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SCHRUPP GAS DRYER STATIONS

Optional with Bypass

For compressed Air and other non- aggressive gaseous media:

- drying
- de-oiling
- filtering

this means

- less corrosion
- less wear and
- no icing
- depressurized standby function

and therefore

- greater service life
- lower maintenance costs and
- fail safe operation

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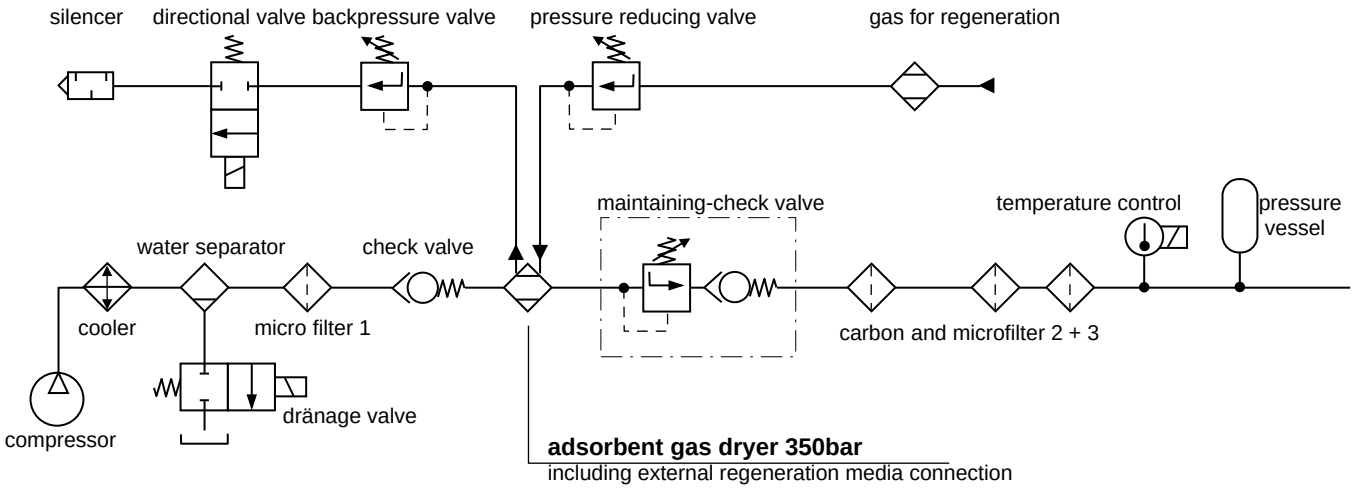
GAS DRYER STATIONS

Gas Processing Systems

Efficient Solutions for processing breathing air or industrial atmosphere.

- designed for continuous production of compressed air or class 2 gases
- excellent efficiency by use of an external regeneration media
- dew points below -50°C
- temperature compensated processing
- drying process independent from inlet temperature
- no thermal regeneration necessary
- operation pressures up to 350bar



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GAS DRYER STATIONS

Gas dryer stations are assembled and tested and will be supplied ready for installation according to customers' requirements. Normally all components are assembled on a common frame but it is also possible to select the items separately and integrate them into an existing system.

Variations:

Pressure ranges 30-65 bar, 65-250bar, 250-350bar

Media: industrial air, breathing air, non-flammable and non-aggressive chemical or toxic gases

Flowrates up to 1000L/min and up to1400L/min

Special solutions for external regeneration gases, offshore atmospheres, additional filtration and absorber filters for breathing or clean air applications. TÜV or GL certificates available.

Systems and components shown in this catalogue are only examples to explain the general function of our products. Please contact us for details or any special applications.

