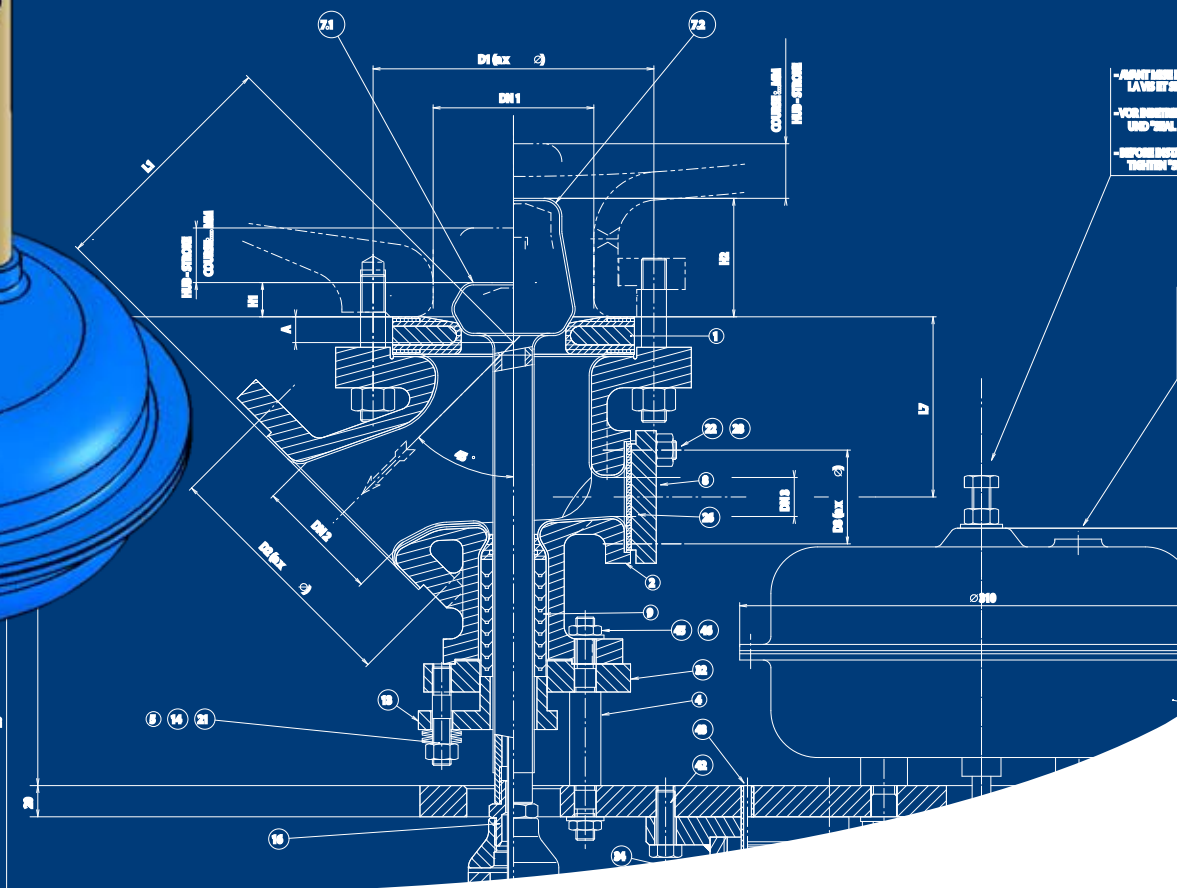




# De Dietrich® Valves

## CONCENTRATED INNOVATIONS





**EQUIPMENT, SYSTEMS, SERVICES**

# THE SINGLE ANSWER TO ALL OF YOUR NEEDS

DE DIETRICH PROCESS SYSTEMS RELIES ON A SYNERGY OF ITS COMPETENCIES AND EXPERTISE TO PROVIDE A COMPREHENSIVE OFFER AIMED AT THE FINE CHEMICAL, PHARMACEUTICAL AND RELATED INDUSTRIES. ITS DEVELOPMENT IS ORGANIZED AROUND THREE BUSINESSES: EQUIPMENT, INTEGRATED SYSTEMS AND SERVICES.

