

# Hydra-Cell<sup>®</sup>

Industrial Pumps



**WANNER ENGINEERING INC**

# Hydra-Cell®



*Durability, performance and simplicity of design make Hydra-Cell® pumps the optimum choice for the widest range of pump applications.*

When we say "Simply Built to Last", we mean it!

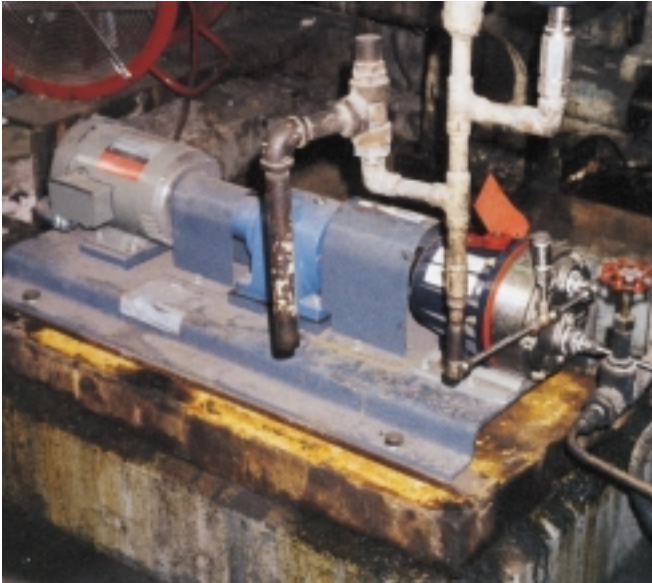
Wanner Engineering Hydra-Cell pumps have proven their performance and reliability in many of the toughest industrial equipment and process applications.

Our customers are found in virtually every market sector of industry, but they all share the same concern; they all require pumps to keep their plants and equipment running... Reliably!



- Agricultural & lawn care
- Automatic car washes
- Chemical processing
- Food & drug
- High pressure machine tool coolant
- Metering and dosing chemical additives
- Mining
- Oil production & refining
- Paper & pulp
- Parts washing
- Pressure washing
- Reverse osmosis
- Water and wastewater





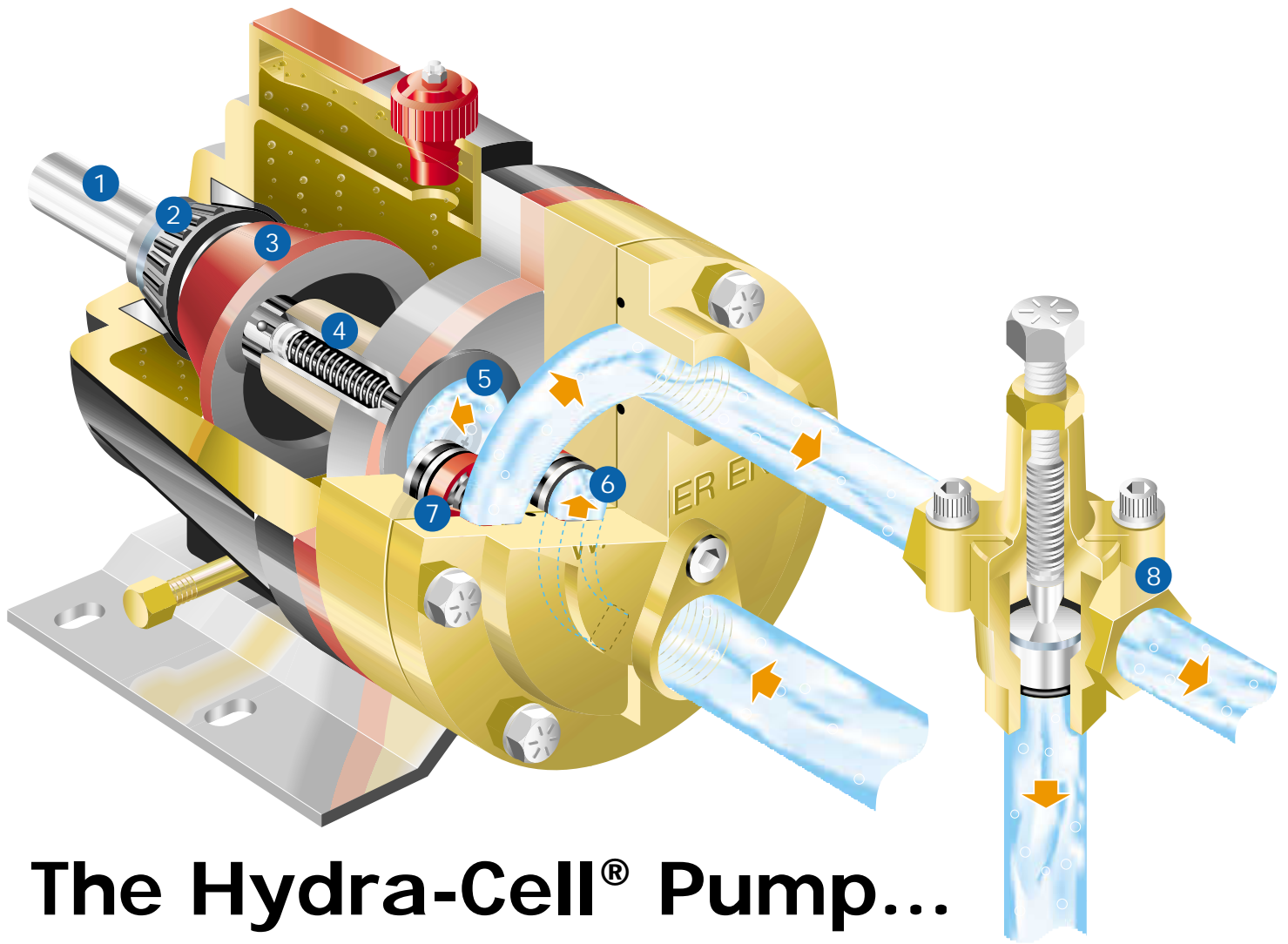
# Hydra-Cell<sup>®</sup> positive displacement pumps handle the difficult fluids that destroy other pumps.



