

# MERSEN DUSTCOLLECTOR (MDC)

ZOOM

CARBON DUST COLLECTION  
SYSTEMS FOR HYDRO  
GENERATORS



**DESIGNED TO AVOID SHORT CIRCUITS  
CAUSED BY LOW INSULATION RESISTANCE**

## A SMART CONCEPT

- ✓ Minimal maintenance
- ✓ Completely integrated and customized with **plug & play concept**
- ✓ Designed for **new, retrofit** and **refurbished** hydro generators (up to 900 MW)

## BETTER HYDRO GENERATOR EFFICIENCY

- Over 90 %\* of carbon brush dust is suctioned at its source, to avoid dispersion all over the machine
- They offer higher reliability for continuous power production

## INCREASED HYDRO GENERATOR RUNNING TIME

- There is less cleaning maintenance

\* Efficiency value measured during 5 internal tests on test benches under specific conditions, for more detail please contact us.

MERSEN PROPERTY

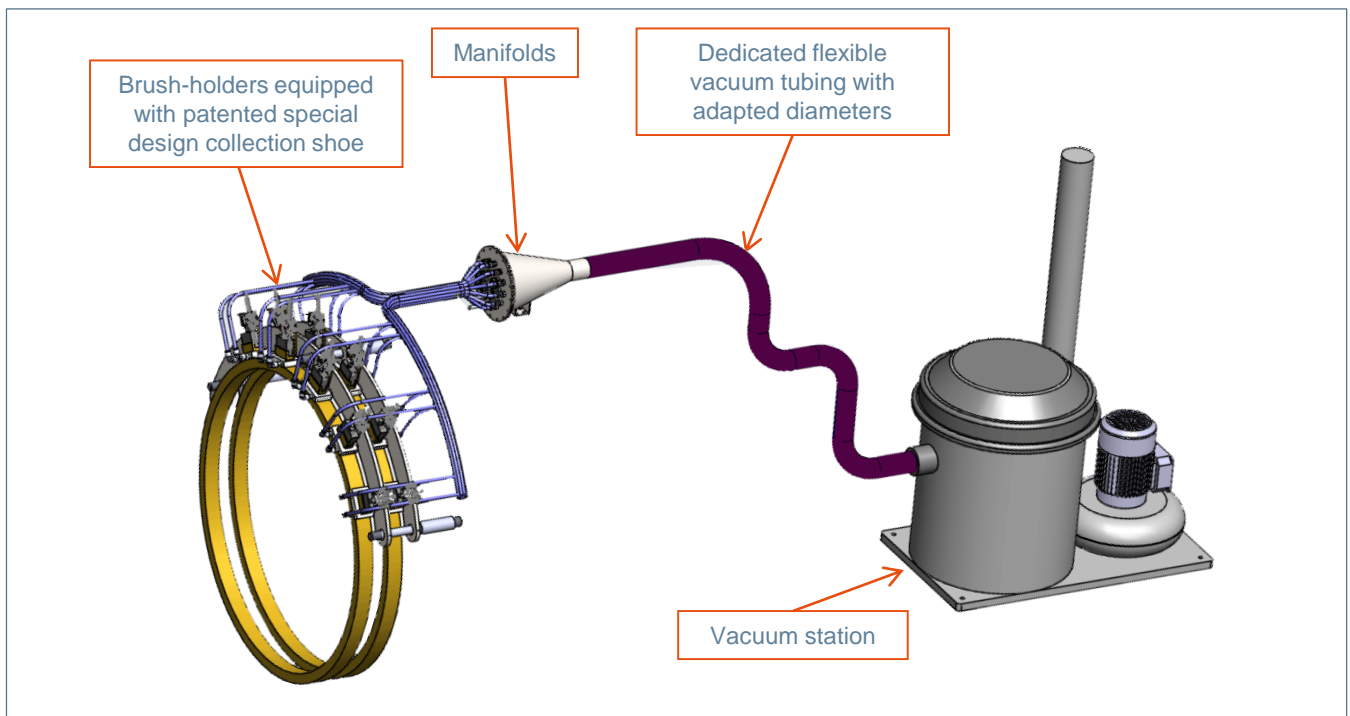
## A RELIABLE SOLUTION

- ✓ Studies by Mersen's design offices
- ✓ High quality materials
- ✓ Conformity to international standards (HEPA, CE, UL, CSA)



If oil vapor is present, it will seriously affect the MERSEN DustCollector's performance.

