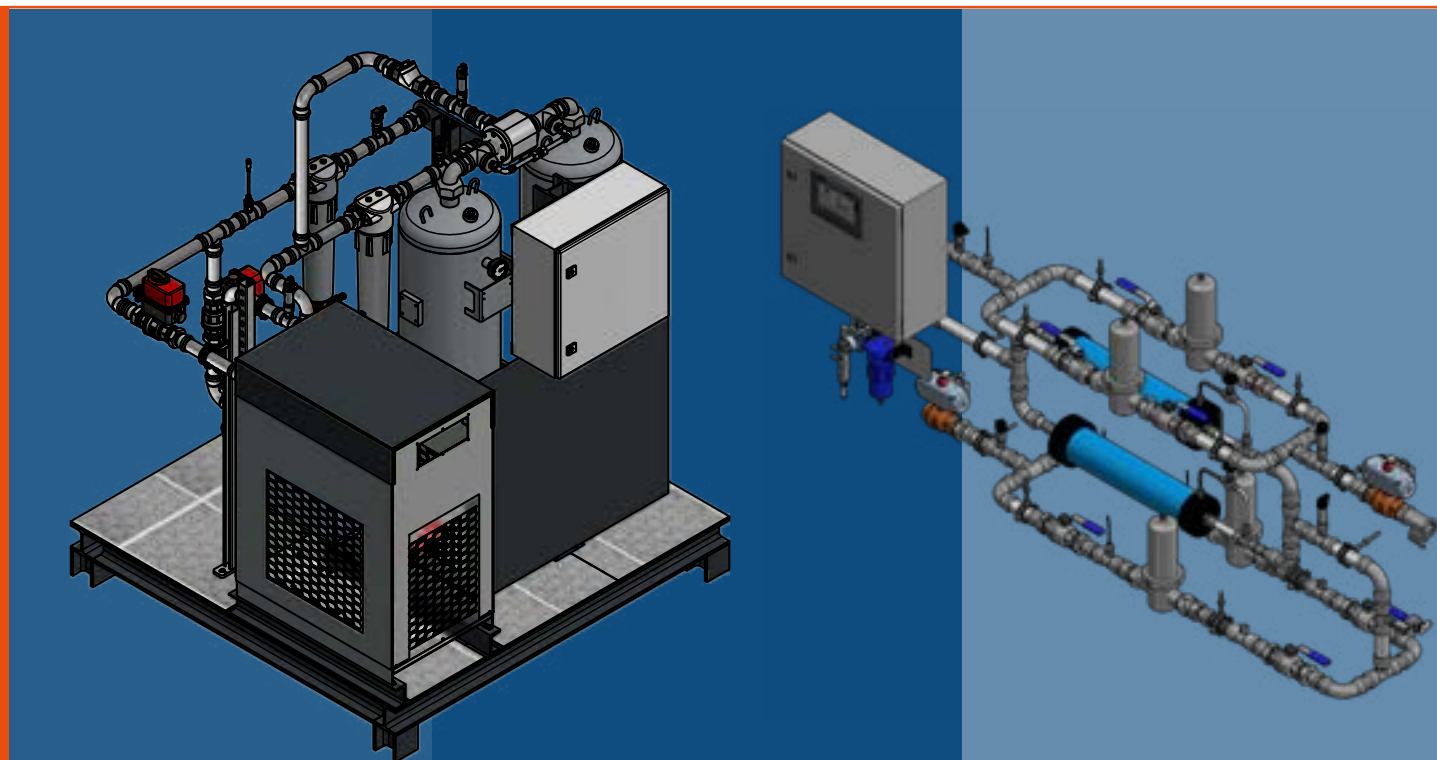


# SYSTEMS

## Combined System Solutions



Rev 01\_0421



### KSI SYSTEMS sets benchmarks in cooperation with retail partners.

#### The advantages for KSI partners:

- **INDUSTRY 4.0 ready:** all parameters can be measured and displayed on a control system (ISO 5001)
- modular system enables complete solutions tailored to customer requirements
- no more technical configuration on your own
- no more time-consuming orders of all the single components
- no more assembly work in your own workshop
- even more complex solutions are now a valuable part of the product range of KSI's retail partners

The system solutions, designed with measurement and control technology, are „**plug & play**“-units. They are already assembled and fixed to a base frame or installed in a container.

### The KSI SYSTEMS Plus-Effects +++

- + provides operational safety
- + service-friendly ► maintenance while in operation modular system ► easy to add or replace components
- + only one (!) contact person during order process  
► no hassle with other companies or suppliers
- + valuable addition to the performance range of specialist retailers
- + ordering of compressors may still be done by the retailer
- + CE certificates of the complete systems are available

### Some applications:

- container solutions
- breweries
- brick factories
- solutions for the point-of-use

