

# WILFLEY<sup>®</sup>

## HEAVY DUTY CENTRIFUGAL PUMPS



Wilfley Sealing  
Technology



No Flush Water  
Required

# WILFLEY SEALING TECHNOLOGY

Wilfley Sealing Technology is the premier sealing solution for the toughest pumping applications and has proven to be a superior alternative to conventional sealing systems like mechanical seals and compression packing. It has been the foundation for every Wilfley pump design, dating back to the ground-breaking Model A slurry pump in 1919.



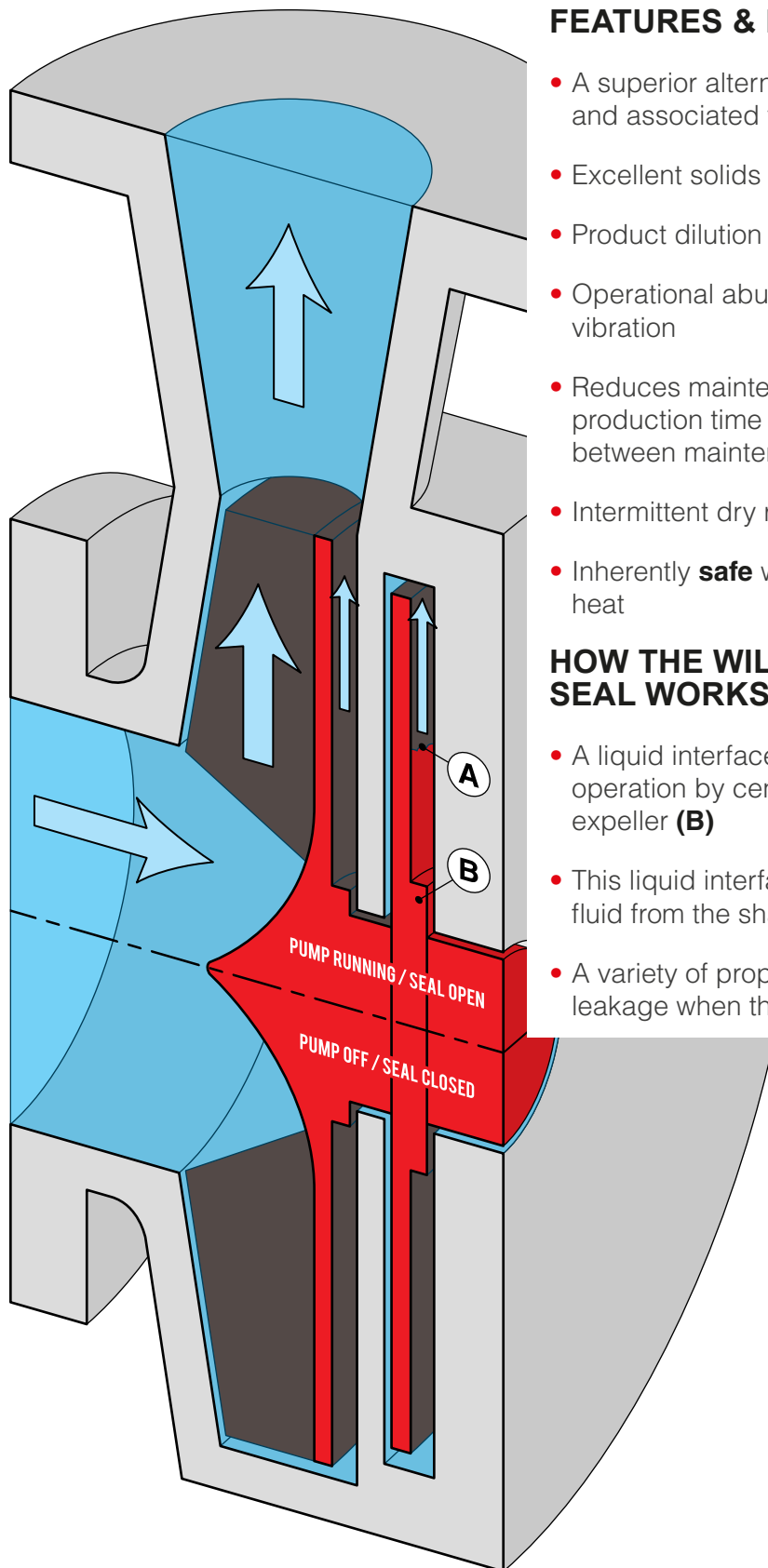
Wilfley Sealing Technology provides **leak free** operation at all times by partnering a dynamic seal (page 2) with a static seal (page 3). The dynamic seal prevents leakage while the pump is running and the static seal prevents leakage while the pump is off.

