

Brooks® Type 1198 Flow Indicators

FEATURES AND BENEFITS

- Simple, reliable and economical way to verify liquid flows through industrial process lines
- Many specials are available upon request to meet various conditions of pressure, temperature, fluid types and mechanical dimensions

DESCRIPTION

Brooks Instrument Model 1198 flow indicators provide a quick, reliable and economical way to verify fluid flows through industrial process lines. Model 1198 is available with three styles of indicators including paddle wheel, flap style, or drip tube/whistle shape.

1198M type: A paddle wheel indicator style is ideal for indicating flow of clear or opaque liquids as well as observations from a distance. It can be installed in any direction, upward, downward, vertical or horizontal lines.

1198C type: A flap indicates at a glance which direction the flow is moving in horizontal lines or vertical lines with upward flow.

1198S type: A port in the shape of a whistle or drip tube is ideal for gravity flow, extremely low flow or intermittent flow. The drip tube keeps the fluid from dripping on the sight glass, ensuring visibility.

CONSTRUCTION

The body of the Model 1198 and the drip tube are available in carbon steel or stainless steel. The paddle wheel is available in polyethylene or stainless steel and the flap in the Model 1198C is stainless steel. The borosilicate glass allows observation from either side of the indicator.

In the small sizes, up to 2", the paddle wheel is centered on the axis of the pipe and is acted upon by the full flow. For the larger sizes, the paddle wheel is offset to one side of the pipe and is actuated by part of the flow.

The indicator's process connections include the following:

- BSP thread (1/2" to 2") to NFE 03005 standard
- NPT thread (1/2" to 2") to NFE 03601/ASME B1.20.1
- Flanges, PN10/16 RF (for sizes DN15 to DN200) or ANSI B16-5 150 lbs. RF (for sizes 1/2" to 8")
- Butt Welds are available for 3/4" or 1-1/4" sch 10 pipe
- Special upon request



SPECIFICATIONS

Maximum Operating Conditions:

Standard specification: pressure 10bar
 Temperature 60°C max For polyethylene paddle wheel
 Temperature 200°C max For SS paddle wheel
 Temperature 200°C max For SS flap
 Temperature 200°C max For SS whistle
 Special designs for higher pressure and temperature are available upon request. (Refer to Figure 4).

Klingsil® gaskets C4430 are standard. Other gasket materials such as fluorocarbon and PTFE are available depending on fluid types.

Dimensions

(Refer to Figures 1, 2 and 3).

Flow Rates

Type of flow Indicator	Minimum flow rate(*)	Maximum Flow rate
1198C	0.1m/s	Unlimited
1198M Ø<2"	0.1m/s	1.5m/s
1198M Ø>2"	0.5m/s	3m/s