# SYSTEMS

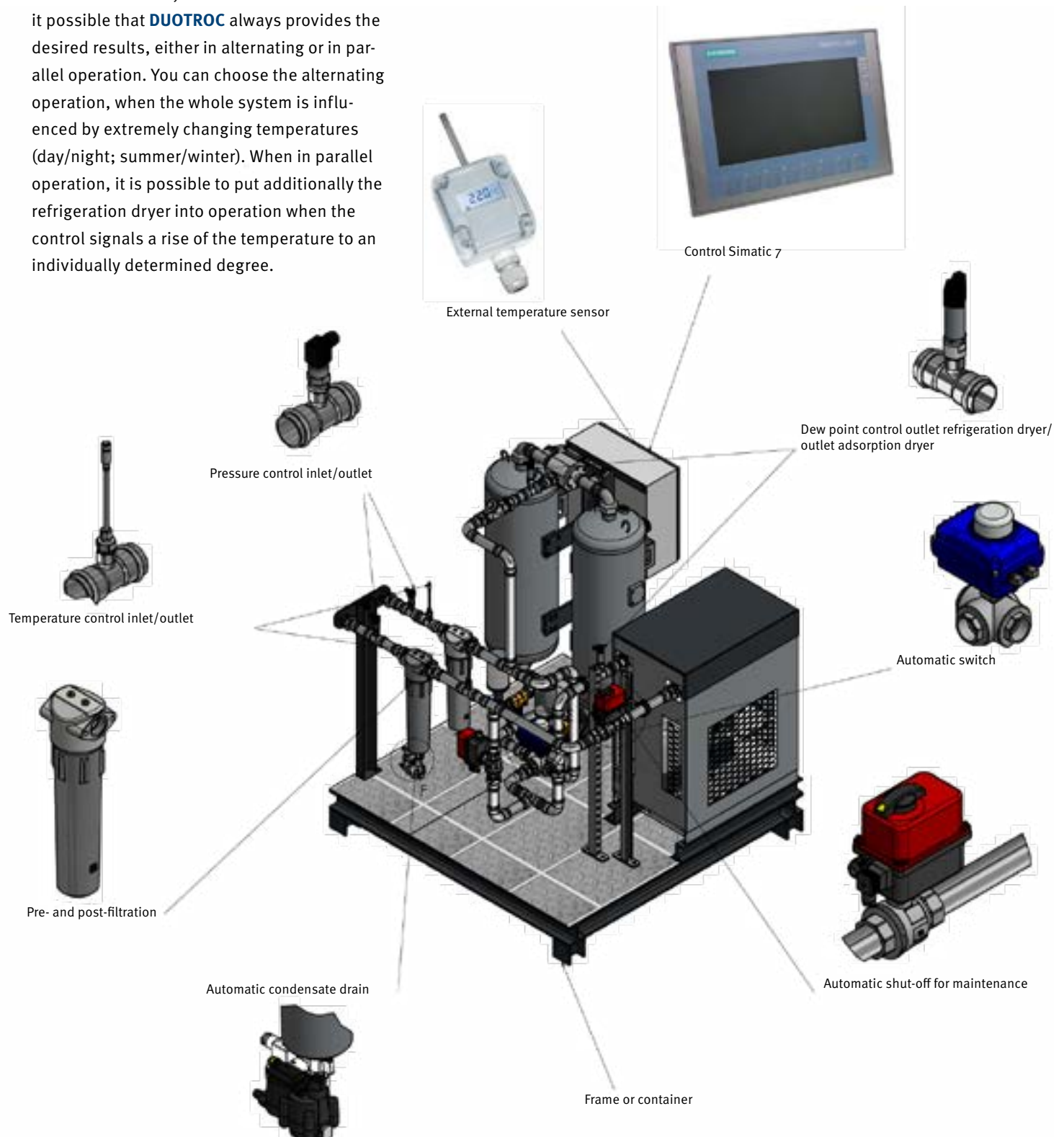
## Combined System Solutions



### The example: DUOTROC

The KSI system solution **DUOTROC** combines the air drying methods of refrigeration and adsorption drying. This works by connecting the wiring and piping of the two drying systems, and by interfacing the complete installation with a control S7-1200 by Siemens.

The effect: The fully-automatic control makes it possible that **DUOTROC** always provides the desired results, either in alternating or in parallel operation. You can choose the alternating operation, when the whole system is influenced by extremely changing temperatures (day/night; summer/winter). When in parallel operation, it is possible to put additionally the refrigeration dryer into operation when the control signals a rise of the temperature to an individually determined degree.



# SYSTEMS

## Combined System Solutions



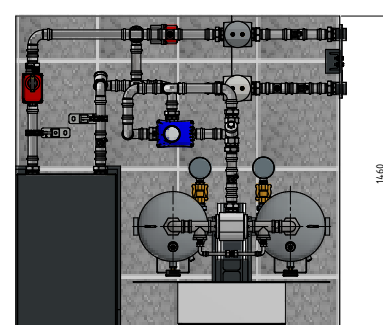
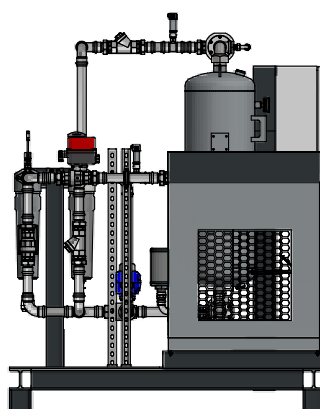
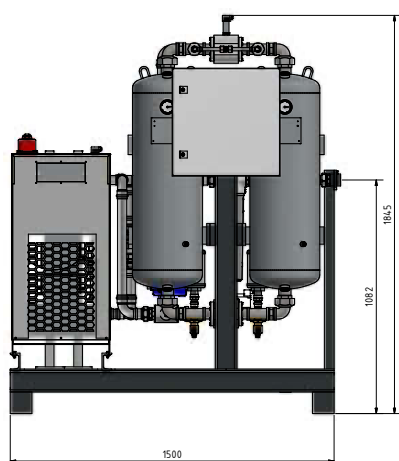
### DUOTROC: the clever combination of refrigeration and adsorption dryer

