



**Accurate Metering and Superior Handling of Abrasives  
in the Manufacture of Engineered Wood Products**



**Engineered Wood**



# Pressure Injecting and Mixing • Transfer • Spraying • Metering and Dosing

## Compact, Seal-less Pumps for Reliable Operation and Long Service Life

With more than 40 years of experience serving the engineered wood and composites industry, including major global companies, Hydra-Cell® pumps are performance-proved for reliable and durable operation in difficult applications that destroy lesser pumps. Hydra-Cell pumps require minimal maintenance, provide energy-efficient operation, and can run dry indefinitely, all resulting in a low total cost of ownership.

The unique attributes of Hydra-Cell pumps offer many distinct benefits in pumping resin adhesives, waxes, and chemicals used in the manufacturing process of engineered wood and composite products.



### Advantages of Hydra-Cell:

- Variety of models, wide range of capacities and ratings, plus extensive choices in materials of construction make Hydra-Cell ideally suited to a wide range of pumping applications.
- Accurate and easy-to-control because the flow rate is proportional to the pump speed.
- Pumps the full spectrum of low-to-high viscosity fluids.
- Seal-less design can tolerate abrasive solids and particulate matter of up to 800 microns in size depending on pump model.
- Operational efficiencies reduce energy costs.
- Able to run dry without damage (or additional maintenance) to the pump in case of accident or operator error.
- Tolerates non-ideal operating conditions.
- Minimizes maintenance and downtime because there are no mechanical seals, cups, or packing to leak or replace.
- Metering pump models designed to exceed API 675 performance standards and provide virtually pulse-free, linear flow without the use of expensive pulsation dampeners.

### Hydra-Cell Pumps Selection and Applications

Hydra-Cell positive displacement pumps are available in 15 pump models covering a wide range of flows and pressures.

Nine (9) Hydra-Cell seal-less pump models are ideal for transfer, spraying, and pressure injecting and mixing.



Six (6) metering pump models are ideal for metering and dosing, spraying, and pressure injecting and mixing.



Hydra-Cell pumps are used to produce a wide range of engineered wood and composite products.



- Plywood
- Trusses
- Wood Joists (TJIs)
- Medium-Density Fiberboard (MDF)
- Oriented Strand Board (OSB)
- Glued-Laminated Timber (Glulam)
- Cross-Laminated Timber (CLT)
- Oriented Strand Lumber (OSL)
- Finger-Jointed Lumber (FJL)
- Structural Composite Lumber (SCL) including: Laminated Veneer Lumber (LVL); Parallel Strand Lumber (PSL); Laminated Strand Lumber (LSL)



Typical Adhesives and Chemicals Pumped	Challenges in Pumping	The Hydra-Cell Advantage
<b>Formaldehyde</b> (Formalin)	Vapors are toxic.	<ul style="list-style-type: none"> <li>Seal-less pumping chamber provides 100% containment of vapors.</li> </ul>
<b>Urea Formaldehyde</b>	Urea reacts with water to form sulfuric acid.  Curing is time dependent.	<ul style="list-style-type: none"> <li>Corrosion-resistant materials of construction.</li> </ul>
	Premature polymerization under heat and pressure.	<ul style="list-style-type: none"> <li>No close tolerances or areas of high shear to create hot spots or dead spots that lead to hardening.</li> </ul>
	Vapors are an irritant.	<ul style="list-style-type: none"> <li>Seal-less design provides 100% containment of vapors.</li> </ul>
<b>Phenol Formaldehyde</b>	Premature polymerization under heat and pressure.	<ul style="list-style-type: none"> <li>No close tolerances or areas of high shear to create hot spots or dead spots that lead to hardening.</li> </ul>
<b>Melamine Resins</b>	Cure fast at relatively low temperatures.	<ul style="list-style-type: none"> <li>No mechanical friction heat to cause premature curing and creation of solid particles.</li> </ul>
<b>MDI</b> (Diphenylmethane Diisocyanate)	Toxic in the manufacturing process and polymerizes in the presence of water and water vapor.	<ul style="list-style-type: none"> <li>No close tolerances or areas of high shear to create hot spots or dead spots that lead to hardening.</li> </ul>
	Exposure to air or moisture causes crystallization and wear to dynamic seals.	<ul style="list-style-type: none"> <li>No cups, packing or dynamic seals to leak or wear.</li> </ul>
<b>Wax Emulsion</b>	Shear-sensitive wax formulation.	<ul style="list-style-type: none"> <li>Low-shear pumping action at the full range of pressures to pump and protect shear-sensitive wax formulations.</li> </ul>



Hydra-Cell pumps provide high-pressure spraying of glue required for manufacturing plywood.



