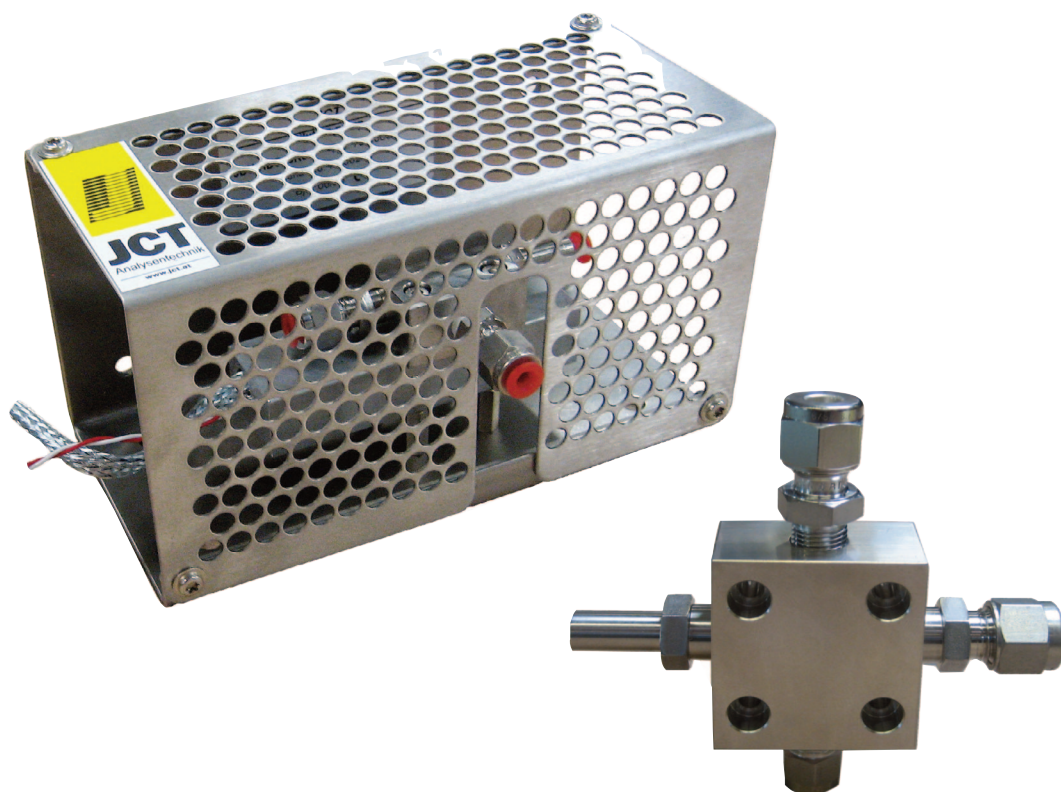




# JDU Dilution Unit



**JCT**  
Analysentechnik

Gas Sampling  
Probes

Heated Sample  
Lines

Sample Gas  
Coolers

Condensate  
Treatment

#### Accessories

Gas Conditioning  
Systems

Sample Gas  
Converters

#### APPLICATION

- For dilution of flammable sample gases
- For emission and process monitoring
- For integration in gas analysis systems

#### BENEFITS

- Easy mounting and integration in gas analysis systems
- Very long lifetime
- Maintenance-free operation
- Corrosion resistant
- Applicable for a wide range of altitude

#### FEATURES

- For use in Ex zones possible
- For wall or bulkhead mounting
- Compact and robust construction
- Small dead volume
- Suitable for high pressures and temperatures
- Heated version for safe zone up to 200 °C (controller required)
- Self limiting PTC heater for Ex zones temperature class T3 & T4

## TECHNICAL DATA

Model	JDU.U	JDU.H
Description	Sample gas dilution unit	
Heating	no	safe zone: heater element (temperature controller needed) Ex-Zone: JHBEX self-regulated heating element
Dilution ratios	1:10, 1:12,5, 1:20, 1:37,5, 1:50, 1:100, 1:200	
Flow of dilution gas	DG1 400...600 l/h / DG2 800...1200 l/h	

