


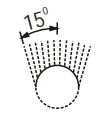

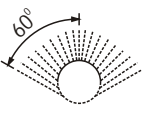



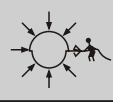

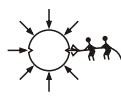
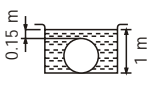
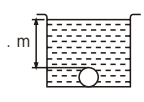


DEFINITION OF "INDEX OF PROTECTION" (IP)

INDICES OF PROTECTION OF ELECTRICAL EQUIPMENT ENCLOSURES

First number : protection against solid objects			Second number : protection against liquids		
IP	Tests	Definition	IP	Tests	Definition
0		No protection	0		No protection
1	Ø 50 mm 	Protected against solid objects of over 50 mm (e.g. accidental hand contact)	1		Protected against vertically dripping water (condensation)
2	Ø 12 mm 	Protected against solid objects of over 12 mm (e.g. finger)	2		Protected against water dripping up to 15° from the vertical
3	Ø 2.5 mm 	Protected against solid objects of over 2.5 mm (e.g. thin wire)	3		Protected against rain falling at up to 60° from the vertical
4	Ø 1 mm 	Protected against solid objects of over 1 mm (e.g. thin wire)	4		Protected against water splashes from all directions
5		Protected against dust (no deposits of harmful material)	5		Protected against jets of water from all directions
6		Totally protected against dust. Does not involve rotating machines.	6		Protected against jets of water comparable to heavy seas
			7		Protected against the effects of immersion to depths of between 0.15 and 1m.
			8		Protected against the effects of prolonged immersion at depth

Example :

IP 55 machine

IP : Index of protection

5 : Machine protected against dust and accidental contact

Test result : **no dust enters** in harmful quantities ; no risk of direct contact with rotating parts

5 : Machine protected against jets of water from all directions from hoses at 3m

distance with a flow rate of 12.5 l/min at 0.3 bar.

Test result : **no damage from water** projected on to the machine whilst in operation.