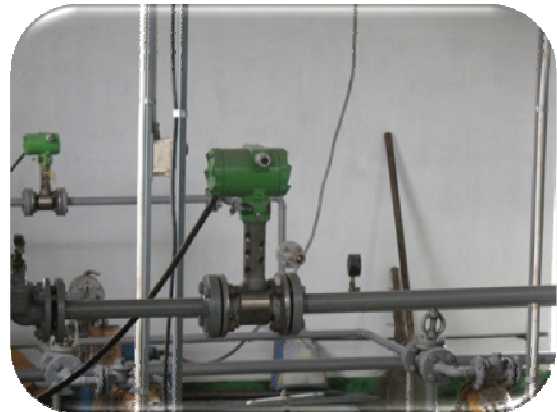
### • EMIS-VECTA 1210.1212, 1215

Updated line filter series EMIS-vectors. For a series of filters EMIS-vectors became available a choice of degree of filtration in the range from 38 to 8000 microns. Just put a lid with quick response, which substantially reduces the time to access the filter element. The undoubted advantage of the newly introduced design version is compatible with the possibility of differential pressure gauges.

### • Flow EMIS to support HART-protocol

For the first time in this catalog are flow EMIS supports HART-Protocol. At the moment of this option is available when ordering rotameters EMIS META-215 and electromagnetic flowmeters EMIS-MAG 270. Active work is underway to implement support for HART-Protocol on the EMIS all flowmeters.

If in this directory you can not find a suitable solution to integrate the flow, highly skilled engineering units have successfully solve the task of designing and manufacturing custom equipment. Features of "EMIS" is not limited to the production and delivery of equipment. We offer a full range of services, including design, installation supervision, maintenance and calibration of equipment.



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## INTELLECTUAL VORTEX FLOWMETER EMIS-VORTEX 200



### APPOINTMENT

Commercial and technological account of saturated and overheated pair, natural gas, compressed air, oxygen, hydrogen and other technical gas. The measurement of the three-dimensional consumption and volume of water, water solutions and the other liquids, including polluted liquids and mixtures of the liquids. They are used in industry and public facilities

### TECHNICAL CHARACTERISTICS

Measured medium.....gas, pair, liquids  
 Temperature of the medium.....from -40 till +460°C  
 Pressure of the medium.....till 4,0 MPa  
 Diameter of pipeline.....from 15 till 300 mm  
 Dynamical diapason.....till 1:46  
 Accuracy of liquid measuring.....till 0,75%  
 Accuracy of pair/gas measuring .....till 1,0%  
 Output signals.....1000Hz / 4-20mA /RS485  
 Explode protection.....1ExibIIB / 1ExibIIC  
 Tension of power supply.....from 10 till 30 B  
 Temperature of the medium.....from -40 till +70°C  
 Dust-moist protection.....IP65  
 Interval between checking.....3 years

### PARTICULARITIES AND ADVANTAGES

Broad dynamic range  
 Pinpoint accuracy of the measurements  
 Independence of accuracy of the measurements from the parameter process change  
 Stable work under high temperature  
 Installation with minimum volume of the erection work  
 Low losses of the pressure in contrast with the narrowing devices  
 Absence of moving parts  
 Reliability and longevity  
 Protection from Hydro hits  
 Does not require service  
 Remote data communication, adjustments, check through RS-485 Modbus RTU  
 Confirmed simulation check even without takedown with pipe line Driving check on liquid stand  
 Quality world-level on Russian prices

### RANGE OF EXPENSES\*

Diameter mm	liquids m3/hour	gas / pair m3/hour
15**	0,2-5	3,2-32
25	0,4-16	3,5-120
32	0,6-26	6-200
40	1-41	9-310
50	1,4-64	14-480
65	2,6-107	24-810
80	4-160	36-1230
100	6-250	60-1920
125	10-400	90-3000
150	14-575	130-4325

\* - the lower limit of gas and pair consumption changes depending on the working conditions

\*\* - the maximum temperature of the measured medium - 100°C

### ATTENTION!

In order to avoid wrong independent selecting of the specification of the equipment, please, make the order, send the filled EMIS examination paper on the flowmeter.

**CARD OF THE ORDER**

The example of the indication for the order:

	1	2	3	4	5	6	7	8	9	10
EMIS-Vortex 200	- ExB	- 050	- G	- H	- C	- T	- 2,5	- 200	- A	- GP

<b>1</b>	<b>The level of explosion protection</b>		
-	Without explosion protection (standard performance)		
ExB	1ExibIIB(T1-T5)X level explosion protection		
ExC	1ExibIIC(T1-T5)X level explosion protection		
<b>2</b>	<b>Diameter of conditional passage</b>		
015	diameter= 15 mm ( allowed temperature of the medium -100°C)	100	Dr = 100 mm
025	Dm = 25 mm	150	Dm = 150 mm
032	Dm = 32 mm	200	Dm = 200 mm
050	Dm = 50 mm	250	Dm = 250 mm
080	Dm = 80 mm	300	Dm = 300 mm
<b>3</b>	<b>Measured medium</b>		
L	Liquids and mixes of liquids		
G	Gas		
P	Pair (saturated and overheated)		
O	Oxygen		
<b>4</b>	<b>Materials, contacting with the medium</b>		
H	Stainless steel (standard performance)		
KH	Acidproof stainless steel		
X	Hit-strong corrosion-steadfast alloy on the nickel base by "hastelloy" type		
<b>5</b>	<b>Joining with pipeline</b>		
S	Non- flanged sandwich(standard performance)		
SU	Non-flanged for the changing of narrowing devices		
F1	Flanged with flanges, which are made of carbon steel (just for Diameter≥ 100 mm)		
F2	Flanged with flanges, which are made of stainless steel		
M	Muffed (feeding)		
<b>6</b>	<b>The construction of streamline body</b>		
-	Non-withdrawable streamline body (standard performance)		
T	Withdrawable streamline body (just for diameters ≥ 50 mm)		
<b>7</b>	<b>Allowed medium pressure</b>		
2,5	Maximal pressure – 2,5 MPa (standard performance)		
4,0	Maximal pressure – 4,0 MPa (just for «FSt », «FN» и «M» performance)		
<b>8</b>	<b>Allowed medium temperature</b>		
100	Maximal temperature – 100 °C		
250	Maximal temperature – 250 °C (standard performance)		
320	Maximal temperature – 320 °C		
460	Maximal temperature – 460 °C		
<b>9</b>	<b>Analog current output</b>		
-	Without this current output signal (standard performance)		
A	Analog current output signal 4-20 mA, unified in addition		
<b>10</b>	<b>State check</b>		
-	Without the state check (on the technical needs)		
GP	With the state check (for commercial account)		

**Extra complectation**

Indication	Explanation
EMIS-Vortex 200.000	The complex of erection parts (flanges, laying, bolts, nuts, pucks)
EMIS- Vortex 200.VT	The technological insertion for the suitable montage
EMIS- Vortex 200.KIP	The kit of the cables for simulation check
Power supply-BREEZE 90	provides flowmeters' supply
Power supply EMIS-BREEZE 10	Provides flowmeter's supply on spark safe chain

## IMMERSIBLE VORTEX FLOWMETER EMIS-VORTEX 205



### APPOINTMENT

Used in systems of commercial and technological account of the liquids, gas, pair. Is fixed on pipe lines with diameters from 200 till 2000 mm.

### TECHNICAL CHARACTERISTICS

Measured medium.....gas,pair,liquids  
 Temperature of the medium.....from -40 till +250°C  
 Pressure of the medium.....from 4,0 MPa  
 Diameter of pipeline.....from 200 toll 2000 mm  
 Dynamical diapason.....1:12  
 Accuracy of the measuring.....±2,5%  
 Output signals.....1000Hz/ 4-20mA  
 Tension of power supply.....3,6 / 24 B  
 Temperature of the medium.....from -25 till +55°C  
 Dustwaterprotection.....IP65

### RANGE OF EXPANCES

Dm, mm	Liquids, m3/hour	Gas/pair, m3/hour
200	55-570	560-4530
250	88-885	880-7070
300	125-1275	1270-10180
350	170-1735	1730-13860
400	225-2265	2260-18100
450	286-2870	2860-22905
500	350-3540	3530-28275
600	505-5090	5085-40715
700	690-6930	6925-55420
800	900-9050	9045-72380
900	1145-11450	11450-91605
1000	1410-14140	14135-113095
1100	1710-17110	17100-136840
1200	2035-20360	20230-162850
1300	2385-23895	23890-191125
1400	2770-27710	27705-221660
1500	3170-31800	31700-254455
1600	3610-36200	36105-289510
1800	4580-45850	45750-366410
2000	5650-56550	56545-452365

### PARTICULARITIES AND ADVANTAGES

Independence of accuracy of the measurements from the parameters of the process measurements  
 Installation with minimum volume of the erection works

Absence of the motioning parts

Reliability and longevity

No need in service expense

Counter of consumption with indicator

Autonomous power supply from the built-in battery  
 3,6 B

Quality of the world-level on Russian prices

### SUPPLY SET

№ pn	Name	Amount
1	Flowmeter	1
2	Passport	1
3	Certificate about the check (with the order with state check)	1
4	Manual of the usage	1

**CARD OF THE ORDER**

Example of the indication in the order:

	1	2	3	4	5	6	7	8	9
EMIS-Vortex 205	- Ex	- 400	- L	- H	- 1,6	- 250	- CC	- F	- GP

<b>1</b>	<b>Explode protection</b>
-	Without explosion protection (standard performance)
Ex	1ExIIIC(T1-T5)X level explosion protection
<b>2</b>	<b>Pipeline diameter</b>
200	Dm = 200 mm
2000	Dm = 2000 mm
XXXX	Dm = XXXX mm (where XXXX – is the meaning between 200 and 2000)
<b>3</b>	<b>Measured medium</b>
L	Liquids and mixes of liquids
G	Gas (all except oxygen)
P	Pair (saturated and overheated)
<b>4</b>	<b>Materials, contacting with the medium</b>
H	Stainless steel (standard performance)
OTHER.	Other materials (up to the order)
<b>5</b>	<b>Allowed medium pressure</b>
1,6	Maximal pressure – 1,6 MPa (standard performance)
2,5	Maximal pressure – 2,5 MPa
4,0	Maximal pressure – 4,0 MPa
<b>6</b>	<b>Allowed medium temperature</b>
100	Maximal temperature – 100 °C
250	Maximal temperature – 250 °C
<b>7</b>	<b>Build-in indicator-counter</b>
-	No indicator (standard performance)
CC	Consumption counter with indicator
<b>8</b>	<b>Output signal</b>
F	frequency 0-1000 Hz (standard performance)
A	Analog 4-20 Ma
<b>9</b>	<b>State check</b>
-	Without state check (on technical needs)
GP	With state check (for commercial account)

**EXTRA COMPLECTATION**

Indication	Explonation
EMIS-Vortex 205.000	The complex of erection parts (flanges, laying, bolts, nuts, pucks)
Stop valve	Provides the repeatedmontage / demontage with process non-stop
Power supply EMIS-BREEZE 90	Provides the flowmeter's supply
Power supply unit EMIS-BREEZE 10	Provides flowmeter's supply on spark safe chain

**ATTENTION!**

In order to avoid wrong independent selecting of the specification of the equipment, please, making the order, send the filled EMIS examination paper on the flowmeter.

