

# PULP & PAPER



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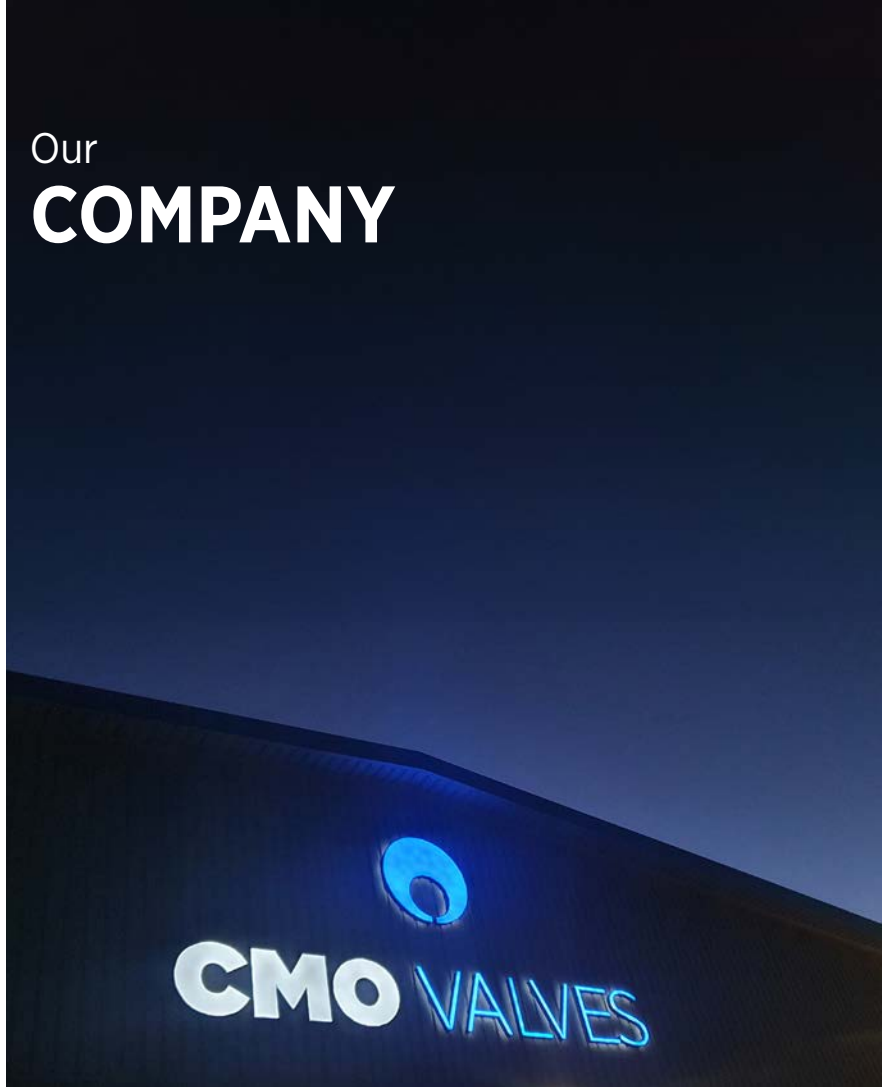
EN 2024



**CMO**VALVES  
manufacturing the valve you need



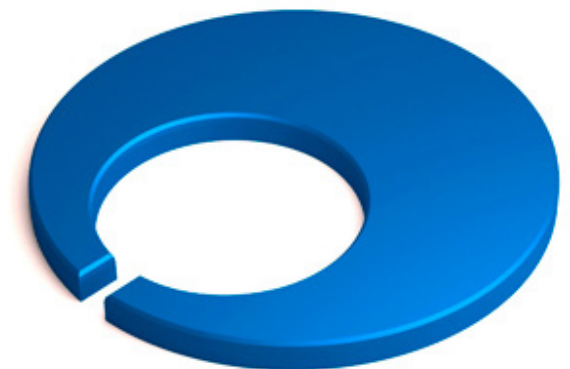
# Our COMPANY



**CMO Valves** is a company that **designs, manufactures and markets standard, and specialised valves**. Its comprehensive range of manufacturing allows one to cover many industrial applications and the ability to control all kinds of fluid.

