



PRODUCT MANUAL FOR PUMPS – CENTRIFUGAL SELF PRIMING ACCORDING TO IS 8418: 2025

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: 2025
	Title	:	Pumps – Centrifugal Self Priming
	No. of Amendments	:	Nil
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 8418:2025		
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. QUALITY ASSURANCE PLAN**

1.1 It is expected that manufacturers (licensees/applicants) will implement a Quality Assurance Plan i.e. a plan of regular testing and in-process controls, designed to ensure that the product bearing the Standard Mark conforms to all requirements of the Indian Standard.

1.2 The manufacturers shall define a Quality Assurance Plan defining the control unit i.e. Batch and the levels of control (i.e. the frequency and number of samples for conducting the different tests as per the Indian Standard) and submit the same to BIS Branch Office for information. The manufacturer shall comply with the same and maintain test records in accordance with **para 2.4 below**.

1.3 RECOMMENDED LEVELS OF CONTROL/CONTROL UNIT:

1.3.1 For the guidance of manufacturers in preparing the Quality Assurance Plan, recommended levels of control are given in **Table 1**.

1.3.2 The manufacturer shall ensure inspection and testing as per the Quality Assurance Plan submitted by them on the whole production of the factory which is covered by this plan. Alternatively, the manufacturer has the option of adherence to the quality plan as per levels of control recommended in column 3 of Table 1.

1.4 However, all manufacturers shall ensure compliance of their products to all the requirements of the Indian Standard.

2. ENSURING COMPLIANCE THROUGH TESTING- It is expected that manufacturers (licensees/applicants) will establish a suitably equipped and staffed in-house laboratory (In house testing facility) for testing at least those parameters of the Indian Standard which require routine testing for ensuring quality of the product. This includes in-process controls as may be defined and put in place by the manufacturer, and testing parameters/requirements which can only be performed in the factory.

2.1 For the guidance of manufacturers, Table 1 giving the recommended levels of control is given below. Column 2 of Table 1 indicates routine tests where test equipment is required in-house as “R” or other tests which can be sub-contracted as “S”. Subcontracting is permitted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.2 For MSME manufacturers, the requirement of maintaining a laboratory/in-house testing facility for routine tests (indicated as “R” in Column 2 of Table 1) also is optional.

2.2.1 MSME manufacturers may utilize common cluster based facilities as per guidelines for the utilization of cluster based test facilities by MSMEs or the provisions of Sharing of testing facilities or get testing done from BIS recognized/empaneled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025.

2.3 Large Scale manufacturers shall maintain an in-house laboratory equipped at least with test facilities for routine tests (indicated as “R” in Column 2 of Table 1), where different tests given in the specification shall be carried out in accordance with the method given in the specification. They shall also implement a calibration plan for the in-house test equipment.

2.3.1 Alternatively, in lieu of an in-house laboratory, large scale manufacturers can also utilize the provisions of Sharing of testing facilities as per the Guidelines for Grant of Licence available on BIS website www.bis.gov.in. (Under Conformity Assessment>Product Certification Process). Even for subcontracted tests, provisions for sharing of testing facilities can be utilized.

2.4 TEST RECORDS- The manufacturers maintaining an in-house laboratory or utilizing common cluster based facilities or shared test facilities shall maintain test records for the tests carried out to establish conformity. For the tests being subcontracted to BIS recognized/empanelled laboratory or any other laboratory having valid NABL accreditation as per IS/ISO/IEC 17025, test reports issued by the laboratories shall be available for inspection by BIS.

3. LABELLING AND MARKING – As per the requirement of IS 8418:2025. The Standard mark as given in the schedule of the Licence shall be marked legibly and indelibly on each Pump provided always that the product thus marked conforms to all the requirement of the specification. In addition, the licence no. CM/L-_____ and details of BIS website shall be marked at an appropriate place on product or package as follows: “For details of BIS certification please visit www.bis.gov.in”.

4. REJECTION - All the production which conforms to the Indian Standard and covered under scope of the licence shall be marked with Standard Mark. 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 (Recommended levels of Control- For guidance only)

(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	S	One	Each consignment	No further testing is required in case component is received with test certificate
11	Design features	11.1, 11.2	IS 8418	S	1	Once in a month	Testing shall be carried out such that one sample of each rating manufactured in the month is tested at least once in the month 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	S	1		
12.2 / 14.2	Performance test	4	IS 11346	S	1		

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)