## MDC OPERATING BLOCK DIAGRAM



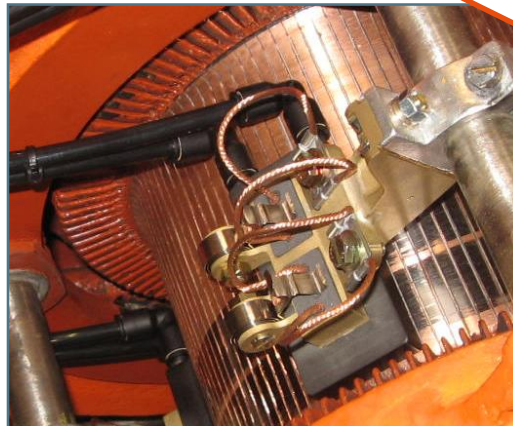
## MERSEN DUSTCOLLECTOR OFFERS CONSIDERABLE BENEFITS:

- ✓ Accurate air suction calculation to collect carbon dust **without causing a depression** inside the hydro generator
- ✓ **No effect on carbon brush and slip ring temperatures**
- ✓ **Durability** of components
- ✓ Quick replacement of components with **plug and play concept**
- ✓ Installation and set up by Mersen's experts
- ✓ Optional **monitoring**

MERSEN PROPERTY

DUST SUCTION SHOE

PATENTED BY MERSEN



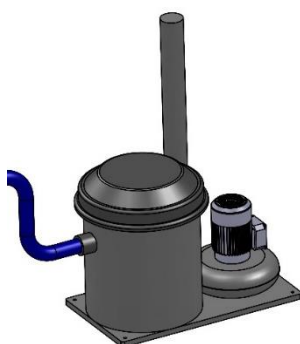
Operating temperature	-40 to 100°C (-40 to 212°F)
Material	POM-C
Mechanical resistance	Over 50 MPa (exceptional mechanical resistance)
Electrical resistance	High insulated

TUBING



Operating temperature	-40 to 100°C (-40 to 212°F)
Material	Polyamide
Mechanical resistance	Flexibility and exceptional mechanical resistance
Wear resistance	High abrasion resistance
Safety	Not flammable
Electrical resistance	High insulated (tested under 10 kV)
Installation	Quick and easy installation

INDUSTRIAL VACUUM UNIT



Duty cycle	24/7
Operating temperature	-10 to 40°C (14 to 104°F)
Low noise level	< 85 dB
Filter	Removable filter with manual unclogging
Dust tank	Removable dust tank

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**MAIN BENEFITS FOR THE USERS**

**SAFETY AND HEALTH FOR THE OPERATORS**

- ✓ Over 90 % of carbon dust is suctioned at its source, to avoid dispersion all over the machine and inhalation by the operators



**VERY QUICK RETURN ON INVESTMENT**

- ✓ Less than 18 months

**STRONG REDUCTION OF THE NUMBER OF FLASH-OVER OCCURENCES**

- ✓ Cost savings on repairs
- ✓ Maximized performance



**MAINTENANCE COST REDUCTION**

- ✓ Preventive maintenance
- ✓ No need to perform coil cleaning by dry ice blasting

**BETTER RELIABILITY TO MAXIMIZE THE BENEFIT FOR ELECTRICAL PRODUCTION**



**OVER 200 UNITS ALREADY INSTALLED IN MORE THAN 25 COUNTRIES**

Australia, Austria, Canada, Chile, Colombia, Finland, France, Germany, Guatemala, Hungary, Iceland, India, Ireland, Italy, New Zealand, Norway, Peru, Portugal, Russia, Serbia, Spain, Sweden, Switzerland, Ukraine, USA, Vietnam.

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