Founded in February 1993, with a staff having **more than 40 years experience in the design and manufacture of valves**. This experience, satisfaction and quality of work is what has assisted the company in evolving into what it is today, continually developing new products to meet the demands of industry and our customer's needs.

Today, **CMO Valves** is one of the largest manufacturers of valves in both domestic and international markets, with young and highly qualified staff continually willing to give the best service and attention to its customers.







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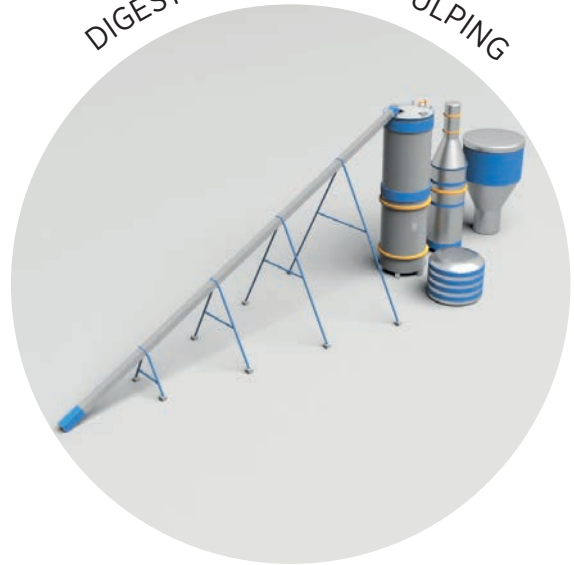