Hydra-Cell pumps also offer metering capability for OSB production as shown in the delivery of waxes and resins.

# Lower Initial Investment and Lower Energy Costs

## Uses lower hp motors

- Although both pumps have the same pressure rating, the lighter, more compact Hydra-Cell has a higher flow rating while requiring a less expensive, lower hp motor. This means Hydra-Cell saves approximately 30% to 55% on initial costs.

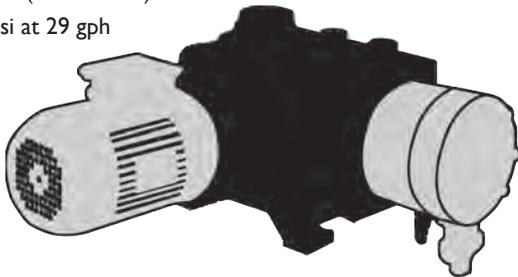


### Hydra-Cell metering pump

Weight: 83.5 lbs. (with motor)  
 Rated: 2500 psi at 36 gph  
 Motor: 1-1/2 hp

## Conventional metering pump

Weight: 220 lbs. (with motor)  
 Rated: 2500 psi at 29 gph  
 Motor: 5 hp



## Low power consumption - 85% to 90% energy efficiency

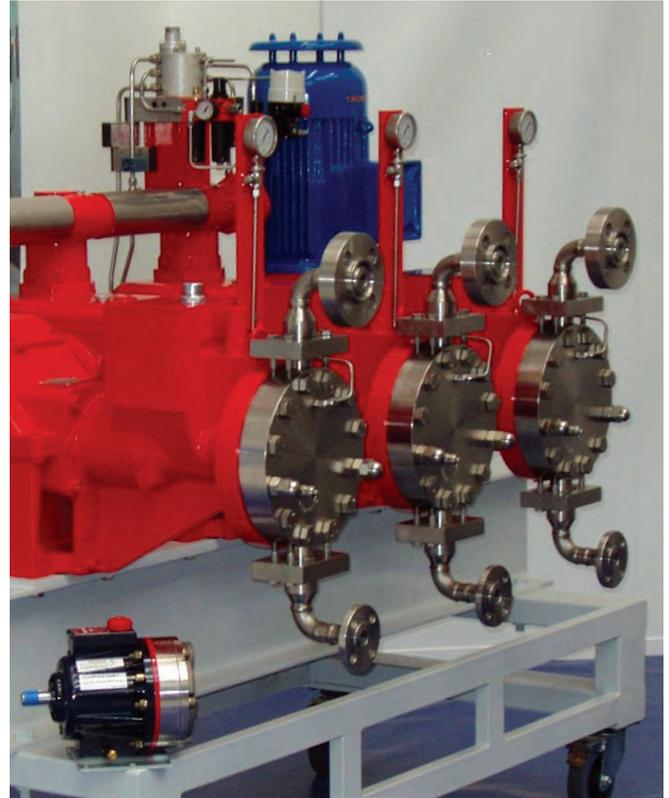
- The lower hp requirement of the Hydra-Cell pump achieves the same performance but with greater energy efficiency and less power consumption.
- Hydra-Cell positive displacement pumps show significant energy savings when compared to screw pumps and multi-stage centrifugal pumps (notably in cleaning and transfer applications).



The multiple-diaphragm liquid head of Hydra-Cell also allows a less expensive, energy-saving motor to be used.

## Small footprint for savings

- Compact design can mean up to 30% lower initial cost compared to other pumps.
- Space-saving design creates a smaller footprint for more efficient use of plant space.
- Easier to access for routine maintenance or servicing.



