# DYCOMETAL

*Testing Technology*

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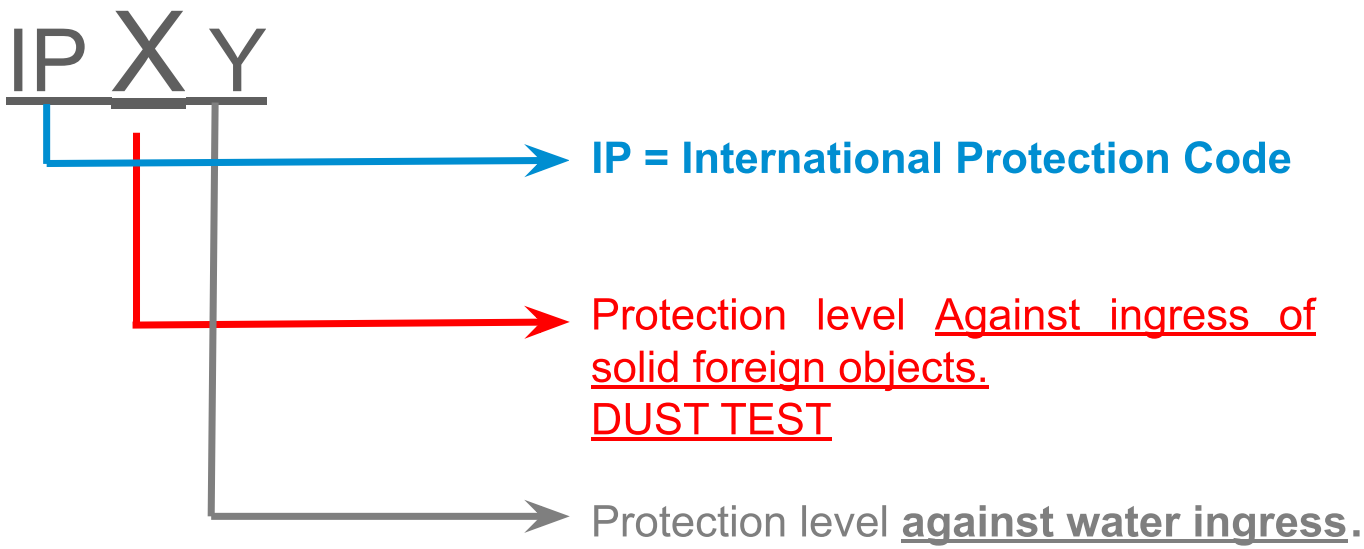
*Testing Technology*

# DUST TEST CHAMBERS,
# CP- SERIES

# Intro

The IP protection degrees refer to an international regulation, which indicates the level of protection of electrical or electronic equipment against the penetration of external agents: dust (IPX_) or water (IP_Y).

We will present in this document the, protection against solid agents ingress. CP SERIES – Dust Test Chambers for IPX_ tests.



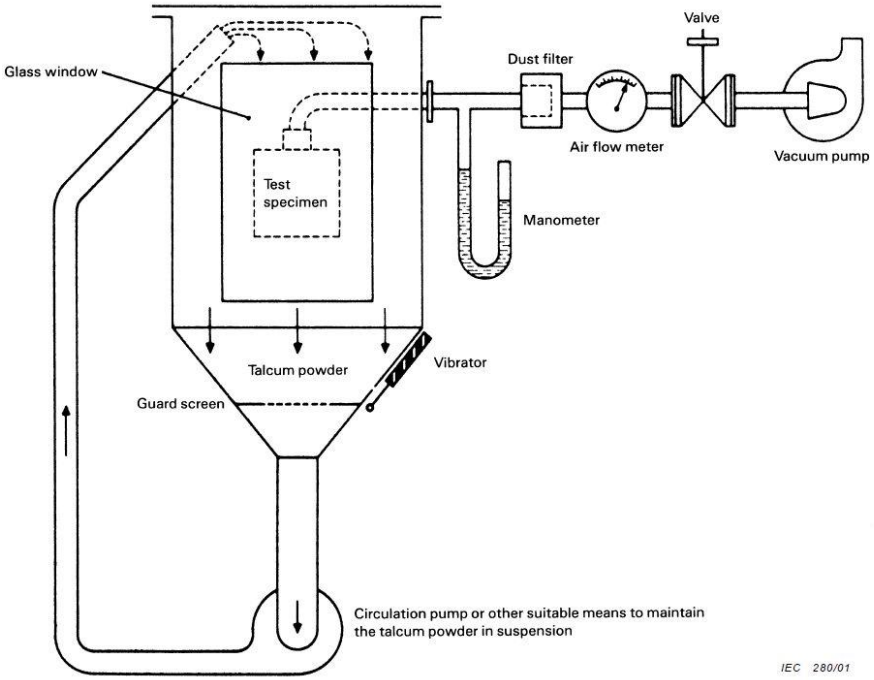
The dust chambers are primarily designed to comply with the IEC 60529 standard. This standard classifies the different degrees of protection of the components to be tested alpha-numerically according to the level of protection of the materials against the ingress of foreign materials.

