

ROBUST HIGH QUALITY FLOW MONITORS

Elettas alternative for replacement of
ABB TIVG Flow Indicator



Robust Flow Monitors for liquids & gases



The Flow Monitor is a protective device which controls that the given flow of the liquid in a pipe is at a correct rate and controls any deviations.

The Eletta TIVG-S series is replacing the old TIVG-F and -R series with updated materials and functions. The upgrade gives a higher quality monitor allowing higher flow rates and wider flow turndown.

The Eletta TIVG-S will for example to protect expensive equipment such as; coolant in transformers, induction coils of furnaces, generators, diesel engine and compressors. It can supervise the supply of fuel oil to central heating boilers and lubricating oil to gear units and bearings. It can cope with almost anything that flows, high and low viscous liquids, contaminated or clean and for many different flow ranges up to 20 000 l/min.

The monitor combines the long-standing proven mechanical function with outstanding reliability. The products are manufactured with all wetted parts in Stainless Steel except for threaded 1 ½" BSP-F in brass.

- The new TIVG-S is designed to one-to-one replacement without modifications to your system
- TIVG-S has a much higher flow measurement capability
- TIVG-S has a better material of construction
- TIVG-S has a higher flow measurement turndown
- 4-20 mA output, HART protocol, pulse or frequency
- Two settable local alarms
- Digital back-lit display
- Liquid and gases can be measured

In 1994, Eletta Flow acquired the exclusive rights for the ABB Flow Indicator TIVG in order to add this product to our existing offer of Eletta Flow Monitors. Over the years, we have seen limitations in specifications and as a result, a decline in sales for this original ABB product. We have therefore developed an updated version where we combine the Eletta Flow Monitors with the TIVG functions and measures in order to create a direct replacement to the old TIVG. This updated version is called TIVG-S and

we have actually included more options and features into their new model than we were able to offer before. The aim was of course to keep all important measures of the old model so you can direct replace the old version with the new TIVG-S, without any modifications to the existing pipe configuration at site. We have added a schematic picture below to describe how easy the replacement is.



Technical specification



TIVG-D5R Series

Flow Monitor with aluminium housing and threaded stainless steel pipe connection 1/2" and 1" BSP-F.

Replaces old TIVG-15 and 25R



TIVG-D5R Series

Flow Monitor with aluminium housing and threaded pipe connection in brass 1 1/2" BSP-F.

Replaces old TIVG-40R



TIVG-D5F Series

Flow Monitor with aluminium housing and flanged stainless steel pipe connection except for DN350 and 400 which comes in painted carbon steel. Available in DIN from 15-400 mm.

Replaces old TIVG15-400F

The TIVG-S with D-series has a digital display that can be rotated electronically in 90° increments over a 360° angle. It can be installed in any position, vertically or horizontally.

In order to conveniently set up a flow system at dry conditions, a simulation mode for the analog and frequency output signal as well as the HART protocol can be activated.

You can easily adjust the monitor to your demands in field. Change your output, local alarms, language, the orientation of the display etc.

The TIVG-S with D-series has the long-standing proven mechanical function with outstanding reliability. The exceptionally sturdy and robust design makes it extremely well suited for difficult environments.

Flow range	0,2 – 20 000 l/min (liquid), to choose the right range, please refer to table of Measuring ranges page 4.
Flow turndown	1:5
Wetted Material	Stainless steel 316L/1.4404, DN40 threaded comes in brass.
Rubber Parts	Nitrile (HNBR), EPDM or Fluorinated rubber (FPM)
Min. pressure	Apprpr. 700 – 1000 mbar (0,7 – 1 bar). 700 – 1000 mbar (0,7 – 1 bar)
Max. pressure	16 bar, DN250-400 10 bar.
Max. temp. Control Unit	Operating temperature -10 to 65°C
Max. temp. Pipe Section	D5-R brass 1 1/2" BSP-F: 120°C D5-R and F in SS: 250°C
Enclosure	IP65 (NEMA4)
Display	Backlit graphic display, electronically rotatable 90/180/270/360° 58x30 mm (2,6" FSTN)
Counter	Re-settable flow volume counter
Process Connection	DN15-40 BSP-F thread DN15 – 400 DIN flange (wafer)
Power supply	24 VDC +/- 1,5 VDC
Connection cable	Shielded twisted pair, min. 0,2 mm ²
Current consumption	Max 50 mA
Output	4-20 mA, HART protocol, pulse or 200-1000 Hz frequency
Alarm relays	Two relay contacts, independently adjustable within the ordered Flow range. Max. 50 V AC/DC. Min. 1 mA, 5 VDC Max. switching capacity: 30 W
Accuracy	+/- 2% F.S (full scale)
Repeatability	+/- 2% actual
Certificates:	