Hydra-Cell pumps handle a lot more than just clean water!

- Hot fluids
- Reclaim water
- Corrosive fluids
- Slurries
- Abrasives
- Liquid gases
- Wettable powders
- Fertilizers
- Cutting fluids
- Viscous fluids
- Ultrapure fluids
- Chemicals
- Adhesives
- Soap solutions
- Salt water
- and many more...





# The Hydra-Cell® Pump... "Simply Built to Last!"

## Hydra-Cell Design Advantages

- Positive displacement with smooth, low pulse output
- Heavy-duty industrial construction for long service life in harsh conditions
- Hydraulically-balanced, unstressed diaphragms
- Wide range of flow rates from 0.4 to 128 l/min and pressures up to 172 bar
- Repeatable, accurate output – ideal for metering and dosing
- Sealless design – can pump particles in suspension
- Flexible installation with a variety of mounting configurations
- Minimal maintenance; no cups, packings or seals – can even run dry!
- Wide choice of materials of construction for pump heads, diaphragms and valve assemblies
- High efficiency – low power consumption

- 1 Drive shaft – via electric motor, hydraulic motor, belt and pulley, etc.
- 2 Roller bearings – rigid support, immersed in lubricating oil bath
- 3 Fixed-angle cam – translates rotary motion into linear to the hydraulic cells
- 4 Hydraulic cells – displace diaphragms via pressurised oil
- 5 Diaphragms – hydraulically balanced, no stress during flexing
- 6 Inlet valve assemblies – simple design, allows liquid into pump chamber
- 7 Outlet valve assemblies – allows liquid to flow into pressure discharge line
- 8 Pressure regulating valve – controls output pressure and prevents pump overload





