

# WILFLEY®

## 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.

## DYNAMIC & STATIC SEAL & SEAL

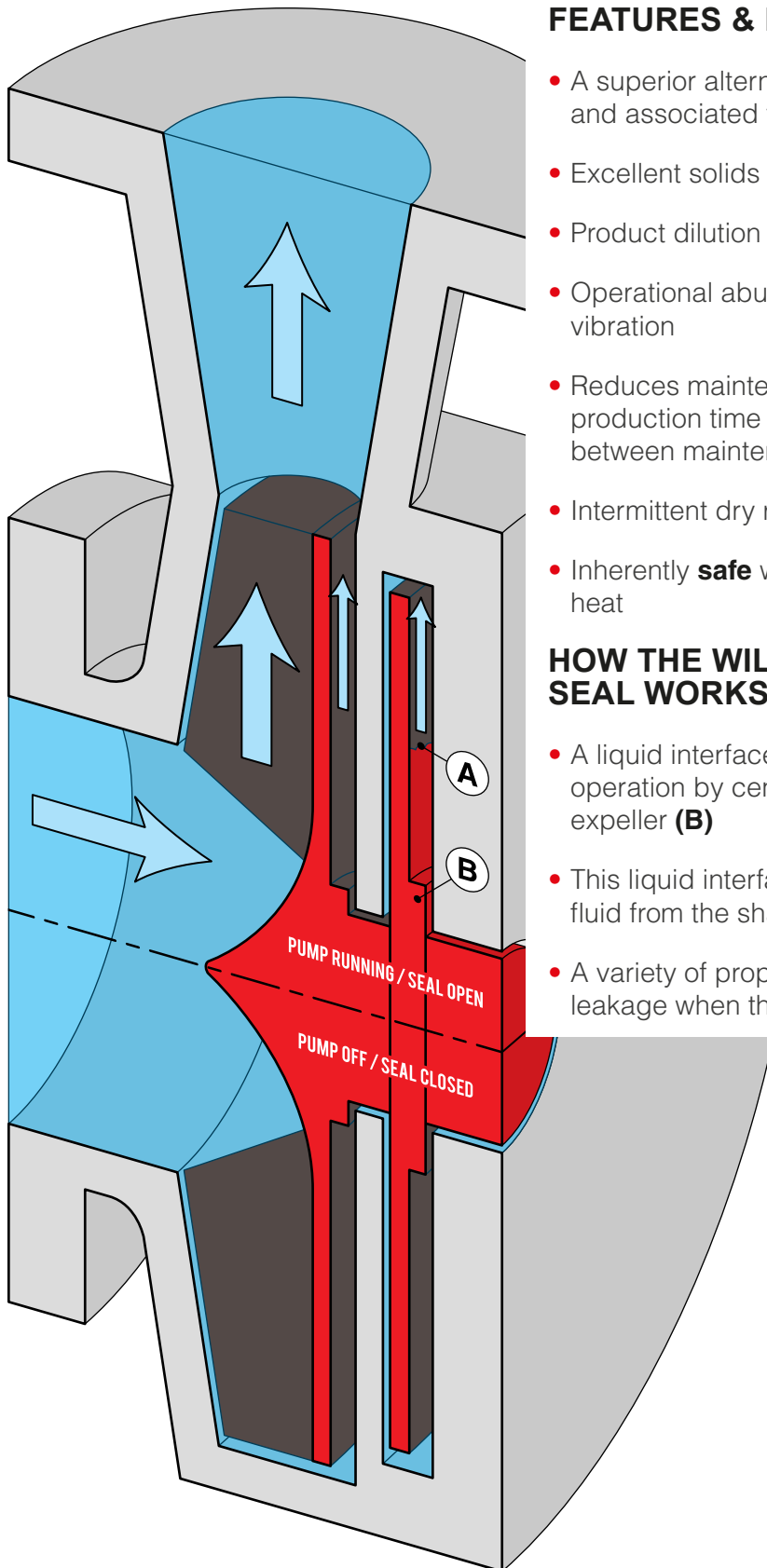
Wilfley Sealing Technology provides **leak free** operation at all times by partnering a dynamic seal (page 2) with a static seal (page 3). The dynamic seal prevents leakage while the pump is running and the static seal prevents leakage while the pump is off.