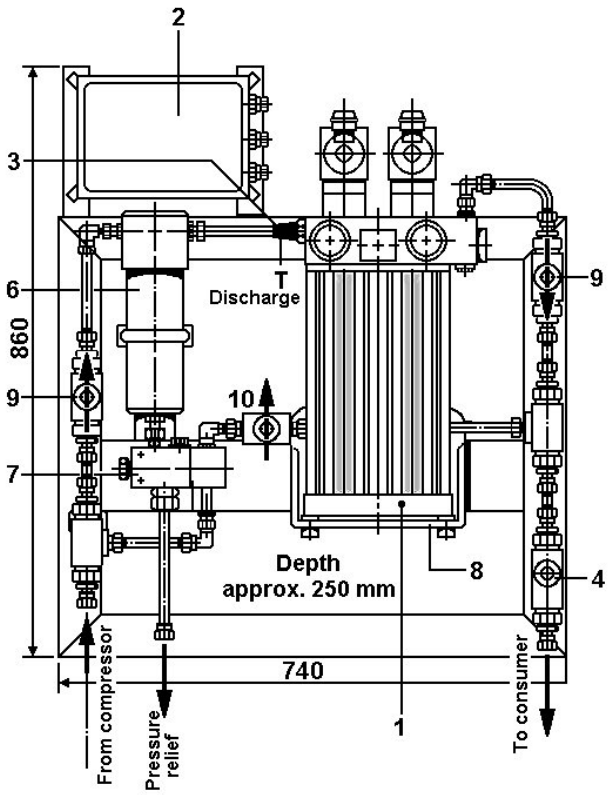
GAS DRYER STATION GTS
(Example: unit for industrial application)

1	1 Gas dryer	Type GTR
	Operating pressure	30 - 350 bar
	Flow rates up to	1400 l/min
	Regeneration air	5-10%
	Control voltage	AC or DC

2	1 Electrical control unit	3	1 Silencer
4	1 Pressure maintaining valve	5	2 Check valves
6	1 Fine filter	7	1 Directional valve
8	1 Mounting frame		

9/10 1 Version with bypass (Option)
3 shut off valves + additional piping

Unit complete assembled and tested



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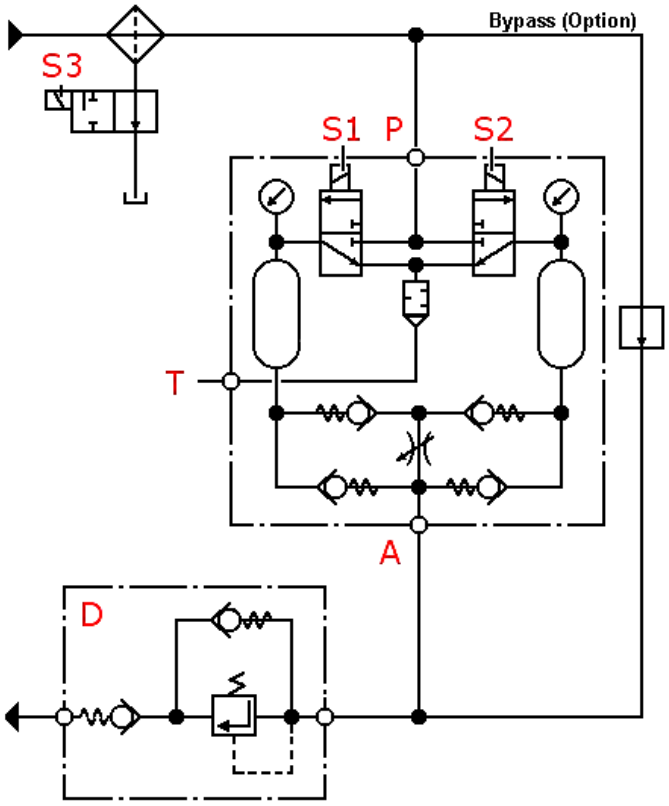
GAS DRYER STATIONS

Functional Diagram

S3 Fine filter + electrically operated drain valve
P High pressure inlet GTR
B Bypass (Option) (maintenance)
T Vent connection
A High pressure outlet GTR
D Pressure maintaining unit



Functional description

The gas dryer station consists of a gas dryer, fine filter with drain valve, pressure maintaining check valve, shut off valves, optional bypass and an electrical control unit.

All components are assembled on a mounting frame, piped, wired and tested..

