

MERSEN DUSTCOLLECTOR

ZOOM

CARBON DUST
COLLECTION SYSTEMS
FOR HYDRO GENERATORS



BETTER HYDRO GENERATOR EFFICIENCY

- Over 90 % of carbon brush is suctioned at its source, avoiding dust dispersion all over the machine
- Higher reliability for continuous power production

INCREASED HYDRO GENERATOR RUNNING TIME

- Reduction of cleaning maintenance

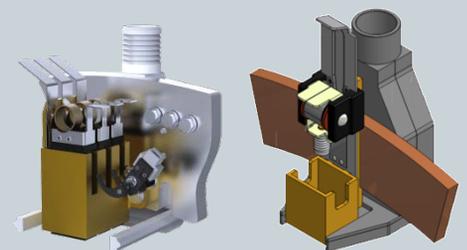
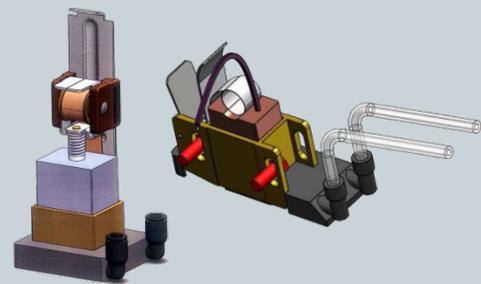
DESIGNED TO PREVENT SHORT CIRCUITS CAUSED BY LOW INSULATION BETWEEN ACTIVE COILS AND GROUND

A SMART CONCEPT

- ✓ Requires **minimal maintenance**
- ✓ Completely integrated and customized with **plug & play concept**
- ✓ Designed for **new, retrofit** and **refurbished** hydro generators (up to 900 MW)
- ✓ Annual preventive maintenance service
- ✓ Monitoring (in option)

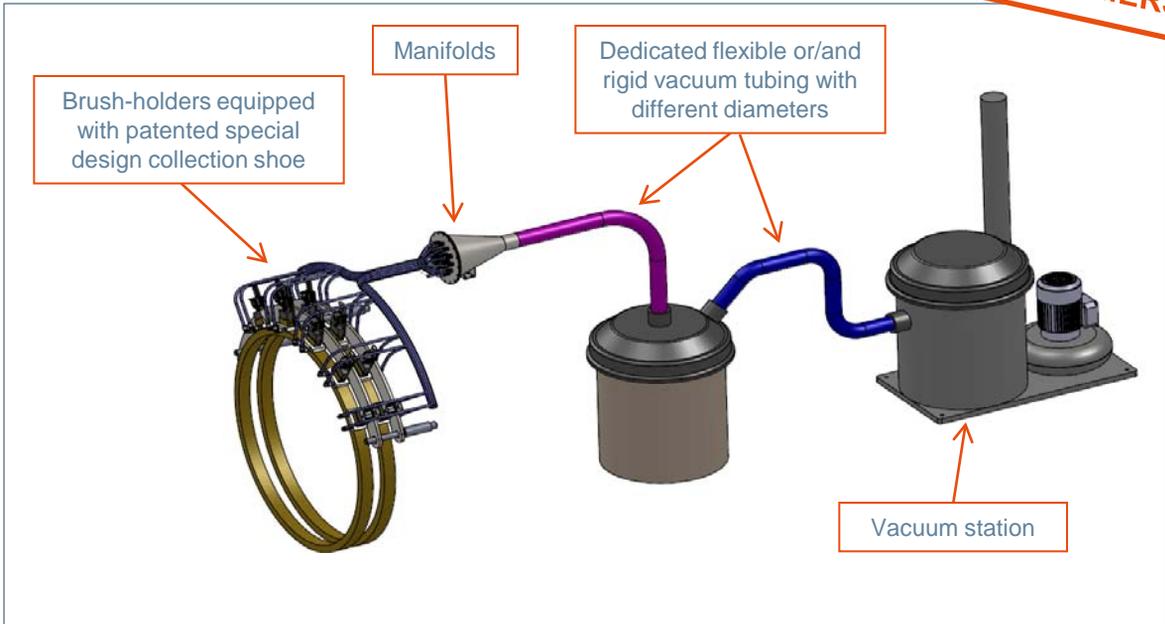
A RELIABLE SOLUTION

- ✓ Studies performed by Mersen design offices
- ✓ Selection of high quality materials
- ✓ Tested on our test benches (NF EN 60312)
- ✓ Conformity with international standards (HEPA, CE, UL, CSA)
- ✓ Installation and set up by Mersen experts



