## NUMBER OF 8 HOUR SHIFTS BETWEEN RESERVOIR REFILLS **4 LITER** Injector Volume Injector Volume Injector Volume Injector Volume No. of Cycle Options Options Options njectors Frequency HIGH MED LOW HIGH MED LOW HIGH MED LOW MED LOW 1562 1041 1488 2604 297 520 625 892 148 104 148 312 446 781 520 744 1302 12 Injectors 78 10 14 31 44 52 74 Every 3 Mins 10 14 17 24 Once a Min 520 99 208 297 347 496 34 Every 30 Mins 49 104 148 260 173 248 36 Every 3 Mins. 10 14 24 3 Once a Min 49 104 148 260 173 248 Once an Hour 17 130 24 43 52 86 124 Every 30 Mins 72 2 5 13 8 12 Every 3 Mins Once a Min.

# **Reservoir Selection**

The standard Hydracision® 2 liter reservoir can supply 36 lube points with oil every 30 minutes for 5 days without requiring a refill. Four reservoir sizes are available. The 2 liter polycarbonate reservoir can rest on its base or be mounted to a vertical surface. The 4, 12, and 20 liter reservoirs are steel and include a drain, low level switch, and liquid level gage for monitoring fluid level. The chart to the left estimates the number of 8 hour shifts that can be serviced by each size reservoir.









# 1 PurgeX Pumps

Accurate and reliable grease dispensing using positive displacement

# 2 Grease Reservoir

Pressurized reservoir ensures constant grease supply to pumps

# 3 Cycle Timer

Programmable lubrication interval from .6 seconds to 24 hours (also available with a PLC)



# 4 3-Way Solenoid

Regulates flow of air that powers PurgeX numns

# 5 Mounting Plate

Fits standard enclosures

# **PurgeX® Multi-Point Grease Lubrication**

Hydracision® is for use with 10 to 80 wt. oil and with many lubrication points typically 12 or more. PurgeX® pumps are a cost-effective alternative for fewer lubrication points or where grease is required. PurgeX® is powered by compressed air of 40 - 120 psi (shop air), a 3-way solenoid, and timer. PurgeX® dispenses up to .20 ml of fluid or grease with the same level of accuracy as Hydracision®. Both PurgeX® and Hydracision® avoid the complexities and safety concerns inherent to other lubrication systems that require operating pressures of 1,000 psi and more.



# Hydracision Hydraction **By Oil-Rite Corporation**

র্থ্য Hydracision Distributed by: **Major Sales and Service** 92 Fairbank Road, Clayton Victoria 3169 Phone: (03) 8558 1800 Fax: (03) 8558 1805 major@majoreng.com.au www.majoreng.com.au

Hydracision® distributes lubricant to many separate points – as few as 12 and as many as hundreds. It combines efficient hydraulic movement of fluid with the precision of positive displacement injection. The technology is patented by Oil-Rite Corporation, a leader in the design and manufacture of lubrication equipment since 1933. Hydracision® supplies the user with options, but doesn't overwhelm with calculations, complex components, or pages of schematics. It's simple to configure and use.

# **Single Line Delivery**

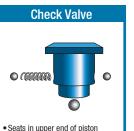
Fluid is routed to each lube point through one main outlet tube. Injectors connect directly to the main line or can be installed at remote locations with a tee connection and additional tubing. Fluid travels efficiently over large distances.

# **Programmable Cycle**

Injectors deliver lubricant when the pressure peaks. The injectors reset as the pressure is relieved during a timed cycle. The user can schedule the interval at which lubricant is dispensed using the on-board electronic control.

# **Industrial Lubrication**

Hvdracision® is a reliable, efficient lubrication method for printing presses, injection molding, packaging machinery, punching presses, assembly systems, canning operations, conveyors, manufacturing processes, and machine tools



- Seats in upper end of piston Square head allows free flow of fluid along outer surface
- Small bearings lock position until
- · Lower ball seals fluid path through



- along outer surface · 0-ring seals off fluid path at lowe
- end of piston · Horizontal hole intersects with vertical shaft to supply fluid to

# **Lower Valve** Forms lower portion of chamber

- Opens as fluid pressure increase Fluid flows freely around outer
- Closes as fluid pressure decreases

Fluid Pressure

on Check Valve Surface

(Elevated Pressure)

# **Components Held in Position** by Spring Force

(Neutral Pressure)

Seated in pistor

# Ball seated against

- Highest position Internal path sealed off from fluid supply
- Sealed on top (by piston) and bottom (by lower valve)
- **Lower Valve**  Pressed against and seals exit path



