भारत सरकार
GOVERNMENT OF INDIA
उपभोक्ता मामले, खाद्य एवम् सार्वजनिक वितरण मंत्रालय
Ministry of Consumer Affairs, Food & Public Distribution
उपभोक्ता मामले विभाग
Department of Consumer Affairs
राष्ट्रीय परीक्षण शाला (उ०क्षे०)
NATIONAL TEST HOUSE (NR)
कमला नेहरु नगर, गाजियाबाद KAMLA NEHRU NAGAR, GHAZIABAD-201002
Phone : 0120-2789813, 2789906 Fax : 0120-2789883 E-mail : nthnr@rediffmail.com

TEST CERTIFICATE

Sample No. ME/01868

Issued to: Date: 08-6-2009

Aman Engineeering Works
C-54 & 55, Focal Point Extension,
Jalandhar -144004

File No. NTH/NR/ME/2008/88-B
Ref. No. Nil
Dated: 06-11-2008 and further correspondence
Dated 10-11-2008,03-12-08& 05-03-09
Sample Recd on 01-12-2008

One sample consisting of three water meters described as " 20 mm Multi Jet class B of KRANTI MAKE having meter numbers 269462,269461 & and 269463
As desired, the above meters were subjected to Type Test as per IS: 779-1994 read with IS: 6784-1996 ,. The results obtained are noted below:-;

Tests Results		Observed value			Specified value
		Meter Number			
		269462	269461	269463	
A	Performance				
1	Minimum starting flow at which measurement starts	Satisfactory	Satisfactory	Satisfactory	Shall start registering at a flow rate of 50 l/h
2	Pressure tightness test				
2.1	At 1.6 MPa for 15 minutes	Satisfactory	Satisfactory	Satisfactory	No leakage, seepage or deformation
2.2	At 2.0 MPa for 1 minutes	Satisfactory	Satisfactory	Satisfactory	No leakage, seepage or deformation
3	Loss of pressure in MPa				
3.1	For nominal flow rate (Qn: 2500l/h)	0.020	0.020	0.020	0.025 Max
3.2	For maximum flow rate (Qmax: 5000 l/h)	0.065	0.065	0.065	0.100 Max
4	Metering Accuracy				
4.1	Error in metering accuracy at maximum flow rate (Qmax : 5000l/h)	- 0.6 %	- 1.5%	+ 0.7%	+/- 2% Max

NTH/NR/ME/2008/88-B

Tests Rersults		Observed value			Specified value
		Meter Number			
		269462	269461	269463	
4.2	Error in metering accuracy at normal flow rate (Qn: 2500l/h)	+ 0.0%	-1.0%	+ 0.5%	+/- 2% Max
4.3	Error in metering accuracy at transitional flow rate (Qt :200 l/h)	+ 1.0%	-2.0%	+2.0%	+/-2% Max
4.4	Error in metering accuracy at minimum flow rate (Q min :50 l/h)	+2.0%	+2.0%	+ 3.0%	+/-5% Max
5	Performance after Life test(Accelerated endurance test as per clause 12.4.4) conducted on two meters bearing no 269461 and 269463				
		Meter No			
		269461	269463		
5.1	Minimum starting flow at Which measurements starts	Satisfactory	Satisfactory	Shall start registering at a flows rate of 50 l/h	
5.2	Pressure tightness test				
5.2.1	At 1.6 MPa for 15 minutes	Satisfactory	Satisfactory	No leakage seepage or deformation	
5.2.2	At 2.0 MPa for 1 minute	Satisfactory	Satisfactory	No leakage seepage or deformation	
5.3	Loss of pressure in MPa				
5.3.1	For nominal flow rate (Qn: 2500l/h)	0.015	0.015	0.025 Max	
5.3.2	For maximum flow rate (Qmax: 5000l/h)	0.075	0.075	0.100 Max	
5.4	Metering accuracy				
5.4.1	Error in metereing Accuracy at maximum Flow rate (Qmax :5000l/h)	-0.2%	-1.0%	+/-2% Max	

		Meter No		
		269461	269463	
5.4.2	Error in metering Accuracy at normal Flow rate (Qn : 2500 l/h)	- 0.5%	-0.7%	+/-2% Max
5.4.3	Error in metering Accuracy at transitional flow rate (Qt : 200 l/h)	+ 0.5%	+ 0.5%	+/-2% Max
5.4.4.	Error in metering Accuracy at minimum Flow rate (Q min.: 50l/h)	+4.0%	+4.0%	+/-5% Max

6- Performance after Temperature suitability test (As per clause 10.3)

Two meters, one after initial performance test and other after life test were subjected to temperature suitability test

		Meter No.		
		269462	269463	
6.1	Minimum starting flow at which measurements starts	Satisfactory	Satisfactory	Shall start registering at a Flow rate of 50 l/h
6.2	Pressure tightness test			
6.2.1	At 1.6 MPa for 15 minutes	Satisfactory	Satisfactory	No leakage seepage or deformation
6.2.2	At 2.0 MPa for 15 minutes	Satisfactory	Satisfactory	No leakage seepage or deformation
6.3	Loss of pressure in MPa			
6.3.1	For nominal flow rate (Qn 2500l/h)	0.015	0.015	0.025 Max
6.3.2	For maximum flow rate (Qmax 5000 l/h)	0.080	0.080	0.100 Max
6.4	Metering Accuracy			
6.4.1	Error in metering accuracy at maximum flow rate (Qmax : 5000l/h)	0.0%	-0.5%	+/-2% Max
6.4.2	Error in meeting Accuracy at normal Flow rate (Qn : 2500 l/h)	-0.5%	-0.2%	+/-2% Max
6.4.3	Error in metering Accuracy at transitional flow rate (Qt : 200 l/h)	-1.0%	+1.0%	+/-2% Max
6.4.4.	Error in metering Accuracy at minimum Flow rate (Q min.: 50l/h)	-2.0%	+4.0%	+/-5% Max

7	Meters size, threads, and dimensions (in mm) (Notations as per Table 2 of IS: 779-1994)		
7.1	Meter size	20 mm	20 mm
7.2	Threads	Satisfactory	G1B
7.3	Length of threads, on one side	15	12 Min
	other side	15	12 Min
7.4	Length of meter with nipples	290	290 +/- 5
7.5	Length of meter without Nipples	190	+0 190 -2
7.6	Width (W)	85	130 Max
7.7	Height (HI)	36	60 Max
7.8	Height (H2)	72	240 Max
8	Value of verification Scale interval (l)	0.1	0.2 Max

Note:- The samples were tested at factory site on 1.12.2008, 16.03.2009 and 17.03.2009

Remarks:- The sample meets the requirements of IS: 779-1994 in respect of test carried out for water meter (Domestic type), of size 20 mm, Multi jet and class "B".

Tested By	Checked By	Approved By
(ANIL CHOPRA)	(R.N. RAM)	(SHER SINGH)
SCIENTIST SB(Mech)	SCIENTIST SC(Mech)	SCIENTIST SD