(*) Minimum rate necessary for observation of the flow

Flow Indicator

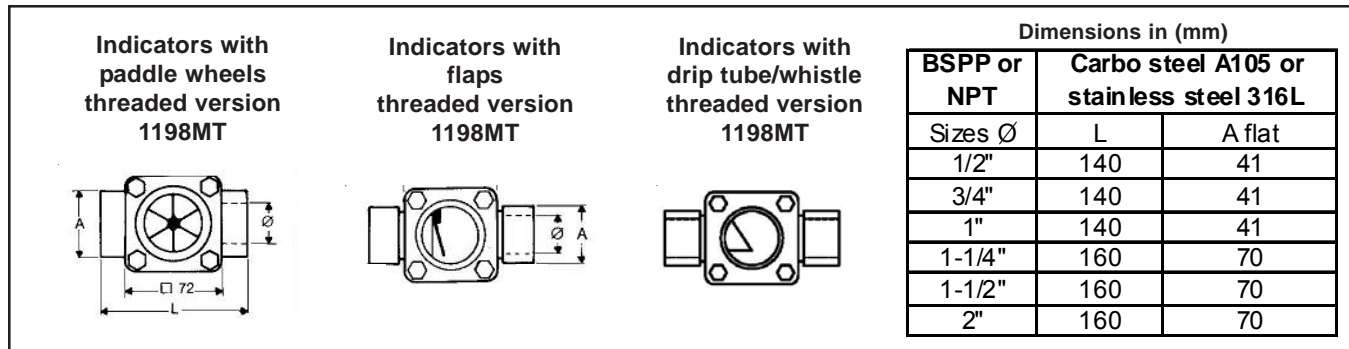


Figure 1 Standard Dimensions for Models 1198MT, 1198CT and 1198ST

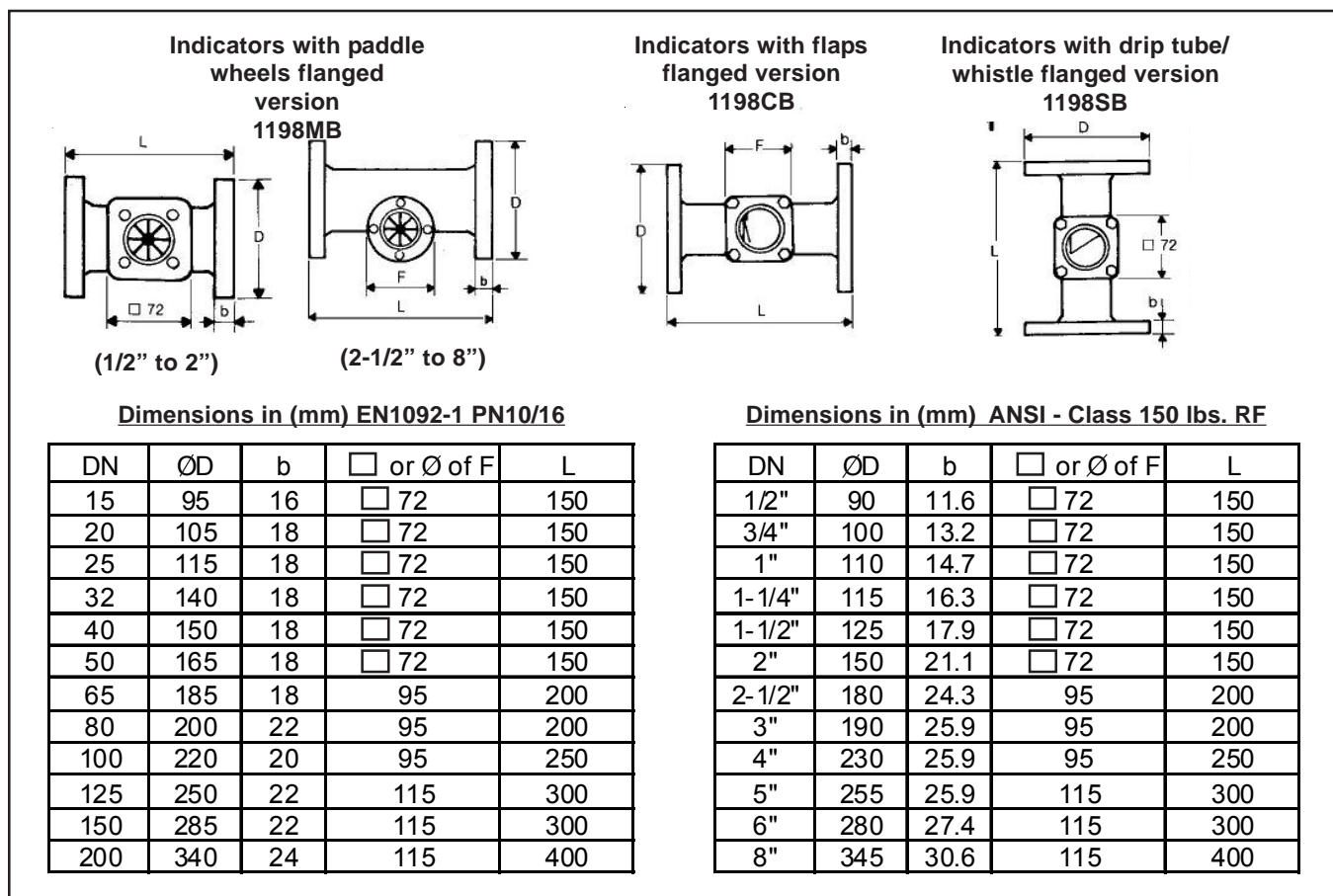


Figure 2 Standard Dimensions for Models 1198MB, 1198CB and 1198SB

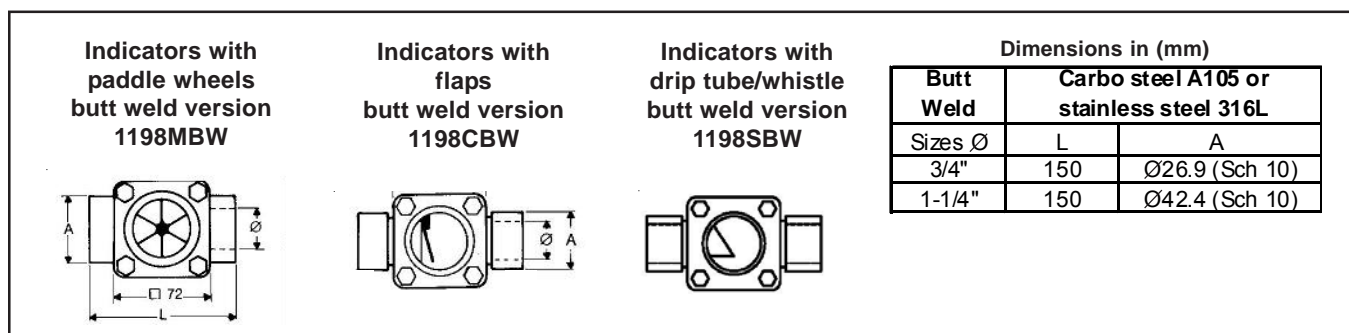


Figure 3 Standard Dimensions for Models 1198BW, 1198CBW and 1198SBW

Ordering Information for Model 1198

TYPE	Code	
1198ST		Whistle indicator : Threaded - Vertical pipes with downward flow
	C10	Carbon steel BSPPF
	C11	Carbon steel NPTF
	C50	Stainless steel BSPPF
1198SB		Whistle indicator : Flanged - Vertical pipes with downward flow
	C12	Carbon steel PN10-16 RF
	C13	Carbon steel PN20/ANSI 150 RF
	C52	Stainless steel PN10-16 RF
1198SBW	C53	Stainless steel PN20/ANSI 150 RF
		Whistle indicator : B.W. - Vertical pipes with downward flow
	C14	Carbon steel PN10-16 RF
1198CT		Flap indicator : Threaded - Horizontal pipes or upward flow
	C15	Carbon steel, SS Flap BSPPF
	C16	Carbon steel, SS Flap NPTF
	C55	Stainless steel, SS Flap BSPPF
1198CB		Flap indicator : Flanged - Horizontal pipes or upward flow
	C17	Carbon steel, SS Flap PN10-16 RF
	C18	Carbon steel, SS Flap PN20/ANSI 150 RF
	C57	Stainless steel, SS Flap PN10-16 RF
1198CBW	C58	Stainless steel, SS Flap PN20/ANSI 150 RF
		Flap indicator : B.W. - Horizontal pipes or upward flow
	C19	Carbon steel, SS Flap PN10-16 RF
1198MT		Paddle wheel indicator : Threaded - Horizontal or Vertical pipes
	C20	Carbon steel, polyethylene paddle wheel BSPPF
	C21	Carbon steel, SS paddle wheel BSPPF