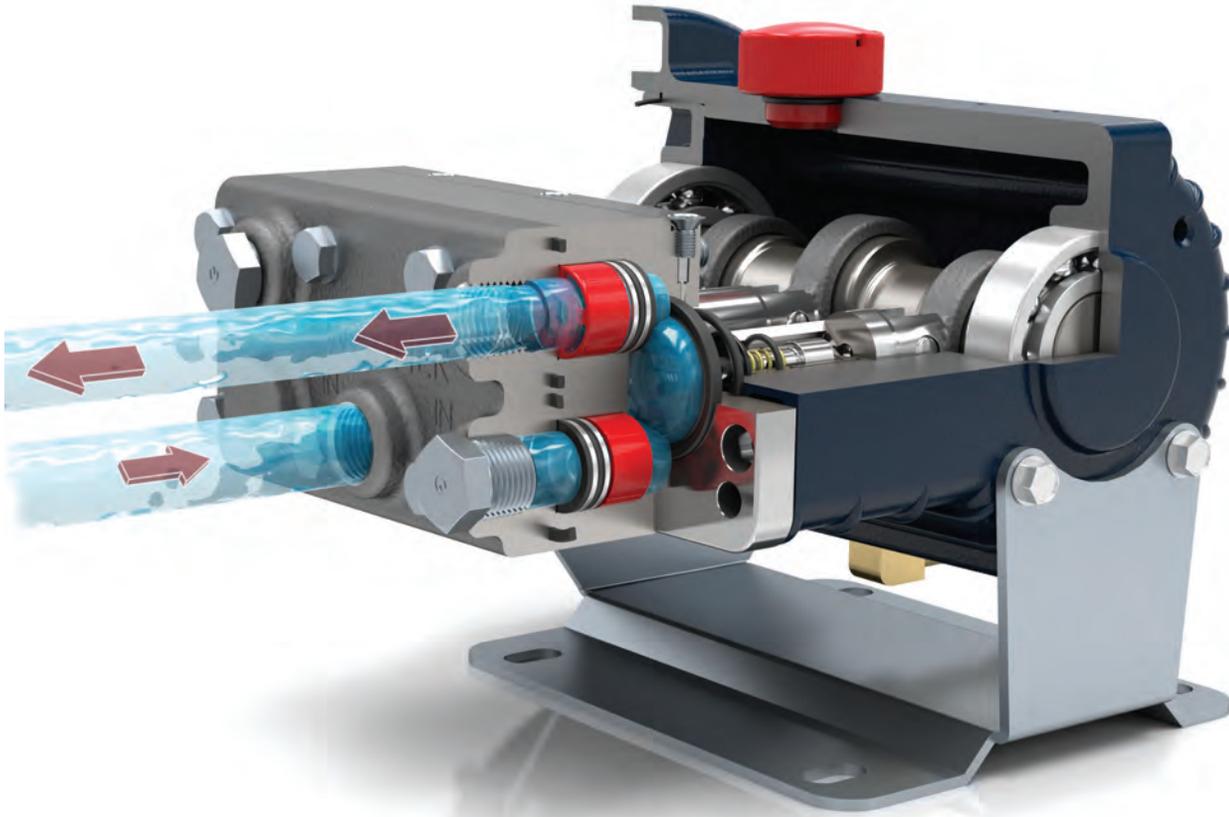
**Pumps Shown to Scale**

The Hydra-Cell and triplex metering pumps both have the same flow capacity and pressure rating; however, space-saving Hydra-Cell has a much smaller footprint. Conventional metering pumps can become oversized and overpriced at higher flow/pressure requirements.

## Minimal filtration

- Unlike gear pumps and screw pumps that wear excessively without fine filtration, Hydra-Cell has no dynamic seals or tight tolerances that need protection by fine filtration.
- Seal-less design handles abrasive particles up to 800 microns in size (depending on pump model) and up to 9 hardness on the Mohs scale.
- Can pump liquids with non-dissolved solids up to 40% depending on particle distribution.
- Unaffected by lapses in filtration, reducing costly pump repairs.
- Less need for costly filtration management and maintenance.

# Pumps Abrasives and Low-to-High Viscosity Fluids



Storage tanks for adhesives and chemicals may collect solid particles. Hydra-Cell's horizontal check valve orientation will handle abrasives and particulates without clogging or damage to the pump.

## Handles abrasives and particulates

- Seal-less design and spring-loaded, horizontal disk check valves provide superior handling of abrasive fillers and particulates.
- Reliably pumps acids and caustics which crystallize.
- Efficiently pumps liquids with solids.

## Runs dry without damage

- Running dry can damage or destroy gear pumps and screw pumps, requiring costly repairs or pump replacement, and resulting in lost production. Hydra-Cell pumps can run dry without damage to the pump.
- When an interruption in flow is caused by suction blockage or a valve closure, gear pumps and screw pumps can fail immediately. Hydra-Cell pumps equipped with Kel-Cell® Diaphragm Position Control (DPC) will not be affected, allowing for correction of the interruption.

## Handles low-to-high viscosity fluids

- Pumps thin to highly viscous liquids throughout the entire pressure range.
- Non-lubricating resins can be pumped reliably.

## Full containment and protection

- Seal-less pumping chamber provides complete containment. Resins are 100% sealed from the atmosphere, preventing resin crystal formulation.
- No leak path for toxic or irritating vapors.
- No mechanical friction to create heat that would cause premature curing of resins or creation of solid particles.

## Low-shear pumping action

- No close tolerances and low-shear pumping action means there is no breaking down of shear-sensitive polymers.
- No breaking down of wax emulsion.
- No creation of areas of high shear, hot spots or dead spots that can lead to hardening of liquid pumped.