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



Wilfley Expellers

# WILFLEY DYNAMIC EXPELLER SEAL

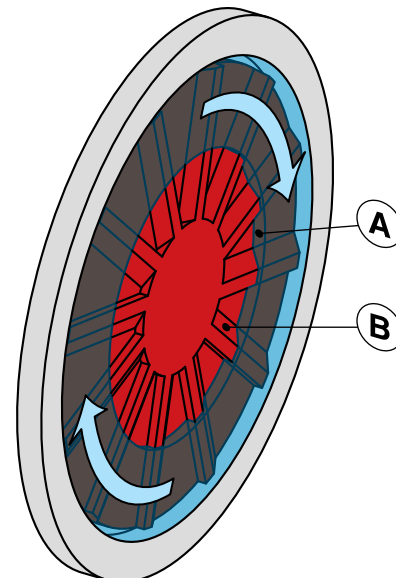


## FEATURES & BENEFITS:

- 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:

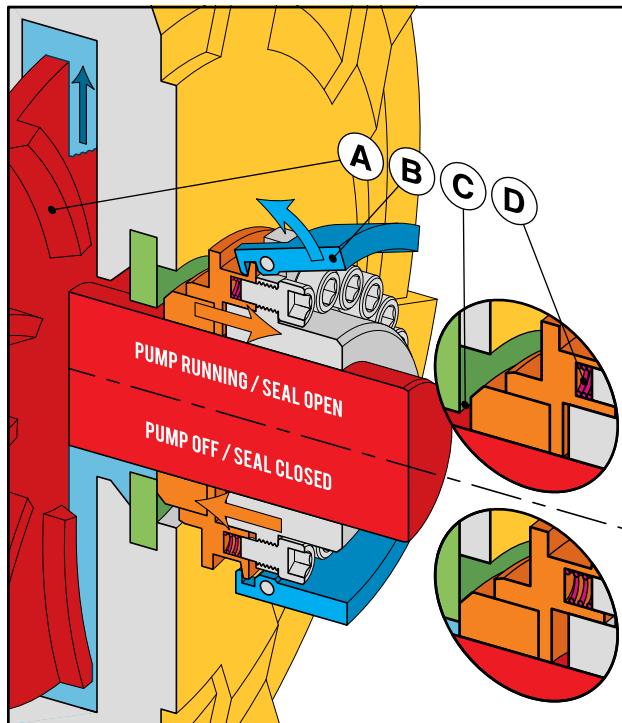
- A liquid interface **(A)** is established during pump operation by centrifugal forces generated by the expeller **(B)**
- This liquid interface effectively isolates the pumped fluid from the shaft
- A variety of proprietary static seals prevent any leakage when the pump isn't in operation





# WILFLEY STATIC SEALS

## SolidLock® Series



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

### HOW THE SolidLock® SEAL WORKS:

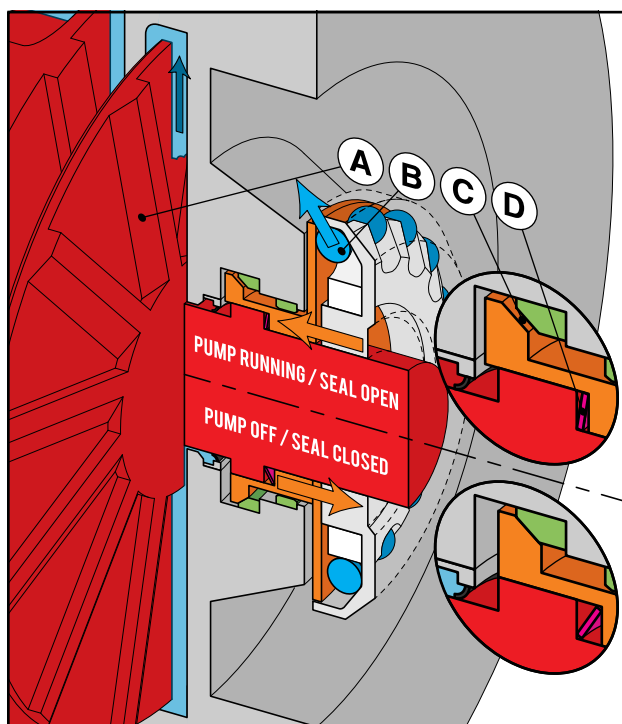
As the expeller **(A)** establishes a liquid interface at start up, centrifugal force moves weights **(B)** outwards to open seal faces **(C)** and prevent any rubbing contact.