	C22	Carbon steel, polyethylene paddle wheel NPTF
	C23	Carbon steel, SS paddle wheel NPTF
	C60	Stainless steel, polyethylene paddle wheel BSPPF
	C61	Stainless steel, SS paddle wheel BSPPF
	C62	Stainless steel, polyethylene paddle wheel NPTF
	C63	Stainless steel, SS paddle wheel NPTF
		Paddle wheel indicator : Flanged - Horizontal or Vertical pipes
1198MBW	C24	Carbon steel, polyethylene paddle wheel PN10-16 RF
	C25	Carbon steel, SS paddle wheel PN10-16 RF
	C26	Carbon steel, polyethylene paddle wheel PN20/ANSI 150 RF
	C27	Carbon steel, SS paddle wheel PN20/ANSI 150 RF
	C64	Stainless steel, polyethylene paddle wheel PN10-16 RF
	C65	Stainless steel, SS paddle wheel PN10-16 RF
	C66	Stainless steel, polyethylene paddle wheel PN20/ANSI 150 RF
	Paddle wheel indicator : B.W. - Horizontal or Vertical pipes	
C28	Carbon steel, polyethylene paddle wheel PN10-16 RF	
C29	Carbon steel, SS paddle wheel PN10-16 RF	
C68	Stainless steel, polyethylene paddle wheel PN10-16 RF	
C69	Stainless steel, SS paddle wheel PN10-16 RF	
Code - Sight Flanges		
		Standard on all models: Aluminium Sight Flanges + Epoxy primer + Zinc steel Bolts
Z11		Carb. steel.+Epoxy primer+ Zinc steel bolts
Z12		Stainless Steel (SS body+SS bolts)
Code - Options / Documentation		
Z9		Paint + Epoxy finish (carbon steel) Conformity certificate, pressure test, material test, Maintenance Manual (1st for ordered instrument)
D0		3-1-B material certificate (body)
D2		Welding file
DX		To specify
D11		Documentation on CD Rom
D12		G/A drawing for approval or final
D13		Press. test cert. + Conformity cert.
1198MT -2" - C22 - Z9 - Z11		

