

**TCTECORA**<sup>®</sup>  
POLLUTION CHECK

tcrtecora.com



# IMP8

## ACI 8 Stage

ANDERSEN CASCADE IMPACTOR



Made in Italy



tcrtecora.com



OUTDOOR  
AIR QUALITY



LABORATORY



OUTDOOR  
AIR QUALITY



LABORATORY

# IMP8

8 STAGE ANDERSEN CASCADE IMPACTOR



## Applications

- ✓ Pharmaceutical Production
- ✓ Air Quality Studies
- ✓ Filter and Clean Rooms Efficiency
- ✓ Healthcare
- ✓ Food
- ✓ Cosmetics
- ✓ Defense & Military Sector

MDI - Metered Dose Inhalers; DPI Dry Powder Inhaler

## Aerodynamic particle sizing

The design concept of the Andersen Cascade Impactor evolves from the following information:

The human respiratory system tract is an aerodynamic classifying system for airborne particles. A sampling device can be used as a substitute for the respiratory tract as a collector of airborne particles, and as such, it shall reproduce to a reasonable degree the lung penetration by these particles.

The IMP-8, 8 Stage "Andersen type" Cascade Impactor ACI, with 400-201-96 small round jets per stage meets all the criteria for the efficient collection of airborne particles.

Produced with  
**AISI 316**



Product passed by  
**SURFACE  
DISINFECTION  
PROCESS**



The 8 Stage ACI works at a standard constant flowrate of 28,3 L min<sup>-1</sup>, with particle cut size in the range from 0,4 to 9,0 μm.

Dry Powder Inhaler (DPI) testing requires to achieve a high pressure drop through the sampler (4 kPa), so that a higher flowrate than 28,3 L min<sup>-1</sup> is needed.

Conversion kits for 60 L min<sup>-1</sup> and 90 L min<sup>-1</sup> allow the standard 28.3 L min<sup>-1</sup> impactor to be upgraded to the higher flowrates for DPI and MDI Applications.

ACI - Conversion Kit @ 60L min <sup>-1</sup>		ACI - Conversion Kit @ 90L min <sup>-1</sup>	
Stage #	Cut Size (D <sub>50</sub> ) μm	Stage #	Cut Size (D <sub>50</sub> ) μm
-1	8,6	-2	8,0
0	6,5	-1	6,5
1	4,4	0	5,2
2	3,3	1	3,5
3	2,0	2	2,6
4	1,1	3	1,7
5	0,54	4	1,0
6	0,25	5	0,43

# IMP8

## 8 STAGE ANDERSEN CASCADE IMPACTOR

### Main Features:

- ③ Aerodynamic particle sizing
- ③ Sampling flow: 28,3 L / min<sup>-1</sup>
- ③ Conversion Kit: 60 L / min<sup>-1</sup>; 90 L / min<sup>-1</sup>;
- ③ Material: Aisi / Aluminium (on request)
- ③ Height: 256mm
- ③ Diameter: 105mm
- ③ Weight: 3,5 Kg (Aisi) - 1,55Kg (Aluminium)
- ③ Carrying case
- ③ Dimensional Inspection Certificate



### Cascade Impactors-Impaction surfaces

Cascade impactors are multi-jet, multistage devices operating at constant flowrates that allow the characterization of an aerosol in terms of its particle size distribution. Different impaction surfaces can be used to collect the airborne particles on the impaction stages, and the features of the impaction surfaces depend on the analytical needs. Glass dishes, stainless steel plates, glass-fiber/quartz filter and other membranes are mostly used. Glass dishes (used for optical analysis) and stainless steel plates are used in DPI and MDI applications to test inhalation suspensions and spray. Glass-fiber filters are commonly used for gravimetric analysis because they are lighter and less hygroscopic. Other types of filters (quartz, PTFE, polycarbonate membrane..) can be used for chemical speciation and physical characterization of the sampled particles.



### Product Code

Product	Code
8 Stage Cascade Impactor (IMP-8)	AC99-120-0020SP