# Accurate Metering and Dosing with Pulse-free, Linear Flow

## Accurate electronic flow control

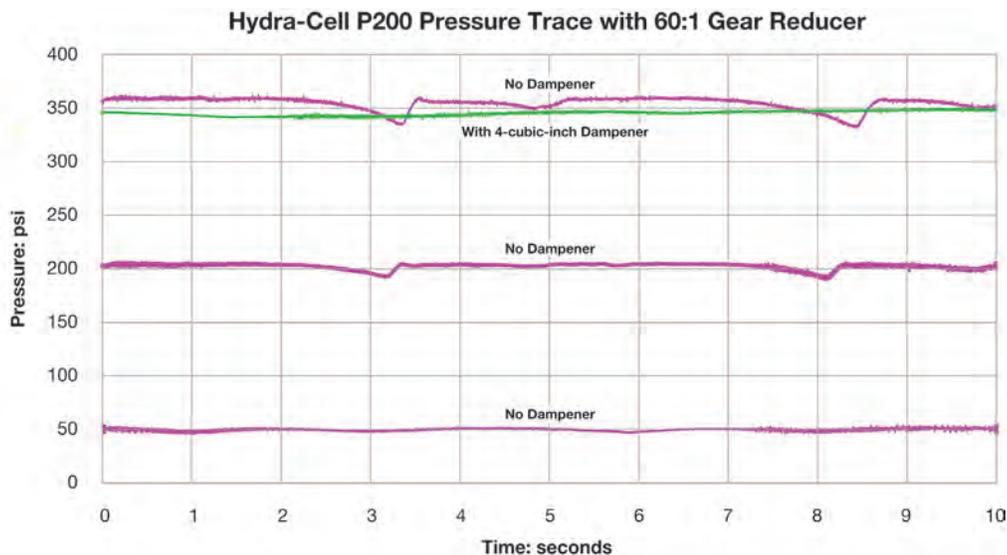
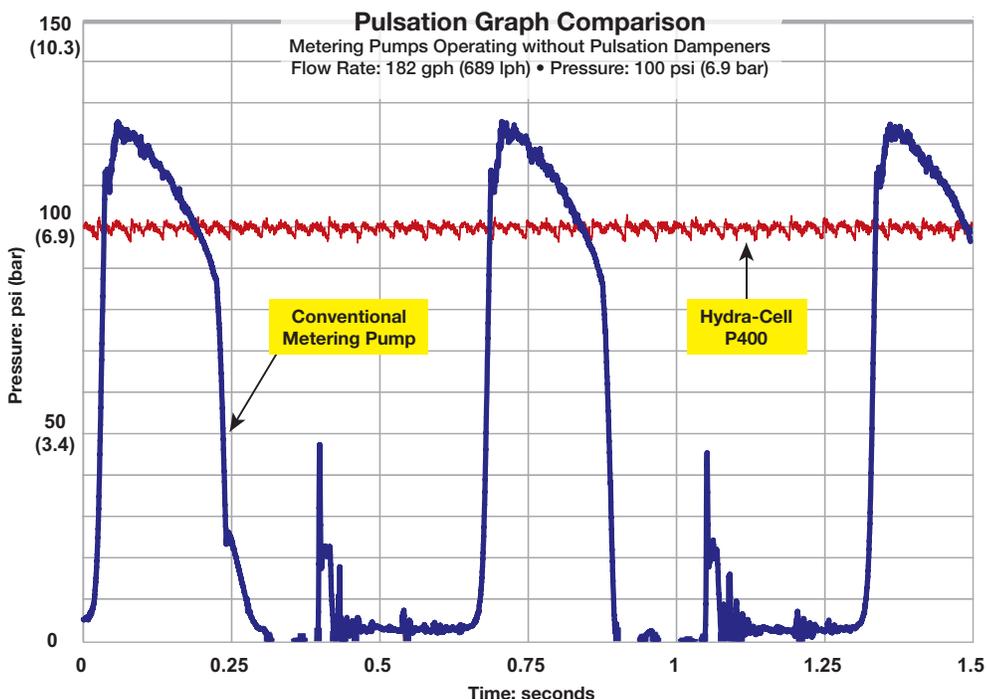
- Compared to pumps that rely on manual stroke adjustment or expensive actuators to change flow, Hydra-Cell metering pumps utilize speed control for greater accuracy throughout the turndown range.
- Can be equipped with solid-state electronic flow control where the volume per every stroke is constant and a known value.
- Electronic flow also provides easy calibration of the desired feed rate and a near instantaneous rate of change (0 to maximum rpm in 0.3 seconds).