**The harmony between the dynamic and static seal is what makes Wilfley Sealing Technology excel beyond conventional seals.**



Wilfley Expellers

# WILFLEY DYNAMIC EXPELLER SEAL

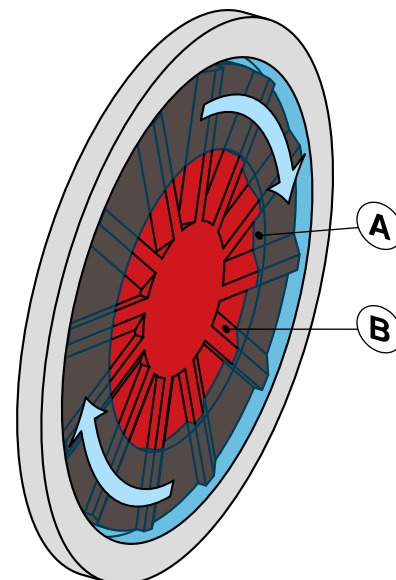


## FEATURES & BENEFITS:

- A superior alternative to packing / mechanical seals and associated flush systems
- Excellent solids / slurry handling capabilities
- Product dilution is eliminated
- Operational abuse tolerant, e.g. cavitation and vibration
- Reduces maintenance costs and maximizes production time through increased mean time between maintenance (MTBM)
- Intermittent dry running capability
- Inherently **safe** without gland packing or frictional heat

## HOW THE WILFLEY DYNAMIC EXPELLER SEAL WORKS:

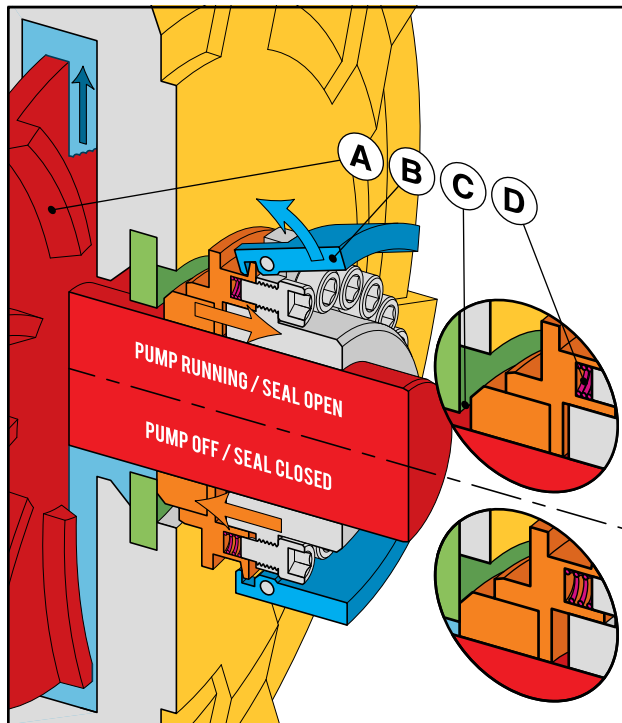
- A liquid interface **(A)** is established during pump operation by centrifugal forces generated by the expeller **(B)**
- This liquid interface effectively isolates the pumped fluid from the shaft
- A variety of proprietary static seals prevent any leakage when the pump isn't in operation





