

# Compressed air treatment

## Product overview



# About us

FST GmbH Filtrations-Separations-Technik



**Sales / Service / Engineering / Product management**  
Im Teelbruch 106 - 45219 Essen - Germany



**Head office / Production / Logistics**  
Weiherdamm 17 - 57250 Netphen-Deuz - Germany

## “There’s always a solution”

A one-stop shop for compressed air treatment and condensate technology solutions

We specialise in compressed air treatment and condensate technology, a market segment where there is increasing demand for innovative, energy-efficient and cost-effective technical solutions that also safeguard resources and protect the environment.

We offer a complete range of products for a wide array of applications. Our products allow all the compressed air purity classes specified in ISO 8573-1 to be achieved. They can also manage condensate fully, from discharge to treatment. The compressed air purity classes that can be achieved with our standard products range from standard instrument air or technically oil-free compressed air right through to sterile ultra-pure air or medical breathing air. The pressure ranges supported go from a vacuum through 16 bar up to 350 bar, with flow rates of up to 30,000 m<sup>3</sup>/h. All our core products have been developed and produced in-house.

If any other tasks need to be accommodated, our project department can offer a solution – whether you need higher flow rates or operating pressures, customer site specific process technologies, approvals or specific materials.

## “We aim to please”

We invest in long-term and cooperative partnerships based on customer satisfaction

Ultimately, business relationships and success are built and maintained by real people. That is why we aim to ensure that our customers do not just remain satisfied with our products, but also with our advice and support, our customer service and, above all, with our employees.

Thus we offer a team of experts with decades of experience and solid track record of having completed countless projects successfully, additionally supported by our engagement in national and international standardization bodies, organizations and research institutions.

What’s more, we like to continue supporting our customers with services long after they have decided for FST. Our service department looks after customers all over the world, offering assistance with commissioning, maintenance and repairs.

## “Listen, understand, act”

That’s what FST understands by being customer-focused

The autonomy that we enjoy as a «German Mittelstand manufacturing company» is one of the cornerstones of our ability to make quick decisions and act swiftly in the interests of our customers, partners and the market.





## “Every product needs a master plan”

Products need well-thought-out and sophisticated concepts

When developing our products, we pay attention to all kinds of finer details. As a result, we not only offer solutions that are energy-efficient, reliable, user-friendly and easily serviced, but also offer the lowest total-costs of ownership.

## “Our approach: A high level of vertical production integration”

The basis for ensuring speed, flexibility and competitiveness

W&Z Rohrsystem-Technik, based in Netphen-Deuz, is one of our key strategic partners and major shareholder of FST. This company specializes in the manufacture of pipe systems, pressure vessels and complete plants – made out of steel or stainless steel. Its production facilities, which cover an area of approximately 6000 m<sup>2</sup> are divided into separate production lines and can produce plants weighing up to 70 metric tons, feature pipe diameters of up to 4000 mm and pressures of up to 1000 bar – offering many worldwide approvals or approved compliance to standards and directives.

As far as our core products are concerned, vertical production integration thus extends right down to the raw parts at the bottom – sheet metal, pipes, cast parts and prefabricated blanks. We have access to every conceivable produc-

tion process available in the technologies of metal working and welding. In terms of surface treatment, we have our own facilities for the following production processes: sand blasting, wet paint coating and powder coating. If any other types of surface treatment are required, our local supply chain provides specialist treatment to our own exacting standards.

Our extensive vertical production integration, coupled with our development and project capabilities, enable us to achieve high levels of flexibility, speed and competitiveness to provide outstanding and innovative custom solutions.

## “Bucking the trend”

If you want to deliver quickly, you need your warehouse to be big enough

In our view, customer service is also about providing things as quickly as possible. This specifically includes the ability to actually deliver our products. That is why we have decided to buck the trend by keeping above average stock levels of raw and finished products.

You can be the best organized company on the planet, but if the desired product does not arrive when the customer needs it, all your efforts will have been in vain.

## “Take us at our words”



中华人民共和国  
特种设备制造许可证  
Manufacture License of Special Equipment  
People's Republic of China  
(压力容器) (Pressure Vessel)

# Product overview

## Filtration

### Industrial filter housings

FCA	FWS	FCA	FWS	FMA - FMS
 <p>16 bar</p>	 <p>16 bar</p>	 <p>50 bar</p>	 <p>50 bar</p>	 <p>100, 350 bar</p>
Volume flow up to 2,500 m³/h	Volume flow up to 30,000 m³/h option for stainless steel	Volume flow up to s 4,080 m³/h	Volume flow up to 12,750 m³/h option for stainless steel	Volume flow up to 4,290 m³/h option for stainless steel

### Industrial filtration grades and element types

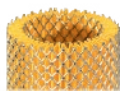








W(HP)	V(5)	ZN	XN	XXN	A	CA
						
Water separator	Coarse filter	General purpose filter	Fine filter	Super fine filter	Activated carbon	Activated carbon cart.