	Standard Hydra-Cell Models	Hydra-Cell P Series Metering Pumps
Steady State Accuracy	±1%	±1% or better
Repeatability	±3%	±3% or better
Linearity	±3%	±3% or better

*Typical results for recommended speed range*

## Virtually pulse-free flow

- Multiple-diaphragm design minimizes pulsations, eliminating the need for expensive pulsation dampeners for most Hydra-Cell models.
- Reduces pipe strain.
- Enhances operating safety.
- Minimizes maintenance.
- Reduces acceleration/friction losses in the suction line.
- Provides accurate metering with linear, constant flow.
- Lowers system acquisition costs.



# One Versatile, Low-Maintenance Pump Design

## Adaptable to many applications

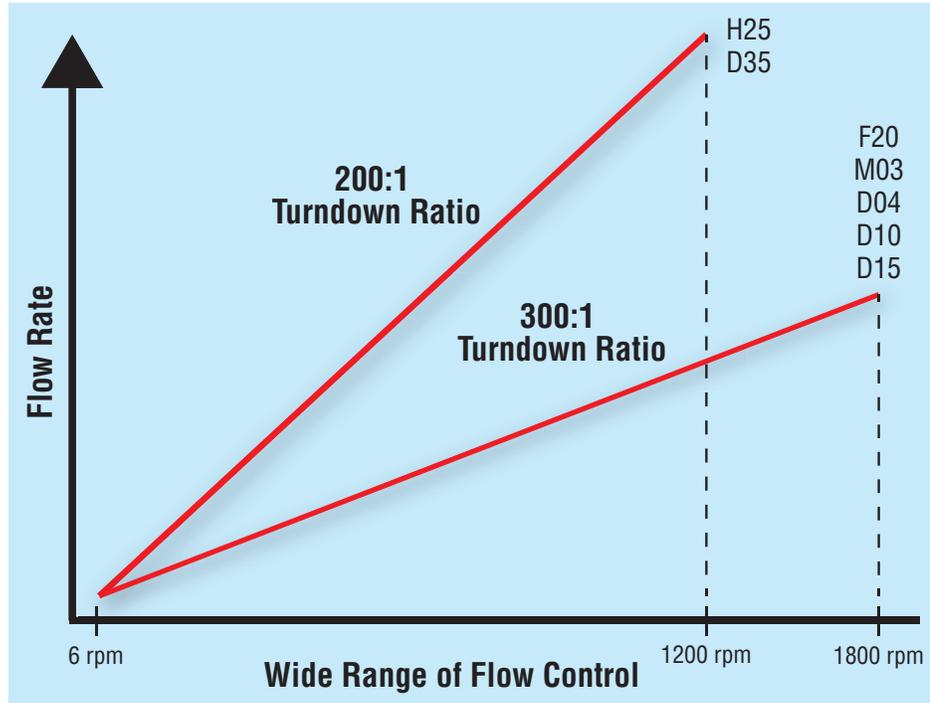
- One Hydra-Cell seal-less design with 15 models (9 seal-less; 6 metering) covers a wide range of operating flows and pressures.
- Can be fitted with ANSI, SAE or DIN flanges, IEC or NEMA motor mounts, or provided with ATEX certification to adapt to specific applications or meet international standards.
- Proven record of replacing different pump technologies with improved abrasives handling, less maintenance, and other benefits (as detailed on pages 8-9).

## Extensive operating range

- Shaft speeds from 6 rpm to 1800/1200 rpm, yielding a 300/200:1 turndown ratio.
- Maximum discharge pressures from 1000 to 2500 psi.
- Maximum flow rates for standard Hydra-Cell models from 1 to 37 gpm and for metering pumps from 27 to 895 gph.
- Minimum flow rates less than 0.15 gph at approximately 6 rpm.

## Simple pump head design

- Liquid head materials can be changed readily, enabling Hydra-Cell to be used for many different chemicals and liquids pumped.
- Minimal maintenance required with no special tools needed.
- Low cost of spare parts.



	Minimum	Maximum
<b>Flow Rate</b>	<b>0.0025 gpm (0.15 gph)</b>	<b>37 gpm (2220 gph)</b>
<b>Discharge Pressure</b>	<b>0 psi</b>	<b>2500 psi</b>

## Low maintenance

- No mechanical seals, cups or packing to leak, wear, or replace.
- No tight tolerances that could be susceptible to corrosion or damaged by solid particles.
- One design for all applications minimizes the need for standby pumps and spare parts, which optimizes training and service expertise and reduces inventory size and expense.
- Since there are no dynamic seals to wear or replace, Hydra-Cell pumps need little maintenance and will operate reliably under continuous duty at high pressure.
- Any maintenance or repair can usually be performed on-site.
- Can operate up to 6,000 hours between lubricating oil changes (compared to 1,500 hours recommended by many piston pump manufacturers).



