KP Presentation

KP1 and KP2 Features
The Godiva KP series of rear or midship mounted PTO driven centrifugal fire pumps offers the ultimate in unrivalled performance to 1500 LPM because only the KP offers:

- both a single-pressure and a multi-pressure option
- reduced whole life cost of ownership
- is easily installed and maintained
- all in the smallest, lightest package in the market.
KP Designations

**KP**
1 - Single Pressure  
2 - Multi-Pressure

**A** - Aluminium  
**B** - Bronze

**Example**
- KP1A  
  Single Pressure Aluminium KP
- KP2B  
  Multi-Pressure Bronze KP

Single versus Multi-pressure  
Pump Material
EN 1028 Rated Flows

- **Single Pressure** 1500 LPM
  - FPN 10-750
  - FPN 10-1000
  - FPN 10-1500
  - FPN 15-1000
- **Multi-pressure** 1500 LPM
  - FPN 10-750 / FPH 40-250
  - FPN 10-1000 / FPH 40-250
  - FPN 10-1500 / FPH 40-250
  - FPN 15-1000 / FPH 40-250

**NF S 61-515**

- 1000 L/min at 15 bar

**NFPA Rated Flows**

- **Single Pressure** 500 GPM
- **Multi-Pressure** 500 GPM
Size & Weight Advantage

- On average the **KP1** is **40% smaller** and **30% lighter**
- On average the **KP2** is **30% smaller** and **29% lighter**
KP Advantage

- Low and high pressure impellers can be maintained without disturbing the volute or discharge plumbing
- Gearbox ratios allows KP to be installed to suit many chassis and PTO configurations
- Gearbox and volute rotations for flexibility
- Mechanical seal for long life maintenance free operation
- Single piston primer for simplicity
Low Pressure

Maximum Flow at 10 bar
- KP1 – 2125 l/min
- KP2 – 1900 l/min

Maximum Flow
- KP1 – 2200 l/min
- KP2 – 1975 l/min

Maximum Pressure
- 17 bar
Low Pressure

- Self adjusting mechanical seal replaceable through suction side of the pump
- Polymer wear rings
- Light alloy pump
- Low pressure impeller constructed of corrosion resistant anodised aluminium alloy.
- Optional Bronze pump includes gunmetal low pressure impeller
Low Pressure

Rotatable Volute (KP1 Only)
When viewed from the suction flange
High Pressure (KP2 Only)

Rated at 250 l/Min at 40 Bar

- Capable of 400 l/min at 40 Bar
- Pressures up 54.5 Bar
- Flows up to 550 l/min
High Pressure (KP2 Only)

Manual Changeover Handle

High Pressure

Normal Pressure

Shown in normal pressure
Multi pressure pumps include HP manifold as standard:

- High pressure connection 1-1/4” BSP
- High pressure gauge connection ¼” BSP
- Internal pressure relief 54.5 bar
- High pressure filter Ø 0.75mm
- Suction Pressure relief valve
Thermal Relief Valve (TRV) is standard with KP2

- Standard 42°C
- Optional 74°C

Optional on KP1
High Pressure (KP2 Only)

Regenerative high pressure impeller, body, and HP cover plate constructed of Stainless Steel

- Simultaneous multi-pressure operation
- Single, short shaft for low and high pressure impeller
- Polymer labyrinth bushing between stages
- Capable of maintenance without disturbing the volute or discharge of the pump
• **Automatic Piston Primer**
  - 12 Volt
  - 24 Volt

• **No primer option**

• **Electric rotary vane primer (shipped loose)**
  - 12 Volt
  - 24 Volt
Single Piston Primer

• Dry running
• Integral Priming Valve
• Electromagnetic Clutch
  \((0.75 \text{ bar switch out})\)
• Primer seals bench maintainable
• Fail safe shutoff
  \((@ 3000\text{ rpm})\)
Piston Primer

Assembly removal bolts

Primer Discharge (32mm hose)

Clutch Cover

Tachometer Sender
Symmetrical Clockwise and Counter Clockwise volutes allow the low pressure discharge plumbing to be identical on either option.