## Materials of Construction

### Pumping Head

- 316 Stainless Steel
- Brass
- Cast Iron
- Hastelloy®
- Kynar®
- Polypropylene

### Diaphragms

- Buna-N-XS
- EPDM
- Neoprene
- Teflon®
- Viton®-XT

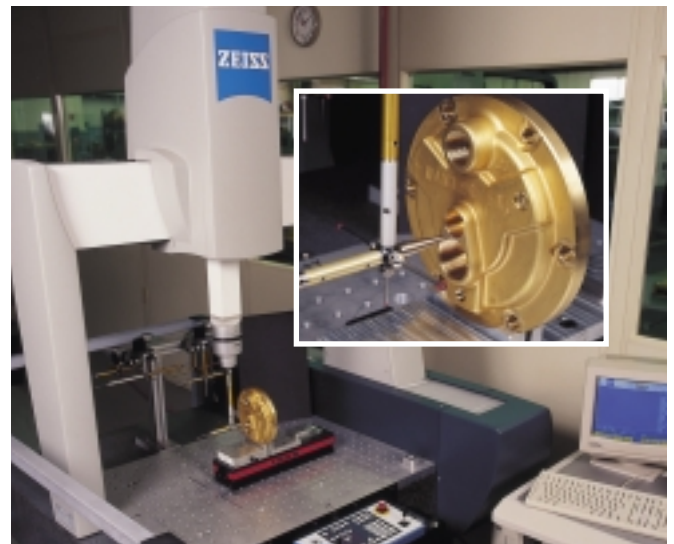
## Design and Manufacturing Standards

- High volume, precise manufacturing
- Extensive inventory and worldwide distribution
- Minimal leadtimes
- Design engineering services
- Consistent unit-to-unit quality
- 100% testing prior to shipment

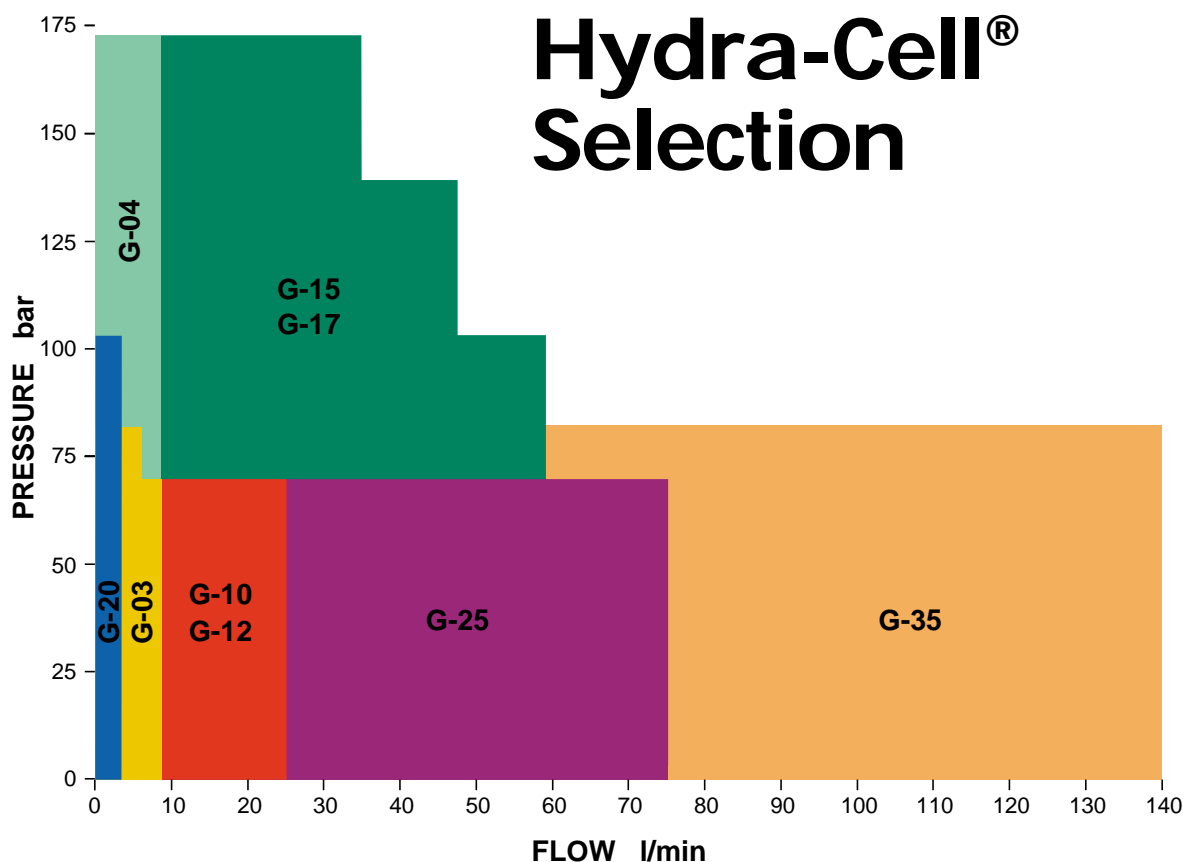


*“After more than thirty years of designing, manufacturing, testing, and constantly improving Hydra-Cell pumps, we are confident that we are producing a great product in a timely, cost-efficient manner.”*