# WILFLEY STATIC SEALS

## SolidLock® Series



**The ultimate static seal for the toughest slurry applications**

### HOW THE SolidLock® SEAL WORKS:

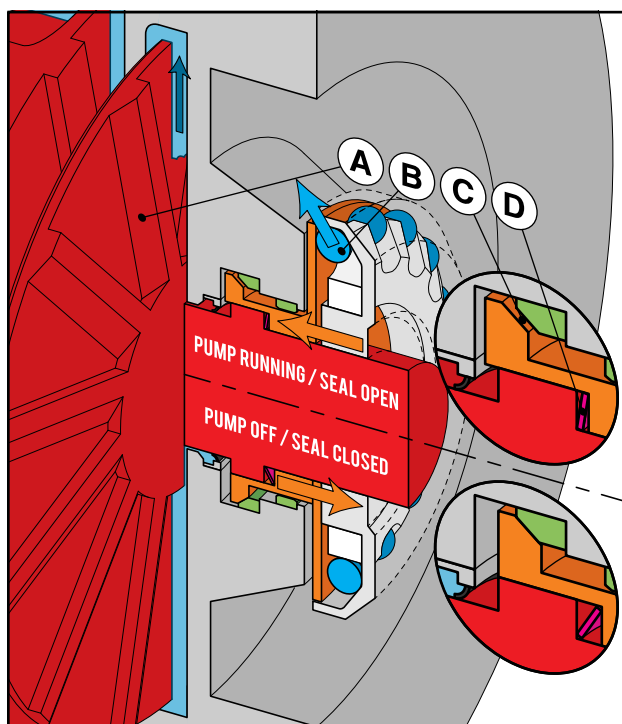
As the expeller (A) establishes a liquid interface at start up, centrifugal force moves weights (B) outwards to open seal faces (C) and prevent any rubbing contact.

At shut down, isolated springs (D) force the seal faces to close before any of the pump fluid can escape.

### CURRENTLY AVAILABLE FOR:

- EMW® Slurry Pump
- A9 Chemical Pump
- Kpro® Slurry Pump
- A7 Chemical Pump
- HD Slurry Pump
- AF Chemical Pump
- S3 Acid Slurry Pump

## DryLock® Series



**An exceptional static seal for the most demanding process applications**

### HOW THE DryLock® SEAL WORKS:

As the expeller (A) establishes a liquid interface at start up, centrifugal force moves balls (B) outwards to open seal faces (C) and prevent any rubbing contact.

At shut down, an isolated wave spring (D) forces the seal faces to close before any of the pump fluid can escape.