# Hydra-Cell® Performance Advantages Compared to Other Types of Pumps

Magnetic Drive Pump Disadvantages:	Hydra-Cell Advantages:
<ul style="list-style-type: none"> <li>Running dry can result in damage to the pump.</li> </ul>	<ul style="list-style-type: none"> <li>Seal-less design enables Hydra-Cell to run dry without damage to the pump.</li> </ul>
<ul style="list-style-type: none"> <li>Requires monitoring to ensure fluid flow.</li> </ul>	<ul style="list-style-type: none"> <li>Ensures proper fluid flow without monitoring.</li> </ul>
<ul style="list-style-type: none"> <li>Designed to pump clean, low-viscosity fluids.</li> </ul>	<ul style="list-style-type: none"> <li>Low-shear pumping action handles higher viscosity fluids.</li> </ul>
<ul style="list-style-type: none"> <li>Higher power requirements and energy costs.</li> </ul>	<ul style="list-style-type: none"> <li>More energy efficient.</li> </ul>
<ul style="list-style-type: none"> <li>Can have a long horizontal footprint with higher acquisition and replacement costs.</li> </ul>	<ul style="list-style-type: none"> <li>Smaller footprint compared to some magnetic drive pumps.</li> <li>Easier to service.</li> <li>Lower acquisition, operating and replacement costs.</li> </ul>

Axial Piston Pump Disadvantages:	Hydra-Cell Advantages:
<ul style="list-style-type: none"> <li>Tight tolerances prevent use in fluids with particulates greater than 7 microns, especially with liquids (e.g. Isocyanates) that react with air and form crystals in the liquid.</li> </ul>	<ul style="list-style-type: none"> <li>Tolerances are not an issue because the seal-less design and spring-loaded, horizontal disk check valves enable Hydra-Cell to pump solids, abrasive fillers and particulates up to 800 microns in size (depending on pump model).</li> </ul>
<ul style="list-style-type: none"> <li>Filter and fluid reservoir necessary to maintain fluid cleanliness.</li> </ul>	<ul style="list-style-type: none"> <li>Inherently simple design separates the lubricating film from the pumped liquid.</li> </ul>
<ul style="list-style-type: none"> <li>Cylinder barrel can separate from valve plate, causing loss of lubricating film and damage to the barrel or plate.</li> </ul>	<ul style="list-style-type: none"> <li>Requires no external filtration of pumped fluids.</li> </ul>
<ul style="list-style-type: none"> <li>Back pressure can cause seal failure and mechanical damage.</li> </ul>	<ul style="list-style-type: none"> <li>No packing and seal-less design, so it will not leak from seal failure.</li> </ul>

Internal Gear Pump Disadvantages:	Hydra-Cell Advantages:
<ul style="list-style-type: none"> <li>Mechanical seals and packing require maintenance, and replacement or adjustment.</li> </ul>	<ul style="list-style-type: none"> <li>The seal-less design of Hydra-Cell means that there are no mechanical seals or packing to leak or replace.</li> </ul>
<ul style="list-style-type: none"> <li>Does not tolerate thin/non-lubricating liquids, and does not handle solids, abrasives or particulates well.</li> </ul>	<ul style="list-style-type: none"> <li>Seal-less pumping chamber and spring-loaded, horizontal disk check valves can pump solids, abrasive fillers and particulates while handling liquids thick or thin.</li> </ul>
<ul style="list-style-type: none"> <li>Designed for operating at low speeds and low pressure ratings.</li> <li>Low volumetric efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>Operates at low-to-high speeds and at higher pressures with higher volumetric efficiency.</li> </ul>
<ul style="list-style-type: none"> <li>Component wear reduces accuracy and efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>No internal gears to wear so there is less maintenance and spare part replacement.</li> <li>Accuracy and efficiency are more stable.</li> </ul>
<ul style="list-style-type: none"> <li>One bearing runs in the pumped fluid.</li> </ul>	<ul style="list-style-type: none"> <li>No bearings in the pumped fluid.</li> </ul>
<ul style="list-style-type: none"> <li>Unbalanced - overhung load on the shaft bearing.</li> </ul>	<ul style="list-style-type: none"> <li>Hydraulically balanced design so there is no overhung load.</li> </ul>



Compared to other pumps, Hydra-Cell requires minimal maintenance for manufacturers of engineered wood and composite products. Hydra-Cell has no mechanical seals, cups or packing that leak or need to be replaced and no internal gears to wear.