### Operation

Operating temperature	–	max. 200°C
Ambient temperature	5° to 50 °C (min. 5 °C above sample gas dew point)	
Supply pressure for dilution gas	4...5 bara	
Ejector vacuum	≥ –750 mbar at 1013 mbar ambient pressure	
Maximum back pressure	< 50 mbar	
Warm up time	–	< 60 min

### Construction

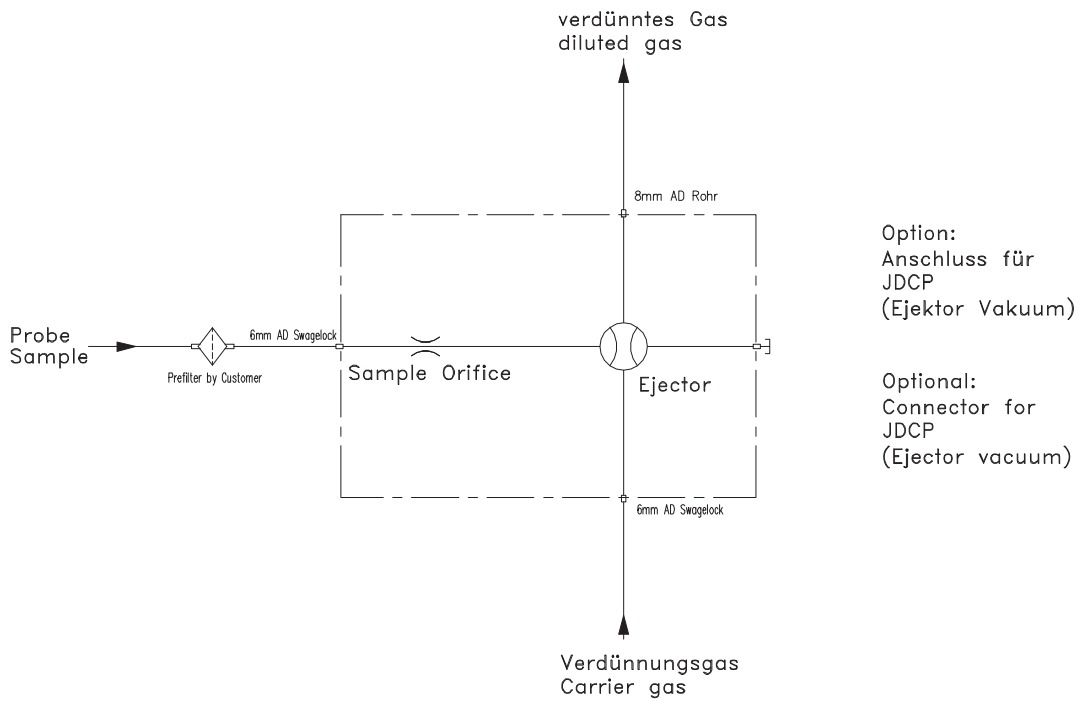
Dimensions over all	90 x 74 x 20 mm	180 x 94 x 104 mm
Weight	approx. 0,5 kg	approx. 1,5 kg
Connections dilution gas / Sample gas	6 mm female connection	
Connection diluted sample gas	8 mm pipe stub	
Gas wetted materials	SS316Ti, glass	
Mounting / Position	wall mounting / any	
Protection class	IP 66 (EN60529)	IP 20 (EN60529)
Recommended dilution gas	purified instrument air, dew point ≤ –40 °C; according to ISO 8573-1 class 1.2.1 or inert gas (e.g. nitrogen 5.0)	
Approvals / Signs	CE	

