



TEST REPORT

TITLE : Testing of Valve

OUR REFERENCE : J13817-1

DESCRIPTION OF SAMPLE : Stainless steel check valve; pressure rating PN16; female screwed ends to BS21; size: 20mm, 25mm, 32mm, 40mm and 50mm

SAMPLE SUBMITTED BY : Waterfront Fluid Controls Limited
Unit 6, Elderpark Workspace,
100 Elderpark Street, Glasgow, U. K.

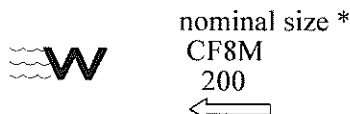
BRAND : Waterfront

MANUFACTURER : Waterfront Fluid Controls Limited

ORIGIN : U. K.

SERIES : 614

BODY MARKINGS :



(* The nominal size: 3/4, 1, 1 1/4, 1 1/2 and 2 respectively.)

TEST REQUIRED : BS5154 : 1991; BSEN12288: 2003; BSEN12266-1: 2003
(There is no British Standard for check valve made of stainless steel. To show the hydraulic strength of the valve sample, the test procedures laid down in BS5154, BSEN12266-1; 2003 and BSEN12288: 2003 were adopted for reference.)

PERIOD OF TESTS : 3rd to 20th August 2009

RESULTS: - (apply only to sample tested)

1. DIMENSIONS (in millimetres)

Nominal size	Sample				
	20	25	32	40	50
Face to face dimension	80.6	90.1	105.0	120.1	139.4
Minimum body thickness	2.75	3.15	3.50	4.00	4.00

Note : the female threads at the water inlet and water outlet of each valve sample comply with ISO7-1 and BS21.

2. HYDRAULIC PRESSURE TEST (BSEN12288, Clause 5.1 & 5.3; BSEN12266-1: 2003; BS5154, Clause 11)

	Nominal pressure PN (bar)	Shell tightness test (1.5 PN)			Seat tightness test (1.1 PN)		
		Test pressure (bar)	Duration (s)	Remark	Test pressure (bar)	Duration (s)	Remark
Samples (20mm, 25mm, 32mm, 40mm & 50mm)	16	24	15	Pass	18	15	Pass
BSEN12288's Requirement	16	24	15	/	18	15	/
BS5154's Requirement	16	24	15	/	18	15	/

Note : no leakage was detected during the above test.

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3. CHEMICAL COMPOSITIONS

One piece of the valve samples was randomly selected and subjected to the chemical composition test; the results are tabulated below:

Component	Element compositions (%)								Designation
	C	Si	Mn	Ni	Mo	Cr	S	P	
Body, bonnet, disc & hinge pin	0.035	0.32	1.69	11.1	2.42	18.1	0.01	0.01	grade 316S31 of BS970: Part 1 and grade X5CrNiMo17- 12-2 (1.4401) of BSEN10088


4. SUMMARY OF RESULTS (apply only to the sample tested)

Dimensions – Satisfactory

Hydraulic pressure test – Satisfactory

Chemical compositions – Satisfactory; the chemical composition test results for the valve body, bonnet, disc and hinge pin comply with BS970 part 1 grade 316S31 and grade X5CrNiMo17-12-2 (1.4401) of BSEN10088.

Remark : the internal water passage surface of the sample does not have any metallic coating.

Date : 12th December 2009 Authorized signature : 

Nutek Systems is a testing agency,
approved by the Water Authority and
Government Supplies Department, for
testing water supply fittings.

Samson W.K. Yiu

(Director)