



**PRODUCT MANUAL FOR
PUMPS – CENTRIFUGAL SELF PRIMING
ACCORDING TO IS 8418: 1999**

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 8418: 1999
	Title	:	Pumps – Centrifugal Self Priming
	No. of Amendments	:	1
2.	Sampling Guidelines:		
a)	Raw material	:	-
b)	Grouping guidelines	:	Each Type of Centrifugal Self Priming Pump is to be tested for GOL and CSoL
c)	Sample Size	:	1 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 as per IS 8418:1999		
6.	Scope of the Licence:	Please refer ANNEX – C	

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

Sl. No.	Tests used in with Clause Reference	Test Equipment
1	Performance Test (Clause 12.2)	(i) Voltmeter (ii) Ammeter (iii) Wattmeter / Power Meter (iv) Frequency meter (v) Slip Speed Meter/ Tacho meter (vi) Current transformer (vii) Digital pressure transducer with indicator/ Pressure Gauge (viii) Digital vacuum transducer with indicator/ vacuum gauge (ix) Magnetic flow meter / volumetric tank (x) Sump (xi) Prime mover (Motor -1P/3/P) - as applicable (xii) Pipes of various sizes (xiii) Steel Scale / Tape (xiv) Auto transformer
2	Priming Test (Clause 12.3)	(i) Current transformer (ii) Prime mover (Motor -1P/3/P) - as applicable (iii) Pipes of various sizes (iv) Self-prime test set-up with 3m static suction pipe (v) Stop watch (vi) Steel Scale / Tape (vii) Auto transformer
3	General Requirements (Clause 13)	(i) Current transformer (ii) Prime mover (Motor -1P/3/P) - as applicable (iii) Pipes of various sizes (iv) Pipes of various sizes (v) Auto transformer (vi) Hydrostatic Pressure test Apparatus with pressure gauge (vii) Impeller Balancing Machine

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 equipments.

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

3. LABELLING AND MARKING – As per the requirement of IS 8418:1999.

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 Standards 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, 2016.

TABLE 1

(1)				(2)	(3)		
Test Details				Test equipment requirement R: required (or) S: Sub-contracting permitted	Levels of Control		
Cl.	Requirement	Test Method			No. of Sample	Frequency	Remarks
		Clause	Reference				
6	Materials of Construction	6.1, 6.2	IS 8418	Conformity to the relevant Indian Standard may be established			
13.1	General requirements	-	IS 5120	R	-	Each Pump	
13.2	Hydrostatic Pressure test on Casing	13.2	IS 8418	R	-	Each Casing	
13.3	Balancing of Impeller	13.3	IS 8418	R	-	Each Impeller	
11	Design features	11	IS 8418	R	1	Each lot of 10 Pumps of identical Type and Design	In case of failure, all subsequent pumps manufactured shall be tested till 5 consecutive pumps pass, after which the normal frequency of testing may be restored
12.3	Priming test	12.3	IS 8418	R	1		
12.2 / 14.2	Performance test	4	IS 11346	R	1		

Note-1: 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 8418: 1999 with the following scope:

Name of the Product: Centrifugal Self Priming Pump

Model Name	Type	Speed (rpm)	Frequency (Hz)	Delivery Size (mm)	Suction Size (mm)	Prime Mover Rating (kW)	No of Stages	Rated Head (m)	Discharge (LPH/LPS)	Pump Efficiency (%)	Head Range (m)	Maximum Self priming Time (Sec)	Maximum Static Suction Lift (m)