### CURRENTLY AVAILABLE FOR:

- A9 Chemical Pump
- A7 Chemical Pump
- S3 Acid Slurry Pump

# BREAKTHROUGH MATERIALS

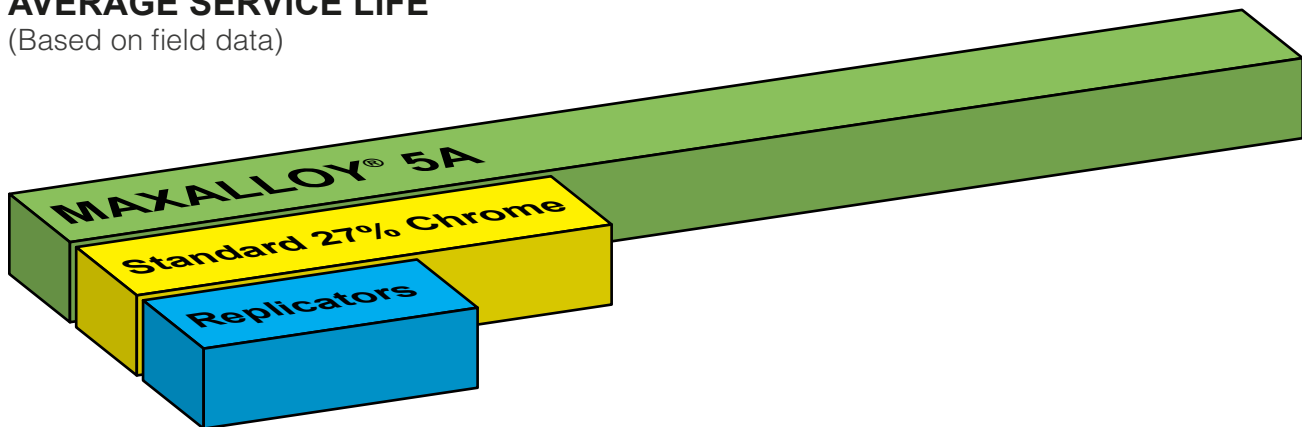
## MAXALLOY® 5A

Wilfley's MAXALLOY® 5A was developed specifically for the toughest slurry applications, combining unsurpassed hardness for wear resistance with superior toughness for durability.

Through special proprietary processing, chromium carbides are evenly distributed in a fully martensitic matrix with an average hardness of **740 HBN**. The microstructure is designed to avoid any retained austenite, delta ferrite and secondary carbides resulting in extraordinary wear performance. The proprietary processing also increases the pH range, which gives MAXALLOY® 5A a much lower corrosion rate as compared to commonly available high chrome irons.

### AVERAGE SERVICE LIFE

(Based on field data)



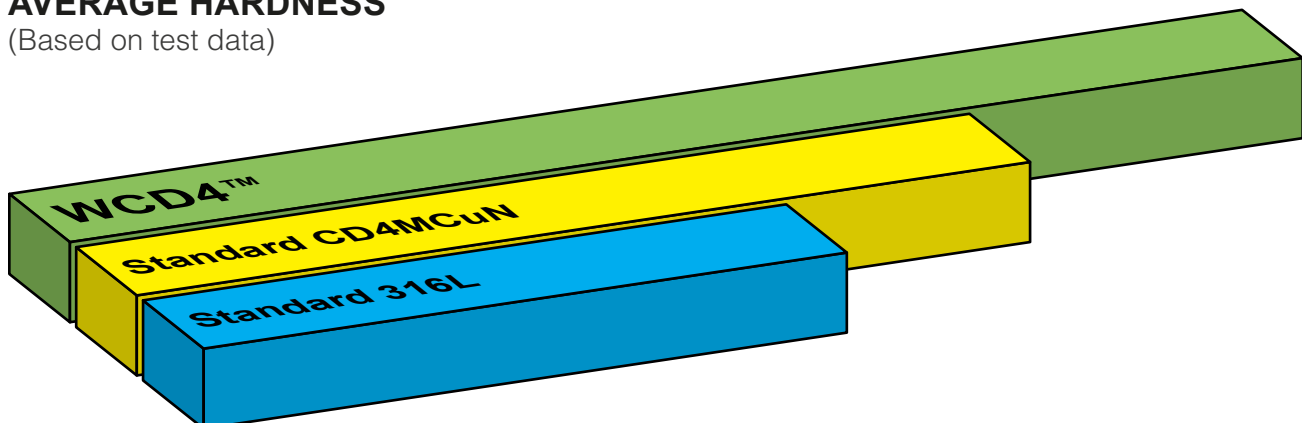
## WCD4™

Wilfley's WCD4™ is ideal for erosion-corrosion applications due to its average hardness of **345 HBN** and its improved corrosion resistance.

