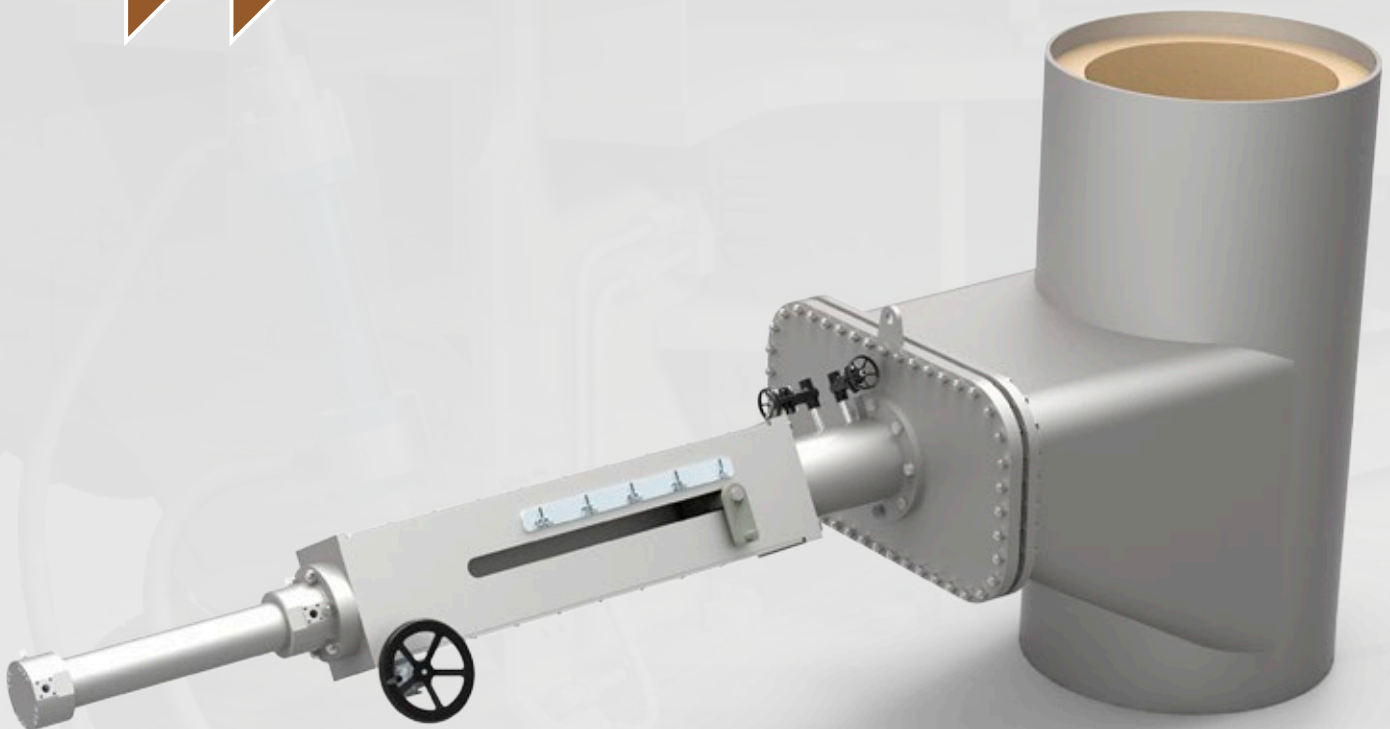


PAUL WURTH

SMS group

Valves for Fluid Catalytic Cracking

Oil & Gas Downstream Processes



Special Valves

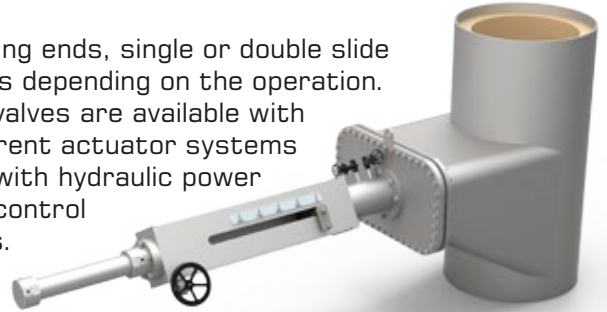
Taking advantage of its long-standing know-how in designing and supplying special valves for severe operating conditions for metallurgical plants like blast furnaces, the Paul Wurth Oil & Gas division today develops, manufactures and distributes special valve solutions for refineries and petrochemical plants.

FCC Slide Valves

In the field of **Fluid Catalytic Cracking**, the Paul Wurth slide valves are tailored to your needs and find application in Spent Catalyst, Regenerated Catalyst, Recirculating Catalyst, Cooled Catalyst and Flue Gas Lines.