## PLASTIC ROTMETER EMIS-META 210



## APPOINTMENT

The measurement of the single-phase smoothness changing flow of the liquids and gas.

Used mainly in systems of water cleaning and water preparing, also can be used in chemical, oil, food, cellulose-paper industry, medicine.

## TECHNICAL CHARACTERISTICS

Liquid consumption.....0,03-700l/min  
 Gas consumption.....0,5-720l/min  
 Accuracy.....±4%  
 Repeatability.....±0,25%  
 Maximal pressure.....1MPa  
 Maximal temperature.....80°C  
 Material of the joining.....plastic ABS  
 Material of the measuring.....mechanism. stainless steel  
 Material of the rotmeter..... (PMMA)

## VARIANTS OF THE PERFORMANCE

Indication	Dm, mm	Consumption diapason, m3/hour	
		min	max
<b>Liquid consumption</b>			
ЭМ 210-015A-L	15	0,016	0,16
ЭМ 210-015B-L	15	0,06	0,6
ЭМ 210-025A-L	25	0,16	1,6
ЭМ 210-025B-L	25	0,25	2,5
ЭМ 210-032A-L	32	0,4	4
ЭМ 210-032B-L	32	0,6	6
ЭМ 210-065C-L	50	1	10
ЭМ 210-050B-L	50	1,6	16
ЭМ 210-065A-L	65	5	25
ЭМ 210-065B-L	65	8	40
ЭМ 210-050A-L	65	12	60
<b>Controlled liquid consumption</b>			
ЭМ 210-P-008A-L	8	0,002	0,02
ЭМ 210-P-008B-L	8	0,004	0,04
ЭМ 210-P-008C-L	8	0,006	0,06
ЭМ 210-P-008D-L	8	0,01	0,1
ЭМ 210-P-010A-L	10	0,03	0,24
ЭМ 210-P-010B-L	10	0,06	0,42
ЭМ 210-P-010C-L	10	0,12	1,08
ЭМ 210-P-025A-L	25	0,16	2,4
ЭМ 210-P-025B-L	25	0,6	4,2
<b>Controlled gas consumption</b>			
ЭМ 210-P-008A-G	8	0,03	0,3
ЭМ 210-P-008B-G	8	0,06	0,6
ЭМ 210-P-008C-G	8	0,12	1,2
ЭМ 210-P-008D-G	8	0,24	2,4
ЭМ 210-P-010A-G	10	0,72	7,2
ЭМ 210-P-010B-G	10	1,4	14
ЭМ 210-P-010C-G	10	2,8	28
ЭМ 210-P-010D-G	10	4,3	43
ЭМ 210-P-025A-G	25	7	70
ЭМ 210-P-025B-G	25	10	100

## PARTICULARITIES AND ADVANTAGES

Direct sensing of importances of the consumption

Installation with minimum volume of the erection work

No need in adjustment before the montage, immediately ready for exploitation

spec. qualifications is not required for montage

Presence of the regulator of the consumption

Reliability and longevity

Low cost

Stable work

## SUPPLY SET

No pn	Name	Amount
1	Rotameter	1
2	Manual of the usage. passport	1
3	Package	1

## ATTENTION!

In order to avoid wrong independent selecting of the specification of the equipment, please, making the order, send the filled EMIS examination paper on the flowmeter

## METALLIC ROTAMETR EMIS-META 215



### APPOINTMENT

Metallic rotameters unlike plastic or glass rotameters are different, because of the possibility of the using under high pressure and temperature of the measured medium. Rotameters of EMIS-META 215 series measure the consumption with its pinpoint accuracy, suitable in installation and can convert the importance of the consumption in standard analog signal 4-20 mA.

### TECHNICAL CHARACTERISTICS

Diapasons of liquid consumption.....2.5-100 000 l  
 Diapasons of gas consumption....0.07-3000 m<sup>3</sup>/hour  
 Diameters.....from 15 till 100 mm  
 Accuracy of the measuring.....till 1,0%  
 Pressure of measured medium.....till 10 MPa  
 Temperature of measured .....from -80 till 250°C  
 Temperature of medium.....from -25 till 55°C  
 Dustwaterprotection.....IP65

### DIAPASON OF CONSUMPTION

Dm, mm	Diapason of consumption			Pressure		
	water, l/h		Gas m <sup>3</sup> /hour	water, l/h		water, l/h
	performance H (stainless. steel)	performance (fluoroplastic)		performance H (stainless. steel)	performance (fluoroplastic)	
015A	2,5-25	-	015A	2,5-25	-	015A
015B	4-40	2,5-25	015B	4-40	2,5-25	015B
015C	6,3-63	4-40	015C	6,3-63	4-40	015C
015D	10-100	6,3-63	015D	10-100	6,3-63	015D
015I	16-160	10-100	015I	16-160	10-100	015I
015F	25-250	16-160	015F	25-250	16-160	015F
015G	40-400	25-250	015G	40-400	25-250	015G
015H	63-630	40-400	015H	63-630	40-400	015H
025A	100-1000	63-630	025A	100-1000	63-630	025A
025B	160-1600	100-1000	025B	160-1600	100-1000	025B
025C	250-2500	160-1600	025C	250-2500	160-1600	025C
025D	400-4000	250-2500	025D	400-4000	250-2500	025D
040A	500-5000	300-3000	040A	500-5000	300-3000	040A
040B	600-6000	350-3500	040B	600-6000	350-3500	040B
050A	630-6300	400-4000	050A	630-6300	400-4000	050A
050B	1000-10000	630-6300	050B	1000-10000	630-6300	050B
050C	1600-16000	1000-10000	050C	1600-16000	1000-10000	050C
080A	2500-25000	1600-16000	080A	2500-25000	1600-16000	080A
080B	4000-40000	2500-25000	080B	4000-40000	2500-25000	080B
100A	6300-63000	4000-400000	100A	6300-63000	4000-400000	100A
100B	20000-100000	-	100B	20000-100000	-	100B

**CARD OF THE ORDER**

Example of the indication in the order::

	1	2	3	4	5	6	7
EMIS-META 215	-	L	H	100	4,0	CC	A

	1	2	3	4	5	6	7
	<b>Consumption diapason</b>						
XXX	Seethe table of consumption diapason						
	<b>Measured medium</b>						
L	Liquid						
G	Gas						
	<b>Material of the running part</b>						
H	Stainless steel						
F	fluoroplastic						
	<b>Allowed medium temperature</b>						
-80	from -80 till 30 °C						
100	from - 40 till 100 °C						
150	from- 40 till 250 °C						
	<b>Allowed medium pressure</b>						
1,6	Maximal pressure – 1,6 MPa						
4,0	Maximal pressure – 10 Mpa						
	<b>Electronical indication</b>						
-	arrow shaped, mechanical indication						
CC	Electronical indication						
	<b>Analog output signal</b>						
-	No output signal						
A	4-20 mA						

**ATTENTION!**

In order to avoid wrong independent selecting of the specification of the equipment, please, making the order, send the filled EMIS examination paper on the flowmeter

## ELECTRONICAL LIQUID FLOWMETER EMIS-PLAST 220



### APPOINTMENT

Intended for the measurement of liquids consumption in pressure pipe line, and are used in oil, chemical, metallurgical, light ranges of industry. Instruments are used for measurement of water and oil with water consumption on oil gaining bore hole, consumption of the sewages, oils and food oils.