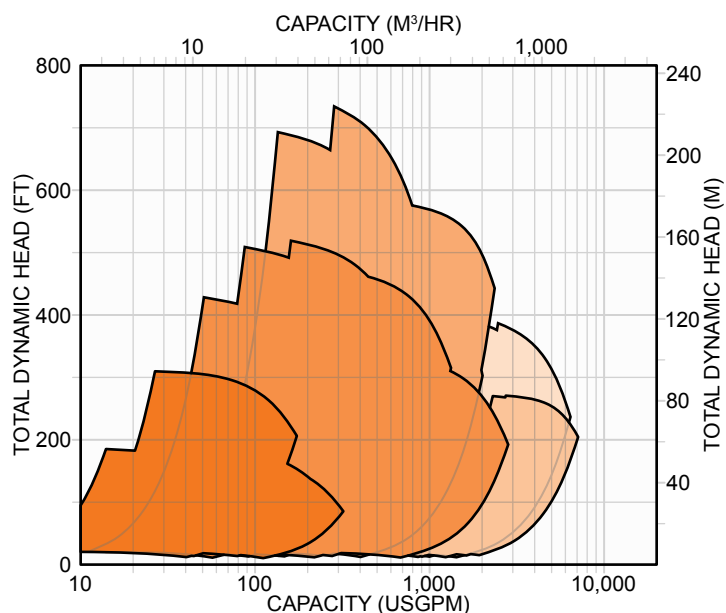
WCD4™ is chemically identical to standard CD4MCuN (ASTM A890 Grade 1B) but has significantly improved mechanical properties and corrosion resistance. These improvements are achieved through proprietary manufacturing processes developed at Wilfley.

### AVERAGE HARDNESS

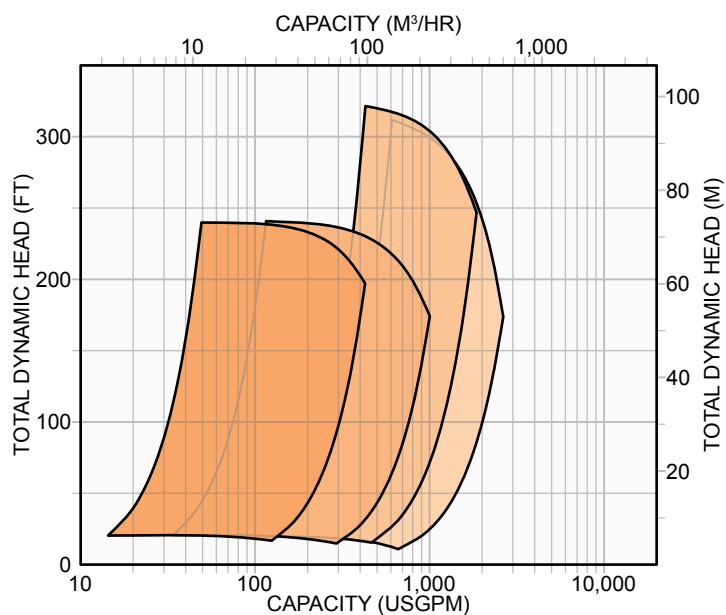
(Based on test data)



