

# PS4 series: U-J-D-H CORROSION RESISTANCE

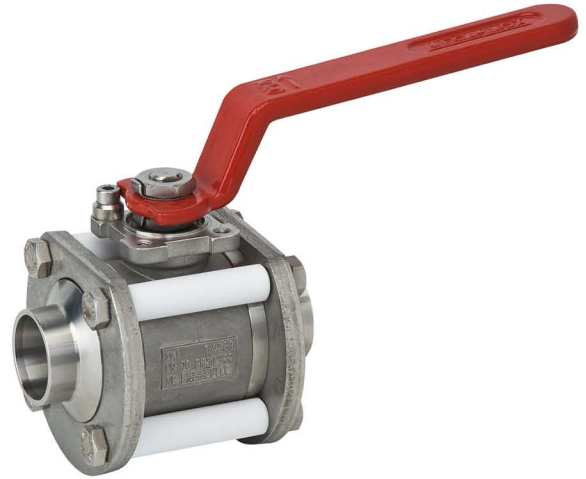


### Applications

Many fluids such as base, acid, sea water are corrosive. Temperature and pressure increase this phenomenon.

Fluid contamination by metal oxide from valve material, and safety concern (internal/ external leak) are some of the corrosion risks.

The process environment can also corrode outside valve surface.



### MECA-INOX Solution

Whether exposed to uniform, intergranular, pitting or stress corrosion, series PS4 U – PS4 J – PS4 D and PS4 H can withstand these multiple attacks.

"Stainless" steels are steels with low carbon content (< 0.4 %), alloyed with other metals such as chromium (10 to 20 %), nickel (6 to 15%), molybdenum (0 to 6%).

Their chemical resistance varies according to the percentage of added metals.

MECA-INOX performs the casting, machining and assembly of these various alloys.

### Material grade available:

Each steel grade provide a technical & economical solution to a specific need of corrosion resistance.

- **"Austenitic"** steel: 304L - 316L - 904L
- **"Duplex"** steel: 1.4362 / S 32304 and their variants (Super Duplex & Lean-Duplex)
- **"Alloy 22"**: 2.4602 / N 06022



**Valve DN 32, PN 100, 904L steel bar machined offering a high pressure corrosion resistance**

### Applications example:

Fluids requesting other materials than 316L:

- Lactic acid
- Hydrochloric acid
- Sulphuric acid (high temp. & concentration)
- Acetic acid
- Nitric acid
- Hydrofluoric acid
- Chromic acid
- Sulphate, chlorate, ammonium phosphate
- Ethane dichloride

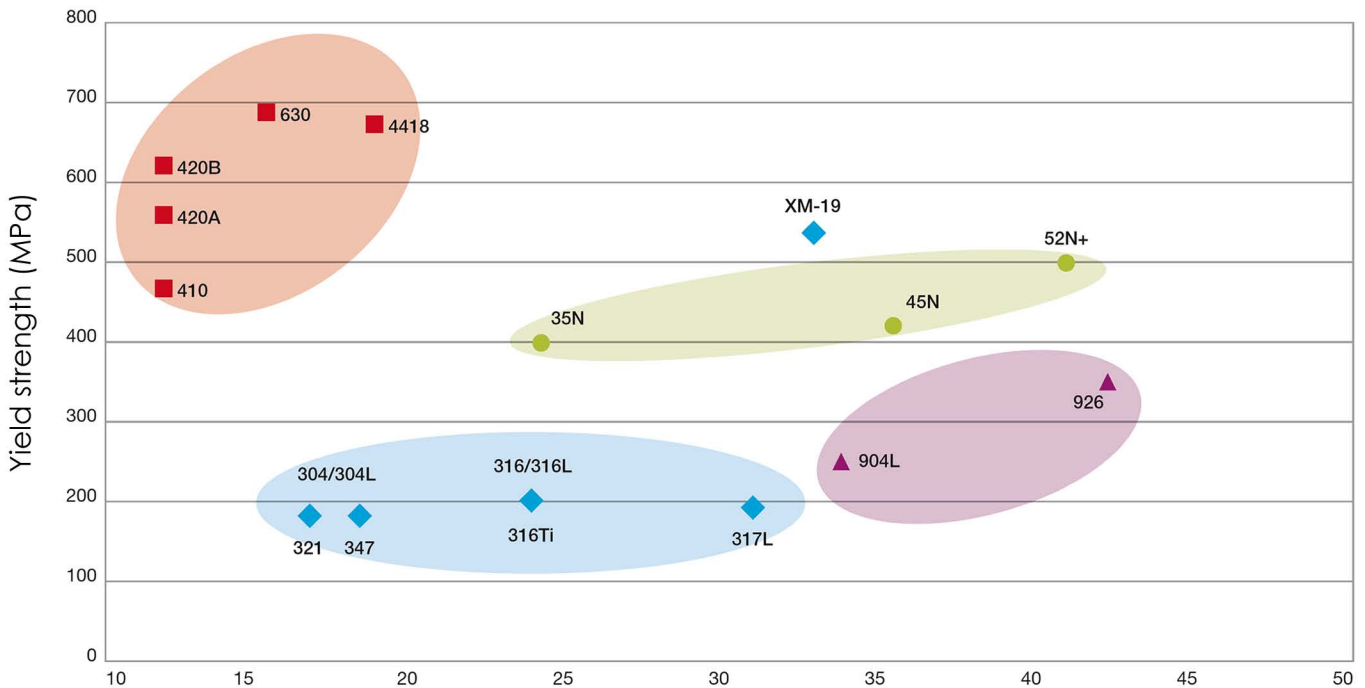


In order to meet the demands of our customers, **components with long lead times are stored** (bodies, balls, stems, etc.)

### Corrosion resistance by material: PReN

**PReN = Pitting Resistance Equivalent number**

This theoretical formula compare resistance to corrosion by pitting according to the steel composition. (see above ✳)



✳ PITTING RESISTANCE EQUIVALENT NUMBER ( $Cr + 3,3Mo + 16N$ )

■ Martensitic    ◆ Austenitic    ▲ Super Austenitic    ● Duplex

(UGITECH Document)