### TECHNICAL CHARACTERISTICS

Diameter of conditional passage.....from 8 till 300mm  
 Accuracy of the consumption measuring .....до 1,0%  
 Output signals.....1000Hz /4-20mA/  
 Maximal pressure..... till 42 MPa  
 Temperature of the measured medium.....-40°C...+150°C  
 Temperature of the medium.....-40°C...+55°C  
 Explode protection.....ExdIIB6  
 Dustwaterprotection..... IP65

### DIAPASON OF CONSUMPTION



Dm, mm	Range of diapasons m3/hour depending on accuracy of the measurement			
	Full diapason		Standard diapason	
	water 2,5%	Oil 1,5%	water 1,5%	oil 1,0%
8	0,08 – 0,8		8	
15	0,12 – 1,5		15	
20	0,2 – 4		20	
25	0,5 – 7		25	
40	1,5 – 15		40	
50	2 – 25		50	
65	5 – 60		65	
80	6 – 100		80	
100	18 – 250		100	
150	30 – 400		150	
200	70 – 700		200	
250	120 – 1500		250	
300	150 – 2000		300	

### PARTICULARITIES AND ADVANTAGES

Wide dynamic range  
 Consumption measurement in pipe line with high pressure;  
 Non-littering construction;  
 Work in condition corrosion activities of the medium;  
 Stable work under high pressures

### ATTENTION!

In order to avoid wrong independent selecting of the specification of the equipment, please, making the order, send the filled EMIS examination paper on the flowmeter

**CARD OF THE ORDER**

Example of the indication in the order:

		1		2		3		4		5		6		7
EMIS-PLAST 220	-	Ex	-	050	-	H	-	2,5	-	80	-	CC	-	F

**1 Explode protection**

- Without explosion protection (standard performance)

Ex Exib(d)IIBT6 level explode protection

**2 Diameter of the conditional passage**

008 8 MM 025 25 MM 065 65 MM 50 150 MM

015 15 MM 040 40 MM 080 80 MM 200 200 MM

020 20 MM 050 50 MM 100 100 MM 250 250 MM

**3 Materials, contacting with the medium**

CS Carbon steel

H Stainless steel

OTHERS Other materials (up to the order)

**4 Allowed medium pressure**

2,5 Maximal pressure – 2,5 MPa

4,0 Maximal pressure – 4,0 MPa

6,3 Maximal pressure – 6,3 MPa

16,0 Maximal pressure – 16,0 MPa

25,0 Maximal pressure – 25,0 MPa

42,0 Maximal pressure – 42,0 MPa

**5 Allowed medium temperature**

80 from -40 till 80 °C

150 from 0 till 150 °C

**6 Build-in indicator-counter**

- No indicator

CC Consumption counter with indicator

**7 Output signal**

F frequency 0-1000 Hz

A analog 4-20 mA

**SUPPLY SET**

№ pn	Name	Amount
1	Flowmeter	1
2	Passport	1
3	Manual of the usage	1

**EXTRA COMPLECTATION**

Indication	Explanation
EMIS-PLAST 220.KMH	The complex of erection parts (flanges, laying, bolts, nuts, pucks)
EMIS-PLAST 220. VT	Technological insertion for convenience of the montage
Power supply unit EMIS-BREEZE 90	Provides power supply of the flowmeter

## ELECTRONIC FLOWMETER FOR LIQUIDS WITH THE CONSUMPTION REGULATOR EMIS-PLAST 200 P



### DESCRIPTION

The unique decision, combining in itself a liquids flowmeter, a valve and a control mechanism.

Fine suits for using in systems of the automatic measurement and for controlling of the consumption in systems of batching. It can be broadly used in systems of the maintenance of seam pressures (PPD), as well as for measurement of the consumption of water and oils with water on oil-producing bore holes.

Protection from the mechanical contamination and oiling allow using this flowmeter for accounting of the consumption of the sewages.

### TECHNICAL CHARACTERISTICS

Diameter of the conditional passage..from 25 to 80 mm  
 Accuracy of the consumption measurements.....till 1,0%  
 Output signals.....1000 hertz /4-20mA  
 Maximal pressure.....till 40 MPa  
 Temperature of the measured ambience...-40°C...+150°C  
 Temperature of the surrounding ambiances.....-20°C...+55°C  
 Dust and moisture protection..... IP65

### PARTICULARITIES AND ADVANTAGES

Autonomous charging

Automatic and manual regulation of the expense

Compact design

Wireless digital interface

Multifunctional system on price of the flowmeter

System does not require an additional adjustment

#### ATTENTION!

In order to avoid the wrong independent selecting the specification of the equipment, please, send us the filled examination paper EMIS on the chosen flowmeter while you are making the order.  
 Flowmeter selection and the range of the consumption selection can be realized by means of specialized program EMIS-Selector.

### RANGE OF CONSUMPTION

Dr, MM	Range of consumption depending on accuracy of the measurement,	
	Full range, m <sup>3</sup> /h	Normalized range, m <sup>3</sup> /h
25	1,0-5,0	0,5-7,0
40	2,0 -9,0	0,8-12,0
50	3,0-20,0	1,2-20,0
80	20,0-80	10,0-150

### PRINCIPAL OF THE ACTION

The customer installs the required range of the consumption locally through the button management or remotely through the interface. In process of the work the control mechanism checks the position of the valve, in purpose of the maintenance of the necessary consumption. The process of the valve controlling is produced not only automatically, but also manually that provides efficient using of the flowmeter in systems of batching.

### KIT OF THE SUPPLY

No	Name	Amount
1	Flowmeter	1
2	Manual of the usage. Passport.	1

**CARD OF THE ORDER**

Example of the indication at order EMIS-PLAST 220P

	1		2		3		4		5		6		7		8	-	9
-	025	-	-	-	H	-	-	-	25	-	80	-	CI	-	Ч	-	RS

1	DIAMETER OF THE CONDITIONAL PASSAGE
025	Dr=25 mm
040	Dr=40 mm
050	Dr=50 mm
080	Dr=80 mm
X	Special order
2	Range of consumption
-	standard in accordance with the program Selector
X	spec. Order
3	Material of the running part
CT	Carbon steel
H	Stainless steel
X	spec. Order
4	Join with the pipe line
-	in accordance with manual
X	spec. Order
5	Nominal pressure
16	Maximal pressure 16 MPa
25	Maximal pressure 25 MPa
40	Maximal pressure 40 MPa
X	spec. Order
6	Temperature of the measured ambience
80	from -40 till 80°C
150	from -40 till 150°C
X	spec. Order
7	Presence of the counter of the indicator
-	No indicator
CI	Counter-indicator with the base set of functions (look manual).
X	spec. Order
8	Output signals
Ч	Frequency output signal
A	Analog current 4-20mA signal
X	spec. Order
9	Digital interface
-	Non
RS	interface RS-485
W	wireless data communication
X	spec. Order

**ADDITIONAL COMPLETING**

Indication	Explanation
EMIS-PLAST 220P. KmH	Kit of the erection parts (flange, layings, bolts, nuts, pucks)
EMIS-PLAST 220P. Vt	Technological insertion as a matter of the montage convenience
Power supply unit EMIS-BREEZE 90	Provides flowmeter's charging

## HIGH-ACCURACY ROTARY LIQUID FLOWMETER EMIS-DIO 230



### APPOINTMENT

Commercial and technological account of the liquids with pinpoint accuracy till 0,1%. The measurement of the consumption of liquefied gas, light oil products, oils, oils with water, fuel oil and others viscous liquids. Used on factories of the fuel-energy complex and other branches of the industry.

### TECHNICAL CHARACTERISTICS

Measured medium..... liquefied gas, liquides  
 Medium viscosity.....till 20000 mPa\*c  
 Medium temperature.....from -30 till +250°C  
 Medium pressure.....till 6,4 MPa  
 Diameter of the pipeline.....from 8 till 400 mm  
 Accuracy of the measuring.....0,5 / 0,25%  
 Output signals.....1000Hz / 4-20mA /RS485  
 Explode protection.....ExdIIC  
 Power supply tension.....3,6 B / 24 B  
 Temperature of surrounding .....from -40 till +80°C  
 Dustwaterprotection.....IP65

### PARTICULARITIES AND ADVANTAGES

Pinpoint accuracy of the measurements  
 No requirements to the direct parts  
 High reliability, noiseless work  
 Feeding from the built-in lithium battery  
 Built-in counter indicator of the consumption

Dm, mm	0,3 – 0,8 cSt			2-400 cSt		
	Benzene, liquefied gas, kerosene, water			Diesel fuel, oil, fuel oil		
	Full diapason	0,5%	0,25%	Full diapason	0,5%	0,2%
8	0,024-0,3	0,06-0,3	0,1-0,3	0,009-0,3	0,03-0,3	0,06-0,3
15A	0,064-0,8	0,2-0,8	0,27-0,8	0,024-0,8	0,08-0,8	0,16-0,8
15B	0,08-1,0	0,33-1,0	0,2-1,0	0,03-1,0	0,1-1,0	0,2-1,0
15C	0,32-3	0,6-3	-	0,12-4	0,4-4	-
25A	0,48-6	1,5-6	2-6	0,18-6	0,6-6	1,2-6
25B	0,8-8	3-8	-	0,3-10	1-10	-
40	2-20	8-20	8-20	0,75-25	2,5-25	4,4-22
50	3,2-36	9-36	15-36	1,2-40	4-40	7,2-36
80	7,2-80	20-80	32-80	2,7-90	9-90	16-80
100	9,6-100	25-100	40-100	3,6-120	12-120	20-100
150	20-225	55-225	88-220	7,5-250	25-250	44-220
200	32-360	90-360	150-360	12-400	40-400	72-360
250	48-540	135-540	180-540	18-600	60-600	108-540
300	80-900	220-900	300-900	30-1000	100-1000	180-900
400	144-1600	400-1600	550-1600	54-1600	180-1800	320-1800

### ATTENTION!

In order to avoid wrong independent selecting of the specification of the equipment, please, making the order, send the filled EMIS examination paper on the flowmeter

**CARD OF THE ORDER**

Example of the indication in the order:

	1	2	3	4	5	6	7	8	9	10
EMIS-DIO 230	- ExB	- 050	- BL	- CT	- 1,6	- 80	- 0,5	- CC	- A	- GP

<b>1</b>	<b>Level of explode protection</b>
-	Without explosion protection (standard performance)
Ex	ExdIICT6 level explode protection
<b>2</b>	<b>Diameter of the conditional passage</b>
008	Dm = 8 mm
015A	Dm = 15 mm (performance for A diapason)
015B	Dm = 15 mm (performance for B diapason)
015C	Dm = 15 mm (performance for C diapason)
025A	Dm = 25 mm (performance for A diapason)
025B	Dm = 25 mm (performance for B diapason)
032	Dm = 32 mm
050	Dm = 50 mm
080	Dm = 80 mm
100	Dm = 100 mm
150	Dm = 150 mm
200	Dm = 200 mm
250	Dm = 250 mm
300	Dm = 300 mm
<b>3</b>	<b>Measured medium</b>
-	Liquids with viscosity more, then 1 mPa*c
BL	Benzene and n liquefied
<b>4</b>	<b>Materials for running parts</b>
CT	Rotary mechanism and carbon steel body
H1	Роторный mechanism, which is made of stainless steel, carbon steel body
H2	Роторный mechanism and body, made of stainless steel
<b>5</b>	<b>Allowed medium pressure</b>
1,6	Maximal pressure – 1,6 MPa
2,5	Maximal pressure – 2,5 MPa
4,0	Maximal pressure – 4,0 MPa
6,4	Maximal pressure – 6,4 MPa
<b>6</b>	<b>Allowed medium temperature</b>
80	Maximal temperature – 80 °C
150	Maximal temperature – 150 °C
250	Maximal temperature – 250 °C
<b>7</b>	<b>Accuracy class</b>
0,5	accuracy 0,5%
0,25	accuracy 0,25%
<b>8</b>	<b>Counter indicator</b>
-	Absent
CC	Built-in counter of the three-dementional consumption with indicator
<b>9</b>	<b>Output signal</b>
F	frequency 0-1000 Hz
A	Analog 4-20 Ma
<b>10</b>	<b>State check</b>
-	Factory check
GP	State check

**EXTRA COMPLECTATION**

Indication	Explanation
EMISC-DIO 230.KMH	The complex of erection parts (flanges, laying, bolts, nuts, pucks)
EMIS-WEKTA	Filter for the liquid cleaning from the admixture (for stable work)
EMIS-BREEZE power supply 90	Provides flowmeter with power supply

## MASS FLOWMETER EMIS-MASS 260



### APPOINTMENT

Intended for measurement of the mass consumption, density and the temperature of the liquids and gas. Mass flowmeters are used for technological and commercial account in different branches of industry: oil, petrochemical, chemical, pharmaceutical, cellulose-paper, food, on factories of the fuel-energy complex.