## SINCE 1684

SINCE ITS CREATION IN 1684, THE FRENCH COMPANY, DE DIETRICH® HAS NEVER STOPPED EVOLVING. BY CREATING SYNERGIES WITH PARTNER COMPANIES, BY INTEGRATING KNOWLEDGE IN SKILL SETS, DE DIETRICH® IS TODAY A WORLD LEADER IN THE DESIGN AND MANUFACTURE OF EQUIPMENT AND ACCESSORIES IN ENAMELLED STEEL FOR THE CHEMICAL AND PHARMACEUTICAL INDUSTRIES.

## BASIC DATA

All De Dietrich® enamelled valves are made of cast steel coated with our standard DD 3009 enamel.

They thus present the same characteristics of resistance to corrosion, thermal and mechanical shock as all of the other appliances in the De Dietrich® range, particularly the reactors on which they are installed. All other parts in contact with the process are made of fluoropolymer (PTFE, PFA). Our valves are available for the following fittings: PN16, ANSI 150 and JIS 10K.

All of our valves are available in manual or pneumatic versions and can be fitted with temperature measurement sensors, measurement electrodes for GlasWatch (appliance for monitoring enamel integrity) and other accessories.

Our valves comply with the requirements of Directive 97/23/EC (PED) and therefore bear the CE marking. They are designed for use with group 1 fluids.





# THE CLEANVALVE RANGE

This range has been designed to satisfy each and every requirement in terms of safety and cleanability. The cleaning opening has been angled at 5° and the outlet nozzle presents a groove to facilitate the run-off of the very last drops of product.



The absence of bellows also favors valve cleaning. The dimensions of the valve bodies in the CleanValve series are interchangeable with all of our previous models, which allows them to be fitted instead and in place of the former fittings in an existing installation without having to make any changes to the pipe layout.

## OUR VALVE SEATS

Our standard seats are made of glass-filled PTFE, with an integrated seal in aramide fibre for a temperature of -20°C to 180°C. Reinforced seats



in PFA with a STEEL armature are available as optional for high operating temperatures of -60°C to +200°C.

## TIGHTNESS GUARANTEED BY A THREEFOLD SAFETY PROVISION



Grinding of the valve stem to reduce friction.

Replacement of the packing braid by a chevron system in PTFE (overlay of multiple sealing provisions).

Installation of an O-ring seal inside the anti-extrusion ring.

## FIRE SAFE CERTIFICATION

A FIRE SAFE version has also been produced and can be delivered at the customer's request.

## TA LUFT CERTIFICATION

De Dietrich® CVB valves are TA LUFT certified.

## VALVES AND ATEX

OUR VALVES ARE ATEX CERTIFIED ACCORDING TO THE CLASSIFICATION:

- CE MARKING EX II 2 G: CAN BE USED IN ZONE 1 OR 2; GAS ATMOSPHERE
- GROUP IIC GASES
- TEMPERATURE CLASS T2/T3/T4 ACCORDING TO THE TEMPERATURE OF THE PROCESS.

THE ATTACHED DOCUMENTATION COMPRISES THE FOLLOWING ITEMS:

- DECLARATION OF CONFORMITY TO DIRECTIVE 94/9/EC
- DRAWING AND PARTS LISTING
- INSTRUCTIONS FOR USE IN EXPLOSIVE ATMOSPHERES.

