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IS 3365 (1965): Specification For floor polishing machines  
[MED 18: Mechanical Engineering]



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**IS : 3365 - 1965**  
(Reaffirmed 2009)

*Indian      Standard*

**SPECIFICATION FOR  
FLOOR POLISHING MACHINE**

( First Reprint DECEMBER 1985 )

UDC    69.025.3 : 648.523



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**INDIAN STANDARDS INSTITUTION**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG

NEW DELHI 110002

AMENDMENT NO. 1 JULY 1980

TO

IS:3365-1965 SPECIFICATION FOR FLOOR  
POLISHING MACHINES

Alteration

(Page 6, clause 5.5.1, informal table) -  
Substitute the following for the existing  
matter:

<i>Size of Machine</i>	<i>Speed of Centre of Stone, Min</i>	<i>Sweep of Disc, Min</i>	<i>No, of Grind- ing Stones per Stone Bolder, Min</i>
<i>cm</i>	<i>smpm*</i>	<i>cm</i>	
<i>60</i>	<i>330</i>	<i>60</i>	
<i>75</i>	<i>365</i>	<i>75</i>	

*\*Surface metres per minutes.*

( BDC 28 )

# *Indian Standard*

## SPECIFICATION FOR FLOOR POLISHING MACHINES

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***Indian Standard***  
**SPECIFICATION FOR**  
**FLOOR POLISHING MACHINES**

**0. FOREWORD**

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 19 November 1965, after the draft finalized by the Construction Plant and Machinery Sectional Committee had been approved by the Civil Engineering Division Council.

**0.2** Grinding and polishing of wearing surface is an important aspect in the construction of superior floor finishes. Machine grinding is increasingly replacing manual grinding because of its advantages in respect of quality of finish and economy in time. This standard has been prepared with a view to assisting the manufacturers and users of floor polishing machines in obtaining machines capable of giving satisfactory and efficient service.

**0.3** In the formulation of this standard due weightage has been given to international co-ordination among the standards and practices prevailing in different countries in addition to relating it to the practices in this field in this country.

**0.4** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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**1. SCOPE**

**1.1** This standard lays down the requirements for materials, sizes, construction and performance of floor polishing machines.

**2. TERMINOLOGY**

**2.0** For the purpose of this standard, the following definitions shall apply.

**2.1 Pressure Weight** — An arrangement to increase the pressure exerted by the revolving disc on the surface to be ground and polished.

**2.2 Sweep of the Revolving Disc** — Diameter of the circle traced by the extreme tips of stones held in the stone holder.

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\*Rules for rounding off numerical values (*revised*).

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**2.3 Working Face** — The portion of machine in contact with the surface to be ground and polished.

## 3. MATERIALS

**3.1 Steel Sheet** — Mild steel sheet shall conform to IS : 1079-1963\*.

### 3.2 Steel Sections, Bars and Rivet

**3.2.1** Steel sections and bars shall conform to IS : 1977-1962† or IS : 226-1962‡.

**3.2.2** Rivet bars shall conform to IS : 1148-1964§.

**3.3 Steel Tubes** — Steel tubes shall conform to IS : 1239-1964||.

**3.4 Grey Iron Castings** — Grey iron castings shall be of suitable grade conforming to IS : 210-1962.

**3.5 Springs** — Springs shall be manufactured from suitable grade of wire conforming to IS : 727-1964\*\*.

**3.6 V-Belts** — V-belts for belt drives shall conform to IS : 2494-1964††.

**3.7 Bolts and Nuts** — Bolts and nuts shall conform to the appropriate requirements of relevant Indian Standards.

**3.8** Other materials to be used in construction of the machine shall conform to appropriate Indian Standards.

## 4. SIZE

**4.1** Size of the machine shall be indicated by the sweep of the revolving disc in centimetres.

**4.1.1** The standard nominal sizes shall be as below:

60, 75 cm

**4.1.2** Sizes other than those specified in **4.1.1** may be supplied if agreed to between the purchaser and the manufacturer.

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\*Specification for hot rolled carbon steel sheet and strip ( *revised* ).

†Specification for structural steel ( ordinary quality ).

‡Specification for structural steel ( standard quality ) ( *third revision* ).

§Specification for rivet bars for structural purposes ( *revised* ).

||Specification for mild steel tubes and tubulars ( *revised* ).

¶Specification for grey iron castings ( *revised* ).

\*\*Specification for hard drawn carbon steel wire for springs for general engineering purposes ( *revised* ).

††Specification for V-belts for industrial purposes.



**4.2** The overall width and length of the floor space occupied by the machine shall not be more than the values given below:

<i>Size of Machine</i>	<i>Width, Max</i>	<i>Length, Max</i>
cm	cm	cm
60	65	95
75	80	125

## 5. CONSTRUCTION

**5.1 General** — The machine shall be of suitable construction to ensure smooth working on the surface to be polished. It shall be capable of easy maneuverability and easy balancing while in operation without undue effort on the part of the operator.

**5.1.1** It shall be designed to be capable of working close to the vertical surfaces surrounding the area to be polished and shall not leave more than 25 mm wide strip for hand grinding.