### Electrics

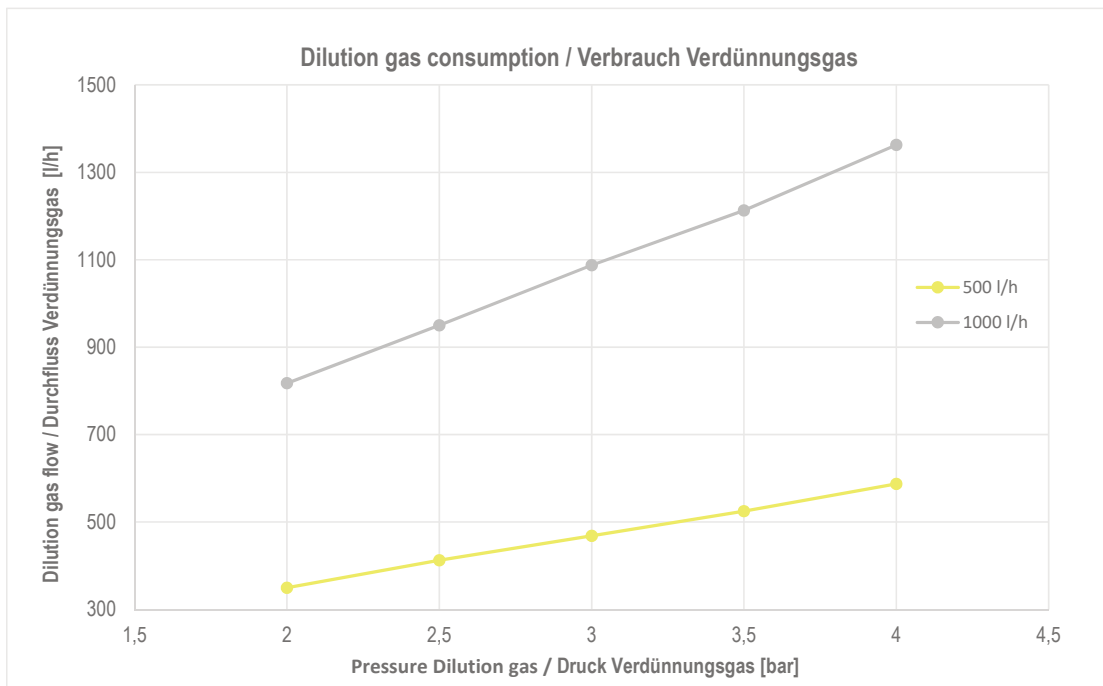
Power supply	–	230 VAC 50/60 Hz
Power consumption	–	approx. 200W Ex approx. 160W
Temperature sensor	–	RTD Pt100 Ex selflimited
Electrical connection	–	2 x 2-pole cables with free ends Ex 3G1 with free ends
Protection class heater	–	IP 66 (EN60529)

All dilution data are approximate values and can be varied with the dilution gas

## GAS FLOW DIAGRAM



## PERFORMANCE DIAGRAMS



## ORDER CODES

### Available Features

Heater	unheated	U		
	heated up to 200°C	H		
	Ex heated zone 1 (21) temperature class T3	HE1		
	Ex heated Zone 1 (21) temperature class T4	HE2		
	Ex heated Zone 2 (21) temperature class T3	HE3		
Dilution gas	500 l/h		DG1	
	1000 l/h		DG2	
Dilution orifice	orifice 010			OR1
	orifice 015			OR2
	orifice 020			OR3
	orifice 025			OR4
	orifice 030			OR5
	orifice 035			OR6
	orifice 040			OR7
	orifice 050			OR8
	Order code		JDU.	DG

## DILUTION RATE AIR

		<u>Verdünnungsrate / Dilutionrate</u>								
Verdünnungsgas		1:200	1:100	1:50	1:37,5	1:25	1:20	1:12,5	1:10	Dilution gas
		<u>Verdünnungsdüse / Dilution orifice</u>								
DG1	500l/h		OR1/010	OR2/015		OR3/020	OR4/025	OR5/030	OR6/035	DG1
DG2	1000l/h	OR1/010	OR2/015	OR3/020	OR4/025	OR5/030	OR6/035	OR7/040	OR8/050	DG2

## ACCESSORIES

Part No	Description
89.00102	Temperature controller JPXE-4
89.90000	Preconfiguration of temperature controller
89.00500	Solid state relay
HT62	Temperature controller HT62
79.90050	Precision pressure regulator 0...10bar, 1/4" connections
35.00673	JDCP dilution control panel
17.00001	JF-1 filter housing made of PVDF with Viton® gasket
17.00002	Glass fibre filter element 2 µm, PU = 5 pcs
17.00003	PTFE filter element 2 µm, PU = 3 pcs

Gas Sampling Probes



Heated Sample Lines



Sample Gas Coolers



Gas Conditioning Systems



NOx Converter



and solutions for