— Bill Wanner



# Hydra-Cell® Selection



## G-20

### Max Pressure

Metallic Heads:	G-20: 70 bar; G-21 & G-22: 100 bar
Non-Metallic Heads:	All Models: 17 bar

### Capacity @ Max Pressure

	Nom Speed		Max Speed	
	rpm	l/min	rpm	l/min
G-20-X	1450	2.9	1750	3.6
G-20-E	1450	2.2	1750	2.8
G-20-S	1450	1.6	1750	2.1
G-20-B*	1450	1.0	1750	1.3
G-20-G*	1450	0.6	1750	0.8

### Delivery @ Max Pressure

	revs/litre
G-20-X	500
G-20-E	659
G-20-S	906
G-20-B*	1400
G-20-G*	2302

### Max Inlet Pressure

7 bar

### Inlet Port

1/2 inch BSPT

### Discharge Port

3/8 inch BSPT

### Shaft Diameter

G-20: 19 mm hollow shaft  
G-21 & G-22: 19 mm

### Bearings

Ball bearings

### Oil Capacity

0.12 litres

### Weight

Metallic Heads:	5.5 kg
Non-Metallic Heads:	4.1 kg



G-20



G-03

## G-03

### Max Pressure

Metallic Heads	G-03-X: 70 bar G-03-S, E, B, G: 83 bar
Non-Metallic Heads	All models: 17 bar

### Capacity @ Max Pressure

	Nom Speed		Max Speed	
	rpm	l/min	rpm	l/min
G-03-X	1450	9.9	1750	11.3
G-03-E	1450	7.1	1750	8.3
G-03-S	1450	5.6	1750	6.8
G-03-B*	1450	3.5	1750	4.2
G-03-G*	1450	1.6	1750	1.9

### Delivery @ Max Pressure

	revs/litre
G-03-X	155
G-03-E	204
G-03-S	258
G-03-B*	415
G-03-G*	906

### Max Inlet Pressure

17 bar

### Inlet Port

1/2 inch BSPT

### Discharge Port

3/8 inch BSPT

### Shaft Diameter

G-03: 7/8 inch  
G-13: 24 mm hollow shaft

### Bearings

Ball bearings

### Oil Capacity

0.95 litres

### Weight

Metallic Heads:	12.7 kg
Non-Metallic Heads:	8.6 kg

\* May require pressurised inlet.

Performance specifications are guidelines only.

## G-04

<b>Max Pressure</b>	170 bar					
<b>Capacity @ Max Pressure</b>	<b>Nom Speed</b>		<b>Max Speed</b>			
	<b>rpm</b>	<b>l/min</b>	<b>rpm</b>	<b>l/min</b>	<b>rpm</b>	<b>l/min</b>
G-04-X	1450	9.0	1750	11.0		
G-04-E	1450	6.5	1750	7.8		
G-04-S	1450	5.5	1750	6.1		
<b>Delivery @ Max Pressure</b>	<b>revs/litre</b>					
G-04-X	159					
G-04-E	224					
G-04-S	287					
<b>Max Inlet Pressure</b>	34 bar					
<b>Inlet Port</b>	1/2 inch BSPT					
<b>Discharge Port</b>	1/2 inch BSPT					
<b>Shaft Diameter</b>	7/8 inch					
<b>Bearings</b>	Ball bearings					
<b>Oil Capacity</b>	1.05 litres					
<b>Weight</b>	16.8 kg					