# PROCESSES

WOOD CHIPS



DIGESTOR + BLOWER PULPING



SCREENING



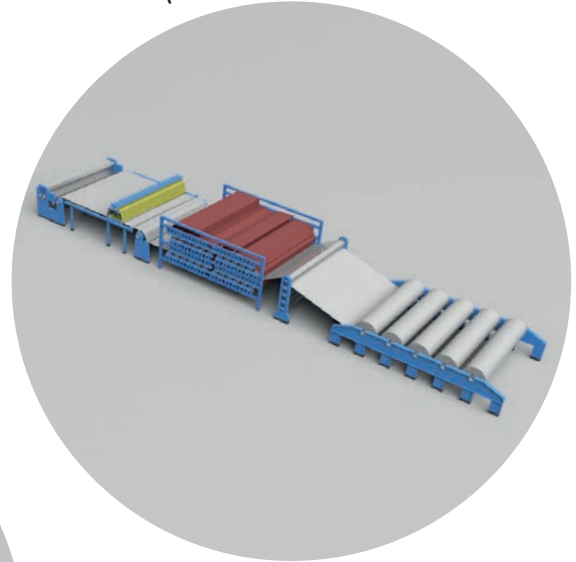
PULPER



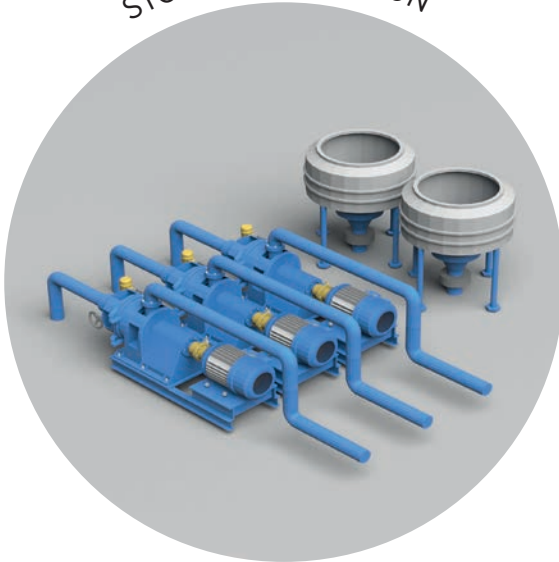
BLEACHING



PAPERMAKING



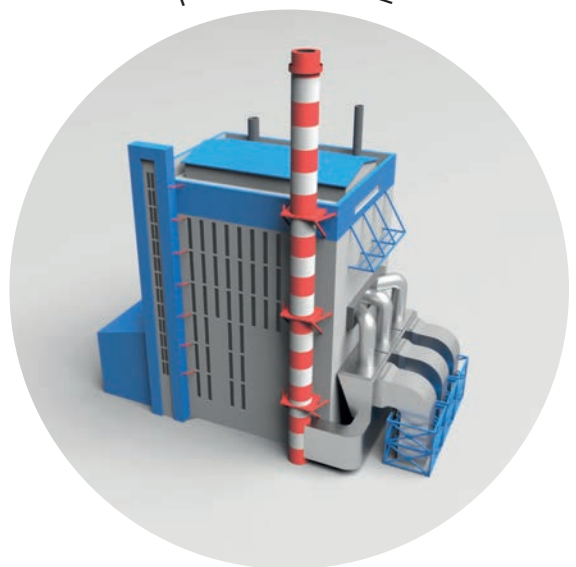
STOCK PREPARATION



CHEMICAL RECOVERY



POWER HOUSE



# APPLICATIONS

PROCESS	A	AB	T	TB	E	B	L	TD
KAMYR CONTINUOUS DIGESTER (Sand Filter)					E	B		
THERMOMECHANICAL PULPING PROCESS (TMP)	A	AB	T	TB				
- Steam And First Stage Pulp After Refiner	A	AB	T	TB				
- Between cyclone and Refiner	A	AB	T	TB				
- After Refined stock Chest	A	AB	T	TB				
CHEMICAL	A	AB	T	TB				
- Thermomechanical Pulping (CTMP)	A	AB	T	TB				
- After Stock chest	A	AB	T	TB				
BROWN STOCK WASHING	A	AB	T	TB				
- After Blow tank	A	AB	T	TB				
- Between blow tank and deknoter	A	AB	T	TB				
- Between deknoter and seal boxes	A	AB	T	TB				
BEFORE HIGH-DENSITY STORAGE							L	
RECOVERY BOILER							L	
- Before smelt dissolving tank (green liquor wash)							L	
- After smelt dissolving tank (green liquor)							L	
RECAUSTISIZING AREA							L	
- Between Smelt tank and Clarifier							L	
- Between clarifier and heater							L	
- Before withe liquor clarifier							L	
- Between clarifier and lime mud thickener							L	
- Between dregs washer and sewer							L	
BLEACH PLANT							L	
- Between Chlorine dioxide application, washer and high density tower							L	
STOCK PREPARATION AND BLENDING OVERVIEW	A	AB	T	TB				
- Between low density storage and refiners	A	AB	T	TB				
- Between deflakers and blend chest	A	AB	T	TB				
- Between saveall feed chest and saveall	A	AB	T	TB				
- Between pulper and deflakers	A	AB	T	TB				
- Between blend chest and machien chest	A	AB	T	TB				
- Between machine chest and saveall	A	AB	T	TB				
- Between saveall and saveall seal chest	A	AB	T	TB				
PAPER MACHINE WET END	A	AB	T	TB				
- Between machine chest and refiner	A	AB	T	TB				
- Between refiner and cleaner	A	AB	T	TB				
- Between seal box and saveall	A	AB	T	TB				
- Between machine silo and broke chest	A	AB	T	TB				
FOURDRINIER WET END	A	AB	T	TB				
- Between white water tank and saveall	A	AB	T	TB				
- Between saveall and machine chest	A	AB	T	TA				
SECONDARY FIBER REPULPING	A	AB	T	TB				
- Between cleaner and dirt trap	A	AB	T	TB				
- Between surge chest and cleaner	A	AB	T	TB				
- Between pulper and surge chest	A	AB	T	TB				
- Between cleaner and vibrator screens	A	AB	T	TB				
- Between Vibrator screen and pulper	A	AB	T	TB				
- Between cleaner and dirt trap					E	B	L	TD
- Between impeller and dirt trap					E	B	L	TD
- Between surge chest and vibrator screener					E	B	L	TD





SEALING	METAL/METAL	EPDM	FKM	PTFE
MAINTENANCE	NO	SEAT AND PACKING JOINTS CHANGE	SEAT AND PACKING JOINTS CHANGE	SEAT AND PACKING JOINTS CHANGE
GEOMETRICAL TIGHTNESS	UP TO 98.5%	100%	100%	UP TO 99.5%
CHEMICAL COMPATIBILITY	-	LIMITED ACID COMPATIBILITY	GOOD ACID COMPATIBILITY	WIDE RANGE OF COMPATIBLE ACID
TEMPERATURE	-	90 ° C	200 ° C	250 ° C