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

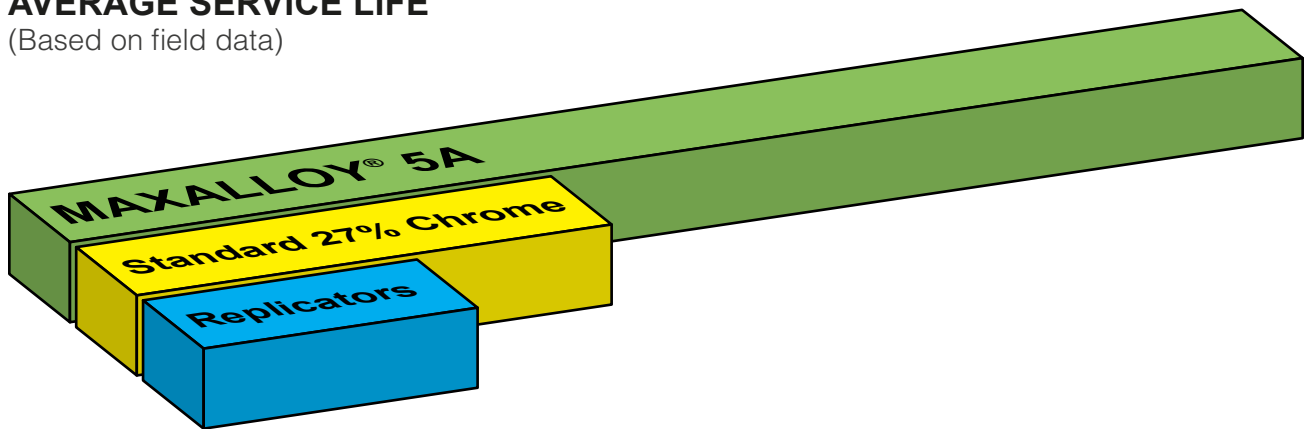
## MAXALLOY® 5A

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)