### TECHNICAL CHATACTERISTICS

Diameter of the conditional passage....from 10 till 200mm  
 Accuracy of consumption measuring.....0,15%, 0,25%,  
 0, 5%  
 Accuracy of temperature measuring..... $\pm 1^{\circ}\text{C}$   
 Accuracy of density measuring..... $\pm 0,002 \text{ g/sm}^3$   
 Repeatability..... $\leq 0,01\%$   
 Output signals.....frequency /4-2mA  
 Nominal pressure.....till 6,3 MPa  
 Temperature of the measured medium..... $-50^{\circ}\text{C} \dots +350^{\circ}\text{C}$   
 Temperature of surrounding medium..... $-40^{\circ}\text{C} \dots +55^{\circ}\text{C}$   
 Explode protection.....Exib(d)IICT6  
 Dustwaterprotection..... IP65

### DIAPASON IF CONSUMPTION

Dm	Range of consumption t/h depending on class of accuracy		
	Full diapason	0,15%	0,25%,0.5%
10	0,02-1	0,15-1	0,08-1
15	0,04-2	0,3-2	0,15-2
20	0,08-4	0,6-4	0,4-4
25	0,12-6	1-6	0,6-6
40	0,6-30	5-30	3-30
50	1-50	8-50	5-50
80	2,4-120	20-120	12-120
100	4-200	30-200	20-200
150	10-660	80-500	50-500
200	20-1200	150-1000	80-100

### PARTICULARITIES AND ADVANTAGE

The Direct measurement of the mass consumption of the medium with pinpoint accuracy without additional calculations  
 Measurement of the medium density and the temperature of the medium in one instrument  
 Absence of the need in rectilinear area of the pipe line  
 High reliability, due to absence of the moving, abrading or conking parts.

### SUPPLY SET

№ pn	Name	Amount
1	Flowmeter	1
2	Passport	1
3	Certificate about the check (at order with state check)	1
4	Manual of the usage	1

### ATTENTION!

In order to avoid wrong independent selecting of the specification of the equipment, please, making the order, send the filled EMIS examination paper on the flowmeter

**CARD OF THE ORDER**

Example of the indication in the order:

	1	2	3	4	5	6	7	8	9	10
EMIS-MASS 260	- Ex	- 050	- L	- H	- 1,6	- 100	- 0,25	- CC	-	A

<b>1</b>	<b>Explode protection</b>
-	Without explosion protection (standard performance)
Ex	Exb(d)IICT6 level explode protection
<b>2</b>	<b>Diameter of the conditional passage</b>
010	10 mm
015	15 mm
020	20 mm
025	25 mm
040	40 mm
050	50 mm
080	80 mm
100	100 mm
150	150 mm
200	200 mm
<b>3</b>	<b>Measured medium</b>
L	Liquid
G	Gas
<b>4</b>	<b>Materials, contacting with the medium</b>
H	Stainless steel (standard performance)
OTHERS	Other materials (up to the order)
<b>5</b>	<b>Accommodation of the electronic converter</b>
-	joint performance
LP	Lowering performance (at order to indicate length of the cable in metres)
<b>6</b>	<b>Allowed medium pressure</b>
1,6	Maximal pressure– 1,6 MPa
2,5	Maximal pressure– 2,5 MPa
4,0	Maximal pressure– 4,0 MPa
6,3	Maximal pressure– 6,3 MPa
<b>7</b>	<b>Allowed medium temperature</b>
100	Maximal temperature – 100 °C
200	Maximal temperature – 200 °C
350	Maximal temperature – 350 °C
<b>8</b>	<b>Class of accuracy</b>
0,15	0,15
0,25	0,25
0,5	0,5
<b>9</b>	<b>Counter indicator</b>
-	Absence
CC	built-in counter of the three-dementional consumption with indicator
<b>10</b>	<b>Output signal</b>
F	Frequency
A	Analog 4-20Ma

**Extra complectation**

Indication	explanation
EMIS-MASS 260.KMH	The complex of erection parts (flanges, laying, bolts, nuts, pucks)
EMIS-MASS 260. VT	Technological insertion as a matter of convenience montage
EMIS-BREEZE power supply 90	Provides flowmeter with power supply

## ELECTROMAGNETIC FLOWMETER EMIS-MAG 270



### DESCRIPTION

Intended for the measurement of the consumption of cold and hot water, pressure sewers, any non-aggressive liquids. The excellent decision for the accounting of the consumption in housing-public facilities, administrative homes and other objects.

They are used as technological flowmeters in systems of the automatic check and regulation in different branches of industry, for commercial account of water amount (heat carrier).

### TECHNICAL CHARACTERISTICS

Measured ambience..... liquid with specific electro conductivity from 0,02 till 10 Sm/m

Accuracy..... till  $\pm 0,25\%$

Diameter of the pipe line .....from 5 till 100 mm

Join to the pipe line .....flanged

Temperature of the measured ambience.....from  $+5^{\circ}\text{C}$  till  $+150^{\circ}\text{C}$

Output signals..... analog current / frequency or pulsed / digital interface

Temperature of the surrounding ambience...from  $+5^{\circ}\text{C}$  till  $55^{\circ}\text{C}$

Interval between checking .....2 years

### PARTICULARITIES AND ADVANTAGES

The bricklining is made from special steadfast to soiling material, that provides the possibility to use the flowmeter in worn-out pipe lines, forming much of the public system in Russia. This bricklining is used in EMIS-MAG 270 flowmeter.

The built-in evaluator with the possibility of the measurement of the pressure and temperature makes flowmeter a node of the account of the heat energy. This decision allows getting a heat counter without an additional gaining of the evaluator.

### RANGE OF CONSUMPTION

Dr	Range of consumption $\text{m}^3/\text{h}$ depending on accuracy of the measurement		
	EMIS-MAG 270-1	EMIS-MAG 270-2	EMIS-MAG 270-3
5	-	-	0,03-0,6
15	0,03-6	0,05-5	0,25-5
25	0,08-5	0,17-17	0,85-17
32	0,15-30	0,3-30	1,5-30
50	0,3-60	0,6-60	3-60
80	0,8-160	1,6-160	8-160
100	1,25-250	2,5-250	12,5-250

### KIT OF THE SUPPLY

No	Name	Amount
1	Flowmeter	1
2	Manual of the usage. Passport.	1

### ATTENTION!

In order to avoid the wrong independent selecting the specification of the equipment, please, send us the filled examination paper EMIS on the chosen flowmeter while you are making the order.

Flowmeter selection and the range of the consumption selection can be realized by means of specialized program EMIS-Selector.

**CARD OF THE ORDER**

Example of the indication at order EMIS-MAG 270

	1		2		3		4		5		6		7		8	-	9
-	02	-	1	-	32	-	000	-	000	-	420	-	0	-	0	-	-

<b>1</b>	<b>Accuracy of the measurement of the consumption</b>
01	inaccuracy of the measurement of the consumption 1%
02	inaccuracy of the measurement of the consumption 0,5%
03	inaccuracy of the measurement of the consumption
X	spec. Order
<b>2</b>	<b>Counter-indicator</b>
0	Non
1	Counter-indicator, just for modifications 01 and 02, functions in correspondence with manual
X	20 mm
<b>3</b>	<b>DIAMETER OF THE CONDITIONAL PASSAGE</b>
5Д	5 mm, just for flowmeters with an accuracy 0,25%
15Д	15
25Д	25 mm
32Д	32 mm
50Д	50 mm
80Д	80 mm
100Д	100 mm
X	spec. Order
<b>4</b>	<b>Type of the converter of the resistance</b>
000	Non
1385	thermo element Pt500, W=1.385, just for modifications 01 и 02
1391	thermo element 500P, W=1.389, just for modifications 01 и 02
X	spec. Order
<b>5</b>	<b>Impulse output signal</b>
000	Non
XXX	Indicate the weight of the pulse in dr <sup>3</sup> / imp.
X	spec. Order
<b>6</b>	<b>Analog current output signal</b>
000	Stainless steel (standard performance)
020	0...20 mA
420	4...20 mA
<b>7</b>	<b>Entry for sensor of the pressure</b>
0	Non
1	entry for sensor of the pressure 4..20mA, just for modifications 01 и 02
X	spec. Order
<b>8</b>	<b>Reverse of the flow</b>
0	Non
1	Measurement of the consumption in straight and inverse direction, only for modification 01
X	spec. order
<b>9</b>	<b>Range of consumption</b>
-	standard range of the consumption in accordance with Selector
X	spec. order

## FLOW RECTIFIER EMIS-VEKTA



### APPOINTMENT

Intended for the reduction of the requirement to the length of the rectilinear area in a place of the installation of the flowmeter. Used mainly with vortex flowmeters, ultrasonic flowmeters and flowmeters of the swing of the pressure, as well as with the other types of flowmeters. Can be fixed at pipe lines with liquids, gas and pair.