Measuring Ranges Eletta Flow Monitor TIVG-S with D-series



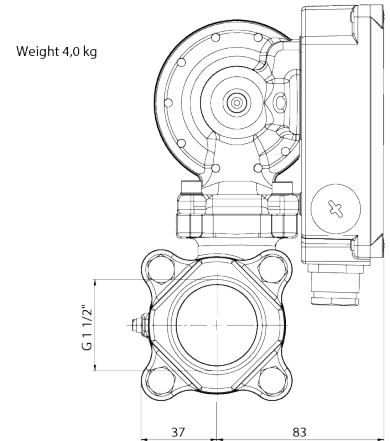
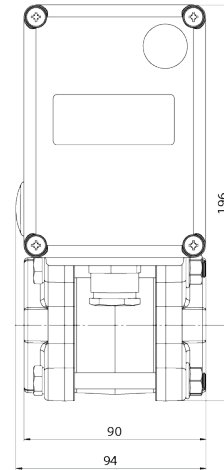
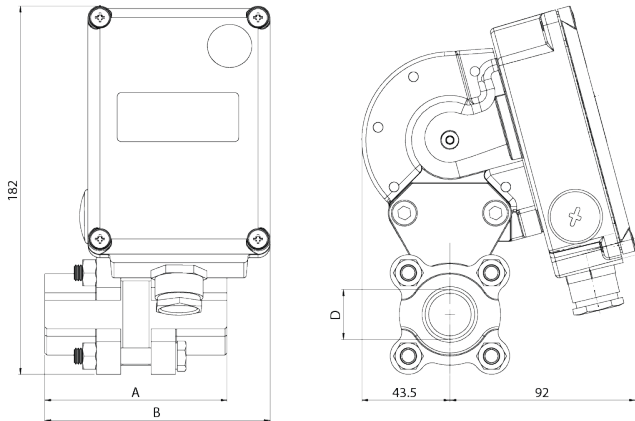
	"Old" TIVG-R	TIVG-D5-R
	l/min	l/min
Model	<i>Actual range</i>	TIVG-S threaded
15 R	0,2-6 0,4 - 1,2 0,8-2,5 1,6-4,8 3 - 9 5 - 15 10 - 30	0,2 -1 0,3 - 1,5 0,5-2,5 1 -5 2- 10 4 - 20 6 - 30
25 R	16-48 24 - 72 40-120	12-60 16 - 80 24-120
40 R	40-120 70-210	24-120 50-250

	"Old" TIVG-F	TIVG- D5-F
	l/min	l/min
Model	<i>Actual range</i>	TIVG-S flanged
15 F	4,5 - 15 9-20 9-30	4-20 5-25 6-30
25F	15-50 21-70 30-100	10-50 15-75 20-100
40F	45-150 60-200	40-200 50-250
50F	60-200 90-300	50-250 70-350
65F	90-300 150-500	70-350 100-500
80F	150-500 210-700	100-500 160-800
100F	210-700 300-1000	160-800 250-1 250
125F	450-1 500 600-2 000	400-2 000 500-2 500
150F	600-2 000 900-3 000	500-2 500 600-3 000
200F	1 200-4 000	1 000-5 000
250F	1 500-5 000 1 800-6 000	1 000-5 000 1 200-6 000
300F	2 100- 7 000 2 700-9 000	1 500-7 500 2 000-10 000
350F	3 600-12 000	2 400 - 12 000
400F	4 500 - 15 000	4 000 - 20 000

