# Scraper valves Wellheads

Fittings Oil well Christmas Trees

Wellhead flange technology

Ball valves

Twin ball valves

Onshore and Offshore FPSO Crude oil and gas Cavern storage facilities

CO<sub>2</sub> injection Chemical industry Extreme temperatures

#### deep geothermal

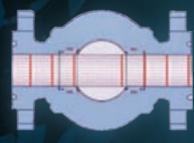
Food industry Mining industry Petro-chemical industry Power station technology



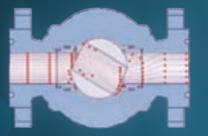
## Stay tough

### The "zero bubbles" ball valve – maintenance-free, highest

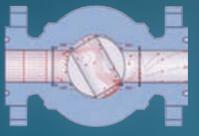
For many applications the ball valve is superior to the gate valve. But the ball valve can only achieve the necessary tight seal when fitted with a "metal to metal" seal.



open



partly open

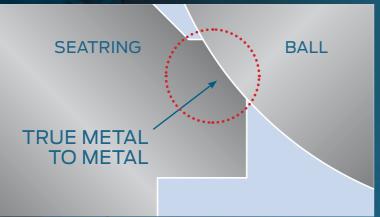


just before closing

### The issue for valves with soft seals

Dirt and foreign particles and thermal effects can lead to damage of the exposed soft seals.

Result: The ball surface becomes marked or grooved and the valve is consequently no longer fully sealable. A repair is necessary thus reducing the operational reliability.



# The "Hartmann" solution

Our true metal to metal sealing system ensures a ZERO BUBBLE SEAL which is both reliable and maintenance-free.

### operating safety and long life



reliable sealing even by high particle levels

### low operating costs

bubble-tight, double-sided sealing under all pressure conditions

for use up to a working pressure of API 700 bar 10.000 PSI

#### high-resistant materials resist aggressive fluids

suitable for temperatures in the range -110°C to +550°C

#### suitable for extreme temperature differences

ANSI 150 to ANSI 2500

#### fire resistance

automatic ball valves SAV / POV / MOV also available as quick-closing valves suitable for both sweet and sour gases

split body design

diameter from 1/2 inch to 40 inches

#### maintenance-free

forged steel throughout

successfully tested endurance for more than 100.000 operational cycles

#### extremely long life

choice of materials for each component dependant on the particular use

## highest operational reliability

## Hard Work Our solution for

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Gas wellhead and tree



Offshore Equipment



Quick-closing valves for H₂S-operations

## the oil and gas industry

The robust design of all Hartmann products ensures that they can resist the most testing aggressive and heavily contaminated fluids and conditions. Our plant is reliable under all environments.

Our wellheads, valves, fittings and ball valves have been developed to meet the exacting standards necessary for exploration, production and exploitation in the oil and gas industry. In addition we deliver oil field accessories such as wellhead equipment, riser pipes and rotating polished rods.

Hartmann will deliver one-off products and special solutions as well as complex system solutions.

## Exacting design and development: Components for the chemical and petro-chemical industries

In order to guarantee reliability plant components must meet the very highest requirements for the chemical processes associated with the refining of oil and gas.

Hartmann ball valves have proved fully capable of taking aggressive medien, high working temperatures and demanding switching cycles in their stride – particularly because of the dedicated attention given to material choice, special surface treatments and immediate switching cycle equipment.



## Tough stuff Wellheads for deep geothermal

Hartmann geothermal products have been in operation for more than 25 years. Hartman geothermal wellheads are suitable for temperatures up to +550 °C and withstand aggressive media and extreme temperature variations. Consequently the highest operational reliability is guaranteed.

Our wellheads are manufactured out of forged steel throughout and employ a purely metal sealing system. We are the experts for geothermal wellheads and production trees.

### Pioneers in geothermal



In the 1980s Hartmann was a partner in a joint project with the European Union, Germany, the German state of Baden-Württemberg and the Bruchsal Energy and Water Authority.

Our equipment has run maintenance-free for 25 years and thus ensured an extremely high production reliability.



#### Geothermal Project Kirchwaidach



Geothermal Wellhead 5.000 PSI



Bundesministerium für Bildung und Forschung

We are the members of the Geothermal Wellhead Development Project

#### GeoEnergy Celle e.V.

Kompetenz in Erdöl, Erdgas, Erdwärme

Hartmann Valves is a founding member of GeoEnergy Celle e.V.

# Hard shell, soft core

Durable equipment for cavern wellheads

Our wellhead equipment and valves with their gas-tight components and long life are ideally suited for surface installations of underground gas storage facilities.

Hartmann Valves has become one of the most important suppliers to gas storage projects: Wellhead flanges and wellhead equipment meet API 6 A requirements for gas and oil cavern storage, porous reservoirs, compressed air and CO<sub>2</sub> storage.

Our systems and equipment have been internationally installed for saturated salt solutions, brining-out and the initial gas injection in salt caverns.



Wing valve: true metal to metal: 9" x 9" x 9" 5.000 PSI

Master valve: true metal to metal: Ball Valve 11" x 10" x 11" 5.000 PSI

Tension-System: 20 <sup>3</sup>/<sub>4</sub> x 13 <sup>5</sup>/<sub>8</sub> 5.000 PSI for casing 9 <sup>5</sup>/<sub>8</sub> with a maximum load-bearing up to 350 tonne

#### Close to the limit: Our mining equipment

Hartmann offers customised solutions for the high demands associated with construction, material choice and function in the mining industry.

For instance, in the pressurised Coal gasification and diamond mining industry true metal to metal sealing ball valves in various materials with a range of surface treatments are employed.

## Hartmann Valves & Wellheads

A family-owned company since 1946







Work-based seminars in modern training facilities: Enhancing detailed knowledge of the Hartmann technical innovations and of the optimal use of the Hartmann products



Co-operation partners: Leibniz University, Hannover; Freiburg University; Clausthal University

Founding member of GeoEnergy Celle E.V.





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**Burgdorf-Ehlershausen Facilities** 



**Celle Facilities**