G-04



G-10

## G-10 (Horizontal) G-12 (Vertical)

<b>Max Pressure</b>	Metallic Head: G-10, G-12: 70 bar Non-Metallic Head: G-10: 17 bar					
<b>Capacity @ Max Pressure</b>	<b>Nom Speed</b>		<b>Max Speed</b>			
	<b>rpm</b>	<b>l/min</b>	<b>rpm</b>	<b>l/min</b>	<b>rpm</b>	<b>l/min</b>
G-10/12-X	1450	29.0	1450	29.0		
G-10/12-E	1450	25.2	1750	30.3		
G-10/12-S	1450	18.9	1750	22.7		
G-10/12-I	1450	12.5	1750	14.9		
<b>Delivery @ Max Pressure</b>	<b>revs/litre</b>					
G-10/12-X	50					
G-10/12-E	58					
G-10/12-S	71					
G-10/12-I	117					
<b>Max Inlet Pressure</b>	17 bar					
<b>Inlet Port</b>	1 inch BSPT					
<b>Discharge Port</b>	3/4 inch BSPT					
<b>Shaft Diameter</b>	7/8 inch					
<b>Bearings</b>	Tapered roller bearings					
<b>Oil Capacity</b>	1.05 litres					
<b>Weight</b>	Metallic Heads: G-10: 22 kg; G-12: 29 kg Non-Metallic Heads: G-10: 16 kg					



G-12



G-15/17

## G-15 (Horizontal) G-17 (Vertical)

<b>Max Pressure</b>	170 bar @ 1200 rpm; 140 bar @ 1450 rpm					
<b>Capacity @ Max Pressure</b>	<b>Nom Speed</b>		<b>Max Speed</b>			
	<b>rpm</b>	<b>bar</b>	<b>l/min</b>	<b>rpm</b>	<b>bar</b>	<b>l/min</b>
G-15/17-X	-	-	-	1450	100	50
	-	-	-	1450	140	48
	-	-	-	1200	170	39
	-	-	-	960	170	32
G-15/17-E	1450	34	47	1750	100	57
	1450	140	43	1750	100	53
	1200	170	35	1450	140	44
	960	170	29	1150	170	35
<b>Delivery @ Max Pressure</b>	<b>bar revs/litre</b>					
G-15/17-X	100		29.6			
	140		30.2			
	170		29.6			
G-15/17-E	100		32.8			
	140		33.3			
	170		32.3			
<b>Max Inlet Pressure</b>	34 bar					
<b>Inlet Port</b>	1-1/4 inch BSPT					
<b>Discharge Port</b>	3/4 inch BSPT					
<b>Shaft Diameter</b>	1-1/8 inch					
<b>Bearings</b>	Taper roller bearings					
<b>Oil Capacity</b>	2.1 litres					
<b>Weight</b>	66 kg					

Performance specifications are guidelines only.

### Common Specifications:

#### Max Temperature

Metallic Heads:	121°C
Consult factory for correct component selection for temperatures above 71°C	
Non-Metallic Heads:	60°C

<b>Shaft Rotation</b>	Bi-directional
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## G-25

### Max Pressure

Metallic Head:	70 bar
Non-Metallic Head:	17 bar

### Capacity @ Max Pressure

	Nom Speed		Max Speed	
	rpm	l/min	rpm	l/min
G-25-X	960	69	1050	76
G-25-E	960	64	1150	77
G-25-S	960	50	1150	59
G-25-I	960	37	1150	44

### Delivery @ Max Pressure

	revs/litre
G-25-X	14
G-25-E	15
G-25-S	19
G-25-I	26

<b>Max Inlet Pressure</b>	17 bar
<b>Inlet Port</b>	1-1/2 inch BSPT
<b>Discharge Port</b>	1 inch BSPT
<b>Shaft Diameter</b>	1-1/8 inch
<b>Bearings</b>	Tapered roller
<b>Oil Capacity</b>	2.4 litres
<b>Weight</b>	
Metallic Heads:	57 kg
Non-Metallic Heads:	41 kg