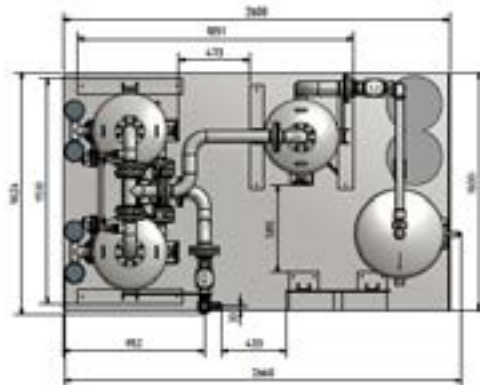
**DUOTROC** is only one example taken from a great variety of possible solutions which are all part of the new product division **KSI SYSTEMS**.

Specifications and scope of supply of a complete system solution – i.e. DUOTROC 380		
Volume flow	m <sup>3</sup> /h	380*
Operating pressure max.	bar	16
Dew point	°C	+ 3 / - 40
Frame	Type	Powder-coated steel, RAL 7040 and RAL 7016, checker plate
Connection	Inch	1 1/2"
Pressure sensor inlet	bar	0-16 bar
Pressure sensor outlet	bar	0-16 bar
Prefilter	Type	KSI ECOCLEAN APF133SMA with level-controlled condensate drain KN1
Temperature sensor	°C	0 - 400
Post filter	Type	KSI ECOCLEAN APF133DMF
Connection filter	Inch	1 1/2"
Electrical ball valve inlet	V	24 dc
Dew point controls	Piece	2
Electrical three-way valve	V	24 dc
Control	Type	Siemens S7-1200 with Touch Panel
Refrigeration dryer	Type	KTN390
Adsorption dryer	Type	ATKN34
Dew point measurement	°C	- 100 bis + 20

\* related to 1 bar (abs.) 20°C at 7 bar g operating pressure

### Outlines and designs





### Example: adsorption dryer ATK + ATC, compressed air filter, oil-water-separator

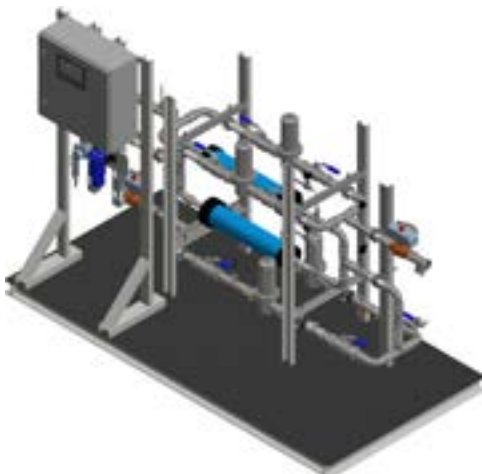
#### Main components:

- APF163SMA prefilter 0,01μ with level-controlled condensate drain
- ATKN90 adsorption dryer
- APF163DMF postfilter
- ATCN90 oil vapour adsorber
- APF163DMF postfilter
- KON-C 15 oil-water-separator
- residual oil monitoring / measurement
- SPS control / optional monitoring
- WK 500 L air vessel

#### Application example:

- special customized solution for the mobile use

### Example: membrane dryer + sterile filter

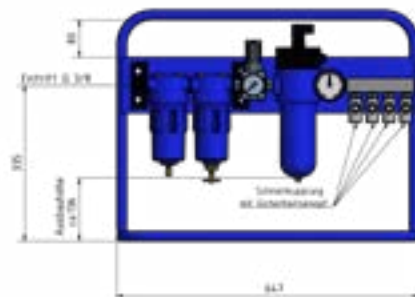


#### Main components:

- MT3000 membrane with purge air stop
- FES080 sterile filter
- FPF080 process filter
- temperatur control inlet
- dew point control inlet / outlet
- connections for vapor deposition sterile filter
- automatic shut-off of inlet and outlet fittings
- pressure monitoring inlet and outlet
- SPS control

#### Application example:

- special solution post drying medical device manufacturer



### Example: compressed air filter + pressure regulator

#### Main components:

- APF53SMA filter 0,01μ
- APF53CA activated carbon filter
- pressure regulator
- (optional) compressed air heater
- 4-way distributor with quick coupling

#### Application example:

- in paint shops
- road construction / tunnel construction
- mobile industrial breathing air applications