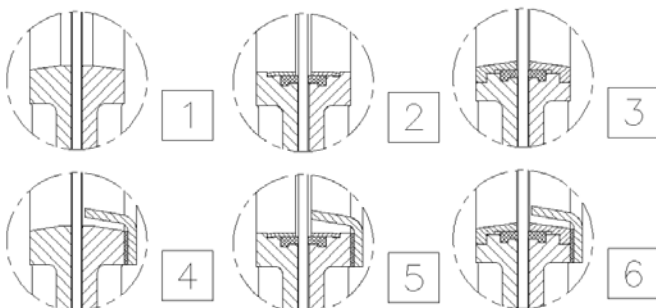
## SEAT

Six types of seats are available according to the working application:

### SEAT 1

#### Metal / metal seat.

This type of seat does not include any kind of resilient seat and the estimated leakage (considering water as the test fluid) is 1.5% of the pipe flow.



### SEAT 2

#### Standard soft-seated valve

This seat construction includes a resilient joint that is held on the valve body by an AISI316 stainless steel retaining ring. Considering that the valve is bidirectional it has two joints.

### SEAT 3

#### Soft-seated valve with reinforced socket.

This seat construction includes a resilient joint that is held on the valve body by a reinforced socket with two functions (protect the valve body from abrasion and clean the gate when the valve is working with particles that stick on the gate). Considering that the valve is bidirectional it has two joints and two reinforced sockets.

### SEAT 4 / 5 / 6

#### The same as seats 1, 2 and 3 but including a deflector.

The deflector is a conical shaped ring located on the valve inlet with two functions (protect the valve body from abrasion guide the flow to the centre of the valve). There are three materials available for the reinforced ring and deflector (CA-15, CF8M and Ni-hard steel).

## RESILIENT SEAT MATERIALS

### EPDM

This is the standard resilient seat fitted on **CMO valves**. It can be used in many applications, however, it is generally used for water and products diluted in water at temperatures no higher than 90°C. It can also be used with abrasive products and it provides the valve with 100% watertight integrity.

### FKM

Suitable for corrosive applications and continuous high temperatures of up to 190°C and peaks of 210°C. It provides the valve with 100% watertight integrity.

### NITRILE

It is used in fluids containing fats or oils at temperatures no higher than 90°C. It provides the valve with 100% watertight integrity.

### SILICONE

Mainly used in the food industry and for pharmaceutical products with temperatures no higher than 200°C. It provides the valve with 100% watertight integrity.

### PTFE

Suitable for corrosive applications and pH between 2 and 12. Does not provide the valve with 100% watertight integrity. Estimated leakage: 0.5% of the tube flow.



## A SERIES

### UNIDIRECTIONAL WAFER TYPE KNIFE GATE VALVE

#### DESCRIPTION

Unidirectional wafer type knife gate valve for general industrial applications and fluids with solids content.

#### GENERAL APPLICATIONS

Pulp & Paper Industry • Mining • Chemical Plants • Pumping Stations • Food & Beverage Industry • Biogas • Sewage Water Treatment...



#### WORKING PRESSURE( $\Delta P$ )

DN50 - DN250	10 bar
DN300 - DN400	6 bar
DN450	5 bar
DN500 - DN600	4 bar
DN700-DN1200	3 bar

Other pressures on request.



Visit our website,  
To see them  
characteristics.



## AB SERIES

### BIDIRECTIONAL WAFER TYPE KNIFE GATE VALVE

#### DESCRIPTION

Bidirectional wafer type knife gate valve for general industrial applications and fluids with solids content.

#### GENERAL APPLICATIONS

Mining • Chemical Plants • Pumping Stations • Biogas • Food & Beverage Industry • Sewage Water Treatment...



#### WORKING PRESSURE( $\Delta P$ )

DN50 - DN200	10 bar
DN250 - DN400	6 bar
DN450	5 bar
DN500	4 bar
DN600	3 bar

Other pressures on request.



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## B SERIES

### BIDIRECTIONAL WAFER TYPE KNIFE GATE VALVE

#### DESCRIPTION

Bidirectional double body wafer type knife gate valve with bottom cover for applications with high solids content.

#### GENERAL APPLICATIONS

Pulp & Paper industry • Mining • Chemical plants • Pumping stations • Food & Beverage industry • Biogas • Sewage water treatment...