G-25



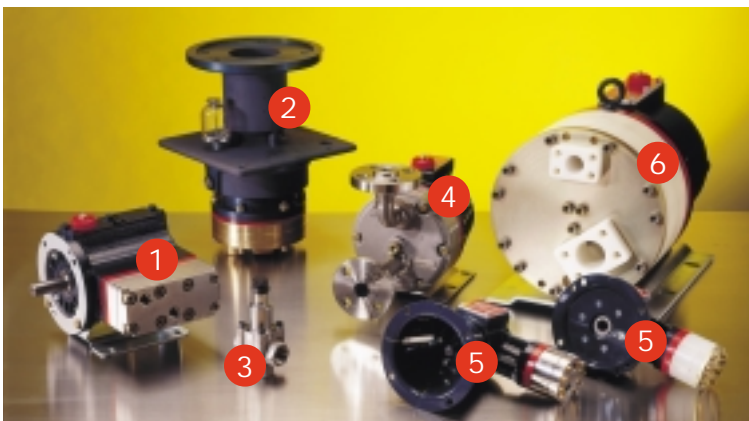
G-35

## G-35

<b>Max Pressure</b>	83 bar	
<b>Capacity @ Max Pressure</b>		
	<b>Nom Speed</b>	<b>Max Speed</b>
	rpm l/min	rpm l/min
G-35-X	960 123	1050 138
G-35-E	960 108	1150 131
<b>Delivery @ Max Pressure</b>	<b>revs/litre</b>	
G-35-X	7.7	
G-35-E	8.8	
<b>Max Inlet Pressure</b>	17 bar	
<b>Inlet Port</b>	2-1/2 inch BSPT	
<b>Discharge Port</b>	1-1/4 inch BSPT	
<b>Shaft Diameter</b>	2 inch	
<b>Bearings</b>	Tapered roller	
<b>Oil Capacity</b>	4.7 litres	
<b>Weight</b>	109 kg	

Performance specifications are guidelines only.

# Flexible pump designs to meet your customised needs...



- 1 High pressures up to 170 bar
- 2 Vertical designs for machine tool and similar pump applications
- 3 Complete line of valves, pump/motor adapters, couplings, and other accessories
- 4 Welded flanges for petrochemical and other critical installations
- 5 Wide selection of pump head, diaphragm and valve materials as well as optional mounting configurations
- 6 Slurry duty designs for tough fluids that destroy most other pumps

## Accessories

Accessory products simplify installation, increase performance and tailor pumps to harsh requirements:

- Pump/motor adapters, baseplates, couplings and guards
- Oil cooler and filter system
- Oil level monitor
- Oil reservoir sight bottles
- Specialty tools
- Hose connectors



## Modified and Customised Designs

- Pump component modification to handle a particular fluid, critical performance specification, extreme operating conditions
- Custom pump head or body castings
- Matching OEM paint specifications
- Private labeling



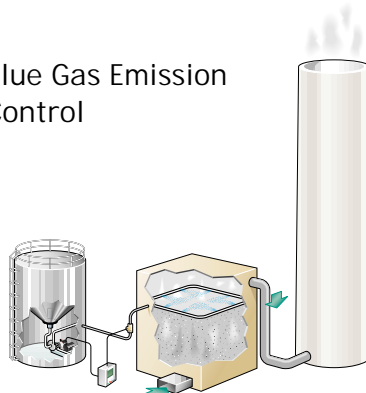


# Hydra-Cell pumps for all your applications...

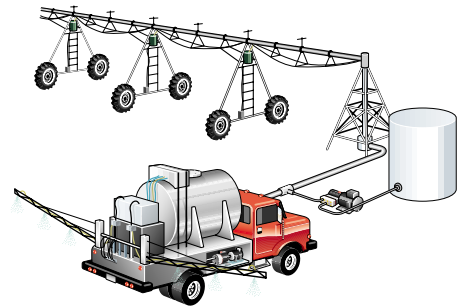
*Clean. Dirty. Hot.  
High pressure.  
Low pressure. Caustic.  
Thick. Goopy. Abrasive.  
Flammable. Perishable.  
Wettable Powder...*

Hydra-Cell pumps can handle a full spectrum of industrial and commercial fluids.