The following codes will quickly and easily identify the degree of protection of the specimen to be tested.

| First characteristic numeral | Degree of protection | |
|---|---|---|
| | Brief description | Definition |
| 0 | Non-protected | |
| 1 | Protected against access to hazardous parts with the back of a hand | The access probe, sphere of 50 mm , shall have adequate clearance from hazardous parts |
| 2 | Protected against access to hazardous parts with a finger | The jointed test finger of 12 mm , 80 mm length, shall have adequate clearance form hazardous parts |
| 3 | Protected against access to hazardous parts with a tool | The access probe of 2,5 mm shall not penetrate |
| 4 | Protected against access to hazardous parts with a wire | The access probe of 1,0 mm shall not penetrate |
| 5 | Protected against access to hazardous parts with a wire | The access probe of 1,0 mm shall not penetrate |
| 6 | Protected against access to hazardous parts with a wire | The access probe of 1,0 mm shall not penetrate |

The test according to IEC60529 shall be performed according to the figure below, depending on the category to be tested (1 or 2), keeping the powder in suspension. The powder used in the test shall not be reused more than 20 times.

The test on category 2 enclosures shall not require a vacuum pump (depression system).




But there are many other standards like: SAE J525, DIN EN 60529, DIN EN 40050-9, VDE 470 – Parte1, EN 60598-1, IEC 60598-1, UNE 20-324-89, DIN 40052, etc

And the automotive manufacturers themselves have their own particular standards like:

- RENAULT: 31-07-049, 32-10-006, ...
- NISSAN 21481, ...
- VW TL 825 17, TL82533,...
- PSA -IHPC_ADMR07_0043 Dust test § 5.5.8.7,…
- etc.

All with similar functions, but with some particular characteristics. That is why it is very important to know the standard that will be used for the manufacture of the chamber.

There is the possibility of being able to combine several standards in a single chamber, consult our technical department.

# How to define a chamber?

In order to define a chamber, it is necessary to know several important points:

1. Sample size to be tested. If the client has several sample sizes, it will be necessary to know the largest size, as this will be the reference for the volume and interior dimensions of the chamber.

2. Standards to be tested. It is very important to know the standards that the client wants to use in the chamber, because these standards will indicate if the chamber must have any additional element.

3. IP protection degree. The chambers are normally configured for IPX5 or IPX6 degrees of protection.

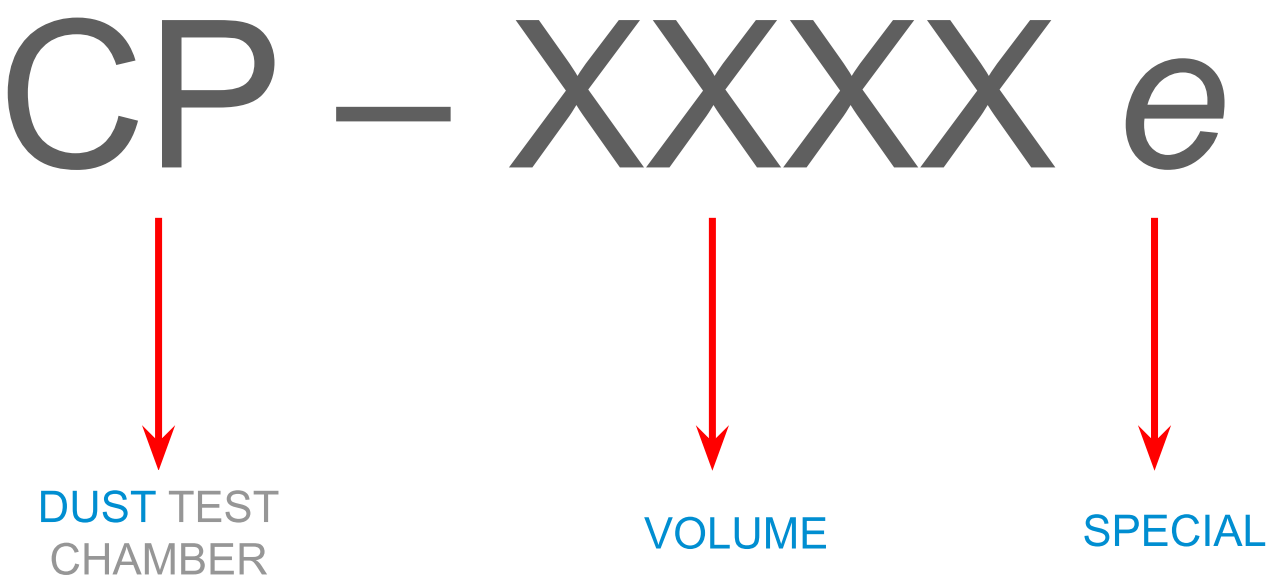

# Standard Models

From DYCOMETAL we offer one of the largest portfolios with different volumes of powder chambers. Our standard designs are adapted to the different needs that we have received throughout our history.