**5.2** All the moving parts shall be assembled on ball or roller bearings conforming to the appropriate requirements of relevant Indian Standards. The bearings shall be fully enclosed so as to be dustproof.

**5.3 Frame** — Frame of the machine shall be constructed of 25 mm nominal bore tube conforming to 3.3 or any other mild steel section of equivalent strength, suitably bent to form strong support for the wheels and other parts of the machine.

**5.3.1 Handle** — The machine shall be provided with a strong handle of adjustable height. The handle shall be provided with insulated grips and shall be of suitable design to prevent discomfort or injury to the operator during operation.

**5.4 Wheels** — The machine shall be provided with not less than two wheels complete with ball or roller bearings capable of free movement and easy steering. The wheels shall be constructed of mild steel or cast iron and shall be of disc type or any other suitable design to ensure adequate strength; they shall be fitted with metal rims or solid rubber tyres.

### 5.5 Rubbing Discs

**5.5.1** The working face of the machine shall be provided with not less than two revolving discs of cast iron or steel. Each disc shall have firmly attached to it a stone holder capable of securely holding rectangular or triangular (in plan) shaped grinding stones. The stone holders shall be

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replaceable and shall allow easy replacement and removal of stones, or their substitution by felt bobs when so required. Stone holders shall revolve firmly on the revolving discs and shall have an intermeshing movement with each other.

While the machine is in operation all the grinding stones shall revolve in an horizontal plane and there shall not be any slip between the grinding stone and the stone holder or the stone holder and the revolving disc.

Speed of rotation and the sweep of the revolving discs and the number of grinding stones on each stone holder shall not be less than the values specified below. Suitable arrangement shall be provided to alter the speed of rotation as required.

<i>Size of Machine</i>	<i>Speed of the Disc, Min</i>	<i>Sweep of Disc, Min</i>	<i>No. of Grinding Stones per Stone Holder, Min</i>
cm	rev/min	cm	
60	1 075	60	3
75	1 200	75	6

**5.5.2** While the machine is in operation, each rubbing due shall exert on the floor a minimum pressure as given below. Removable pressure weight shall also be provided in the machine to exert additional adjustable pressure on disc as required.

<i>Size of Machine</i>	<i>Pressure of Disc Without Pressure Weight, Min</i>
cm	kg
60	115
75	200

**5.6 Splash Guard** — Adjustable splash guard of suitable design shall be provided around the working face of the machine to prevent the splashes spoiling the surrounding surfaces.

## 5.7 Water Tank

**5.7.1** A suitable water tank shall be mounted on the frame of the machine to ensure continuous controlled water supply for watering the floor while grinding is in progress. Finger tip water reed control shall be provided at a convenient position near the handles of the machine.

**5.7.2** The tank shall be of welded mild steel construction and shall be suitably protected against rusting.

**5.8 Lifting and Tewing Arrangements** — The machine shall be fitted with suitable means for attachment of chains and ropes required for lifting without appreciable defection in any part. A towing bar of adequate strength shall also be provided.

**5.9 Finishing** — All exposed parts of the machine shall be given protective anti-corrosive treatment to prevent them from rusting or deterioration due to contact with cement or dirt.

## **6. POWER UNIT**

**6.1** The machine shall have a suitable power unit such as an electric motor or an internal combustion engine. Suitable arrangements shall be provided to protect the power unit from splashes, dirt and mortar slurry.

**6.2** For machines operated by electric motor, fully enclosed safety type quick make and break switch shall be provided at a convenient position near the handles of the machine.

**6.3** The internal combustion engine, electrical motor and other electrical equipments shall conform to relevant Indian Standards.

## **7. LUBRICATION**

**7.1** Adequate arrangements shall be provided to facilitate proper and easy lubrication of different parts. Lubrication points shall be conspicuously marked and suitably guarded to prevent them from getting clogged with dirt, mortar slurry, etc, formed during the operation of the machine.

## **8. SAFETY REQUIREMENTS**

**8.1** The moving parts shall be suitably enclosed to guard against accidents.

**8.2** Suitable earthing and safety arrangements shall be provided for electric motors and components in accordance with the requirements of relevant Indian Standards and safety regulations.

## **9. TOOLS**

**9.1** A strong tool box with lock and key, containing the necessary tools for normal adjustments and lubrication of the machine together with instructions shall be provided with the machine. Provisions shall be made for affixing the tool box on the machine.

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**10. MARKING PLATE**

**10.1** Each machine shall have a plate firmly attached to some part not easily removable. The plate shall have clearly marked on it the following particulars

- a) Size of machine,
- b) Characteristics of power unit, that is, electric motor or internal combustion engine, regarding
  - 1) output power rating,
  - 2) voltage, phase and cycle current;
- c) Manufacturer's name or trade-mark,
- d) Manufacturer's reference number of the machine, and
- e) Year of manufacture.

**10.1.1** The machine may also be marked with the ISI Certification Mark

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution ( Certification Marks ) Act, and the Rules and Regulations made thereunder. Presence of this mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard, under a well defined system of inspection, testing and quality control during production. This system which is devised and supervised by ISI and operated by the producer, has the further safeguard that the products as actually marketed are continuously checked by ISI for conformity to the standard. Details of conditions, under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.



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