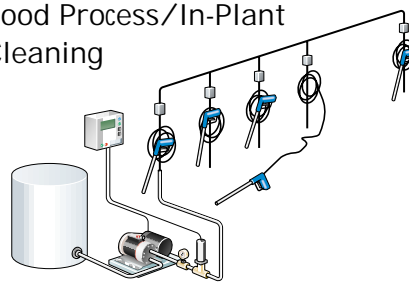
Flue Gas Emission Control



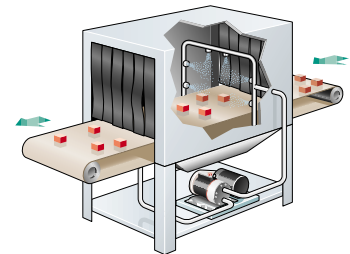
Agricultural Applications



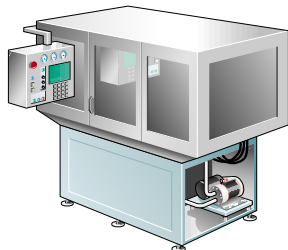
Food Process/In-Plant Cleaning



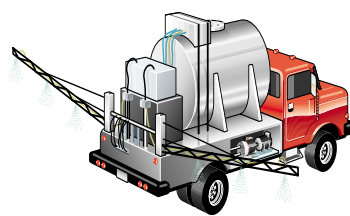
Parts Washing



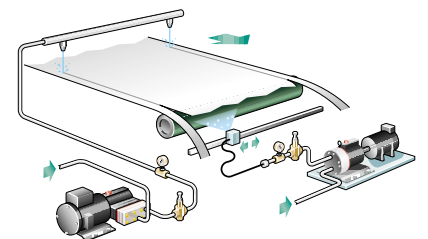
Machine Tool Coolant



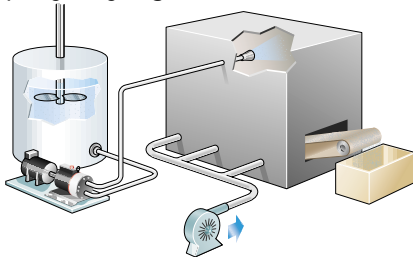
Lawn Care



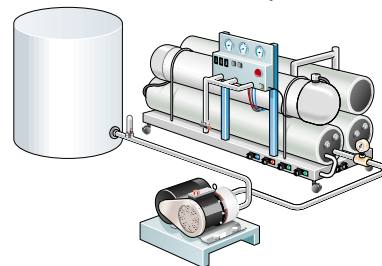
Paper Mill Applications



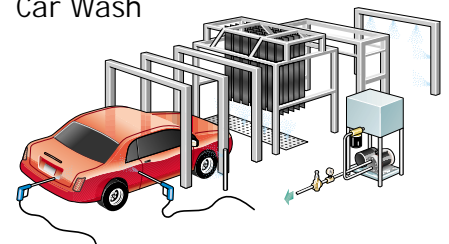
Spray Drying - Abrasives



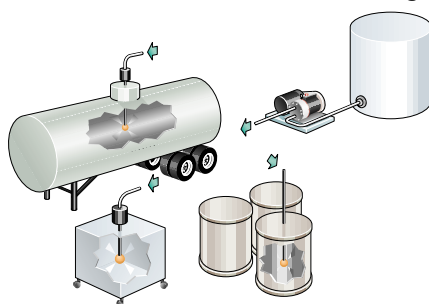
Reverse Osmosis - Separation



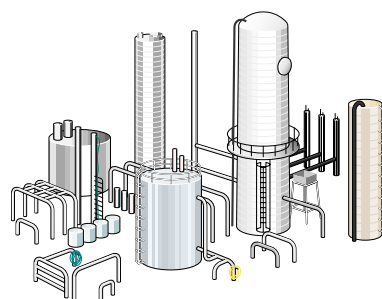
Car Wash



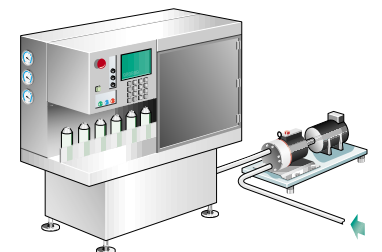
Tote, Tank and Barrel Washing



Oil Production and Refining



Propellant Packaging



# Hydra-Cell™ Worldwide Sales & Service



Hydra-Cell pumps are sold and serviced worldwide by a comprehensive network of factory trained pump distributors. As specialists in pump technologies, these distributor organizations offer you a vital local resource for technical expertise, product training, sales and service.

Hydra-Cell distributors are located in more than thirty countries worldwide. In North America specifically, over 100 Hydra-Cell distributor locations provide local availability for every major industrial marketplace.

Contact our home office for the distributor location nearest you.

Australia	Hong Kong	Portugal
Austria	Iceland	Puerto Rico
Belgium	India	Singapore
Brazil	Indonesia	South Africa
Canada	Israel	Spain
China	Italy	Sweden
Czechoslovakia	Japan	Switzerland
Denmark	Korea	Taiwan
Finland	Malaysia	Thailand
France	Mexico	Turkey
Germany	New Zealand	United Kingdom
Greece	Norway	United States
Holland		



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