Our tailor-made slide valves are available in several designs: cold and hot wall design, flanges or

welding ends, single or double slide gates depending on the operation. The valves are available with different actuator systems and with hydraulic power and control units.



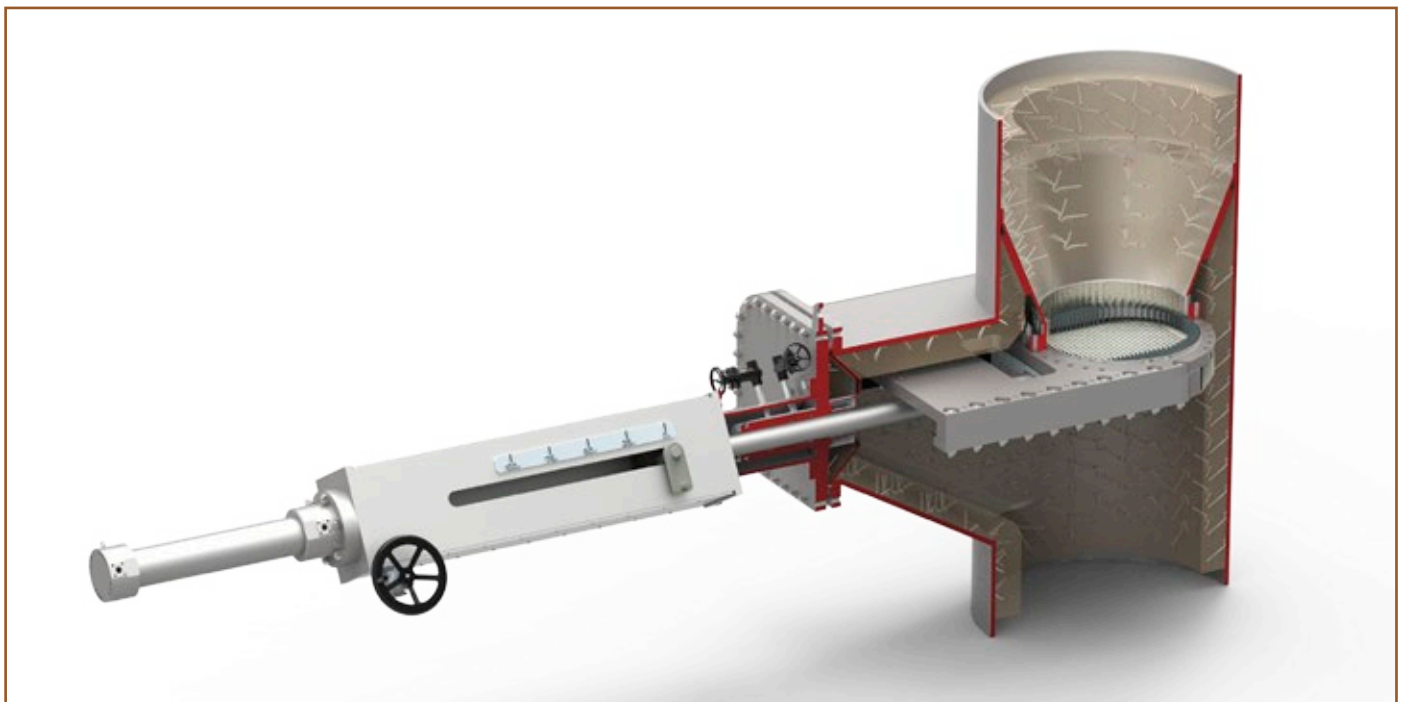
Key features

- ▶ Hot wall or cold wall design
- ▶ Single gate or double gate design
- ▶ Valve design according to customer demands and licensors/customers specifications
- ▶ Paul Wurth provides system package comprising Valves, Actuators, Hydraulic Power Station, Hydraulic manifolds and PLC control system out of one hand

Typical Figures

- ▶ size from 20" up to 80"
- ▶ operating temperature up to 760°C
- ▶ operating pressure up to 5 bar(g)
- ▶ single or dual slide gates
- ▶ hot wall and cold wall design
- ▶ actuation: hydraulic

Other sizes, design features and/or operating features are available on request.