Standard	HT	TC	EX
—	High temperature	Chemical resistant	Electrical conductivity

### Process filter housings

FWP	FWPV
 <p>16 bar</p>	 <p>0,5 bar</p>
Volume flow up to 4,500 m³/h	Volume flow up to 200 m³/h

### Process filtration grades

V	ZN	XN	XXN	A	STPL	SMPL	ST	D
								
Coarse filter	General purpose filter	Fine filter	Super fine filter	Activated carbon	Sterile filter	Sterile filter	Sterile filter	Steam filter

... a comprehensive range of accessories and many types of elements (also available for competitors' products)



# Cooling

## Air and water cooled coolers






HAO-RA	HWO-A
 <p>12/16 bar</p>	 <p>12/16 bar</p>
<p>Volume flow up to 4,500 m³/h Air cooled - including water separator</p>	<p>Volume flow up to 12,600 m³/h Water cooled - option for water separator (WS)</p>

# Drying

## Refrigeration dryer for PDP down to +3°C

DFX	DFE	DFLO
 <p>14/16 bar</p>	 <p>16 bar</p>	 <p>13/16 bar</p>
<p>Volume flow up to 850 m³/h Air cooled - hot gas bypass control</p>	<p>Volume flow up to 1,650 m³/h Air cooled - energy saving control</p>	<p>Volume flow up to 24,000 m³/h Air or water cooled (W) - energy saving control (ES)</p>



## Heatless adsorption dryer for PDP down to -70°C

DPS 1-8 (A)	DPS 10-100 (A)	DPS 120-630	DHW (A)	DHM (A)
 <p>16 bar</p>	 <p>16 bar</p>	 <p>11 bar</p>	 <p>50-420 bar</p>	 <p>100, 350 bar</p>
<p>Volume flow up to 82 m³/h option for additional carbon stage</p>	<p>Volume flow up to 1,000 m³/h option for additional carbon stage</p>	<p>Volume flow up to 6,290 m³/h</p>	<p>Volume flow up to 1,750 m³/h option for additional carbon stage</p>	<p>Volume flow up to 1,600 m³/h option for additional carbon stage</p>

## Heat regenerated adsorption dryer for PDP down to -70°C

DTS..V	DTS..BVL	DTC
 <p>11 bar</p>	 <p>11 bar</p>	 <p>11 bar</p>
<p>Volume flow up to 14,700 m³/h Fast cooling (vacuum)</p>	<p>Volume flow up to 14,700 m³/h Serial heating (blower) fast close loop cooling (vacuum)</p>	<p>Volume flow up to 14,700 m³/h Heat of compression</p>

## Point of use dryer




FCA...CMS	DM-FP
 <p>16 bar</p>	 <p>12,5 bar</p>
<p>Volume flow up to 4 m³/h Dryer for PDP down to -40°C</p>	<p>Volume flow up to 63 m³/h Membrane dryer for PDP +15°C to -40°C</p>

## ... a comprehensive range of accessories







# Oil vapour adsorption

## Activated carbon oil vapour adsorber

DSS 1-8	DSS 10-1470	DSW
 16 bar	 11/16 bar	 50-420 bar
Volume flow up to 82 m <sup>3</sup> /h	Volume flow up to 20,420 m <sup>3</sup> /h	Volume flow up to 1,560 m <sup>3</sup> /h

# Breathing air systems

## Heatless adsorption dryer extended by a breathing air stage



DPS 1-8 BI	DPS 10-100 BI	DPS 1-8 BM	DPS 10-100 BM
 16 bar	 16 bar	 16 bar	 16 bar
Volume flow up to 82 m <sup>3</sup> /h Breathing air acc. to DIN EN 12021	Volume flow up to 1,000 m <sup>3</sup> /h Breathing air acc. to DIN EN 12021	Volume flow up to 82 m <sup>3</sup> /h Breathing air acc. Pharmacopoea Europaea	Volume flow up to 1,000 m <sup>3</sup> /h Breathing air acc. Pharmacopoea Europaea

# Condensate technology

## Condensate discharge

CDM	CDF	CDE..L	CDE..T	CDMV
 16-350 bar	 16 bar	 16 bar	 16-350 bar	 0 bar(a)
Volume flow up to 30,000 m <sup>3</sup> /h Manual drain	Volume flow up to 30,000 m <sup>3</sup> /h Automatic drain	Volume flow up to 30,000 m <sup>3</sup> /h Electronic level controlled	Volume flow up to 30,000 m <sup>3</sup> /h Electronic time controlled	Vacuum flask 100 -250 ml

## Condensate treatment

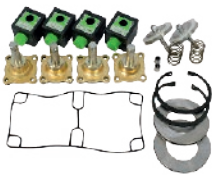



CSD	CSW
	
Volume flow up to 9,600 m <sup>3</sup> /h	Volume flow up to 6,000 m <sup>3</sup> /h

# Service-Aftermarket


**Maintenance and desiccant bundles** (also available for competitors' products)

SEWAPAC	SEDAPAC
	
Maintenance kits for oil water separators	Desiccant and activated carbon bundles

**Parts and Kits** (also available for competitors' products)

SK	SP	SR	SU
			
Service kits	Service parts	Service repair kits	Service upgrade kits

**Control and measurement technology**

Control technology	Measurement technology
	
Controller	Measurement devices and system

# Customer specific solutions


Examples for two customer specific adsorption dryers




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## Distributor