



**PRODUCT MANUAL FOR
HORIZONTAL CENTRIFUGAL PUMPS FOR CLEAR, COLD WATER -
AGRICULTURAL AND RURAL WATER SUPPLY PURPOSES
ACCORDING TO IS 6595 (Part 1):2018**

This Product Manual shall be used as reference material by all Regional/Branch Offices & licensees to ensure coherence of practice and transparency in operation of certification under Scheme-I of Bureau of Indian Standards (Conformity Assessment) Regulations, 2018 for various products. The document may also be used by prospective applicants desirous of obtaining BIS certification licence/certificate.

1.	Product	:	IS 6595 (Part 1) : 2018
	Title	:	Horizontal centrifugal pumps for clear, cold water - Agricultural and rural water supply purposes
	No. of Amendments	:	Nil
2.	Sampling Guidelines:		
a)	Raw material	:	As per clause 6 of IS 6595 (Part 1)
b)	Grouping guidelines	:	Each Type of Horizontal centrifugal pumps shall be tested for GoL/CSoL.
c)	Sample Size	:	One Pump
3.	List of Test Equipment	:	Please refer ANNEX – A
4.	Scheme of Inspection and Testing	:	Please refer ANNEX – B
5.	Possible tests in a day	:	All tests
6.	Scope of the Licence	:	Please refer ANNEX – C

BUREAU OF INDIAN STANDARDS
Manak Bhawan, 9, Bahadur Shah Zafar Marg,
New Delhi – 110002

ANNEX - A**List of Test Equipments****Major test equipment required to test as per the Indian Standard**

Sl. No.	Name of Equipment	Test/Cl. for reference Remarks
1.	Hydraulic Testing machine	Hydrostatic test of casing as per clause 9.1
2.	Impeller Balancing Machine	For balancing impeller as per clause 9.2
3.	Micrometer , Vernier caliper, Dial Bore Gauge, Snap gauge	For various Dimensional measurements
		Various parameters as per clause 10 of IS 6595 (Part 1) and in accordance with IS 11346
4.	a) Volumetric tank b) Vee-notch c) Orifice plate d) Flow meters	Discharge measurement
5.	Pressure gauge , Barometer, Manometer	Discharge pressure
6.	Vacuum gauge	Suction lift measurement
7.	Tachometer	Measurement of RPM
8.	KW meter	Wattage measurement
9.	Volt meter	Voltage measurement
10.	Frequency meter	Frequency measurement
11.	Ampere meter	Current measurement
12.	Power factor meter	Power factor measurement
13.	Powerstat	To vary the voltage

The above list is indicative only and may not be treated as exhaustive.

ANNEX – B

Scheme of Inspection and Testing

1. LABORATORY - A laboratory shall be maintained which shall be suitably equipped (as per the requirement given in column 2 of Table 1) and staffed, where different tests given in the specification shall be carried out in accordance with the methods given in the specification.

1.1 The manufacturer shall prepare a calibration plan for the test equipment.

2. TEST RECORDS – The manufacturer shall maintain test records for the tests carried out to establish conformity.

3. LABELLING AND MARKING – As per the requirements of IS 6595 (Part 1): 2018.

4. LEVELS OF CONTROL - The tests as indicated in column 1 of [Table 1](#) and the levels of control in column 3 of [Table 1](#), shall be carried out on the whole production of the factory which is covered by this plan and appropriate records maintained in accordance with paragraph 2 above.

4.1 All the production which conforms to the Indian Standard and covered by the licence should be marked with Standard Mark.

5. REJECTIONS – Disposal of non-conforming product shall be done in such a way so as to ensure that there is no violation of provisions of BIS Act, 20016.

Table 1

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Subcontracting permitted	Recommended Levels of Control		
Cl.	Requirement	Clause	Test Methods Reference		No. of Sample	Frequency	Remarks
6	Material of Construction	6	IS 6595 (Part 1)	Conformity to the relevant Indian Standard may be established.			
7	Direction of Rotation	7	IS 6595 (Part 1)	-	All		
8	Design features	8	IS 6595 (Part 1)	R	One sample of each identical type and design out of every 100 Pumpsets or every month whichever is earlier		
9	GENERAL REQUIREMENT						
9.1	Hydrostatic test of Volute Casing	9.1	IS 6595 (Part 1)	R	Each casing		
9.2	Balancing of impeller	9.2	IS 6595 (Part 1)	R	Each impeller		
10, 12	Pump Test, Guarantee and Tolerance on Pump Performance	10, 12	IS 6595 (Part 1)	R	One sample of each identical type and design out of every 100 Pumpsets or every month whichever is earlier		

NOTE-1: Sub-contracting is permitted to a laboratory recognized by the Bureau or Government laboratories empanelled by the Bureau.

NOTE-2: Levels of control given in column 3 are only recommendatory in nature. The manufacturer may define the control unit/batch/lot and submit his own levels of control in column 3 with proper justification for approval by BO Head.

ANNEX-C

SCOPE OF LICENCE

Licence is granted to use Standard Mark as per IS 6595 (Part 1): 2018 with the following scope:									
Name of the Product: Horizontal centrifugal pumps for clear, cold water - Agricultural and rural water supply purposes									
Model	Size of Suction (mm)	Size of Delivery pipe (mm)	Nominal Duty Point			Rated Speed (rpm)	Rating (kW)	Discharge Range (lps)	Head Range (m)
			Head (m)	Discharge (lps)	Pump Efficiency (%)				