

**IEC ENCLOSURE TYPES**

**From IEC 529 “Definition of Protection Grades”**

The specific enclosure Types, their applications, and the environmental conditions they are designed to protect against, when completely and properly installed, are indicated by the IP number where the first IP digit indicates the degree of contact prevention and guarding against foreign objects and the second digit indicates the degree of water protection.

**1st I.P. Digit**

0	No protection	No protection of personnel from direct contact with active or moving parts. No protection from access of solid foreign object.
1	Protection against large foreign bodies	Protection of personnel from accidental large area direct contact with active or internal moving parts (hand contact, etc.) but no guard against intentional access to such parts. Protection from access of solid foreign object larger than 50 mm in diameter.
2	Protection against medium foreign bodies	Protection of personnel from finger contact with active or internal moving parts. Protection from access of solid foreign object larger than 12 mm in diameter.
3	Protection against small foreign bodies	Protection of personnel from touching active or internal moving parts with tools, wires or similar foreign objects thicker than 2.5 mm in diameter.
4	Protection against granular foreign bodies	Protection of personnel from touching active or internal moving parts with tools, wires or similar foreign objects thicker than 1 mm.
5	Protection from deposit of dust	Total protection of personnel from touching voltage carrying or internal moving parts. Protection from harmful deposit of dust. Access of dust is not completely prevented.
6	Protection from access of dust	Total protection of personnel from touching voltage carrying or internal moving parts. Protection from access of dust.



**IEC ENCLOSURE TYPES** (continued from page 1)

**2nd I.P. Digit**

0	No protection	No special protection.
1	Protection against water dripping vertically	Water drops falling vertically must not have any harmful effect.
2	Protection against water dripping off vertically	Water drops falling at any angle up to 15 degrees from the vertical must not have any harmful effect.
3	Protection against spray water	Water hitting the object at any angle up to 60 degrees with the vertical must not have any harmful effect.
4	Protection against splash water	Water splashing against the object from all directions must not have any harmful effect.
5	Protection against jet water	A jet of water nozzled from all directions must not have any harmful effect.
6	Protection against flooding	Water from a temporary flooding, such as heavy seas, must not enter it in any harmful quantity.
7	Protection in dipped state	If the object is dipped into water under the defined conditions of pressure and time, water must not enter it in any way.
8	Protection in submerged state	If the object is submerged in water, water must not enter in any harmful quantity.

Remember, when calling for service, parts or system information, always have the pump or system model number and serial number ready.

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