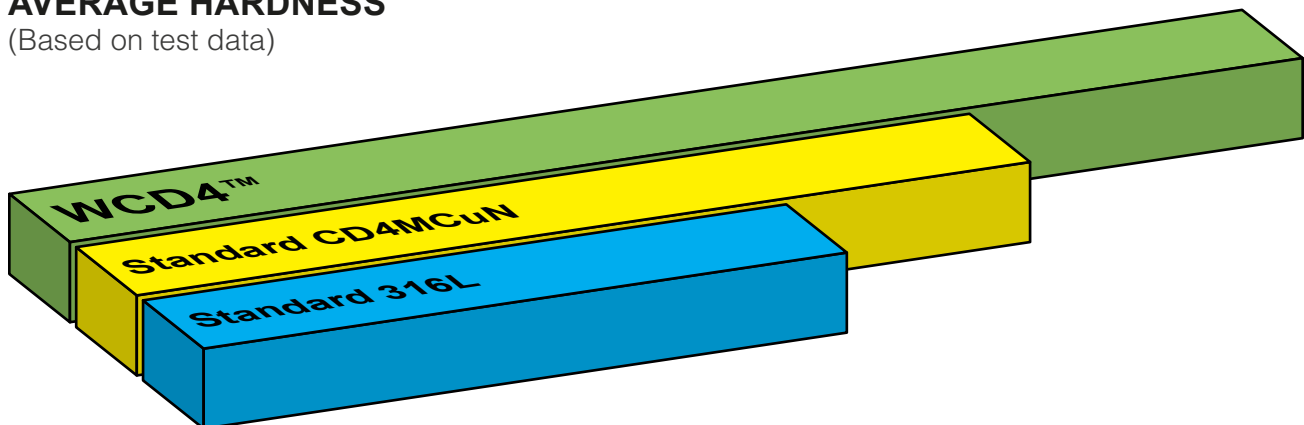
## WCD4™

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

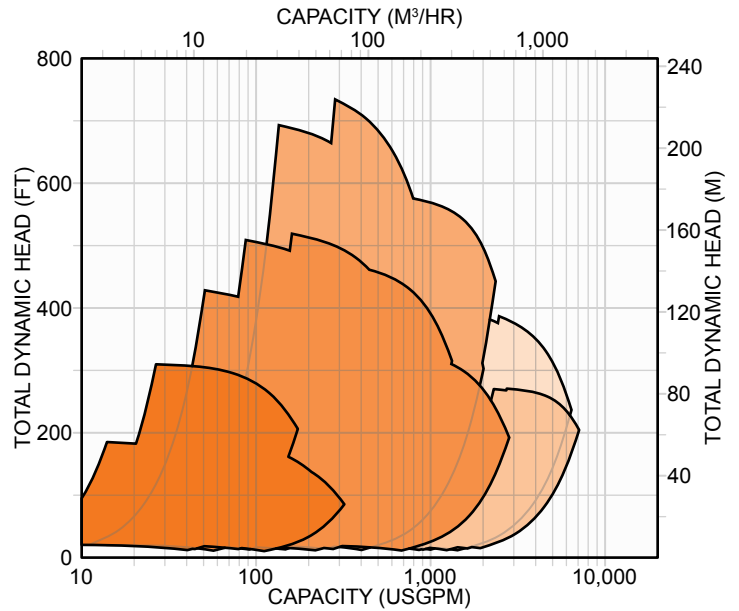
WCD4™ is chemically identical to standard CD4MCuN (ASTM A890 Grade 1B) but has significantly improved mechanical properties and corrosion resistance. These improvements are achieved through proprietary manufacturing processes developed at Wilfley.

### AVERAGE HARDNESS

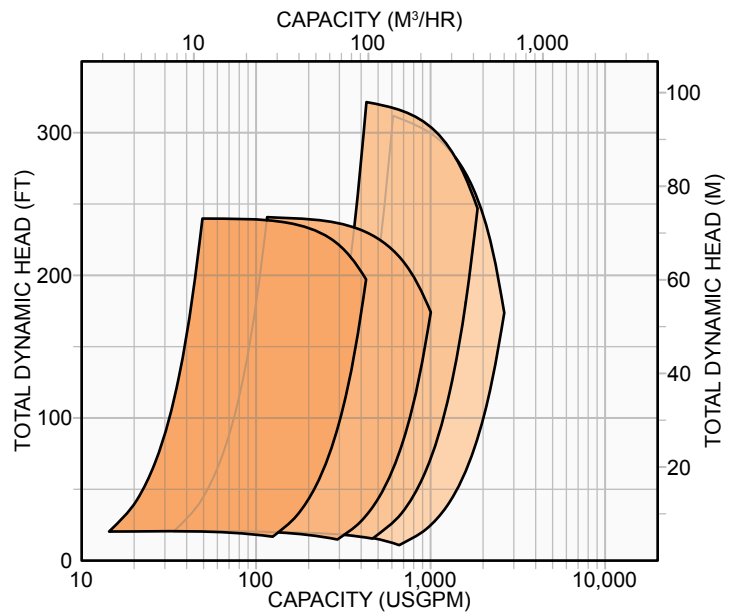
(Based on test data)



