



KNOCK-OUT-DRUM

TYPE VKOD

adequate for all gases acc. to "DVGW Arbeitsblatt" (work sheet) G260
and for all non-aggressive special gases.

KNOCK-OUT-DRUM TYPE VKOD

CHARACTERISTICS

- » Efficient liquid filtration for coarse particles
- » Scrubber, Pre-Separator
- » One-stage, maintenance-free
- » Large liquid collection room
- » Low differential pressure

OPTIONS

- » custom-specific design acc. to various design codes (ASME, EN 13445, SVTI, AS1210, PD5500, etc.)
- » custom specific TPI approvals
- » custom specific testing
- » sour gas application - NACE
- » low temperature application up to -50°C
- » high pressure application up to 300 bar
- » high temperature application up to 250°C
- » custom specific nozzle arrangement

ACCESSORIES

- » differential pressure gauge
- » level indicator
- » drainage system
- » sump heating

GENERAL

The knock-out drum VKOD is designed for to clean gas from liquid particles.

The vessel make occurs as an all steel welded construction in a vertical design. The VKOD do not require spare parts other than gaskets for inspection holes.

QUALITY MANAGEMENT

- » DIN EN ISO 9001
- » Our standard vessel design acc. to AD 2000 are third party approved by TÜV or other TPI and CE certified according to the pressure equipment directive EG/PED 2014/68/EU.
- » Test- and material-certificates are been issued by an authorized person according to the code requirements.

FUNCTION

The knock-out drum is a two-stage separator and filters coarse mechanical impurities and fine liquid particles from the gas stream. The large bottom condensate collection room can be equipped with a corresponding discharge system without maintenance.

The gas flows through the gas inlet connection into the drum and is directed downwards by a 90° elbow. Here the gas flow changes direction and reduces the flow speed to approx. 1 m/s in the the inner cross section of the vessel. This flow process causes coarse mechanical impurities and large liquid drops (up to >> 350 µm) to fall due to gravity.

Fine liquid particles are separated in a downstream droplet wire mesh demister package. Coalesced drops fall out due to gravity.

STANDARD DESIGN DATA

Design Code	AD 2000 + CE	Radiography Test	according code
Design Pressure	custom specific	Dye Penetrant Test	according code
Design Temperature	-10 / +50°C	US-Test	on demand
Body Material	Carbon Steel	Hydrostatic Pressure Test	p x 1,43
Design Approval	Third Party Inspector	Leak Test	workshop test 6 barg
Material Certificates	EN 10204/3.1	EG/PED 2014/68/EU	CE-certified
		Corrosion Allowance	1 mm

TECHNICAL DATA FOR CUSTOM-SPECIFIC INQUIRY/ORDER:

Design Data:				
Design Code	<input type="checkbox"/> AD 2000	<input type="checkbox"/> ASME	<input type="checkbox"/> EN 13445	<input type="checkbox"/> Bitte angeben
Tests / Options	<input type="checkbox"/> CE / PED	<input type="checkbox"/> U-Stamp	<input type="checkbox"/> NACE	<input type="checkbox"/> Bitte angeben
Design Pressure	PN	bar	corrosion allowance c_2	mm
Design Temperature	DT	min. / max. °C	design orientation	<input type="checkbox"/> vertical <input type="checkbox"/> horizontal
Nozzles / Connections:	Bitte angeben		flow direction	<input type="checkbox"/> li / re <input type="checkbox"/> re / li
Nozzle DN <small>Please, announce on demand</small>	<input checked="" type="checkbox"/> inlet	<input checked="" type="checkbox"/> outlet	<input checked="" type="checkbox"/> drainage	<input checked="" type="checkbox"/> vent <input checked="" type="checkbox"/> DP
Nozzle DN, additional	<input type="checkbox"/> PI	<input type="checkbox"/> TI	<input type="checkbox"/> purge	<input type="checkbox"/> Please, announce
Berechnungsdaten:				
Medium	<input type="checkbox"/> Natural Gas	<input type="checkbox"/> Biogas	<input type="checkbox"/> Sour Gas	<input type="checkbox"/> Please, announce
Density (Gas Analysis)	ρ_{ni}	kg/m³	Efficiency Dust	% ≥ µm
flow rate, nominal	V_n	Nm³/h / SCFM	Efficiency Droplets/Fluids	% ≥ µm
Operational Pressure	P_i	min. / max. bar	Efficiency Oil Mist	% ≥ µm
Operational Temperature	ϑ_i	min. / max. °C	Material Contaminations	Please, announce - as far asknown

STANDARD DESIGN:

Each separator is equipped with 2 differential pressure and one vent connection G 1/2 "as standard. These are arranged to the front according to the direction of flow. 2 sleeves for level indication and 1 sleeve for discharge are provided in the liquid collection chamber. According to the design rules, the drum is equipped in the lower sump area with an inspection opening and a drainage nozzle. The drainage nozzle is plugged with a blind flange.

Type-Description Sample:

VKOD 1600 . 16 . 500 . 3

Typ / Type	_____	_____	Durchflussrichtung / Flow Direction
DN Apparat / DN Vessel	_____	_____	DN Stutzen / DN Nozzle
			PN Designdruck / PN Design Pressure

Typ / Type	Technische Daten / Technical Data	Skizze / Sketch	
VKOD	<p>1-stufig, vertikal Demister</p> <p>Abscheiderate Staub Abscheiderate Flüssigkeiten Differenzdruck im Neuzustand</p> <p>Leistungsbereich Flüssigkeits-Sammelräume</p> <p>1-stage, vertical Demister</p> <p>Efficiency Dust Efficiency Liquids Differential Pressure @ new condition</p> <p>Load Range Drainage System Unit</p>	<p>n./v. 99,0 % ≥ 20 µm max. 100 mbar</p> <p>0 – 100% 1x</p> <p>n./a. 99,0 % ≥ 20 µm max. 100 mbar</p> <p>0 – 100% 1x</p>	

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