#### WORKING PRESSURE( $\Delta P$ )

<b>DN50 - DN250</b>	10 bar
<b>DN300 - DN400</b>	6 bar
<b>DN450</b>	5 bar
<b>DN500 - DN600</b>	4 bar
<b>DN700-DN1000</b>	3 bar

*Other pressures on request.*



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## E SERIES

### UNIDIRECTIONAL WAFER TYPE KNIFE GATE VALVE

#### DESCRIPTION

Unidirectional double body wafer type knife gate valve with round inlet and square outlet proper to work with high solids content fluids, specially in recycled carton and paper pulp preparation.

#### GENERAL APPLICATIONS

Pulp & Paper industry • Industrial applications with high solids content

#### WORKING PRESSURE( $\Delta P$ )

<b>DN50 - DN450</b>	7 bar
<b>DN500 - DN1200</b>	4 bar

*Other pressures on request.*



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## L SERIES

### BIDIRECTIONAL THROUGH GOING WAFER TYPE KNIFE GATE VALVE

#### DESCRIPTION

Bidirectional through going wafer type knife gate valve for fluids with a maximum 20% of solids content and applications of gravity discharge fluids with a high consistency.

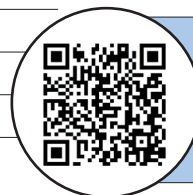
#### GENERAL APPLICATIONS

Pulp & Paper industry • Mining • Chemical plants • Food & Beverage industry • Sewage water treatment

#### WORKING PRESSURE( $\Delta P$ )

DN50 - DN250	10 bar
DN300 - DN400	6 bar
DN450	5 bar
DN500 - DN600	4 bar
DN700-DN1400	3 bar

Other pressures on request.



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## T SERIES

### UNIDIRECTIONAL LUG TYPE KNIFE GATE VALVE

#### DESCRIPTION

Unidirectional lug type knife gate valve for general industrial applications and fluids with solids content.  
Face to face distance acc. to MSS-SP-81.

#### GENERAL APPLICATIONS

Pulp & Paper Industry • Mining • Sewage Water Treatment • Food & Beverage Industry • Pumping Stations • Chemical Plants

#### WORKING PRESSURE( $\Delta P$ )

DN50-2"-DN600-24"	10 bar
DN700-28"-DN800-36"	6 bar
DN900-40"-DN1200-48"	5 bar

Other pressures on request.



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## TD SERIES

### UNIDIRECTIONAL DOUBLE GATE WAFER TYPE KNIFE GATE VALVE

#### DESCRIPTION

Unidirectional double gate wafer type knife gate valve for general industrial applications and fluids with high solids content, usually for Pulp & Paper Industry in pulpers and cleaners with heavy rejects.

#### GENERAL APPLICATIONS

Pulp & Paper industry • Mining • Chemical plants • Food & Beverage industry • Sewage water treatment

#### WORKING PRESSURE( $\Delta P$ )

<b>DN50 - DN250</b>	10 bar
<b>DN300 - DN400</b>	6 bar
<b>DN450</b>	5 bar
<b>DN500 - DN600</b>	4 bar
<b>DN700</b>	3 bar
<b>DN800-DN1200</b>	2 bar

Other pressures on request.



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#### RECYCLED ORIGIN

The valves marked with this icon are suitable for processes that start from recycled paper.