# A9 CHEMICAL PUMP

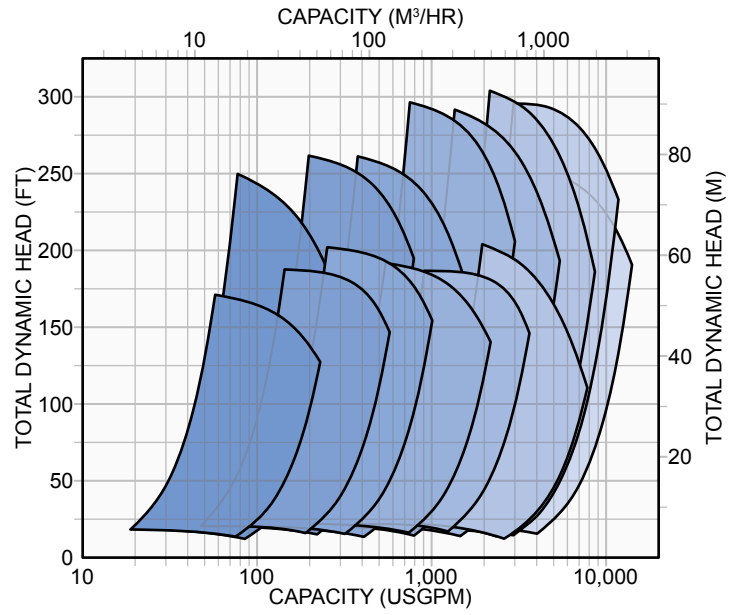


# S3 ACID SLURRY PUMP

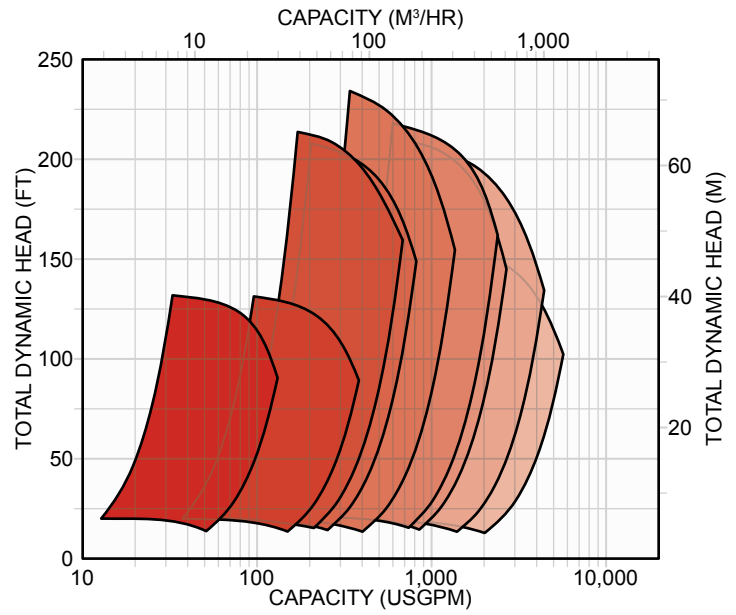


	A9	S3	EMW®	KPRO®	HD
<b>Max Passable Solids Size</b>	0.5" (13mm)	0.5" (13mm)	4.38" (111mm)	1" (25mm)	1.4" (36mm)
<b>Max Working Pressure</b>	350 Psig (24 Bar)	290 Psig (20 Bar)	205 Psig (14 Bar)	100 Psig (7 Bar)	130 Psig (9 Bar)
<b>Max Temperature</b>	400°F (205°C)	250°F (120°C)	250°F (120°C)	200°F (93°C)	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>	<b>DryLock®</b> <b>SolidLock®</b> <b>SolidLock® Lite</b> Expeller with Packing Mechanical Seal	<b>DryLock®</b> <b>SolidLock®</b> <b>SolidLock® Lite</b> Mechanical Seal	<b>SolidLock®</b> <b>SolidLock® Lite</b> Expeller with Packing Packing Mechanical Seal	<b>SolidLock®</b> <b>SolidLock® Lite</b> Packing	<b>SolidLock®</b> <b>SolidLock® Lite</b>