### TECHNICAL CHARACTERISTICS

Technological medium .....liquid/gas/vapour(pair)  
 Diameter of conditional passage .....from 50 till 300 mm  
 Material performance.....steel/stainless steel/other

### ADVANTAGE AND PARTICULARITIES

Compact design  
 High efficiency to stabilization of the flow  
 Use with different types of flowmeters  
 Comfort of the montage  
 Long time of expluatation

### CARD OF THE ORDER

Example of the indication in the order:

EMIS-VEKTA 1200	-	1	-	2
		080		H

1	Diameter of the conditional passage
050	Dm = 50 MM
065	Dm = 65 MM
080	Dm = 80 MM
100	Dm = 100 MM
125	Dm = 125 MM
150	Dm = 150 MM
200	Dm = 200 MM
250	Dm = 250 MM
300	Dm = 300 MM
OTHERS	According to the order

2	Materials, which were used
Ca	Carbon steel
H	Stainless steel
OTHERS	Up to the order

### SUPPLY SET

№ pn	Name	Amount
1	Flow rectifier	1
2	Manual of usage	1
3	Packing	1

### EXTRA COMPLECTATION

Indication	Explanation
EMIS-VEKTA 1200.KMH	The complex of erection parts (flanges, laying, bolts, nuts, pucks)

## FILTERS OF LIQUIDS AND GAS AND RECTIFIER EMIS-VEKTA



### FILTER'S APPOINTMENT

Used for removing of the mechanical particles from the medium. Are fixed before the flowmeters for the prevention from their mortality, improvements of the metrological features and increasing of lifetime of the instruments.

### RECTIFIER'S APPOINTMENT

Used for removing of the gas cut-in from the fluid medium. Fixed before flowmeters for the increasing of accuracy of the measurement of the consumption.

### MODIFICATIONS

EMIS-VEKTA 1210 – filters for liquid  
EMIS-VEKTA 1211 – rectifiers  
EMIS-VEKTA 1212 – filters+ rectifiers  
EMIS-VEKTA 1215 – filters for gas

### TECHNICAL CHARACTERISTICS

#### «EMIS-VEKTA 1210»

Nominal diameter.....from 15 till 300 MM  
Maximal pressure.....till 6,4 MPa  
Temperature diapason.....from 0°C till +250 °C

#### «EMIS-VEKTA 1211»

Nominal diameter.....from 50 till 700 MM  
Consumption diapason..... from 25m<sup>3</sup>/h till 3000 m<sup>3</sup>/h  
Maximal pressure.....4MPa with diameter no more, then 300 mm, for diameters more, then 300 mm-2,5MPa  
Temperature diapason.....from 0°C till +120°C

#### «EMIS-VEKTA 1212»

Nominal diameter.....from 50 till 700MM  
Consumption diapason...from 25m<sup>3</sup>/h till 3000m<sup>3</sup>/h  
Maximal pressure.....4MPa with diameter no more, then 300 mm, for diameters, more, then 300 mm-2,5MPa.  
Temperature diapason .....from 30°C till +250 °C

#### «EMIS-VEKTA 1215»

Nominal diameter ..... from 15 till 300MM  
Maximal pressure till .....6,4 MPa  
Temperature diapason.....from 0°C till +250 °C

### FILTER CARD ORDER

	1	2	3
EMIS-VEKTA 1210	- 050	- 2.5	- 150
EMIS-VEKTA 1211	080	4	100
EMIS-VEKTA 1212	200	4	100
EMIS-VEKTA 1215	150	6,4	150

1*	Nominal diameter				
015	15 MM	100	100 MM	400	400 MM
025	25 MM	150	150 MM	500	500 MM
040	40 MM	200	200 MM	600	600 MM
050	50 MM	250	250 MM	700	700 MM
065	65 MM	300	300 MM		
080	80 MM	350	350 MM		

2	Working pressure		
1,6	1,6 MPa	2,5	2,5MPa
4,0	4 MPa	6,4	6,4 MPa

3	Temperature		
1	80 °C	3	150 °C
2	120 °C	4	250°C

## DIAPHRAGMS FOR FLOWMETERS DKS, DBC, DFK



### DKS DIAPHRAGMS

DKS - a chamber diaphragm, which the flat disk with the hole in the centre, cameras (plus and minus) with nipples, sealing disk.

Standard are made with one pair of nipples for selection of the pressure, on order their amount can be increased to four. The standard diaphragms are made for pipe line with Dm from 50 till 400 mm (the State standard 8.563.1, MI 2638), with cone-shaped entry and rugged (RD 50-411).

### KIT OF KF FLANGES

Kit of flanges is used for the montage of the DKS diaphragm on the measuring pipe line. The flanges are made in accordance with State standard 12820. Flanges, bolts, nuts, pucks, and sealing layings go with the kit of flanges.

### FS FLANGED JOINING

The using of the DKS diaphragm in kit with flanged joining allows minimizing of the measuring inaccuracy. Flanges are executed by State standard 12820, nipples are up to the quality of State Standard 8.563.1. Flanges with nipples, bolts, nuts, pucks, sealing layings go with the kit of flanged joining; erection ring, which is fixed instead of the diaphragm for a period of montage and blowing of the pipe line, can be delivered after the ordering.

### APPOINTMENT

Diaphragms (narrowing device) are intended in kit with sensor of the differences of the pressures for the measurement of the consumption of liquids, pair, gas by method of the variable swing of the pressures.

### PARTICULARITIES AND ADVANTAGE

Low cost  
Absence of the motioning parts  
Diameter of the conditional passage from 20 till 400 mm, depending on the type and performances of the diaphragm  
Conditional pressure in pipe line till 10 MPA  
High reliability  
Non-wire check in any of regional centre of the standardizations and metrologies

### DIAPHRAGMS DBS

DBS - a tubeless diaphragm - a flat disk with the hole in the centre.

The standard diaphragms are made for the pipe line with Dm from 300 till 400 mm (the state standard 8.563.1, MI 2638), rugged (RD 50-411).

### DFK DIAPHRAGMS

DFK - a flanging, chamber diaphragm, is used in the pipe line with conditional Dm from 20 till 40 mm and conditional pressure till 10 MPA. The camera and the flange constructive combined in one detail. The disk of the diaphragm is made in accordance with RD 50-411, cameras on State standard 8.563.1.

They are made standard DFK, as well as with cone-shaped entry and rugged.

### SUPPLY SET

No pn	name	amount
1	diaphragm	1
2	Passport with the seal and the signature of the state supervisor	1
3	Payment with the seal and signature of the state supervisor	1

### ATTENTION!

For registration of the order on the fabrication/production of the diaphragm it is necessary to send: examination paper EMIS-DELTA "Nomenclature of the raw datas for calculation of the diaphragm", the list of available, or required secondary instrument, scheme of the direct parts.

## DKC DIAPHRAGM CARD ORDER

Dm, MM	Indication for the order				
	steel 20		Stainless steel 12X18H10T		Disc for DKC
	0,6 MPa	10 MPa	0,6 МПа	10 МПа	
50	DKS 0,6-50-A/B	DKS 10-50-A/B	DKS 0,6-50-B/B	DKS 10-50- B/B	Disc DKS-50
65	DKS 0,6-65-A/B	DKS 10-65-A/B	DKS 0,6-65-B/B	DKS 10-65- B/B	Disc DKS-65
80	DKS 0,6-80-A/B	DKS 10-80-A/B	DKS 0,6-80-B/B	DKS 10-80- B/B	Disc DKS-80
100	DKS 0,6-100-A/B	DKS 10-100-A/B	DKS 0,6-100-B/B	DKS 10-100- B/B	Disc DKS-100
125	DKS 0,6-125-A/B	DKS 10-125-A/B	DKS 0,6-125- B/B	DKS 10-125- B/B	Disc DKS-125
150	DKS 0,6-150-A/B	DKS 10-150-A/B	DKS 0,6-150- B/B	DKS 10-150- B/B	Disc DKS-150
175	DKS 0,6-175-A/B	DKS 10-175-A/B	DKS 0,6-175- B/B	DKS 10-175- B/B	Disc DKS-175
200	DKS 0,6-200-A/B	DKS 10-200-A/B	DKS 0,6-200- B/B	DKS 10-200- B/B	Disc DKS-200
225	DKS 0,6-225-A/B	DKS 10-225-A/B	DKS 0,6-225- B/B	DKS 10-225- B/B	Disc DKS-225
250	DKS 0,6-250-A/B	DKS 10-250-A/B	DKS 0,6-250- B/B	DKS 10-250- B/B	Disc DKS-250
300	DKS 0,6-300-A/B	DKS 10-300-A/B	DKS 0,6-300- B/B	DKS 10-300- B/B	Disc DKS-300
350	DKS 0,6-350-A/B	DKS 10-350-A/B	DKS 0,6-350- B/B	DKS 10-350- B/B	Disc DKS-350
400	DKS 0,6-400-A/B	DKS 10-400-A/B	DKS 0,6-400- B/B	DKS 10-400- B/B	Disc DKS-400

\* - at order of the non-standard performance, please do the codicil (variants: "rugged", "with cone-shaped entry")