FCC slide valve - section view

Fractionator Isolation Valves

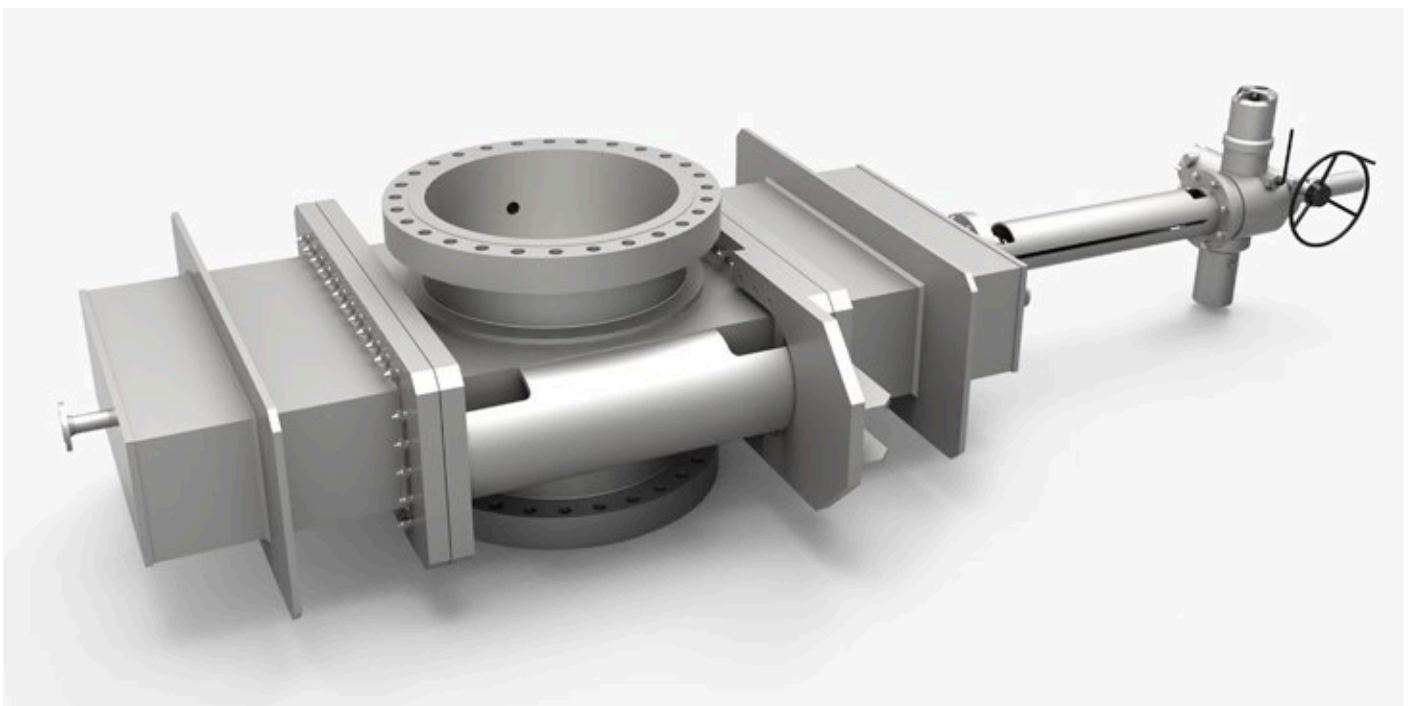
The Double Disc Trough Conduit type Gate Valve has a higher tightness and subsequently a higher safety level than other designs. It provides a true double isolation and purge capability within one valve body. The valves are available in several designs: cold and hot wall design, flanges or welding ends.

Benefits

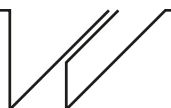
- ▶ Provides fully automatic isolation of the Fractionator Column
- ▶ Decreases downtime - isolation within a few minutes
- ▶ Increases safety of operation – no exposure of personnel to heat and process medium

Key features

- ▶ Double block and purge shut-off by means of double disc technology
- ▶ Electrical, hydraulic or pneumatic options available for valve actuation
- ▶ Valve design according to customer demands and licensors/customers specifications



Fractionator Isolation valve



Engineering & Technology worldwide

The Paul Wurth Group is today one of the world leaders in the design and supply of complete plants, systems and processes as well as specialised mechanical equipment for

■ the iron & steel industry:

Blast Furnaces & Auxiliary Plants
Coke Making Plants
Agglomeration Plants
Direct Reduction Plants
Environmental Protection, Recycling & Energy-Saving Technologies

■ other industries:

Valve Solutions for Oil & Gas Downstream Processes
Solutions for Decentralised Energy Production
Intralogistics Solutions for Heavy Loads
Engineering & Project Management for Civil Construction and Infrastructure Projects

Feasibility Studies – Conceptual, Basic and Detail Engineering – Project Management – Plant and Components Supply – Turnkey Projects – Assistance in Plant Assembly and Commissioning – Technology and Operations Consultancy – On-site and Remote Operational Assistance – After-sales Services



PAUL WURTH

SMS group

oil-gas@paulwurth.com • www.paulwurth.com

Paul Wurth Deutschland GmbH

Paul Wurth Oil & Gas Division
Mönchengladbach, GERMANY
Phone: (+49) 2161 4785824
oil-gas@paulwurth.com

EUROPE

Paul Wurth S.A.