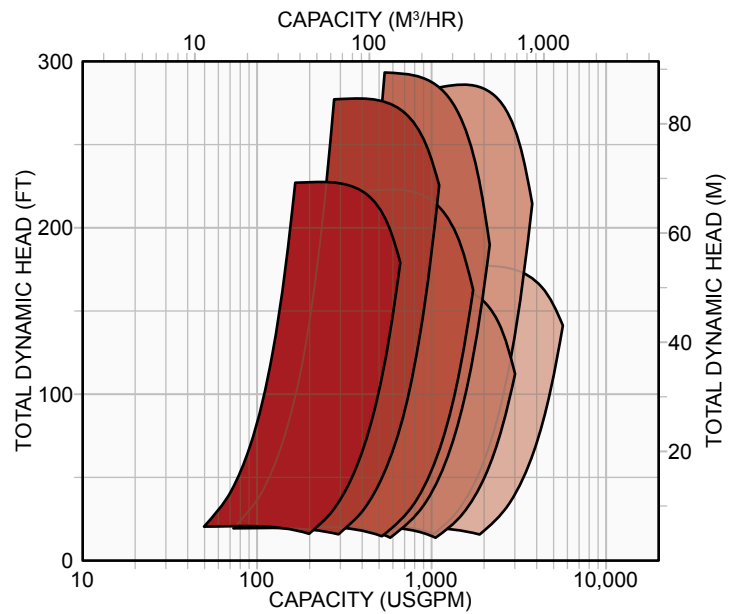
# EMW<sup>®</sup> SLURRY PUMP



# KPRO<sup>®</sup> SLURRY PUMP

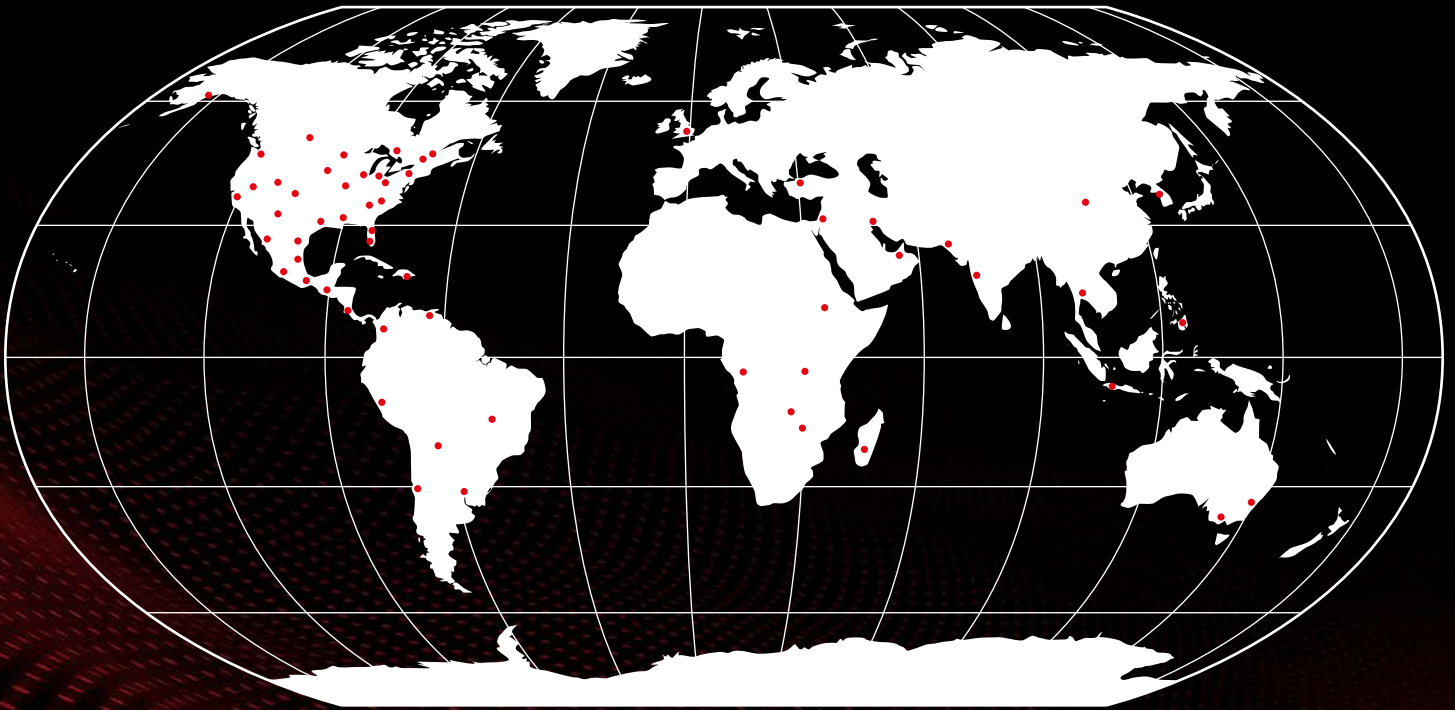


# HD SLURRY PUMP





# WORLDWIDE LOCAL RELATIONSHIPS...



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

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