

POWER FORWARD

January 2022

Introducing: The Next Generation SoloSeal[™] Single-Piece "D" Seals

HydraForce introduced the **SoloSeal[™]** single-piece seal in 2019 to ensure superior sealing effectiveness with single seals and no backup rings. First-generation **SoloSeals[™]** 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

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YDRAFORCE

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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[™] visit https://www.hydraforce.com/Acc-hous/Acc_html/8-650-1_Seal_Kits/8-650-1_Seal_Kits.htm