External Gear Pump Disadvantages:	Hydra-Cell Advantages:
<ul style="list-style-type: none"> <li>• Mechanical seals and packing require maintenance, and replacement or adjustment.</li> </ul>	<ul style="list-style-type: none"> <li>• The seal-less design of Hydra-Cell means that there are no mechanical seals or packing to leak or replace.</li> </ul>
<ul style="list-style-type: none"> <li>• Does not tolerate solids, abrasives, or particulates.</li> </ul>	<ul style="list-style-type: none"> <li>• Seal-less pumping chamber and spring-loaded, horizontal disk check valves can pump solids, abrasive fillers and particulates.</li> </ul>
<ul style="list-style-type: none"> <li>• Component wear reduces accuracy and efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>• No internal gears to wear so efficiency is more stable and there is less maintenance and spare part replacement.</li> </ul>
<ul style="list-style-type: none"> <li>• Contains four bushings/bearings in the fluid area.</li> </ul>	<ul style="list-style-type: none"> <li>• No bushings/bearings in the pumped fluid.</li> </ul>
<ul style="list-style-type: none"> <li>• Fixed end clearances are typical.</li> </ul>	<ul style="list-style-type: none"> <li>• Design does not rely on clearances.</li> </ul>
<ul style="list-style-type: none"> <li>• Efficiency drops as outlet pressure increases.</li> </ul>	<ul style="list-style-type: none"> <li>• Efficiency remains relatively constant over its range of operating pressures.</li> </ul>
<ul style="list-style-type: none"> <li>• Depends on pumped liquid for lubrication.</li> </ul>	<ul style="list-style-type: none"> <li>• Seal-less design does not require pumped liquid for lubrication.</li> </ul>

Conventional Metering Pump Disadvantages:	Hydra-Cell Advantages:
<ul style="list-style-type: none"> <li>• Use manual stroke adjusters or expensive actuators to control flow, which can result in pumping inaccuracies, lost motion, operator error, and a greater chance of leakage.</li> </ul>	<ul style="list-style-type: none"> <li>• Hydra-Cell employs optional Variable Frequency Drive (VFD) electronic flow control for greater accuracy and repeatability, eliminating lost motion, reducing the chance of operator error, and removing a potential leak path.</li> </ul>
<ul style="list-style-type: none"> <li>• Require expensive pulsation dampeners to minimize pulsations.</li> </ul>	<ul style="list-style-type: none"> <li>• Multiple-diaphragm design provides virtually pulse-free flow, so expensive pulsation dampeners may not be required.</li> </ul>
<ul style="list-style-type: none"> <li>• May only offer PTFE diaphragms, requiring frequent replacement due to stress and poor elastomeric memory.</li> </ul>	<ul style="list-style-type: none"> <li>• Available with a wide choice of cost-effective, elastomeric diaphragm materials.</li> </ul>
<ul style="list-style-type: none"> <li>• Large footprint to achieve required maximum flow and pressure.</li> </ul>	<ul style="list-style-type: none"> <li>• Can meet the same flow and pressure requirements with a much smaller footprint, saving space and costs.</li> </ul>
<ul style="list-style-type: none"> <li>• Different plunger and liquid end sizes needed to accommodate changes in operating pressures.</li> </ul>	<ul style="list-style-type: none"> <li>• Operates over a wide range of pressures without changes to the plunger or liquid end size.</li> </ul>
<ul style="list-style-type: none"> <li>• Integral gearing (necessary to prevent cross-contamination of actuating oil) is difficult and expensive to maintain.</li> </ul>	<ul style="list-style-type: none"> <li>• The simplicity of design means lower parts and maintenance costs.</li> <li>• Separate gearbox prevents cross-contamination of the actuating oil.</li> </ul>

# Hydra-Cell Positive Displacement Diaphragm Pumps are Ideal for Handling Abrasives and Particulates

DESIGNED & BUILT  
IN THE USA  
SINCE 1973



**Hydra-Cell**  
Seal-less Pumps

- Unmatched versatility for a wide range of pumping applications required in the production of engineered wood products.
- Features a seal-less design and horizontal disk check valves that enable the pump to handle abrasives and particulates that might damage or destroy other types of pumps.
- Simple, compact design reduces initial investment and lowers maintenance costs.
- Variety of models that can operate with very low to very high flow rates and discharge pressures up to 2500 psi.
- Available in a wide range of pump head materials of construction and diaphragm materials.
- Variety of options and accessories to optimize performance.