# SPECIALS

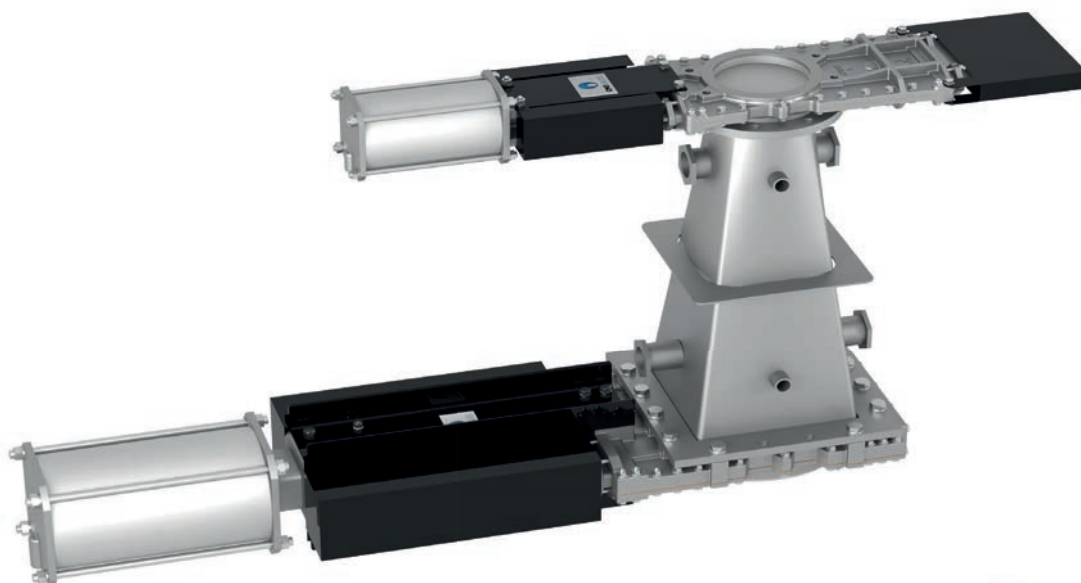
## JT Series

### DESCRIPTION

- Complete solution designed for the most demanding applications, where the separation of hard and abrasive waste is required.
- Specifically designed to reduce erosion wear and prevent the buildup of solid rejects, it is the ideal solution for HD cleaners in lines processing recycled paper fiber.

### GENERAL APPLICATIONS

Pulp and paper industry • HD cleaners • Biogas.



All the valves included in this catalogue are fully customizable, with many materials and actuation options.





## AC Series

### DESCRIPTION

- Unidirectional isolation valve for transmitters, with a compact design that allows the transmitter to be replaced without affecting the process or requiring the tank to be drained.
- It features a specific flange pattern that enables installation on the tank wall, allowing bolts to be applied blindly from the outside.

### GENERAL APPLICATIONS

Pulp & Paper industry



## VI Series



### DESCRIPTION

- Unidirectional flanged reduced bore valve.
- Mechanically welded body, consisting of two bolted parts.
- Precision regulation valve.
- Various packing materials available.

This reduced bore valve is suitable for regulating flow rates in piping with clean liquids or liquids that have a maximum suspended solids concentration of 8%.

### GENERAL APPLICATIONS

Paper industry • Wastewater treatment plants • Chemical plants • Food industry • Mining • Pumping



## R Series



### DESCRIPTION

- Check valves wafer swing or tilting disc (can be manufactured with flanges on request).
- One-piece cast body which provides easy evacuation of solid particles contained in the fluid.
- Face-to-face dimension in accordance with **CMO Valves** standard.
- It has an arrow on the body indicating the flow direction. Can be supplied with auxiliary spring to obtain faster sealing.
- For high water loads or large valve diameters hydraulic damping systems can be incorporated which reduce the valve's impact in the sealing. The R check valve allows the fluid to flow through in one direction, it is opened by the fluid passing through and it closes due to the weight of the disc and the return of the fluid.

This valve is suitable for liquids that contain a maximum of 5% suspended solids.

### GENERAL APPLICATIONS

Paper Industry • Chemical plants • Sewage treatment • Pumping.

## 3V - 4V Series



### DESCRIPTION

- Flanged 3-way and 4-way diverter valve at 90°.
- One piece integral cast body with bolted cap.
- Stainless steel distributor
- Various construction materials.
- Dimensions as per **CMO Valves** standard.
- Though-flow can be straight, L-shaped and T-shaped.

This valve is suitable for liquids with dry matter content, products with a concentration of 4% and over. It is specially designed to handle pulp.