## A9 CHEMICAL PUMP

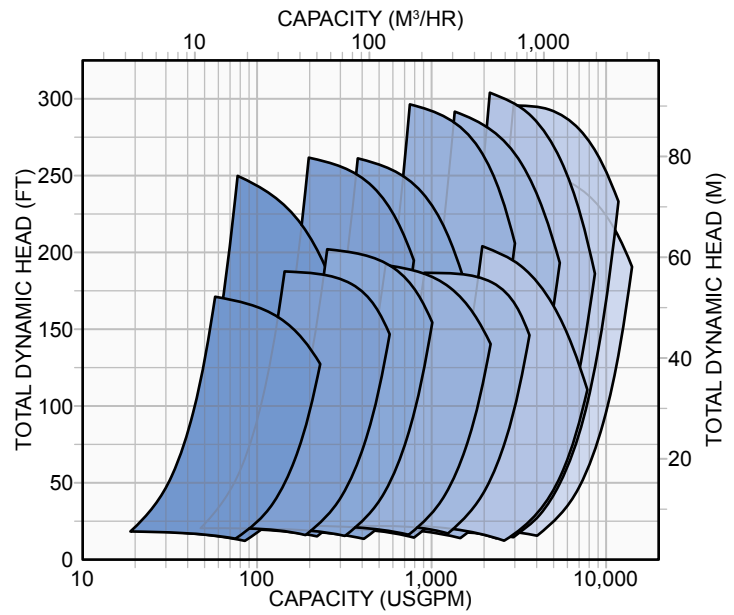


## S3 ACID SLURRY PUMP

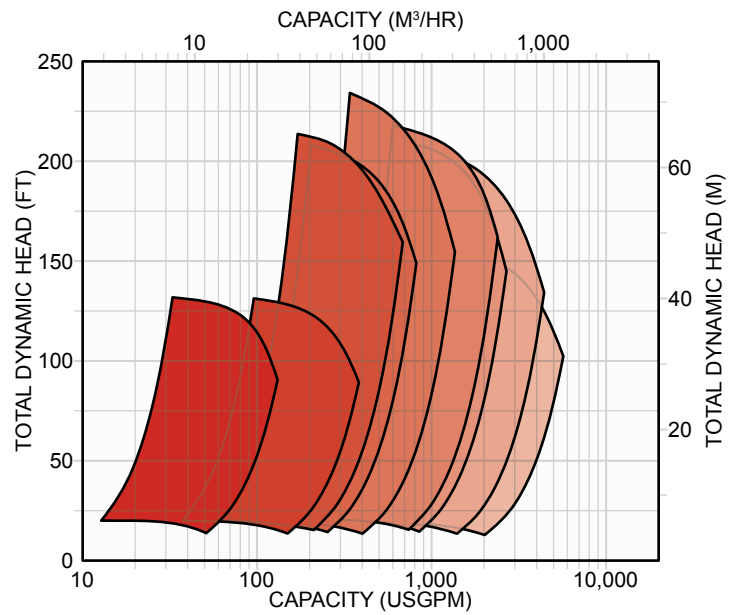


	A9	S3	EMW®	KPRO®	HD
<b>Max Passable Solids Size</b>	0.5" (13mm)	0.5" (13mm)	4.38" (111mm)	1" (25mm)	1.4" (36mm)
<b>Max Working Pressure</b>	350 Psig (24 Bar)	290 Psig (20 Bar)	205 Psig (14 Bar)	100 Psig (7 Bar)	130 Psig (9 Bar)
<b>Max Temperature</b>	400°F (205°C)	250°F (120°C)	250°F (120°C)	200°F (93°C)	200°F (93°C)
<b>Material Options</b>	Duplex Stainless Steels Austenitic Stainless Steels Nickel Alloys High-Chrome Hard Irons	Duplex Stainless Steels High-Chrome Hard Irons	High-Chrome Hard Irons Elastomer Lined Irons Duplex Stainless Steels	High-Chrome Hard Irons Duplex Stainless Steels	High-Chrome Hard Irons
<b>Seal Options</b>	DryLock® SolidLock® SolidLock® Lite Expeller with Packing Mechanical Seal	DryLock® SolidLock® SolidLock® Lite SolidLock® Lite Mechanical Seal	SolidLock® SolidLock® Lite Expeller with Packing Packing Mechanical Seal	SolidLock® SolidLock® Lite SolidLock® Lite Packing	SolidLock® SolidLock® Lite