Direction of rotation refers to when viewed on pump drive flange.
Installation

Constant input flange to install face for ease of installation
Integrated Gearbox

- 1.90:1
- 2.33:1
- 2.91:1

5 year maintenance interval when installed according to the installation manual

High performance synthetic gear lubricant required for 5 year maintenance interval [ISO VG 220]
Gearbox

When viewed from the suction volute

- Left
- Down
- Right
Gearbox

Oil level sight tube
• At a glance indication for oil level

OEM must ensure sight tube can be seen easily
All models include the cooler tube.

- Located in the same location of all gearbox orientations
- Spiral round brass cooling tube
Rotations

• Clockwise
• Counter Clockwise

Drive Flange Options

• SAE 1410
• DIN 100

**When viewed on the drive flange**
Discharge Manifolds

Optional for KP1 And KP2

Standard
• DN65 / 115 flange

Optional
• Low pressure discharge tee ("115" style flanges)
• Low pressure discharge tee with outriggers
Discharge Manifolds

Optional valves (Need optional tee with outrigger)
- 2.5” instantaneous
- 2.5” BSP
- 2.5” 65mm/75mm Storz

Optional Control
- Standard with handwheel
- Standard with crank handle
- Ball valve
- Continental with handwheel
- Continental with crank handle
- Dual flow valve (instantaneous only)
Suction Manifolds

Standard

• DIN175 / DN100

Optional (aluminium and gunmetal)

• 100mm Tank to suction flange
  (Left Inlet)
• 4.5” BSP 0° Droop
• 4.0” BSRT 0° Droop
• 4.0” Victaulic® 0° Droop
• 110 Storz 0° Droop
Foam Options

120 L/MIN RTP

Supplied loose for installer to integrate
KP1 LP Performance

Flow Rate - US gallons/min

<table>
<thead>
<tr>
<th>RPM</th>
<th>Flow Rate - litres/min</th>
<th>Total Head - bar</th>
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</thead>
<tbody>
<tr>
<td>40 kW</td>
<td>200</td>
<td>16</td>
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<tr>
<td>5500 rpm</td>
<td>400</td>
<td>14</td>
</tr>
<tr>
<td>30 kW</td>
<td>600</td>
<td>10</td>
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<tr>
<td>20 kW</td>
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<tr>
<td>5000 rpm</td>
<td>1000</td>
<td>6</td>
</tr>
<tr>
<td>10 kW</td>
<td>1200</td>
<td>4</td>
</tr>
<tr>
<td>4500 rpm</td>
<td>1400</td>
<td>2</td>
</tr>
<tr>
<td>5 kW</td>
<td>1600</td>
<td>0</td>
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</tbody>
</table>

Speeds are impellers speeds
Gearbox ratios available: 1.90:1, 2.33:1, 2.91:1
KP2 HP Performance

Flow - US gallons/min

Discharge Pressure - bar

5500 rpm
5000 rpm
4500 rpm
4000 rpm

110 kW
90 kW
70 kW
50 kW
30 kW

Speeds are impeller speeds
Gearbox ratios available: 1.90:1, 2.33:1, 2.91:1
KP2 Net Performance

Graph showing the relationship between Net Pressure and Flow for different Impeller speeds (4000 rpm, 4500 rpm, 5000 rpm) and powers (10 kW, 20 kW, 30 kW, 40 kW, 50 kW). The speeds are impeller speeds.

Gearbox ratios available: 1.90:1, 2.33:1, 2.91:1
Configuring

<table>
<thead>
<tr>
<th>CUSTOMER</th>
<th>ORDER:</th>
<th>MAKE:</th>
<th>ENGINE NO.</th>
<th>MFR.</th>
<th>MFR. NO.</th>
<th>ORDER DATE</th>
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**PUMP MATERIAL:**
- Stainless Steel
- Bronze

**GEN ISO & POSITION:**
- Generator ISO (if applicable)
- Generator position

**SERVICING VOLUME:**
- 250 rpm

**SPECIFICATION SHEET:**
- PRS SHEET

**PRIAM TYPE:**
- PRS SHEET
Questions?