Compressed air from the copressor with high humidity passes the fine filter (S3) and enters into the Gas dryer (P). The fine filter separates free water particles from the compressed air which will be drained automatically by the directional valve if the compressor is not in operation.

The two directional valves (S1, S2) at the dryer will connect the inlet (P) to one adsorber reservoir, so that air with low humidity will exit at Port A. (For detailed information please see page E1.8.7).

The pressure maintaining check valve unit (D) creates an adjustable back pressure during the operation and keeps the system pressure lower if the compressor is not in operation so that the system can be drained.

The optional bypass allows repairs or maintenance work without an interruption of the air supply.

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GAS DRYER STATIONS

For high pressure air and non aggressive Medium for:

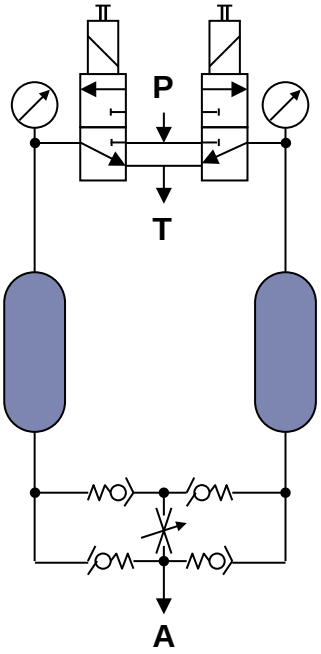
- **drying**
- **de-oiling**
- **filtering**

- Benefits

- **less corrosion**
- **less wear**
- **no icing**

and consequently

- **longer service life**
- **lower maintenance costs**
- **fail-safe operation**



Orderno. and example

GTR 10 **HP 335** **024**

Voltage	
024	24V DC
240	220-240V/50Hz

Oper. pressure	
MP	30-250bar
HP	250-350bar

Type	
GTR 10	Q max 1000L/min
GTR14	Q max 1400L/min

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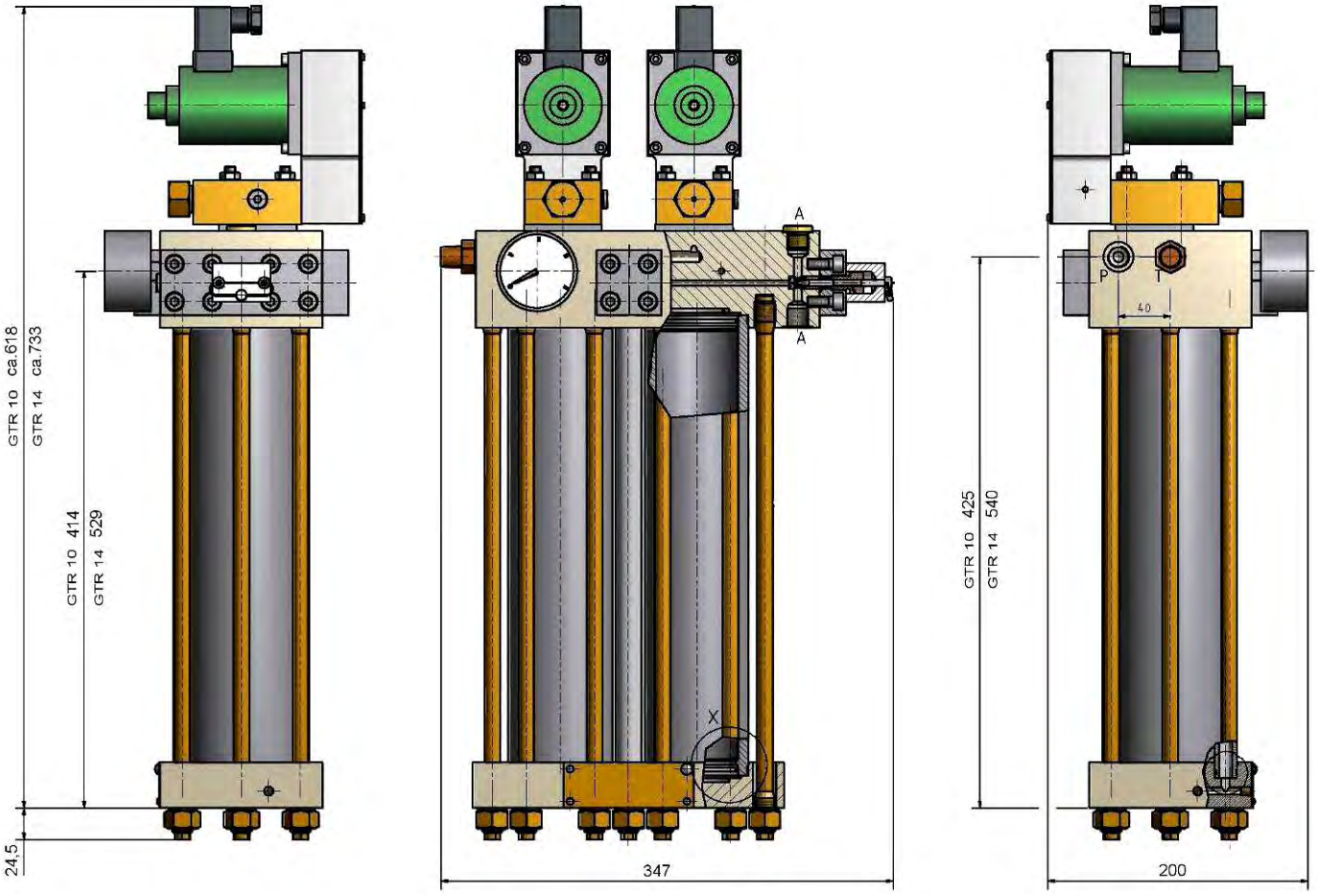
GAS DRYER STATIONS