## KIT OF KF FLANGES CARD ORDER

Dm, MM	Indication for the order									
	steel 20					Stainless steel 12X18H10T				
	0,6 MPa	1,0 MPa	1,6 MPa	2,5 MPa	10 MPa	0,6 MPa	1,0 MPa	1,6 MPa	2,5 MPa	10 MPa
50	KF0,6-50-A	KF1,0-50-A	KF1,6-50-A	KF2,5-50-A	KF10-50-A	KF0,6-50-B	KF1,0-50-B	KF1,6-50-B	KF2,5-50-B	KF10-50-B
65	KF0,6-65-A	KF1,0-65-A	KF1,6-65-A	KF2,5-65-A	KF10-65-A	KF0,6-65-B	KF1,0-65-B	KF1,6-65-B	KF2,5-65-B	KF10-65-B
80	KF0,6-80-A	KF1,0-80-A	KF1,6-80-A	KF2,5-80-A	KF10-80-A	KF0,6-80-B	KF1,0-80-B	KF1,6-80-B	KF2,5-80-B	KF10-80-B
125	KF0,6-125-A	KF1,0-125-A	KF1,6-125-A	KF2,5-125-A	KF10-125-A	KF0,6-125-B	KF1,0-125-B	KF1,6-125-B	KF2,5-125-B	KF10-125-B
150	KF0,6-150-A	KF1,0-150-A	KF1,6-150-A	KF2,5-150-A	KF10-150-A	KF0,6-150-B	KF1,0-150-B	KF1,6-150-B	KF2,5-150-B	KF10-150-B
175	KF0,6-175-A	KF1,0-175-A	KF1,6-175-A	KF2,5-175-A	KF10-175-A	KF0,6-175-B	KF1,0-175-B	KF1,6-175-B	KF2,5-175-B	KF10-175-B
200	KF0,6-200-A	KF1,0-200-A	KF1,6-200-A	KF2,5-200-A	KF10-200-A	KF0,6-200-B	KF1,0-200-B	KF1,6-200-B	KF2,5-200-B	KF10-200-B
225	KF0,6-225-A	KF1,0-225-A	KF1,6-225-A	KF2,5-225-A	KF10-225-A	KF0,6-225-B	KF1,0-225-B	KF1,6-225-B	KF2,5-225-B	KF10-225-B
250	KF0,6-250-A	KF1,0-250-A	KF1,6-250-A	KF2,5-250-A	KF10-250-A	KF0,6-250-B	KF1,0-250-B	KF1,6-250-B	KF2,5-250-B	KF10-250-B
300	KF0,6-300-A	KF1,0-300-A	KF1,6-300-A	KF2,5-300-A	KF10-300-A	KF0,6-300-B	KF1,0-300-B	KF1,6-300-B	KF2,5-300-B	KF10-300-B
350	KF0,6-350-A	KF1,0-350-A	KF1,6-350-A	KF2,5-350-A	KF10-350-A	KF0,6-350-B	KF1,0-350-B	KF1,6-350-B	KF2,5-350-B	KF10-350-B
400	KF0,6-400-A	KF1,0-400-A	KF1,6-400-A	KF2,5-400-A	KF10-400-A	KF0,6-400-B	KF1,0-400-B	KF1,6-400-B	KF2,5-400-B	KF10-400-B

## FS FLANGED JOINING CARD ORDER

Dm, MM	Indication for the order			
	steel 20		Stainless steel 12X18H10T	
	0,6 MPa	2,5 MPa	0,6 MPa	2,5 MPa
50	FS 0,6-50-A	FS 2,5-50-A	FS 0,6-50-B	FS 2,5-50-B
65	FS 0,6-65-A	FS 2,5-65-A	FS 0,6-65-B	FS 2,5-65-B
80	FS 0,6-80-A	FS 2,5-80-A	FS 0,6-80-B	FS 2,5-80-B
100	FS 0,6-100-A	FS 2,5-100-A	FS 0,6-100-B	FS 2,5-100-B
125	FS 0,6-125-A	FS 2,5-125-A	FS 0,6-125-B	FS 2,5-125-B
150	FS 0,6-150-A	FS 2,5-150-A	FS 0,6-150-B	FS 2,5-150-B
200	FS 0,6-200-A	FS 2,5-200-A	FS 0,6-200-B	FS 2,5-200-B
250	FS 0,6-250-A	FS 2,5-250-A	FS 0,6-250-B	FS 2,5-250-B
300	FS 0,6-300-A	FS 2,5-300-A	FS 0,6-300-B	FS 2,5-300-B
350	FS 0,6-350-A	FS 2,5-350-A	FS 0,6-350-B	FS 2,5-350-B
400	FS 0,6-400-A	FS 2,5-400-A	FS 0,6-400-B	FS 2,5-400-B

\* -for the order of the montage ring, please make the codicil "Ring erection"

## DIAPHRAGMS DBS card order

Dm, MM	Indication for the order					
	steel 20			Stainless steel 12X18H10T		
	0,6 MPa	1,6ч2,5 MPa	4,0 MPa	0,6 MPa	1,6ч2,5 MPa	4,0 MPa
300	DBS 0,6-300-A	DBS 1,6-300-A	DBS 4,0-300-A	DBS 0,6-300-B	DBS 1,6-300-B	DBS 4,0-300-B
350	DBS 0,6-350-A	DBS 1,6-350-A	DBS 4,0-350-A	DBS 0,6-350-B	DBS 1,6-350-B	DBS 4,0-350-B
400	DBS 0,6-400-A	DBS 1,6-400-A	DBS 4,0-400-A	DBS 0,6-400-B	DBS 1,6-400-B	DBS 4,0-400-B

\* - making the order of the non-standard performance, please, make the codicil (variants "rugged")

## DFK DIAPHRAGMS Card order

Дy, MM	Indication for the order	
	steel 20	Stainless steel 12X18H10T
20	DFK 20-A	DFK 20-B
25	DFK 25-A	DFK 25-B
32	DFK 32-A	DFK 32-B
40	DFK 40-A	DFK 40-B

\* - making the order of the non-standard performance, make the codicil (variants: "rugged", "with cone-shaped entry")

## EGLAITARIAN CONTAINERS (SU) UNDERBAR CONTAINERS (SR) VAPOR TRAIL CONTAINERS(SK)



### SU APPOINTMENT

The egalitarian containers are intended for the maintenance of a constant level of liquids in one of two connecting lines, during the measurement of the liquids level in reservoir with using of the sensors of the pressure differences.

### SR APPOINTMENT

The underbar containers are used for the protection of the internal cavities of the sensor from the direct influence of the aggressive mediums by the issues of the pressure through the underbar liquid.

### SK APPOINTMENT

The vapor trail containers are used for the measurement of the pair consumption, providing the condensate level equality in the connecting line, sending the swing of the pressure from diaphragm to sensor of the pressure differences.

### TECHNICAL CHARACTERISTICS

Material of performance.....steel 20 / 12X18H10T  
Maximal pressure for SU.....6,3/25/40 MPa  
Maximal pressure for SR.....25/40 MPa  
Maximal pressure for SK.....4/10/40 MPa

### CARD ORDER

Example of the indication in the order:

1		2		3	4
Egalitarian container SU	-	6,3	-	2	A

1	Type of the container
SU	Egalitarian container
SR	Underbar container
SK	vapor trail container

2	Maximal pressure
4	Pmax = 4,0 MPa
6,3	Pmax = 6,3 MPa
10	Pmax = 10 MPa
25	Pmax = 25 MPa
40	Pmax = 40 MPa

3	Variant of performance by the state standard
1	performance 1 (standard for SK)
2	performance 2 (standard for SR и SU)
4	Performance 4

4	Materials, which were used
A	Carbon steel (steel 20)
B	Stainless steel (12X18H10T state standard 5632)

### SUPPLY SET

№ pn	Name	Amount
1	Container, according to the order	1
2	Passport	1
3	Package	1

## RESISTANCE TERMOMETERS EMIS-TERMAL 305



## APPOINTMENT

The sensors of the temperature EMIS-TERMAL 305 are used for the measurement of the temperature of fluid and gaseous non-aggressive mediums, as well as aggressive, not destroying material of the defensive armature.

## TECHNICAL CHARACTERISTICS

HCX.....50M/100M/50P/100P/Pt100/Pt500/Pt1000  
 Amount .....1 or 2  
 Length of the working part .....from 50 till 3200 mm  
 Thickness of the working part.....from 0,6 till 1,0 mm  
 Temperature diapason.....from -200 till +500°C  
 Class of accuracy.....A/B/C  
 Scheme of the connection.....2/3/4-th conducting  
 Martial of the watchstem.....plastic/aluminum

## CARD ORDER

EMIS-TERMAL 305	-	1	-	2	-	3	-	4	-	5	6	-	7	-	8	-	9	-	10	GP
		100P				080		10		M20x1,5P	(-50...+300)		PL		B		4			

<b>1</b>	<b>Nominal scheme HCX</b>
50M	thermometer of the resistance copper 50M
100M	thermometer of the resistance copper 100M
50P	thermometer of the resistance platinum 50P
100P	thermometer of the resistance platinum 100P
Pt100	thermometer of the resistance platinum Pt100
Pt500	thermometer of the resistance platinum Pt500
Pt1000	thermometer of the resistance platinum Pt1000
<b>2</b>	<b>Microprocessor performance</b>
-	one detector element
x2	two detector elements
<b>3</b>	<b>Length of the working part</b>
xxx	length indicated in mm (for example, 50 mm are marked "050", 300 mm are marked "300")
<b>4</b>	<b>Diameter of the working part</b>
10	Dm = 10 mm (standard performance)
8	Dm = 8 mm (small inertia sensor)
6	Dm= 6 mm (small inertia sensor)
OTHERS	diameter of the working part, according to the order
<b>5</b>	<b>Design of the carbine</b>
-	without carbine
M16x1,5P	carbine with the thread M16h1,5 mobile
M20x1,5P	carbine with thread M20h1,5 mobile
M20x1,5	carbine with thread M20h1,5 joined
OTHERS	design of the carbine, according to the order
<b>6</b>	<b>Range of working temperature</b>
(-xxx...+xxx)	please indicate the range of the medium temperature, for the choice of the optimum performance
<b>7</b>	<b>Material of the watchstem</b>
PI	plastic watchstem
AL	aluminum watchstem
<b>8</b>	<b>Class of the tolerance</b>
A	class tolerance A
B	class of the tolerance B
C	class of the tolerance C
<b>9</b>	<b>Scheme of the connection</b>
2	two-wire scheme connection
3	Three-wide scheme of the connection
4	four-wide scheme of the connection

## DEFENSIVE CARTRIDGE CASES AND WELDING BOSS OF EMIS-VEKTA SETIES 1130



### CARTRIDGE CASES EMIS-VEKTA 1300

Intended for the montage of the temperature sensors in the pipe lines, containers under pressure, steam calDmons. Used for the protection of the sensors from the influence of the measured medium and for their service without non-stop of the process.