# stopped by narrow Compresses contents of chamber Sealed on ton Open on bottom Contents expelled



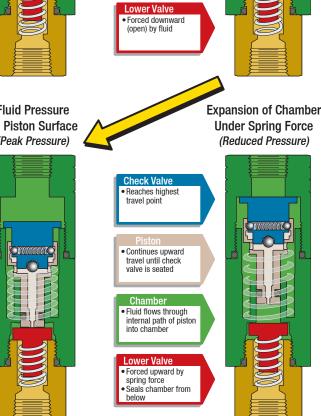




· Contacts lower valve cutting off fluid flow to outlet

Displaced by pistor

Lower Valve Contacts piston and seals fluid path



# **Patented Injector Technology**

Hydracision® supplies oil to many points using hydraulic power. An electric gear pump generates pressure. The injectors remain inactive until the pressure peaks at near 300 psi. The piston within each injector is driven down, ejecting the contents of the fluid chamber. The gear pump then deactivates and the pressure is relieved. Spring force within the injector resets the piston for the next dispensing cycle. The entire process can occur in as little as 5 seconds or be set to occur at larger intervals of hours or days.

The fluid chamber within the injector is the area directly below the piston, which is exactly the same size at the beginning of each cycle. This is important because the fluid dispensed with each cycle is from this chamber. The principal behind this technology is positive displacement.

The patented mechanics expel fluid and any inherent air. Each cycle begins with a "clean slate" to achieve maximum accuracy. Priming is automated and efficient, even with many injectors over large distances.

Hydracision<sup>®</sup> does not rely on a balance between the orifice at the outlet and system pressure to determine the amount of output. Positive displacement produces consistent output with every cycle.

Injectors operate under pressure generated by the central housing, yet each injector functions independently of the others. Disrupted output at any one lubrication point has no affect on the other injectors.

Compared to dual line systems, Hydracision® is easy to install and operate. Unlike progressive lubrication systems, Hydracision<sup>®</sup> does not completely shut down if a single lube point fails. And the positive displacement created by Hydracision® injectors eliminates touchy controls like those typical to restricted orifice valves.

Hydracision<sup>®</sup> dispensing is consistent and reliable. Over 10 million cycles were achieved in laboratory testing without significant wear or maintenance.

# Central Control . . . **Hundreds of Lube Points**

## Hydracision

The fluid reservoir comes in a standard 2 liter size and is clear polycarbonate. It is also available in steel construction for larger capacities of 4, 12, and 20 liters. The reservoir housing contains the gear pump, motor, low level switch, and programming panel. A pressure gauge at the outlet provides visual confirmation of the hydraulic cycle. A swing-away filler cap houses a removable 30 mesh strainer.

The injector has a standard dispensing volume of .20 ml. It can also be specified with smaller dispensing volumes of .14 ml and .08 ml. If volume adjustments are necessary after installation, the cap at the inlet side of the injector can be replaced to change the dispensing amount. The amounts do not have to be the same for each injector. Connections for the inlet and outlet are 1/8" NPT.

Operating instructions are engraved on the front of the unit. Light indicators advise the user when the unit is functioning and warn of a low fluid level condition. Longer or shorter dispensing intervals can be programmed on the PLC.

# **Accessories**

Hydracision® can be configured and operated without the need for specialized knowledge or training. Semi-flexible tubing and push-to-connect fittings minimize installation time.

Injectors connect to the central reservoir with 1/4" OD nylon tubing. A single outlet supplies fluid to all the injectors. The central line can be tapped into as many times as is necessary with push-to-connect fittings. Straight, 90° degree, and tee fittings are available.

The injector can be direct mounted to a lube point or plumbed to the point. A polypropylene bracket is available that can be secured with a single center screw or with screws in two flange locations. The injector snaps into the bracket.

# 1 Wall Mounting

Built-in brackets allow for mounting to a vertical surface

7/8" diameter supply

# 3 Display Panel

Backlit panel shows cycle countdown and menu options

One touch on/off button

# Rapidly fills supply lines to injectors

On-board logic allows quick changes to dispensing interval

# 2 Electrical Inlet

opening for power

4 Run Cycle Button

# 5 Prime Button

6 Program Access

# 7 Pump Status

Flashes when pump is priming and lights when pump is cycling

# 8 Oil Level Status

Flashes when oil level is low and lights when low oil level shuts down system

# 9 Pressure Gage

Displays outlet pressure

# 10 Fill Cap

Cap swivels open while remaining attached

# 11 Strainer

Traps debris during

# 12 Gear Pump

Pressurizes the outlet for uniform fluid distribution

# 13 Low Level Switch

Prevents operation when the oil is depleted

# 14 Reservoir

Transparent 2 liter polycarbonate reservoir

# Sample Part Number

B4560-02B1206072000000

# **Hydracision Packaged System**

Reservoir Capacity (02, 04, 12, 20 liters)

## Seal Material (B = Buna, V = Viton)

Voltage/Frequency (1206 = 120V/60Hz, 2305 = 230V/50Hz, 024D = 24VDC)

lumber of High Volume (.20 ml) Injectors

Number of Medium Volume (.14 ml) Injectors

Number of Low Volume (.08 ml) Injectors