ANY SPECIAL REQUIREMENTS WILL BE EXAMINED ON A CASE BY CASE BASIS

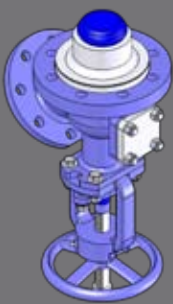


Table of operating conditions

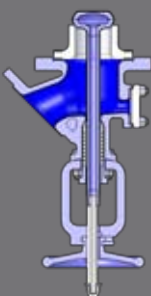
VALVE SIZE (DN)	STANDARD SEAT		REINFORCED SEAT	
	OPERATING PRESSURE (BAR)	OPERATING T° (°C)	OPERATING PRESSURE (BAR)	OPERATING T° (°C)
50/32	-1/10	-20/+180	-1/25	-60/+200
80/50				
100/80				
150/100			-1/16	

CAUTION: Use of a washing nozzle modifies the operating conditions

## THE RANGE



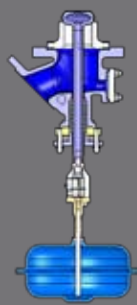
CVB



CVB cross section



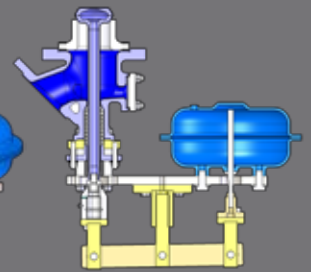
CVBP



CVBP cross section



CVBPLZ



CVBPLZ cross section

# THE REVOLUTION: FLAT SEATS

## THE SINGLE, INNOVATIVE SOLUTION FOR OPTIMAL CLEANING

The De Dietrich® flat seat (registered design) is the answer to your cleanability problems in that it replaces the traditional fitting (raised seat + flat stem head) with our innovation (flat seat + raised stem head).

### OPTIMAL CLEANING

The use of a flat seat makes it possible to eradicate the dead zones between the outlet nozzle and the seat.

This therefore prevents cross-contamination and thus facilitates cleaning approval.

## 100% ADAPTABLE

This type of seat can be fitted to all types of nozzles (cf. diagram).

Indeed, depending on the type of nozzle to which it is to be fitted, only the design of the valve will vary.

It goes without saying that flat seat valves can be fitted to new reactors or replace any other kind of existing valve.



## LOWER PRODUCTION COSTS

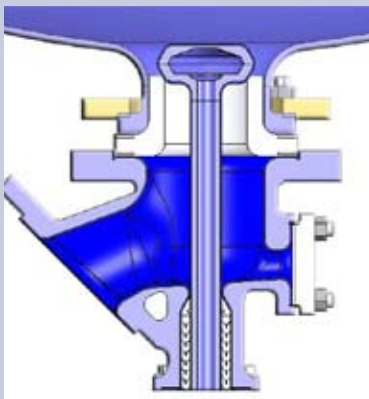
CleanValve valves fitted with a flat seat guarantee optimal cleanability. It is therefore no longer necessary to dismantle them for cleaning. This affords significant time savings.

## SAFETY – MAINTENANCE

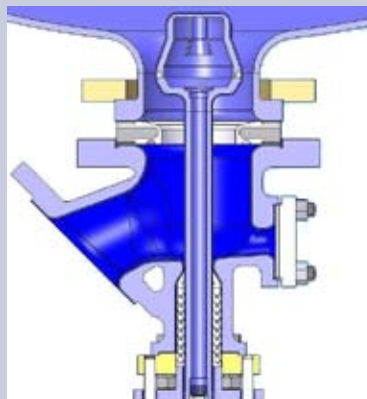
Flat seats considerably improve safety to the extent that dismantling is simplified during maintenance operations.