### EMIS-VEKTA 1130 / 1330

Welding boss soldering in the pipe line or in the reservoir for the following threading joining to them:  
 1130 - valve blocks and valve systems, elite devices and sensors of the pressure of the different types to the measuring lines  
 1330 - Defensive cartridge cases and sensors of the temperature of the different types and different threading joining to the measured medium.

### CARTRIDGE CASES EMIS-VEKTA 1300 ORDER CARD

		1	2	3	4
Cartridge case EMIS-VEKTA 1300		- 1 -	100	- M20x1,5	- 12X18H10T
<b>1 Performance by state standard 5632-72</b>					
1	cylindrical threading cartridge case (before 25 MPA)				
2	cone-shaped threading cartridge case (before 50 MPA)				
3	cone-shaped joining cartridge case (before 50 MPA)				
<b>2 Length of the erection part (choose from the row or indicate the other importance)</b>					
060	60 MM	160	160 MM	400	400 MM
080	80 MM	200	200 MM	500	500 MM
100	100 MM	250	250 MM	630	630 MM
120	120 MM	320	320 MM	800	800 MM
<b>3 Pressure</b>					
2,5 MPa	6,3 MPa	25MPa	32MPa	50MPa	
<b>4 Type of the internal joining (for the sensor)</b>					
M20x1,5	M27x2	G3/4	Without threading		
M24x1,5	M33x2	Other( up to the order)			
<b>5 Type of the external joining</b>					
M20x1,5	M27x2	G3/4	Without threading		
M24x1,5	M33x2	Other( up to the order)			
<b>6 Material</b>					
12X18H10T	steel 12X18H10T (standard performance)				
10X17H13M2T	steel 10X17H13M2T				
12X1MF	steel 12X1MF (recommended for the joining cartridge cases)				

### DEFENSIVE WELDING BOSS EMIS-VEKTA 1130 / 1330 CARD ORDER

		1	2	3
Defensive cartridge case EMIS-WEKTA		1130	- M20x1,5	- steel20
<b>1 Performance by State standard 5632-72</b>				
1130	welding boss for the montage of the pressure sensors and complicating parts			
1330	welding boss for the montage of the temperature sensors and complicating parts			
<b>2 Type of joining</b>				
M20x1,5	M27x2	M33x2		
<b>3 Material</b>				
12X18H10T	Stainless steel 12X18H10T	steel 20	steel 20 (standard performance.)	

## VALVE BLOCKS FOR THE PRESSURE SENSORS OF ONE-, TWO-, THREE-, FIVE VALVES BKN-1, BKN-2, BKN-3, BKN-5



### APPOINTMENT BKN-1

Intended for the connection to the pulsed lines of the sensors of the surplus, absolute, vacuum metric pressure, pressure-discharge. Provide the possibility of the takedown of the sensor with non-stop of the process.

### APPOINTMENT BKN-2

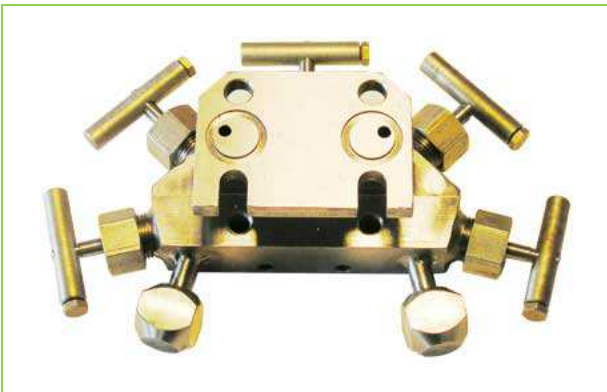
In addition to the functions of the one-valve blocks, can be provided the possibility of the Dmainage of the pulsed line or the joining of the checking manometer, calibrator of the pressure and other equipment.



### APPOINTMENT BKN -3

Intended for the elementary operations: switching off the sensor of the pressure from the measured medium and equalizing of the pressures on membranes of the sensor during the installing of "zero". The special performances of the tree-valves blocks allow:

1. Execute the drainage to measuring pathway, preventing from the contamination of the "above membrane" cavities of the sensor.
2. Provide in the process of the drainage the double protection of the sensor from the contamination.
3. Produce the drainage of the pathways and connection of the checking or duplicating sensor of the pressure.



### APPOINTMENT BKN -5

In addition to the functions, which are available for the tree-valve blocks (the cut-off of the sensor from the measured medium, equalizing of the pressures above the membranes of the sensor, during the installing "zero", drainage), is added one more: connection of the checking or duplicating instrument without switching off of the main sensor.

### TECHNICAL CHARACTERISTICS

Working medium.....liquid, pair, gas, oxygen  
 Working pressure.....40 MPa  
 Medium temperature.....-60...+150°C  
 Performance by material.....steel 20/12X18H10T  
 Material of compaction.....fluoroplastic  
 Grantee.....18 month

### SUPPLY SET

No pn	Name	Amount
1	Block BKN, according to the order	1
2	Passport	1
3	Package	1

**BKN-1 И BKN-2 ORDER CARD**

Example of the indication in the order:

		1		2		3
BKN	-	1	-	08	-	K

1	Type of the valve block					
1	one-valve valving block					
2	two-valve valving block					
2	Entering of the medium			Entering of the medium		Drainage valve*
00	M22x1,5	external	under sfer.	M20x1,5	internal under sfer. nipple	M20x1,5 external under sfer. nipple
01	M22x1,5	external	under sfer.	K1/2" SS 6111 external		M20x1,5 external under sfer. nipple
02	M22x1,5	external	under sfer.	K1/4" SS 6111 external		M20x1,5 external under sfer. nipple
03	K1/2" SS 6111 external			M20x1,5 internal under sfer. nipple		M20x1,5 external under sfer. nipple
04	K1/4" SS 6111 external			M20x1,5 internal under sfer. nipple		M20x1,5 external under sfer. nipple
05	K1/2" SS 6111 internal			M20x1,5 internal under sfer. nipple		M20x1,5 external under sfer. nipple
06	K1/4" SS 6111 internal			M20x1,5 internal under sfer. nipple		M20x1,5 external under sfer. nipple
07	M20x1,5	external	under sfer.	M20x1,5 internal under sfer. nipple		M20x1,5 external under sfer. nipple
08	M20x1,5 external under sq. nipple			M20x1,5 internal under sfer. nipple		M20x1,5 external under sfer. nipple
09	M20x1,5	external	under sfer.	K1/2" State standard 6111 external		M20x1,5 external under sfer. nipple
10	M20x1,5	5 external	under sq.	carbine with throw on nut M20x1,5 under pl. nipple		M20x1,5 external under sq. nipple
* - just for BKN-2						
3	Oxygen performance					
-	standard performance					
K	for the using on gaseous oxygen and oxygen consisting mediums					

**BKN-3 ORDER CARD**

Code	Explanation
BKN 3	Base performance. Intended for the switching off the pressure sensor from the measured medium and equalizing pressures above the membranes of the sensor when installing "zero"
BKN-3-3-10	Also provide the drainage of the pulsed line to the insulating valves of the valves/ venteles (above on flow). Length of the carbiners was chosen on the way, when the working medium, during the drainage, is not able to get on the sensor, which is bolted under valve block.
BKN-3-4-00	Are different from BKN-3-3-10 by the form of the drainage channels: medium on the drainage abandons the cavity of the block through the hole, located below the jack of the insulating valve-valve/ventel/gate that reduces the probability of the refusal of the valve when functioning (working) on the polluted medium.
BKN-3-4-10	Supplied with the carbiners with internal thread K1/4". The holes in the carbiners are locked by the gaps with valve-stubs. The drainage of the pulsed line is executed under the opened insulating valves-ventels (the drainage above on flow). Metrological/checking equipment is connected through the special converters (do not enter in the kit of the supply), carbiners screwed instead of gaps.
BKN-3-10-00	Constructive executed similarly with BKN-3-4, but does not have a flanged salient.
BKN-3-10-10	Differ from BKN-3-10 by the presence of the carbiners with valve-stubs for the drainage of the pulsed line before the insulating valve-valves/ventel (below on flow).
K	Code "K" after the main indication, indicates that the blocks of the oxygen performance

**BKN-5 ORDER CARD**

Code	Explanation
BKN 5-7	Base performance. In addition to the functions of BKN-3 lets to join control equipment without switching off of the main sensor
BKN -5-8	Discriminating particularity is a combination from two equalizing valves and located between them drainage valve, which is opened when sensor is functioning(working), guarantees the absence of the leakage of the medium through the equalizing channel, which could influence on the accuracy of the measurements
BKN -5-7-00	Has a carbiners K1/4". The drainage of the pulsed line is executed under the opened insulating valves-ventels (the drainage above on flow). Metrological equipment is connected through the special converters (do not enter in the kit of supply), screwed carbiners.
BKN -5-8-00	Differs from BKN-5-7-00 because of the holes in carbiners closing gaps with valve stubs
BKN -5-7-01	Intended for the connection of the portable calibrator of pressure, having ferrule with the spherical nipple
BKN -5-8-01	and throw on nut M10x1
K	Code "K" after the main indication, indicates that the blocks of the oxygen performance

**DEVICE OF THE PRESSURE SELECTION OF EMIS-VEKTA 1120**



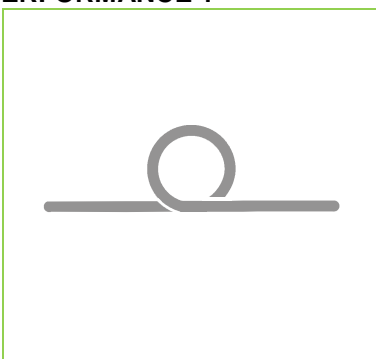
**APPOINTMENT**

Intended for the montage of manometers and sensors of the pressure in pipe lines and containers. Used for the protection of the sensors from the influence of the high temperature (the overheat) and from hydro hits.