Luxembourg, LUXEMBOURG
Phone: (+352) 4970-1
paulwurth@paulwurth.com

Paul Wurth Italia S.p.A.

Genoa, ITALY
Phone: (+39) 010 640 91
pwit@paulwurth.com

Paul Wurth Deutschland GmbH

Essen, GERMANY
Phone: (+49) 201 245300
pwdeutschland@paulwurth.com

Mainz-Kastel, GERMANY

Phone: (+49) 6134 606 6
pwdeutschland@paulwurth.com

Mönchengladbach, GERMANY

Phone: (+49) 2161 4785824
oil-gas@paulwurth.com

Paul Wurth, a.s.

Ostrava, CZECH REPUBLIC
Phone: (+420) 595 155 100
pwcz@paulwurth.com

Paul Wurth Moscow Representation Office

Moscow, RUSSIA
Phone: (+7) 495 721 1553
pwmoscow@paulwurth.com

Paul Wurth Kovrov

Kovrov, Vladimir region, RUSSIA
Phone: (+7) 49232 97099
pwkovrov@paulwurth.com

Paul Wurth Metallurgical Services LLC

Cheliabinsk, RUSSIA
Phone: (+7) 351 799 60 60
pwms@paulwurth.com

Paul Wurth Ukraine Representation Office

Mariupol, UKRAINE
Phone: (+380) 629 41 18 99
pwua@paulwurth.com

Paul Wurth International Site Services S.r.l

Genoa, ITALY
Phone: (+39) 010 640 9700
pwis@is.paulwurth.com

Joint company of
Dango & Dienenthal and
Paul Wurth:

**TMT –
Tapping Measuring Technology**
Luxembourg, LUXEMBOURG
Phone: (+352) 261920 0

Siegen, GERMANY
Phone: (+49) 271 4014 0
contact@tmt.com •
www.tmt.com

Joint Company of
SAB and Paul Wurth:

**VCL –
Valve Competence Luxembourg**
Grevenmacher, LUXEMBOURG
Phone: (+352) 27 68 54
info@vcl.lu • www.vcl.lu

Joint company of
SMS group and Paul Wurth

AMOVA
Lentzweiler, LUXEMBOURG
Phone: (+352) 2685 2000

Netphen, GERMANY
Phone: (+49) 2738 21 0
info@amova.eu • www.amova.eu

AMERICAS

Paul Wurth Inc.

Valparaiso, Indiana, USA
Phone: (+1) 219 756 1061
pwus@paulwurth.com

Paul Wurth do Brasil

Belo Horizonte, M.G., BRAZIL
Phone: (+55) 31 3228 2800
pwbr@paulwurth.com

Paul Wurth do Brasil Montagens e Manutenção Ltda

Vespasiano, M.G. BRAZIL
Phone: (+55) 31 3228 2799
pwbm@paulwurth.com

Paul Wurth de Mexico SA de CV

Atizapan, MEXICO
Phone: (+52) 55 1106 3463
pwmex@paulwurth.com

ASIA

Paul Wurth Metal Technology (Beijing) Co., Ltd

Beijing, P.R. CHINA
Phone: (+86) 10 8405 4400
pwbeijing@paulwurth.com

Beijing Paul Wurth Trading Co., Ltd

Beijing, P.R. CHINA
Phone: (+86) 10 8405 4699
china.trading@paulwurth.com

Shanghai Paul Wurth Metallurgical Equipment Manufacture Co., Ltd

Shanghai City, CHINA
Phone: (+86) 21 61186300
pwshanghai@paulwurth.com

Paul Wurth India Pvt. Ltd

Gurgaon, INDIA
Phone: (+91) 124 4523200
pwindia@paulwurth.com

Paul Wurth International S.A. Taiwan Branch

Kaohsiung, TAIWAN
Phone: (+886) 7 33 93 309
pwtaiwan@paulwurth.com

Paul Wurth International S.A. Korea Branch

Seoul, KOREA
Phone: (+82) 2 553 9450
pwkorea@paulwurth.com

Paul Wurth Vietnam Co., Ltd

Ho Chi Minh City, VIETNAM
Phone: (+84) 8 73 000 514
pwwietnam@paulwurth.com

Joint company of
IHI Corporation and Paul Wurth:

PAUL WURTH IHI Co., Ltd.

Tokyo, JAPAN
Phone: (+81) 3 6630 4785
contact@ihi-pw.jp