## PRESENTATION OF THE DIFFERENT OPTIONS AVAILABLE

### ASSEMBLY ON SWAGED NOZZLE

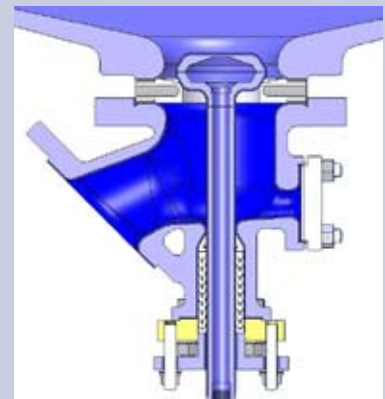


Traditional seat  
+ flat stem head

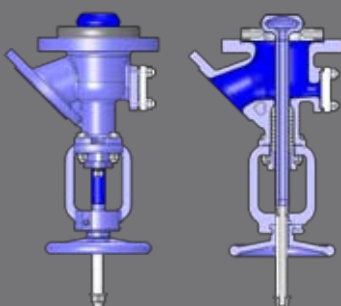


**INNOVATION**  
Flat seat + raised stem head

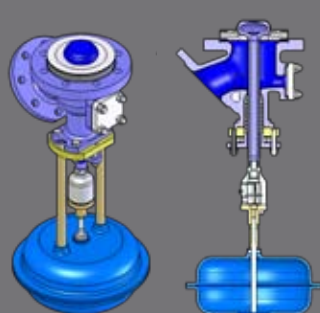
### ASSEMBLY ON PAD TYPE FLANGE



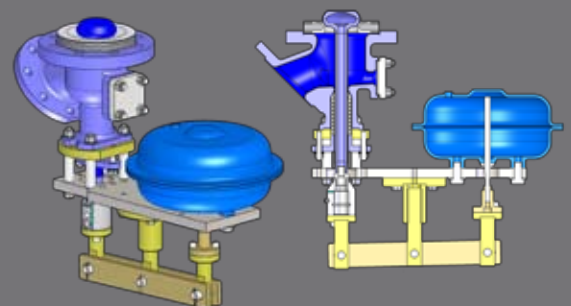
**100% CLEANABILITY**  
Flat seat + flat stem head



CVBSP CVBSP cross section



CVBSP CVBSP cross section



CVBPLZ SP CVBPLZ SP cross section

# ACCESSORIES

## ALL OF OUR VALVES CAN BE FITTED WITH VARIOUS ACCESSORIES FACILITATING THEIR IMPLEMENTATION AND USE

- SINGLE ACTION PNEUMATIC CONTROL WITH RETURN SPRINGS
- EMERGENCY MANUAL CONTROL
- LIMIT SWITCHES
- POSITIONER
- QUICK-EXHAUST VALVE FOR THE PNEUMATIC ACTUATORS
- SOLENOID CONTROL VALVE
- SPRAY NOZZLE



## GLASS VALVES

For reaction units constructed around special reactors from the VERI range, we use a DN40 glass valve in which the PTFE piston is directly applied without a seat to the enamelled reactor flange. These valves are produced by De Dietrich Process Systems GmbH.



## TEMPERATURE MEASUREMENT

This measurement is made through the enamel coating on the valve, without a seal, with no risk of leakage, using an SVR2 sensor fitted with two Pt 100  $\Omega$  probes (2x3 wires). Calibrated sensors and class A sensors are available as options. A patented coupling, located between the valve and the pneumatic actuator, is used to dismantle the SVR2 sensor without removing the valve, even during the process and in complete safety. Replacement kits containing coupling and temperature sensor are available to be fitted to valves already in service.



Various connecting heads are available, fitted either with terminal blocks or temperature transmitters. We would draw your attention to the fact that, in transient heating or cooling states, it is normal to observe a difference between the temperature measured by the valve and the temperature measured on the baffle. This difference is related to the position of the measurement points. In stationary states, it tends to disappear.

## ELECTRODES FOR GLASWATCH



Their principal application is the continuous monitoring of the enamelled coating when they are connected to a GlasWatch. Detection is achieved by two Iridium electrodes located on the top of the stem. The raised stem head can be fitted with electrodes and a temperature probe.

