

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:

Systems & Equipment for Non-Ferrous Pyrometallurgy, Electrometallurgy & Residue Treatment
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

© Copyright 1999-2015 Paul Wurth S.A. – all rights reserved

Non Contractual Data: Paul Wurth believes that the data contained in this folder are correct and accurate, but cannot guarantee same or better performances for any specific site without a detailed quote. **Patents and Patents pending.** — Paul Wurth equipment and processes are protected in many countries by patents.

Paul Wurth and the Paul Wurth Logo are trademarks of Paul Wurth S.A. and may be registered in your jurisdiction.



Paul Wurth S.A.

32, rue d'Alsace
L-1122 Luxembourg
Phone: (+352) 4970-1
paulwurth@paulwurth.com
www.paulwurth.com



Group members:

EUROPE

Paul Wurth Italia S.p.A.

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

Paul Wurth

Refractory & Engineering GmbH
Mainz-Kastel, GERMANY
Phone: (+49) 6134 606 6
pwrefractory@paulwurth.com

Paul Wurth Umwelttechnik GmbH

Essen, GERMANY
Phone: (+49) 201 245300
pwumwelt@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

Ukraine Representation Office

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

Paul Wurth International Site Services

Luxembourg, LUXEMBOURG
Phone: (+352) 4970 2000
pwis@is.paulwurth.com

CTI Systems S.A.

Lentzweiler, LUXEMBOURG
Phone: (+352) 2685 2000
cti@ctisystems.com • www.ctisystems.com

Joint company of
Dango & Dienenthal and Paul Wurth:

TMT - Tapping Measuring Technology
Siegen, GERMANY
Phone: (+49) 271 4014 0

Luxembourg, LUXEMBOURG
Phone: (+352) 261920 0
contact@tmt.com • www.tmt.com

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 de Chile Ltda

Providencia, Santiago, CHILE
Phone: (+56) 2 470 9180
pwcl@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 4400
china.trading@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.

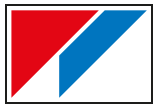
Tokyo, JAPAN
Phone: (+81) 3 6204 8262
contact@ihi-pw.jp

AFRICA

Paul Wurth International S.A.

South Africa Branch

Johannesburg, SOUTH AFRICA
Phone: (+27) 11 794 1926
pwza@paulwurth.com



PAUL WURTH

SMS group

Equalising & Relief Valve

Blast Furnace Plants



Equalising & Relief Valve

Rapid material hopper pressurisation and relief, and abrasive, dust-laden gas led to the development of the Paul Wurth full-section-opening swing-type equalising and relief valve.

The valve is mounted vertically in the gas duct with its flap opening against gas flow by means of a hydraulically driven lever mechanism. This configuration allows the valve to be held in the closed (safe) position by gas pressure in the event of an interruption of hydraulic power.

In the open position the flap remains completely free of the gas stream in order to minimize abrasion.

Recent design improvements have targeted an even greater increase in reliability.

The recently developed Equalising & Relief Valve Mark III offers the following benefits:

- ▶ Simple, efficient maintenance
- ▶ Improved gas tightness

Available sizes are: ND250 – ND400 – ND500

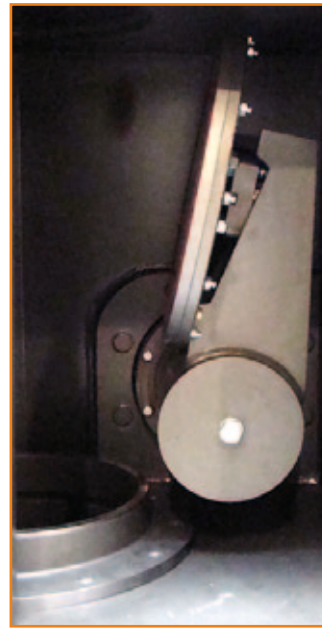
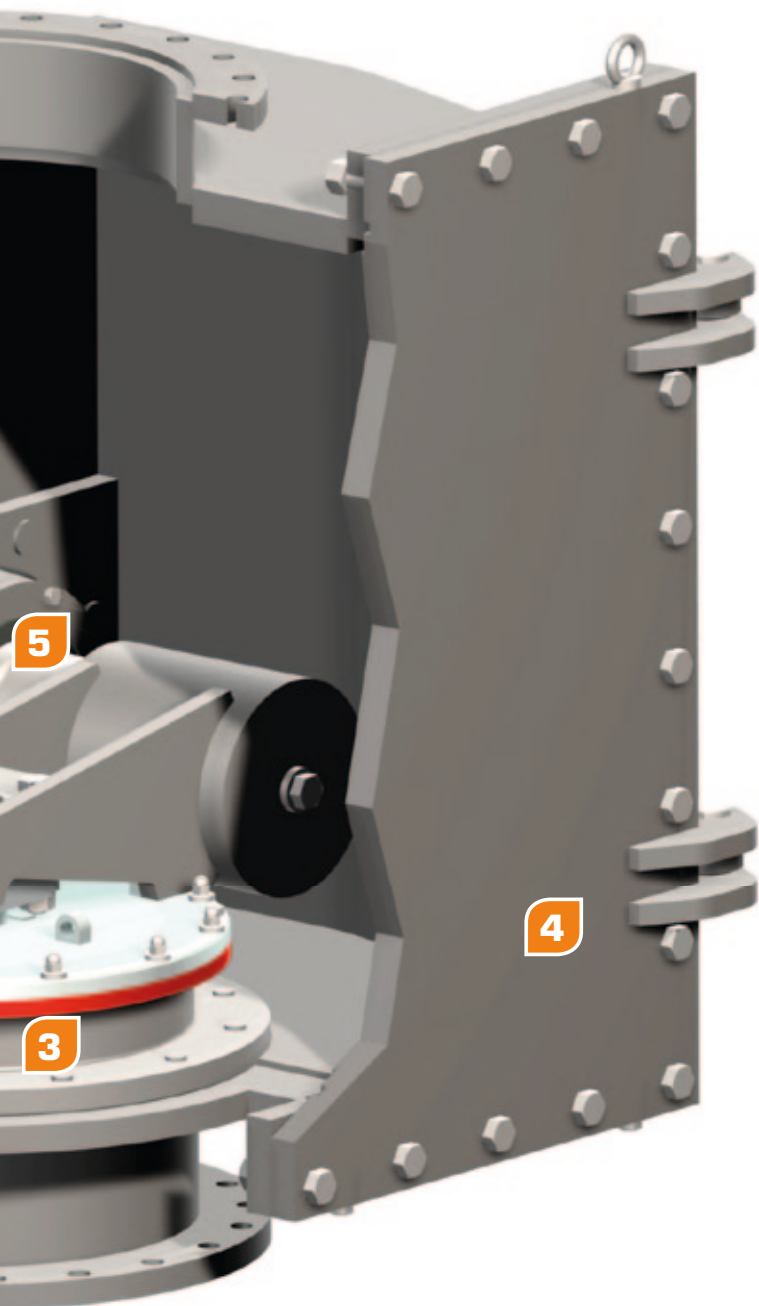
The latest improvements contribute to an increase in service life and facilitate easier maintenance in order to extend overall availability of the top charging system.

- 1 Hydraulic cylinder
- 2 Flap
- 3 Valve seat
- 4 Maintenance door
- 5 Lever



The key features of the enhanced design are:

- ▶ Large maintenance door for easy access
- ▶ Bolted seat, replaceable without dismantling valve
- ▶ Dismantling of lever/flap assembly possible in one unit
- ▶ Conical seat-flap design replaced by a flat seat-flap combination



Open position



Closed position

Since 1960, over 530 equalising and relief valves have been delivered worldwide by Paul Wurth.