Technical Data	GTR 10 MD	GTR 10 HD	GTR 14 MD	GTR 14 HD
Operating pressure	30-250bar	250-350bar	30-250bar	250-350bar
Flow rate	1000L/min		1400L/min	
Regeneration air	5-10% of inlet flow rate			
Air volume	0,7L each reservoir		0,99L each reservoir	
Max. temperature	40°C			
Humidity	100%			
Voltage	24V DC, 240V/50Hz	24V DC	24V DC, 240V/50Hz	24V DC
Power consumption	27W	31W	27W	31W
Dew point	-40 bis -60°C			
Material Covers	SS / MS option	SS	SS / MS option	SS
Material tube	Steel nickel coated			
Main connections	G3/4“			
Mass	58Kg	61,5Kg	58Kg	61,5Kg

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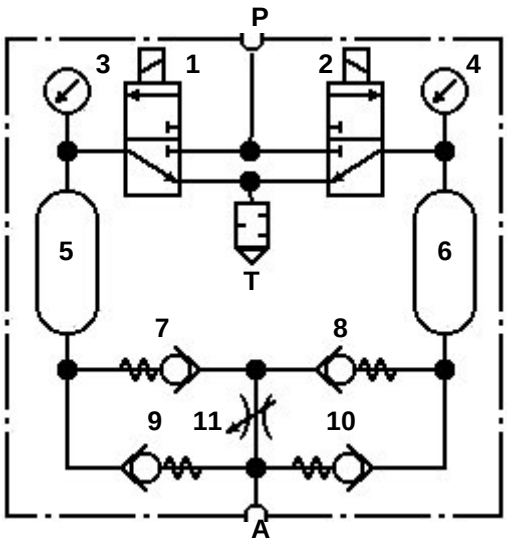
GAS DRYER STATIONS

GAS DRYER TYPE GTR

The gas drier consists of two reservoirs filled with highly porous hydrostatic materials (adsorbents), into which damp com-pressed air and dried depressurized air are alternately admitted for the regeneration phase.



