

CRANE[®]

CRANE ChemPharma Flow Solutions™



Solutions for the Phosphate Fertilizer Industry

- CRANE ChemPharma is focused on key chemical industries

Chlor-Alkali



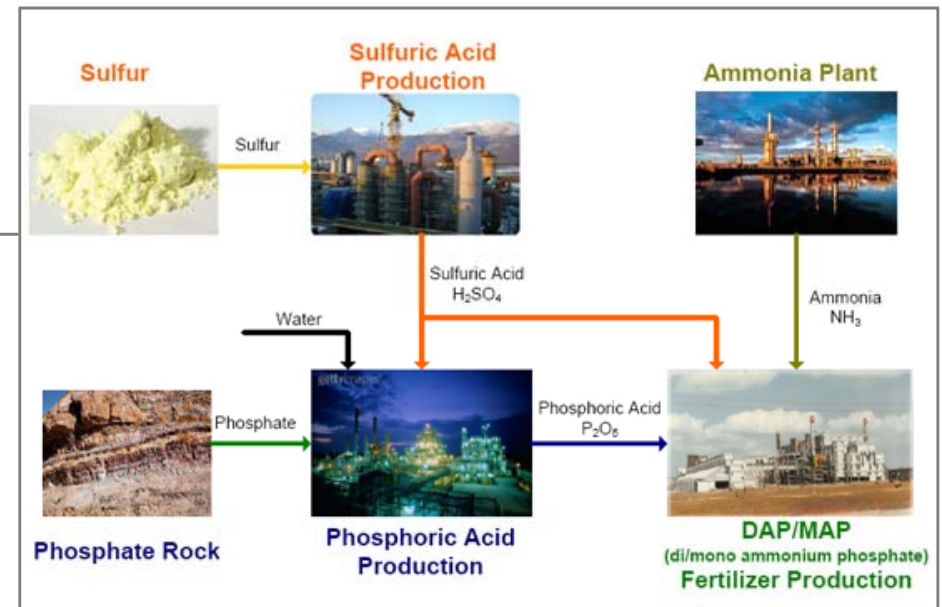
Phosphate Fertilizer

Nitrogen Fertilizer

BioPharm

Silicone

Acetic Acid



- Our superb customer focus is made possible by our industry focus:
 - Manufacturing processes
 - Valve and piping challenges
 - Product applications
- Knowledge, experience, and a history of success enables ChemPharma to provide optimal solutions for our customers

- Common problems we solve:

Abrasion

Downstream Leakage

Corrosion

External Emissions

Scaling

Cleaning/Flushing Issues

Valve Jams

- ChemPharma provides solutions for all areas of the plant:

- Attack / Filtration
- Acid Concentration (Evaporation)
- Gas Treatment
- Recycled Water Supply System

- Our primary products for these applications include:



XOMOX Sleeved Plug Valve

Externally and internally leak tight
Special alloys available:
UB6PM and Duplex Cd4MCuN



Saunders Diaphragm Valves

Diaphragm seals around solids (tight shutoff)
Butyl rubber lining available
New XA Diaphragm for abrasive media



XOMOX High Performance Butterfly Valves

For Attack Tank and Digester drain lines, an HPBV is
a leak tight replacement for knife gate valves
Available in UB6PM

- **Common problems we solve:**
 - Abrasion**
 - Downstream Leakage**
 - Corrosion**
 - External Emissions**
- **ChemPharma provides solutions for all areas of the plant:**
 - **Reactor / Granulator**
 - **Gas Treatment (Scrubbing)**
 - **Utilities to the Combustion Chamber (Solids Section)**

■ **Our primary products for these applications include:**



XOMOX Sleeved Plug Valve
Externally and internally leak tight
Special alloys available:
UB6PM and Duplex Cd4MCuN



Saunders Lined Diaphragm Valves
Fully lined to protect against corrosion
Diaphragm seals around solids (tight shutoff)



Resistoflex Lined Pipe & Fittings
Provides excellent corrosion resistance
Custom shapes, branches, and bends to reduce potential leak points



XOMOX Lined Valve Products
Fully lined plug, ball, and butterfly valves have coatings that extend over shafts to prevent corrosion.
Ball check and swing check valves are available for spec break applications (transition from lined to metallic pipe)



- **Common problems we solve:**
 - Corrosion**
 - External Leakage**
 - Downstream Leakage**
 - Cold Spots (insufficient heating)**

- **ChemPharma provides solutions for all areas of the plant:**
 - **Sulfur Burning**
 - **Sulfuric Acid Lines (Absorption and Storage)**
 - **Heat Recovery System**

- **Our primary products for these applications include:**



XOMOX Sleeved Plug Valve
 Alloy 20 available for >96% H₂SO₄
 Available with heating jacket for molten sulfur applications



Resistoflex Lined Pipe & Fittings
 Provides excellent corrosion resistance
 Custom shapes, branches, and bends to reduce potential leak points



CRANE Energy Products
 CRANE Energy's wide range of products for utility lines complements CRANE ChemPharma's offerings within chemical processing plants



XOMOX Lined Valve Products
 Fully lined plug, ball, and butterfly valves have coatings that extend over shafts to prevent corrosion.
 Lined accessories also available: strainers, check valves, sight glasses



- **Knowledge:** CRANE ChemPharma's industry knowledge enables us to:
 - Understand your valve and piping challenges
 - Leverage our internal applications expertise
 - Improve our products
- **Solutions:** Our sales and applications team can customize optimal solutions for your Phosphate Fertilizer facilities
- **Global Support:** Our global team will support you with purchasing, installation, best practices, and long-term maintenance
- **Commitment to Quality:** With our portfolio of well-known brands and products, ChemPharma can meet the needs of your demanding applications

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KROMBACH[®]
ARMATURENPSI[®]
INDUSTRIAL SYSTEMSResistoPure[®]Saunders[®]
the science inside ELRO[®]RESISTOFLEX[®]XOMOX[®]

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