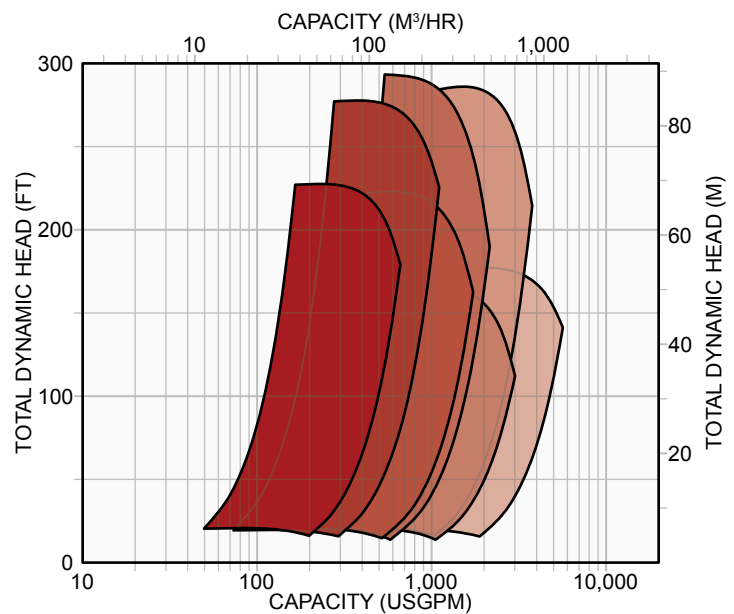
## EMW® SLURRY PUMP



## Kpro® SLURRY PUMP

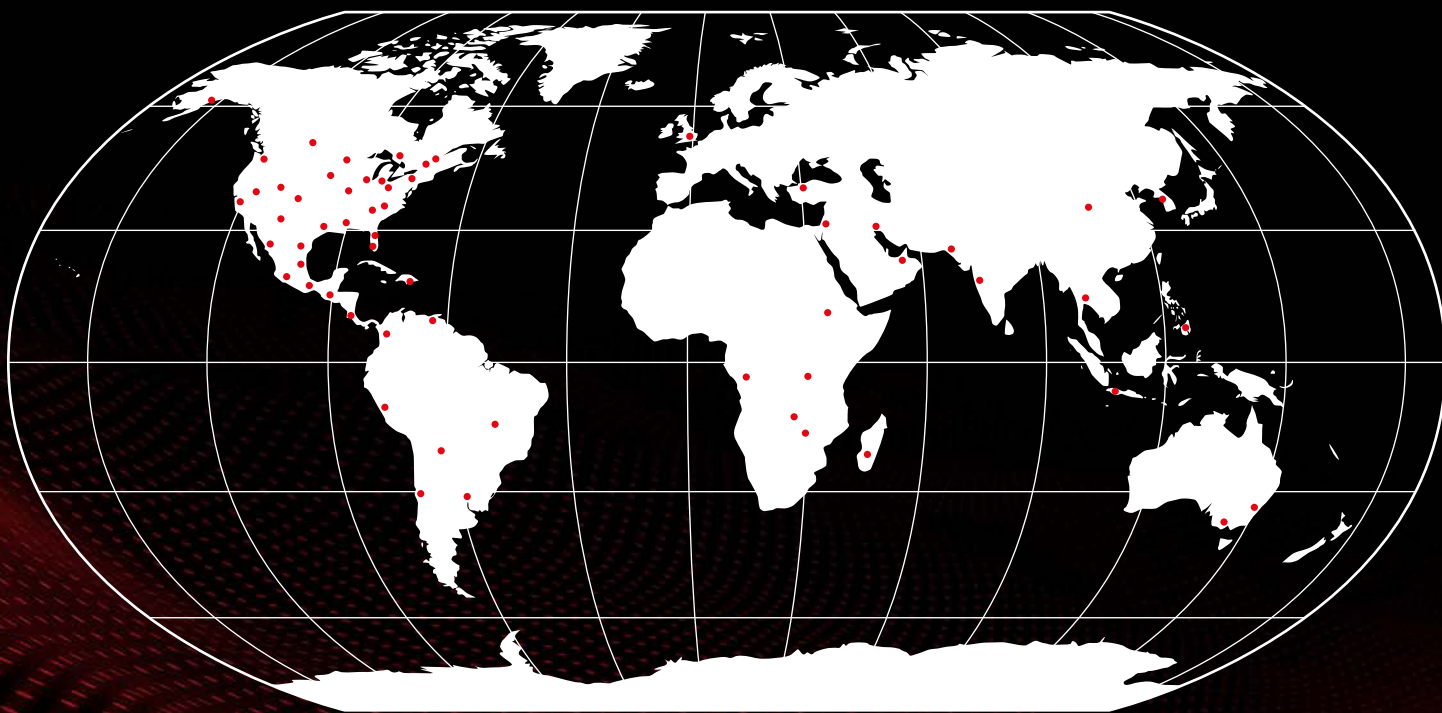


## HD SLURRY PUMP





# WORLDWIDE LOCAL RELATIONSHIPS...



## **WILFLEY®** HEAVY DUTY CENTRIFUGAL PUMPS

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