P	High pressure inlet HP
1; 2	3/2-directional valve
3; 4	Pressure gauge
5; 6	Reservoir with adsorbent
7; 8	Check valve LP
9;10	Check valve HP
11	Throttle
T	Vent
A	High pressure outlet

The gas drier consists of two reservoirs filled with highly porous hydrostatic materials (adsorbents), into which damp com-pressed air and dried depressurized air are alternately admitted for the regeneration phase.

The damp air coming from the compressor passes through the fine filter and the energized open 3/2-way valve DN 6 (1), which voltage is being passed, and reaches the reservoir (5).

The adsorbent in reservoir (5) removes the moisture from the damp compressed air as it passes through this reservoir. The now dry air passes via the check valve (9) to out let port /A). A small portion of this dried compressed air is depressurized in the throttle valve (11) and flows through the check valve (8) to the reservoir (6). This dried air absorbs the water from the damp adsorbents and passes via the 3/2-way valve (2) into the atmosphere, thus regenerating the adsorbents. An dryer system requires an additional fine filter at the inlet and an pressure maintaining unit at the outlet of the dryer (for more details please see page E1.8.4).

The inlet and outlet of the adsorbent reservoirs are each fitted with a sintered metal disk. These disks filter the water and oil particles out of the incoming damp air and any particles of adsorbate material from the outgoing air. Since drying and regeneration are performed in a counter-flow procedure, any residues are removed from the sintered metal disks at each reversal of the direction of flow. After the preset time interval (e.g. 10 minutes), the two 3/2-way valves (1 and 2) are automatically reversed via a timer switch.

The procedure described above is now repeated but with the reservoirs “reversed”.

The drying procedure is connected to the operation of the compressor. When the compressor is switched off, both 3/2-way valves (1 and 2) are closed (off position).

In a complete dryer system the pressure relief valve opens and the condensate in the fine filter is discharged.

When the compressor is restarted, the drying procedure is continued where it was interrupted.

Using this method, extremely low pressure dew points can be achieved (depending on the operating pressure, down to –50°C and lower measured at the drier outlet).

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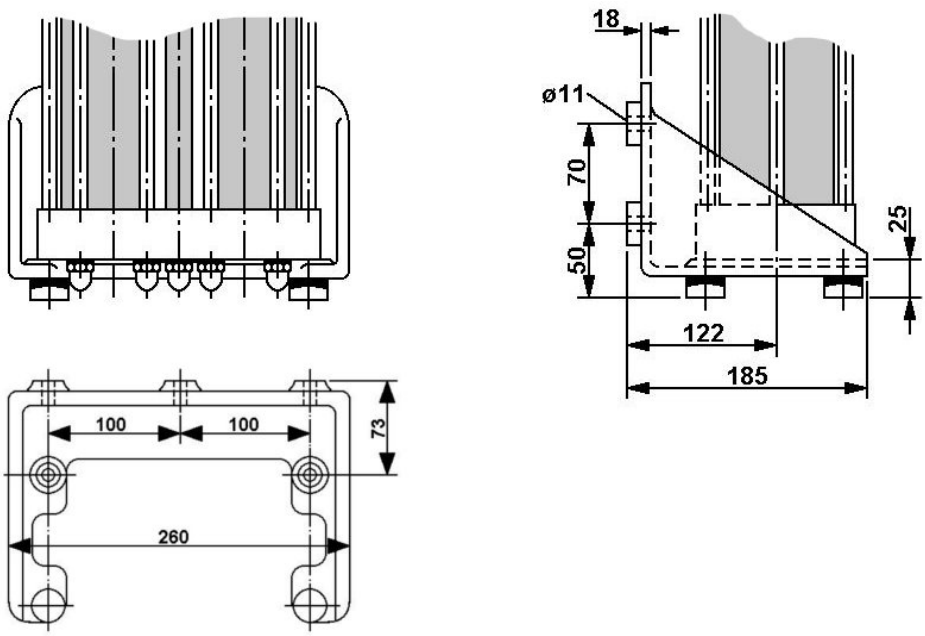
GAS DRYER STATIONS

Ordering information bracket
GTR K 507335



Ordering information control Unit

GTR PS 24GL