## Flow Capacities and Pressure Ratings

Model <sup>1</sup>	Maximum Capacity gpm (l/min)	Maximum Discharge Pressure psi (bar)		Maximum Operating Temperature F (C) <sup>3</sup>		Maximum Inlet Pressure psi (bar)
		Non-metallic <sup>2</sup>	Metallic	Non-metallic <sup>2</sup>	Metallic	
<b>F20</b>	1.0 (3.8)	350 (24)	1500 (103)	140° (60°)	250° (121°)	250 (17)
<b>M03</b>	3.1 (11.7)	350 (24)	1200 (83)	140° (60°)	250° (121°)	250 (17)
<b>D04</b>	2.9 (11.2)	N/A	2500 (172)	N/A	250° (121°)	500 (34)
<b>D10<sup>4</sup></b>	4.3 (15.1)	N/A	1500 (103)	N/A	250° (121°)	250 (17)
<b>D10</b>	8.8 (33.4)	350 (24)	1000 (69)	140° (60°)	250° (121°)	250 (17)
<b>D12</b>	8.8 (33.4)	N/A	1000 (69)	N/A	250° (121°)	250 (17)
<b>D15 &amp; D17</b>	15.5 (58.7)	N/A	2500 (172)	N/A	250° (121°)	500 (34)
<b>H25</b>	20.0 (75.9)	350 (24)	1000 (69)	140° (60°)	250° (121°)	250 (17)
<b>D35<sup>5</sup></b>	23.1 (87.5)	N/A	1500 (103)	N/A	250° (121°)	250 (17)
<b>D35</b>	36.5 (138)	N/A	1200 (83)	N/A	250° (121°)	500 (34)
<b>D66</b>	68.5 (259)	250 (17)	700 (48)	140° (60°)	250° (121°)	250 (17)

<sup>1</sup> Ratings are for cam design with the highest flow rate.

<sup>2</sup> 350 psi (24 bar) maximum with PVDF liquid end; 250 psi (17 bar) maximum with Polypropylene liquid end.

<sup>3</sup> Consult factory for correct component selection for temperatures from 160°F (71°C) to 250°F (121°C).

<sup>4</sup> D10 @ 790 rpm maximum.

<sup>5</sup> D35 @ 700 rpm maximum.

For complete specifications and ordering information, consult the Hydra-Cell catalog.

# Hydra-Cell Metering Pumps Exceed API 675 Standards and Provide “Pulse-free” Linear Flow



The IChemE Awards recognize innovation and excellence in making outstanding contributions to safety, the environment, and sustainable development in the chemical and bioprocess industries.

**Hydra-Cell**<sup>®</sup>  
METERING SOLUTIONS™

- Designed for use with Variable Frequency Drive (VFD) electronic flow control to maintain greater accuracy throughout the turndown range.
- Multiple-diaphragm design (except the P100) provides virtually pulse-free flow, eliminating the need to purchase expensive pulsation dampeners.
- Offers all the features and benefits of standard Hydra-Cell pumps (F/M/D/H Series pumps) including seal-less design, horizontal disk check valves, and space-saving, compact design.
- Variety of models that can operate with very low to very high flow rates and discharge pressures up to 2500 psi.
- Available in a wide range of pump head materials of construction and diaphragm materials.
- Every model is available with a variety of gear box ratios to meet your application needs.
- Variety of options and accessories to optimize performance.
- P200 models available with Mesamoll oil for use with many types of polymers and in instances where it will come into contact with water or an alkali.

## Flow Capacities and Pressure Ratings

Model <sup>1</sup>	Maximum Capacity gph	Maximum Discharge Pressure psi (bar)		Maximum Operating Temperature F (C) <sup>3</sup>		Maximum Inlet Pressure psi (bar)
		Non-metallic <sup>2</sup>	Metallic	Non-metallic <sup>2</sup>	Metallic	
<b>P100</b>	27.0	350 (24)	1500 (103)	140° (60°)	250° (121°)	250 (17)
<b>P200</b>	81.0	350 (24)	1000 (69)	140° (60°)	250° (121°)	250 (17)
<b>P300</b>	81.4	N/A	2500 (172)	N/A	250° (121°)	500 (34)
<b>P400</b>	242.8	350 (24)	1000 (69)	140° (60°)	250° (121°)	250 (17)
<b>P500</b>	425.9	N/A	2500 (172)	N/A	250° (121°)	500 (34)
<b>P600</b>	890.3	350 (24)	1000 (69)	140° (60°)	250° (121°)	250 (17)

<sup>1</sup> Ratings are for X-cam design.

<sup>2</sup> Consult factory for ratings in liters per hour (lph).

<sup>3</sup> 350 psi (24 bar) maximum with PVDF liquid end; 250 psi (17 bar) maximum with Polypropylene liquid end.

<sup>4</sup> Consult factory for correct component selection for temperatures from 160°F (71°C) to 250°F (121°C).

For complete specifications and ordering information, consult the Hydra-Cell metering pumps catalog.

# Hydra-Cell<sup>®</sup>

## Seal-less Pumps

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