### GENERAL APPLICATIONS

Paper industry • Chemical plants



# REFERENCES

COUNTRY	REFERENCES
<b>SPAIN / NATIONAL</b>	<p>TORRASPAPEL, S.A.            ALIER, S.A.            ENCE ENERGIA Y CELULOSA, S.A.            SMURFIT KAPPA, S.A.            INDUSTRIAS CELULOSA ARAGONESA, S.A.            RDM BARCELONA CARTONBOARD, S.A.U.            UNION INDUSTRIAL PAPELERA, S.A.            DS SMITH SPAIN S.A.U            LC PAPER 1881, S.A.            HINOJOSA PAPER            INTERNATIONAL PAPER            ESSITY SPAIN, S.L.            GOMA-CAMPS, S.A.U.            PAPELERA DEL ORIA, S.A.            PAPELERA DEL ARALAR, S.A.            MIQUEL I COSTAS &amp; MIQUEL, S.A.            PAPELERA ZICUÑAGA (IBERPAPPEL)            MATIAS GOMA TOMAS, S.A.</p>
<b>PORTUGAL</b>	THE NAVIGATOR COMPANY
<b>MEXICO</b>	Papelera del Nevado
<b>CHILE</b>	Celulosa Arauco / CMPC
<b>FINLAND</b>	<p>Georgia-Pacifi c, Nokia Paper Mill, Nokia            Metsä Tissue, Mänttä Paper Mill            Oulu Paper Mill, Oulu            Kaukas Paper Mill, Lappeenranta            Rauma Paper Mill, Rauma</p>
<b>FRANCE</b>	<p>I.F.C.            Nantes Paper Mill            Munksjö Arches SAS            La Gère Paper Mill, Pont-Évêque</p>
<b>THAILAND</b>	<p>SCG Group Thailand (various paper mills)            Siam Kraft Industry Co.,Ltd.            Hiang Seng Fibre Container Co.,Ltd.            Advance Agro Public Company Limited            Panjapol Pulp &amp; Paper</p>
<b>EGYPT</b>	<p>Al Bardi Paper Mill, 6th of October City            El Obour paper Egypt            EG Paper Egypt            Samin Amin National Paper Mill</p>
<b>EGYPT &amp; TURKEY</b>	Technopap
<b>URUGUAY- ARGENTINA</b>	<p>Botnia Paper Mill            UPM-Kymmene Corporation, Fray Bentos Pulp Mill            Stora Enso Montes del Plata Paper Mill</p>

COUNTRY	REFERENCES
<b>INDONESIA</b>	<p>Piping Systems            Indah Kiat Pulp &amp; Paper Perawang Mill            Indah Kiat Pulp &amp; Paper Serang Mill            Pindo Deli Pulp &amp; Paper            Pabrik Kertas Tjiwi Kimia            Ekamas Fortuna            OKI Pulp &amp; Paper            Lontar Papyrus Pulp &amp; Paper            Riau Andalan Pulp &amp; Paper            Pura Barutama</p>
<b>ISRAEL</b>	Scope Matel Trading Co. - Paper Mill Hadera Paper Mill
<b>IRAN</b>	IRAN Zarrin Barg Paper Mill, Saveh
<b>ITALY</b>	Fedrigoni Verona Paper Mill Industria Cartaria Pieretti
<b>MALASYA</b>	<p>Muda paper mill sdn bhd            Gs paper &amp; packaging sdn bhd            Trio paper mill sdn bhd</p>
<b>NORWAY</b>	Nordic Paper, Greåker Paper Mill
<b>POLAND</b>	ICT Poland (Kostrzyn nad Odr, Poland)
<b>PORTUGAL</b>	<p>Portucel Soporcel            Cacia Pulp and Paper Mill            Figueira da Foz Pulp and Paper Mill            Setúbal Pulp and Paper Mill            Celbi, Celulose Beira Industrial S.A Figueira da Foz            Caima-Indústria de Celulose S.A. Constância</p>
<b>RUSSIA</b>	Mondi, Syktyvkar Paper Mill
<b>SLOVAKIA</b>	Mondi, Ruzomberok
<b>SOUTH AFRICA</b>	<p>Sappi Saaicor,            Ngodwana,            Stanger,            Felixton, Tugela,            Mandeni,            Lomati.            Kimberly Clark            Gayatri Paper            Twinsaver</p>
<b>SWEDEN</b>	<p>Stora Enso Paper AB, Hyltebruk            SCA Östrand Pulp mill- Helios project, Timrå            Södra Cell AB, Väröbacka            Karlsborg Paper Mill            Lafarge, Örebro Paper Mill            Metsä Board, Husum Paper Mill            Mondi, Dynäs Paper Mill            Swedish Tissue Kisa Paper Mill</p>
<b>VIETNAM</b>	Siam Paper Vietnam – Vina Kfrat Paper Mill



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**CMO**VALVES

QMS CERTIFIED BY LRQA  
Approval number ISO9001 0035593

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