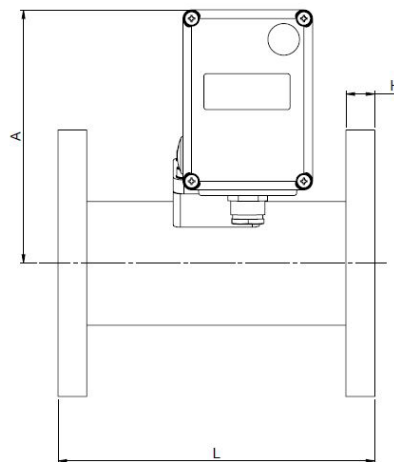
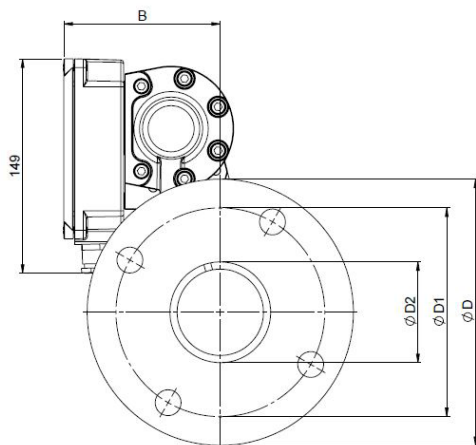
TIVG-V15-...R for threaded connection

Nominal diameter	D Thread	A	B	Weight kg
DN15	G 1/2"	70	91	3,0
DN25	G 1"	90	111	3,0

TIVG-D5-40R for threaded connection (brass)

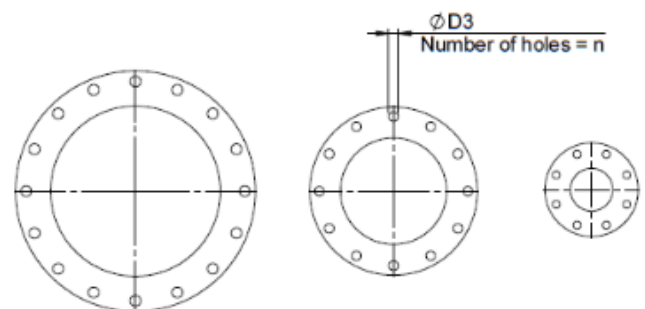


TIVG-D5-...F for flanged connection



Type TIVG-D5-F

DN	A	B	D	D1	D2	D3	H	L	n	Weight kg
15	140	99	95	65	20	15	14	220	4	3,8
25	145	101	115	85	32	15	14	220	4	5,0
40	162	105	150	110	44	18	14	220	4	8,4
50	166	107	165	125	50	18	14	220	4	10,0
65	176	109	185	145	70	18	14	220	4	11,7
80	181	111	200	160	80	18	18	220	4 (8)*	13,4
100	194	114	220	180	100	18	18	220	8	18,0
125	206	117	250	210	125	18	18	220	8	21,7
150	216	124	285	240	150	22	18	220	8	25,8
200	237	148	340	295	200	22	20	220	8	36,6
250	258	165	395	350	250	22	22	220	12	39,7
300	277	193	445	400	300	22	22	220	12	49,0
350	302	209	505	460	350	22	30	320	16	78,0
400	320	221	565	515	400	25	30	320	16	86,1



* DN80 will have flanges according to ISO 2084:1974, PN10, 4 holes as standard. Option with 8 holes must be specified when ordering (EN 1092.1).

Ordering code



Serie		
TIVG-		
Type		
D5	Two adjustable alarms, display LCD, 4-20 mA output and HART	
Dimension		
15	1/2"	Thread R or Flange F, PN16
25	1"	Thread R or Flange F, PN16
40	1 1/2"	Thread R or Flange F, PN16
50	2"	Flange F, PN16
65	2 1/2"	Flange F, PN16
80	3"	Flange F, PN16
100	4"	Flange F, PN16
125	5"	Flange F, PN16
150	6"	Flange F, PN16
200	8"	Flange F, PN16
250	10"	Flange F, PN16
300	12"	Flange F, PN10
350	14"	Flange F, PN10
400	16"	Flange F, PN10
Process connection		
R	Thread, stainless steel	
F	Flange, stainless steel	
Media		
Water		
Oil		
Installation alternative / Flow direction		
A/R		A/R - Left to right in a horizontal pipe
B/L		B/L - Right to left in a horizontal pipe
C/R		C/R - Up to down, dial on right side of the pipe
D/L		D/L - Down to up, dial on right side of the pipe
E/L		E/L - Up to down, dial on left side of the pipe
F/R		F/R - Down to up, dial on left side of the pipe
Measuring range		
See separate table		

Example of Code

TIVG-S25-50F, Water, A/R, 50-250 l/min