WORKING PRINCIPLE

PATENTED BY MERSEN



 If oil vapor is present, it will seriously affect the performances of the DustCollector

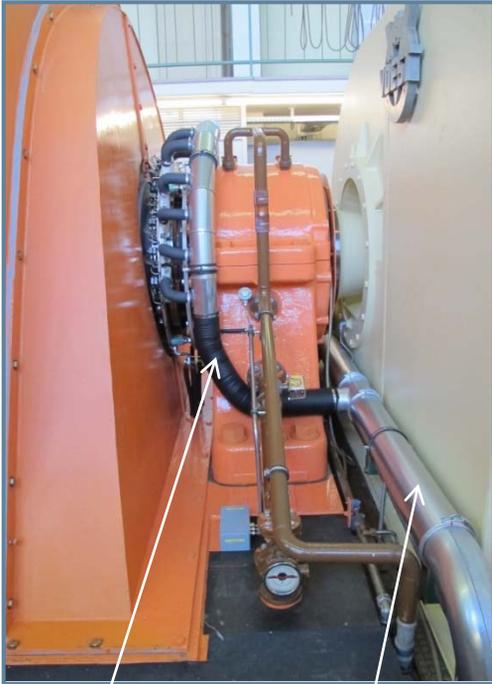
INDUSTRIAL VACUUM UNIT



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

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VACUUM TUBING



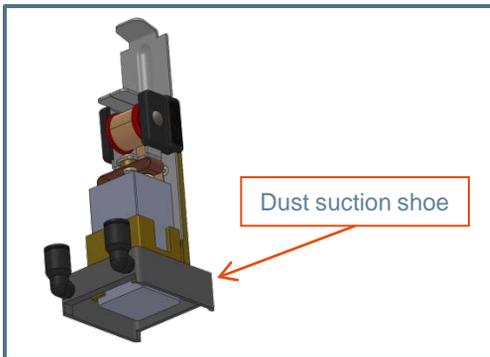
Flexible vacuum tubing

Rigid vacuum tubing

RIGID VACUUM TUBING	
Design	Totally modular concept
Material	Stainless or galvanized steel
Elbow and coupling material	Aluminium
Wear resistance	High abrasion resistance
Safety	Insulated from shaft

FLEXIBLE VACUUM TUBING	
Operating temperature	-40 to 100°C (-40 to 212°F)
Material	Antistatic material
Standard conformity	Silicon-free, conform with standards
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

DUST SUCTION SHOE



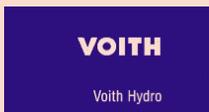
Operating temperature	-40 to 100°C (-40 to 212°F)
Material	Antistatic material
Mechanical resistance	Over 50 MPa (exceptional mechanical resistance)
Electrical resistance	High insulated

PATENTED BY MERSEN

Totally integrated into the hydro generator, the Mersen DUSTCOLLECTOR contains considerable benefits:

- ✓ Proper air suction calculation to collect carbon dust **without causing any depression** inside the hydro generator
- ✓ **No influence on carbon brush and slip ring temperatures**
- ✓ **Long life time** of components (> 3 years)
- ✓ Quick change of components in case of replacement with **plug and play concept**
- ✓ Completely **independent for carbon brush replacement** (standard access)
- ✓ **Monitoring** in option:
 - Electrical set up with hydro generator running (stop & go)
 - Alarm in case of depression loss
 - Alarm in case of carbon brush wear

References: over 80 units already installed



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