



OVERCOME THE PRESSURE



Gas Drying & Cleaning (instrument's savers)

Safe measurements through limpid fluids

Gas Dehydrators and Cartridge Filters for instrument feeding are presented as cylindrical tanks with a vertical axis at the lower end closed by a ACME cap and the top by an ISO threaded Q.O.C. Fulgosi-thread. The bodies, usually built in Carbon Steel for low temperature fluids equivalent to ASTM A333 gr.6, are designed for mechanical filtration and chemical mechanical dehydration of natural gas aimed to power the instruments located immediately downstream of the same and are designed taking also into account the requests of the Customer.

Vessels and performances

The Bodies and their Quick Opening Closures are designed according to both ASME VIII div.1 and 2 as well as EN 13445, therefore are subject to all the safety requirements dedicated to Pressure Vessels operating at high pressures in hazardous environment accessed by persons, typically, measurement's stations and control panels. All Bodies normally undergo to Non Destructive Examinations by means of Radiographic Test (RT), Ultrasonic Test (UT), Liquid Penetrant test (PT), Magnetic Particle Inspection (MPI) and Hydraulic Test (HY) with water. The engineering is validated by Finite Element Module analysis and prototype Burst test with water or other fluids as per the relevant market where the device is addressed.



GROWING IN PROGRESS

Gas Dehydrators

Drying process

Inside the gas dehydration process is carried out automatically by three effects in series: the first stage of dehydration is achieved by the turbulence at the entrance of the dryer. The second phase is achieved by spray drying of the salts. The final phase is implemented through the



absorbent layer of dehydrating boards placed on the grating of the basket. Step 1: the gas at the entrance of the dryer is pushed down and then forced to rise. In this motion, the curved liquid and solid particles suspended in the gases reach the bottom of the dryer before being purged by its orifice. Step 2: the gas flow is significantly slowed down because of bottlenecks in which he is forced to pass. The adsorbents tablets dissolve slowly creating a damp fog still not saturated absorbent salt that falls by gravity. Before you reach the bottom of the dehydrator absorbs the mist of water particles suspended in gas. The salts absorb the finer particles and precipitate removal by making it easy to bleed less. Step 3: the passage of gas through the layer of absorbent tablet purifies the gas completely, making it commercially sterile and non-toxic, ready to use.



Maintenance & Consumables

The Dryer as device is completely maintenance free, while the processing tablets or dehydrating gel are subject to decay. This form of consumption can be at various grades of decadence based on the fluid's conditions and quality. Of course the more often the inside consumables are replaced the better will be the relevant dehydration capacity and performance that means in turn a more appropriate instrument's feeding which is directly proportional to its lifecycle length. The advantage is represented by another main asset identified in the precision of the measurements thanks to more efficient instruments capable to detect and observe thinner variables for longer periods of time. Needless to mention that the technological innovation brings up more and more sophisticated and expensive instruments that can be completely exploited only if utilised with clean fluids.



THE EASIER, THE FASTER, THE SAFER

Cartridge Filters

As simple as effective

Traditional filtration system is essential to separate debris floating in the fluid that can be extremely harmful to the proper functioning of equipment such as precision measurement systems: the most important filtration phase is obtained by forcing the fluid through the cartridge walls from inside to outside. After the passage through the cartridge walls the fluid is cleaned up to the desired grade based on the type of cartridge. The effectiveness of the cycle is assured by the periodic replacement of the cartridge.

Operational details

Both vessel bodies are equipped with a Fulg-o-thread™ quick opening closure that can be ISO or ACME threaded according to Customer requirements and sealed by means of standard O-Rings easily available on the market as well as all the other replaceable parts. The only manoeuvre necessary to access the consumables is the opening of the Q.O.C. by unscrewing its cap, of course, once the system is depressurized and checked by the relevant safety screw placed on top of the cap. Once the vessel is open then unfasten and remove the filter's cartridge by unscrewing the bronze nut on the top of it or, in case of Dehydrators, unscrew the internal cylindrical basket by acting on its relevant handle and, once extracted, empty it of the residual absorbent tablets or gel and replace the same with the new ones. Just reversed operations are needed in order to get the system in duty again in less than five minutes of service suspension that, in case of mandatory continuous instruments feeding, is normally substituted across a simple bypass scheme. The standard characteristics of the devices are shown in the next page but can be customised according to service requirements in case of corrosive fluids or other particular needs. Surface protection can be also personalised according to field's specifications. These operational details are only for devices description purposes and not for maintenance execution nor for the installation, always refer to their relevant Manuals prior to start any action on a Filter or a Dryer even if not in service.





SETTING A NEW STANDARD



Welcome in our e-Workshop system

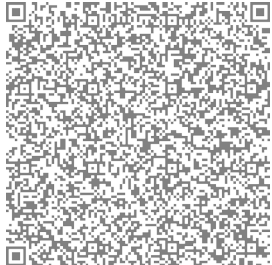
Real Time Customer Service created with the aim to be an active support to all technical, quality and logistic matters. Through e-Workshop it is possible to manage the contents of each manufacturing job-order directly online, by monitoring their status or by the download of relevant documents such as material certificates as well as welding traceability and N.D.E. reports. There is also a logistic management tool aimed at the real time shipping data to inform the Customer concerning the material readiness, its weight and volume as well as a practical forecasting tool which shows the near future foreseen shipments.

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#600 Dryers & Filters bodies EN 10204 3.1 / 3.2

API-5L gr.X52
ASTM A333 gr.6
ASTM A420 gr.WPL6
ASTM A694 gr.F52

Typical European compliance

2014/68/EU - Pressure Equipment Directive (PED)
94/9/EC - ATEX (Explosive Atmosphere)

#600 Devices Characteristics

Gas Dehydrators		Cartridge Filters	
Body Ø	163,3 mm (6")	Body Ø	88,9 mm (3")
Empty Weight	20 kg	Empty Weight	8 kg
Capacity	6,9 Lt	Capacity	2,4 Lt
Connections	No. 3 x 1/2" NPT	Connections	No. 3 x 1/2" NPT
Design Pressure	97 BarG	Design Pressure	97 BarG