We also have a special manufacture, modifying the interior dimensions of the chamber and manufacturing the chamber according to the real needs of the client.

| Model | CP-216 | CP-512 | CP-720 | CP-1000 | CP-1500 | CP-2000 | CP-4500 |
|---|---|---|---|---|---|---|---|
| Internal Dimensions (mm) | | | | | | | |
| Height | 600 | 800 | 900 | 970 | 1030 | 1500 | 2000 |
| Width | 600 | 800 | 900 | 970 | 1000 | 1300 | 1500 |
| Depth | 600 | 800 | 900 | 970 | 1500 | 1030 | 1500 |
| External Dimensions (mm) | | | | | | | |
| Height | 1560 | 1820 | 1800 | 1900 | 2410 | 2400 | 3010 |
| Width | 720 | 920 | 920 | 1400 | 1100 | 1420 | 1620 |
| Depth | 720 | 920 | 1020 | 1150 | 1120 | 1150 | 1673 |
| | | | | | | | |
| Weight | 200 | 225 | 232 | 325 | 403 | 460 | 780 |
| Electrical supply | 230 V / 50 Hz (Other frecuencies under demand) | | | | | | |

# Nomenclature



# Standard Supply

- Interior made in Stainless steel AISI304.
- Exterior made in steel.
- Observation window with big dimensions.
- Wiper on door for cleaning.
- Interior light
- Mechanical pressure seal to ensure the tightness of the door.
- Inner silicone gasket for greater tightness.
- Access port of 50 mm Ø (Other diameters under request).
- Heating elements for the workspace according with the standard.
- Vibratory system.
- Height adjustable legs (Casters like option).

# Standard Supply

- ON / OFF selector.
- VIBRATOR switch.
- DEPRESSOR SYSTEM switch.
- HIGH / LOW SUCTION selector.
- Timer.
- FINAL TEST pilot.
- Interior LIGHTING switch.
- Pressure gauge.
- Flow display.

# Details

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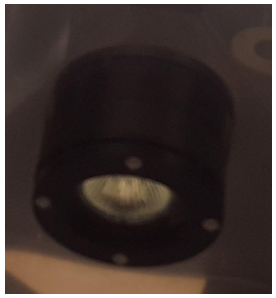


# Installation

- Dust chambers are simple to install. The 230 V power supply of the chamber allows for simple plug-and-play installation.
- The passages from the chamber into the laboratory should be checked, as the dimensions of the chamber may exceed some door or corridor dimensions. However, the chamber can be laid down for moving.
- The customer must have a compressed air supply with an air flow depending on the volume of the chamber to be installed.
- Compressed air pressure: from 2 to 6 bar.
- In addition, a differential and a thermal protection device must be provided between the power supply and the chamber.
- Consideration should be given to the chamber space as well as a service area for access to the installation and maintenance area.

# Turn key Solutions

CP-343

CP-1200

CP-8000

CP-1080

CP-4500

# Turn key Solutions


CP-442

CP-3080

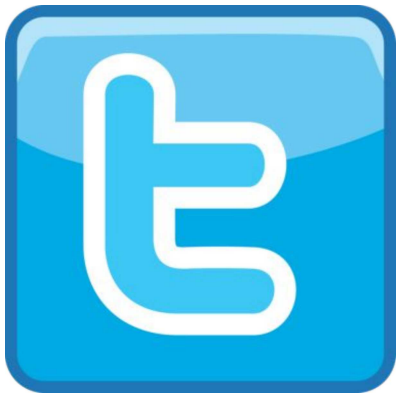
CP-4000

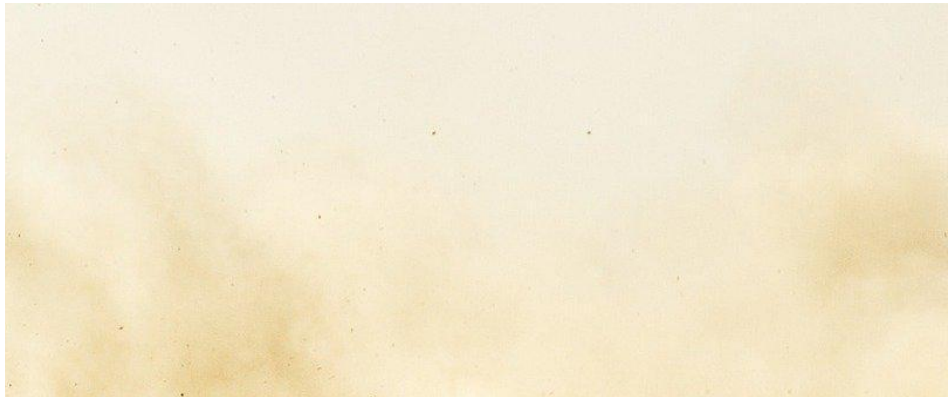
# Turn key Solutions


CP-2500

CP-2600

# Follow us:



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