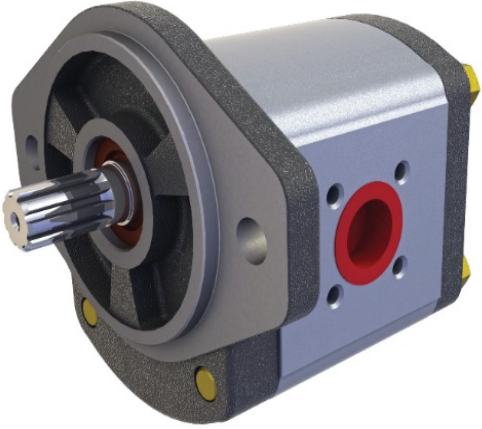
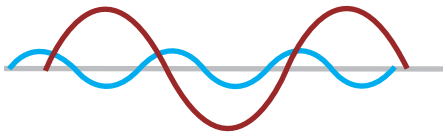


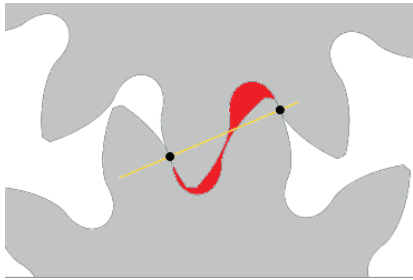
## 1PS LOW NOISE PUMP SERIES



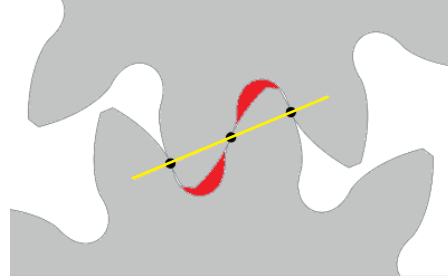
- **97% volumetric efficiency**
- **Reduced outlet pressure ripples by 75%**
- **Wide speed range**
- **Improved mechanical noise**
- **Reduced trapped oil volume**
- **Dual flank contact gears**



- Pressure ripple - Standart Gear Design
- Pressure ripple - 1PS Gear Design



Standard Gear Design



1PS Gear Design

Gear pumps produce high frequency pressure ripples giving rise to remarkable 'flow rate ripples' in suction and impulsion chambers. Flow rate ripples induce significant vibration amplitudes during operation. Generally, excitation of the vibration is the main source of noise in most hydraulic systems. Therefore, with dual-flank contact system, the pressure ripples of 1PS Low Noise Series Pumps are reduced by 75% compared to standard designs. 1PS dual-flank series offers high performance and low noise and ripple levels with new developed 12 teeth gear design.

| Pump Type | Displacement (cm <sup>3</sup> /rev) | Max. Rated Pressure (bar) | Intermittent Pressure (bar) | Peak Pressure (bar) | Max.– Min. Speed (rpm) |
|-----------|-------------------------------------|---------------------------|-----------------------------|---------------------|------------------------|
| 1PS040    | 4.0                                 | 250                       | 280                         | 300                 | 600-4000               |
| 1PS061    | 6.1                                 | 250                       | 280                         | 300                 | 600-4000               |
| 1PS082    | 8.2                                 | 250                       | 280                         | 300                 | 600-4000               |
| 1PS095    | 9.5                                 | 250                       | 280                         | 300                 | 600-3500               |
| 1PS119    | 11.9                                | 250                       | 280                         | 300                 | 600-3500               |
| 1PS140    | 14.0                                | 250                       | 280                         | 300                 | 600-3000               |
| 1PS168    | 16.8                                | 250                       | 280                         | 300                 | 500-3000               |
| 1PS192    | 19.2                                | 250                       | 280                         | 300                 | 500-3000               |
| 1PS229    | 22.9                                | 210                       | 240                         | 270                 | 500-3000               |
| 1PS250    | 25.0                                | 190                       | 225                         | 265                 | 500-2500               |
| 1PS281    | 28.1                                | 170                       | 200                         | 265                 | 500-2300               |
| 1PS310    | 31.0                                | 140                       | 180                         | 220                 | 500-2000               |

### Features

- Low noise, low pressure ripple and high efficiency gear design
- Displacement range from 4.0 cm<sup>3</sup>/rev to 31.0 cm<sup>3</sup>/rev
- Max. rated pressure 250 bar
- Max. speed 4000 rpm
- Designed with aluminum body, cast iron flanges and covers
- Optional sectional sealing for multiple pumps
- SAE, European, DIN and ISO flange, port and shaft options

### Benefits

- Low noise and low pressure ripple
- High efficiencies
- Multiple units
- Custom design

### Applications

- Steering and lift systems of electric trucks
- Light and heavy commercial vehicles
- Warehouse lift trucks
- Electric counterbalanced lift trucks
- Mobile equipments, telehandler
- Agricultural machines and mini loaders
- Hydraulic platforms
- Earth moving machines
- General industrial machines
- On Road / Off Road electric vehicles

Please contact the marketing and sales department for displacements above 16.8cc.  
Please contact the marketing and sales department for cast iron body types.