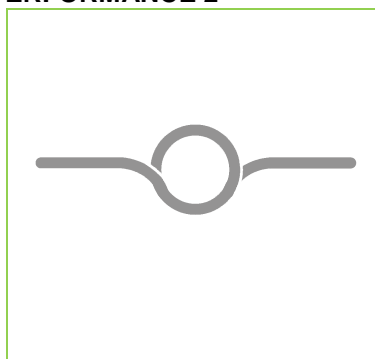
**TECHNICAL CHARACTERISTICS**

Maximal pressure.....till 25 MPa  
 Maximal temperature.....till 300°C  
 Joining.....M20x1,5, G1/2, welded  
 Base.....steel pipe with no join  
 Pipe line diameter.....13,5 mm  
 Thickness of the wall/side.....2,9 mm

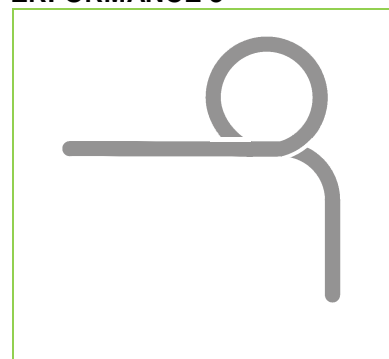
**PERFORMANCE 1**



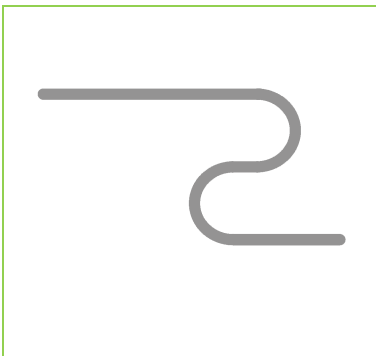
**PERFORMANCE 2**



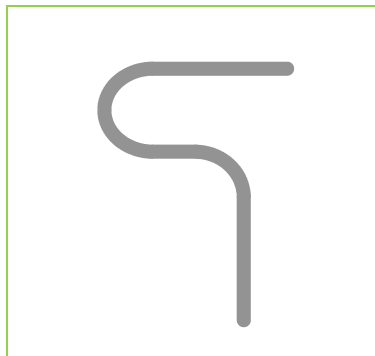
**PERFORMANCE 3**



**PERFORMANCE 4**



**PERFORMANCE 5**



**OTHER PERFORMANCES**

Special performances can be executed on order.

**ORDER CARD**

Selection device EMIS-VEKTA 1120	-	1	-	2	-	3	-	4
		1		M20x1,5		M20x1,5		12X18H10T

<b>1</b>	Performance (according to the pic.)							
1	Performance 1	2	Performance 2	3	Performance 3			
4	Performance 4	5	Performance 5	dp	On order			

<b>2</b>	Type of the joining at the input							
-	without thread (under welding)							
M20x1,5	M20x1,5 (external thread) - a standard performance							
G 1/2	G ½ (external thread)							
other	On order							

<b>3</b>	Type of the joining on output (under the pressure sensor)							
M20x1,5	M20x1,5 (external thread) - a standard performance							
G 1/2	G ½ (external thread)							
other	On order							

<b>4</b>	Material							
12X18H10T	Stainless steel 12X18H10T (standard performance)							
steel 20	steel 20							

## IMPULS POWER SUPPLY UNITS EMIS-BREEZE 60



### APPOINTMENT

Intended for power supplying of the equipment with high current using outside of explosive zone. The pulsed power supply units provide the high maximum current of the load on the channel.

### TECHNICAL CHARACTERISTICS

Type.....impulse  
 Channels amount.....from 1 till 4  
 Power supply tension.....from 90 till 246 V fir. current  
 ..... /from 110 till 370 V reg. current  
 Output tension.....///.....from 5 till 48 V  
 Fastening.....DIN-rod  
 Temperature of surrounding medium..from -20 till +50°C  
 Dustwaterprotection.....IP20

### PARTICULARITIES AND ADVANTAGE

small size and weight  
 functions of the signaling of the breakaway and/or short circuit possibility power supplying of the equipment with the high current using

### CARD ORDER

Example of the indication in the order:

1	2	3	4	5	6
EMIS_BREEZE 60	- 1	24V -	0,75A	0,03A	C
<b>1</b>	<b>Name of the equipment</b>				
EMIS_BREEZE 60	Impulse power supply unit				
<b>2</b>	<b>Amount of output channels</b>				
1	1 channels				
2	2 channels				
4	4 channels				
<b>3</b>	<b>Power supply tension</b>				
5B	5V				
9B	9V				
12B	12V				
15B	15V				
24B	24V				
36B	36V				
48B	48V				
<b>4</b>	<b>Maximal external current</b>				
-	Standard performance				
xxxA	Required meaning in A				
<b>5</b>	<b>Current limits</b>				
-	No current limits				
xxxA	Required meaning in A				
<b>6</b>	<b>Signalization of breakaway</b>				
-	Without signalization				
C	Signalization of breakaway or short closing				

### ATTENTION!

Power supply units "EMIS-BREEZE 60" do not pertain to the explode protection class of the equipment. For power supplying instrument on the spark safe chain follows to use "EMIS-BREEZE 10-Ex".

## TRANSFORMER POWER SUPPLY UNITS EMIS-BREEZE 90



### APPOINTMENT

Intended for the power supplying of the pressure sensor, consumption, level and other industrial sensors or equipment outside of explosive zones. High reliability performance.

### TECHNICAL CHARACTERISTICS

Type.....transformer  
 Channel's amount.....from 1 till 8  
 Power supply tension..... 220 V  
 Output tension.....from 12 till 36 V  
 Fastening.....DIN-rod  
 Temperature of surrounding medium.....from -20 till +50°C  
 Dustwaterprotection.....IP20

### PARTICULARITIES AND ADVANTAGE

channels are galvanically unlaced  
 channels have protection from the overloading and short circuit;  
 the compact size;  
 the varied performances;  
 indication of the enabling of the block on each channel  
 blocks do not create industrial hindrances  
 high reliability

### CARD ORDER

1	Name of the equipment
EMIS-BREEZE 90	transformer power supply unit
2	Amount of output channels
2	2 channels
3	3 channels
4	4 channels
8	8 channels
3	Power supply tension
12B	12V
15B	15V
18B	18V
24B	24V
36B	36V
4	maximal output current
25mA	25 mA
50mA	50 mA
80mA	80 mA
100mA	100 mA
120mA	120 mA
250mA	250 mA
5	The way of montage
DIN	On DIN-rod
shield	Panel montage

## INTERFACE CONVERTER RS-485 «EMIS-SYSTEM 750»



### APPOINTMENT

Intended for the data communication between devices, which are using physical level RS-485 on the side and RS-232 or USB on the other side.

### TECHNICAL CHARACTERISTICS

Type of the network.....half-duplex two-wire  
 Interface 1.....RS-485  
 Interface 2.....USB / RS-232 (COM)  
 Range of the transfer.....1,2 km  
 Send rate.....till 115200 kbit/c  
 Power supply....from 10 till 30 V / 220 V / from USB  
 Isolation of the channels.....1500 V  
 Temperature of surrounding medium.....from -40 till +70°C  
 Dustwaterprotection.....IP20

### PARTICULARITIES AND ADVANTAGE

Automatic turning of the send rate  
 Self-control of the direction of the issues  
 Light indication issues  
 Galvanic insulation between the entry and the output  
 Connection of devices with miscellaneous send rate and format of given to the one tire/bus

### CARD ORDER

indication	Explanation
EMIS-SYSTEM 750-RS485-USB	The Converter of physical level RS-485 aflat USB. Power supplying from the bus/tire USB
EMIS-SYSTEM 750-RS485-RS232	Converter of physical level RS-485 aflat RS-232. Power supplying from the source of the const. current from 10 till 30 V
EMIS-SYSTEM 750-RS485-RS232-C	Converter of the physical level RS-485 aflat RS-232. Power supplying from the network voltage 220V

### SUPPLY SET

№ pn	Name	Amount
1	converter (up to the order)	1
2	Passport and manual of the usage	1
3	CD dist with drivers (for USB)	1
4	Cable USB or COM (up to the order)	1
4	Cardboard package	1

## THE CHECK OF FLOWMETERS – LIQUID COUNTERS



### APPOINTMENT

The check on the modern automated stand of the liquid flowmeter-counters (RSZH), having the report device, optoelectronic node of the removal signal, frequency, pulsed or analog output signals. Check is produced as three-dementional, so and by mass (the weight) method.

### TECHNICAL CHARACTERISTICS

Consumption diapason.....0,01 – 100 m<sup>3</sup>/h  
 Working liquid.liquid by state standard P51232-98  
 Working pressure.....from 0,4 MPa  
 Diameters of flowmeters.....from 15 till 100 mm  
 Methods of checking.....comparing / weighting  
 Amount of etalon flowmeters.....3  
 Amount of checking instruments.....till 8  
 Metrological characteristics .....see the table

### METROLOGICAL CHARACTERISTICS OF THE CHECKING INSTALLATION

Characteristic	Impulse measuring channel	Analog measuring channel
Limit of the allowed main relative inaccuracy of the installation at the measurement of the three-dementional (mass) consumption, volume (mass) by the weight method.	±0,05%	±0,07%
Limit of the allowed main relative inaccuracy at measurement of the three-dementional (mass) of the consumption, volume (mass) by the etalon flowmeter-counters	±0,25%	±0,26%
Limit of the allowed absolute inaccuracy of the measurement of the temperature,		±0,05°C
Inaccuracy of the automatic adjustment on the given consumption		±5%
Average square-law deflection of the importance of the consumption on interval of integration (instability of the consumption)		No more, then ±0,2%

### THE ORDER OF THE SERVICE ORDERING

For the flowmeter's check it is necessary to give the following data:

1. Flowmeter's type (vortex, electromagnetic, chamber and so on)
2. name of the company – flowmeter's producer
3. the model of flowmeter
4. diameter of a conditional passage
5. consumption diapason
6. accuracy of the measuring
7. type of output signal
8. check methods

### DRAWING UP THE DOCUMENTS

The check is produced in the presence of representative of Chelyabinsk CSM, on result is produced the record about passing of the check in passport of the instrument, clamped by the signature of the producer and the seal of CSM.