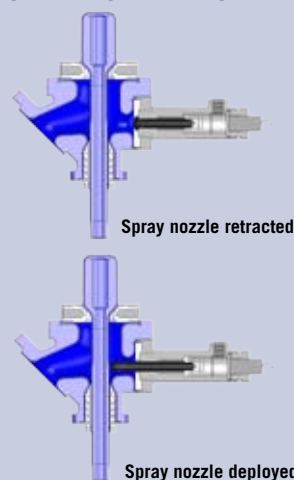
## THE SPRAY NOZZLE



De Dietrich® CleanValve valves can be fitted with a retractable spray nozzle. It is installed on the side opening of the valve body and is used to clean it without dismantling. The nozzle is deployed by the pressure of the medium used for cleaning and retracts automatically at the end of the cycle.

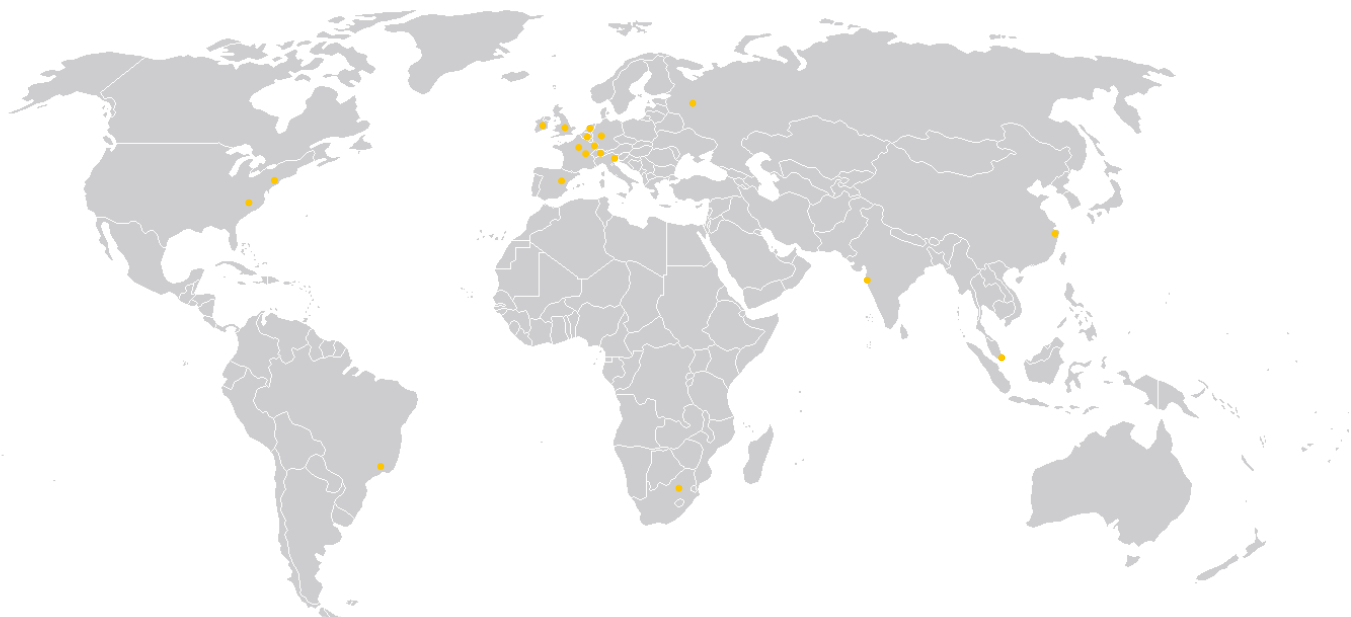


## OPERATION OF THE SPRAY NOZZLE



## ASSEMBLY/DISASSEMBLY DEVICE





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The international business group De Dietrich Process Systems is the leading provider of system solutions and reactors for corrosive applications as well as plants for mechanical solid/liquid separation and drying. The system solutions from De Dietrich Process Systems are used in the industrial areas of pharmaceuticals, chemicals and allied industries.

www.dedietrich.com

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