

POWER FORWARD

January 2022

# Introducing: The Next Generation SoloSeal<sup>™</sup> Single-Piece "D" Seals

HydraForce introduced the **SoloSeal<sup>™</sup>** single-piece seal in 2019 to ensure superior sealing effectiveness with single seals and no backup rings. First-generation **SoloSeals<sup>™</sup>** were implemented with success on HydraForce 08size and 10-size, two-way valves with a planned rollout to 3-way and 4-way valves.

In the process of developing the **SoloSeal™** for use on 3-way, 4-way, and 5-way valves, it was discovered that these applications presented more demanding sealing requirements.

HydraForce engineers sought to improve the **SoloSeal™** and developed the next generation of single-piece seals.

The Next Generation **SoloSeal™** seal has a "D" shape. The outside diameter of the seal has a single "hump" rather than dual ridges and the inside diameter has a concave rather than grooved surface.

The new "D" seal **SoloSeal™** will be usable for a greater variety of valve applications, including 3-way, 4-way and 5-way valve appli-





SoloSeal™ 1st Generation **SoloSeal™** 2nd Generation "D" Seal

cations as well as 08- size and 10-size two-way applications.

No retrofits for 08-size and 10-size two-way applications will be necessary. There will be no change in model code.

Valves ordered after April, 2022 will automatically be equipped with the Next Generation **SoloSeal™** D-ring seals.

For more information, contact your HydraForce representative.

SOLOSEAL	First Generation - 2019	Second Generation - 2021
Outside Diameter	Unique "ridged" profile with two points	"Humped" profile with one point
Inside Diameter	Grooved surface	Concave surface
Applications	08-size and 10-size, 2-way valves only	08-size, 10-size, 2-way, 3-way, 4-way and 5-way valve applications

For detailed information and specifications, visit www.hydraforce.com or contact your local HydraForce representative at www.hydraforce.com/distribs/world.htm

## **HYDRAFORCE INC**

500 Barclay Blvd. Lincolnshire, IL 60069 Phone: +1 847 793 2300 Fax: +1 847 793 0086 Email: sales-us@hydraforce.com Member: National Fluid Power Assoc. ISO 9001

#### HYDRAFORCE HYDRAULICS LTD Advanced Manufacturing Hub

250 Aston Hall Road Birmingham B6 7FE United Kingdom Phone: +44 121 333 1800 Fax: +44 121 333 1810 Email: sales-uk@hydraforce.com

Member: British Fluid Power Association and Verband Deutscher Maschinen und Anlagenbau e.V. (VDMA) ISO 9001 & ISO 14001

## HYDRAFORCE HYDRAULICS Systems (Changzhou) Co., Ltd

388 W. Huanghe Road, Building 15A GDH Changzhou Airport Indl Park Xinbei District Changzhou, China 213022 Phone: +86 519 6988 1200 Fax: +86 519 6988 1205 Email: Vincentz@hydraforce.com

## HYDRAFORCE HYDRAULICS LTDA

Av. Laurita Ortega Mari, 499 Taboao da Serra São Paulo, 06766-360 Brazil Phone: +55 (11) 4786-4555 Fax: +55 (11) 4786-2050 Central@hydraforc<u>e.com</u>

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# Anatomy of the **SoloSeal™** Second Generation "D" seals

### Single-Piece Seal

A single "D"-seal is all you need for complete hydraulic sealing effectiveness - without the need for backup rings.

#### **Concave Inside Diameter**

**SoloSeal™** "D" seals have a concave inside diameter that conforms to pressure to improve seal performance and guard against oil "blow-by."

### **Reduced Part Count**

Fewer parts to keep track of, simplifies field replacement when needed.

#### Standard O-Ring Gland/Bore

**SoloSeal™** "D"-seals fit in a standard O-ring gland/bore so it is easy to retrofit.

## Humped Outside Diameter

**SoloSeal™** "D"-seals are engineered with a single "hump" on the outside diameter of the seal that provides a contact point to improve seal performance and endurance. This unique seal profile also is extremely resistant to becoming inverted during installation.

### **Designed for Automation**

**SoloSeal™** D-seals can be used with conventional manual assembly methods or with automated assembly equipment.

#### Stabilizing "Feet"

#### Each SoloSeal™ "D"-

seal has four built-in "feet" or pressure pedestals that help to balance incoming load pressure around the seal and reduce the chance of localized pressure "pockets" from forming.

## **Choice of Materials**

**SoloSeal™** "D"-seals are available in a choice of seal materials. HydraForce is offering Buna N (nitrile) and fluorocarbon (Viton) to start with, but other materials can be made available in the future.

## **High Temperature Operation**

For higher operating temperatures (up to 204 °C (400 °F) you can specify **SoloSeal™** single-piece seals in fluorocarbon.

#### **Cold Temperature Operation**

For colder operating temperatures (down to -40 °C (-40 °F) you can specify **SoloSeal™** "D"-seals in Buna N (nitrile).

For more information on SoloSeal<sup>™</sup> visit https://www.hydraforce.com/Acc-hous/Acc\_html/8-650-1\_Seal\_Kits/8-650-1\_Seal\_Kits.htm