Available Spare Parts

Paddle Wheel
Polyethylene Paddle Wheel
Stainless Steel Paddle Wheel
2 VTS Glasses
2 Drilled PYREX Glasses
Only for Old C1 Construction
* Painted Aluminium Sight Flange
* Carbon Steel Sight Flange
* Stainless Steel Sight Flange
Klingersil Gaskets (4 gaskets)
Fluorocarbon Gaskets(2 Kling + 2 Fluor.)
PTFE Gaskets (2 klingersil + 2 PTFE)
Set of Cross Bars for Ball Bearings
Set of Cross Bars for Polyethylene Paddle Wheel
Ball Bearing (Unit)
Flap or Whistle/Drip Tube
2 VTS Glasses
* Painted Aluminium Sight Flange
* Carbon Steel Sight Flange
* Stainless Steel Sight Flange
Klingersil Gaskets (4 gaskets)
Fluorocarbon Gaskets (2 Kling + 2 Fluorocarbon)
PTFE Gaskets (2 klingersil + 2 PTFE)

* 2 Sight Glasses per Unit

Available Nominal Connection Diameters

Diameter Nominal ISO	Diameter Nominal ANSI
15	1/2"
20	3/4"
25	1"
32	1-1/4"
40	1-1/2"
50	2"
65	2-1/2"
80	3"
100	4"
125	5"
150	6"
200	8"

Flow Indicator

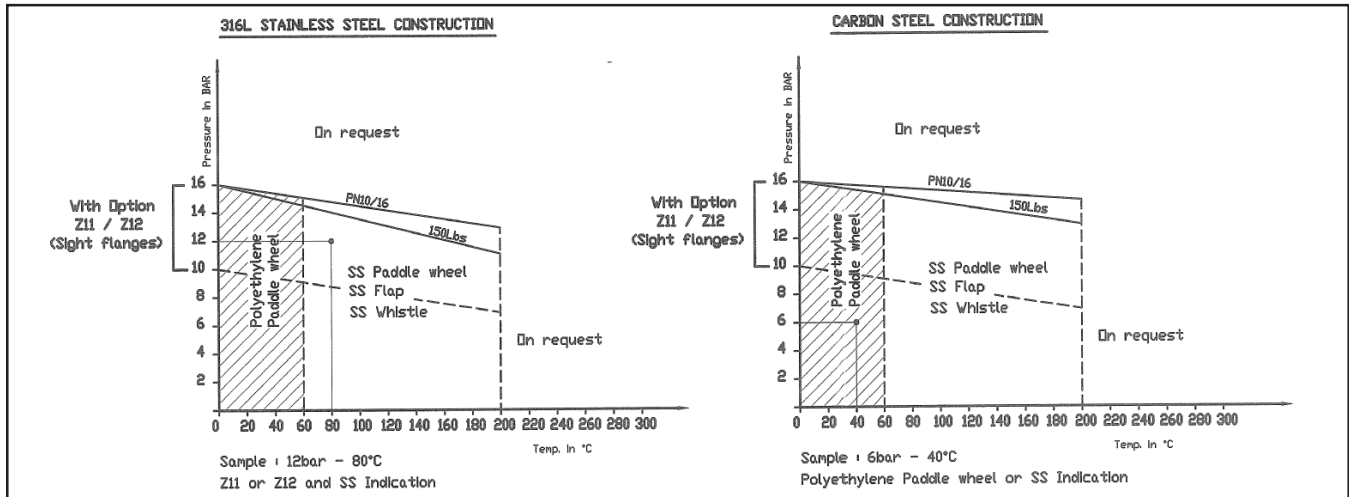


Figure 4 Pressure and Temperature Ratings

INSTALLATION AND MAINTENANCE

The flow indicators are mounted directly on the pipe without any special precautions other than the direction of flow.
 1198M type: pipes can be set at any angle.
 1198C type: horizontal or vertical pipes with upward flow.
 1198S type: Vertical pipes with downward flow.
 These units need no maintenance other than being kept clean.



BROOKS SERVICE AND SUPPORT

Brooks is committed to assuring all of our customers receive the ideal flow solution for their application, along with outstanding service and support to back it up. We operate first class repair facilities located around the world to provide rapid response and support. Each location utilizes primary standard calibration equipment to ensure accuracy and reliability for repairs and recalibration. The primary standard calibration equipment to calibrate our flow products is certified by our local Weights and Measures Authorities and traceable to the relevant International Standards.

Visit www.BrooksInstrument.com to locate the service location nearest to you.

START-UP SERVICE AND IN-SITU CALIBRATION

- Brooks Instrument can provide start-up service prior to operation when required, if necessary under in-situ conditions, and the results will be traceable to the relevant international quality standards.

CUSTOMER SEMINARS AND TRAINING

- Brooks can provide customer seminars and dedicated training to engineers, end users and maintenance persons.

HELP DESK

In case you need technical assistance:

- Americas ☎ 1 888 554 FLOW
- Europe ☎ +31 (0) 318 549 290
- Asia ☎ +81 (0) 3 5633 7100

TRADEMARKS

- Brooks Brooks Instrument, LLC
- Klingersil Klinger Co.

Due to Brooks Instrument's commitment to continuous improvement of our products, all specifications are subject to change without notice.

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