Q-IGPE

Series linear conjugate 4-quadrant internal gear pump
Sizes: 80, 100, 125 mL/r
Maximum pressure: 280 bar

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Features

1. Using a new optimized linear conjugate tooth profile, the noise is lower and the sound quality is more comfortable.
2. It adopts a multi-tooth number and integrated shaft tooth design, which results in smaller pressure fluctuations and lower pressure maintaining speed.
3. It adopts a symmetrical structure with exactly the same high-pressure and low-pressure areas. And specially optimized for 2-quadrant and 4-quadrant modes, Perfectly suitable for high and low pressure bi-directional rotation.
4. A symmetrical lubrication and balancing oil circuit is adopted to balance the internal pressure of the gear pump during operation.
5. It has first-class stability at high and low speeds, and has long life in high alternating load applications.
6. High pressure design, rated pressure reaches 21MPa, and maximum operating pressure reaches 25MPa.
7. It can adapt to heavily polluted oil and various media, and has a longer overall service life.
8. It can be widely used in hydraulic systems in industries such as plastic machines, shoe machines, die-casting machinery, etc., especially suitable for servo variable frequency drives energy saving system.

Ordering code

Q-IGPE	2		R			S10

Linear conjugate type 4-quadrant internal meshing gear pump = Q-IGPE

Series = 2

Displacement (mL/r)
80, 100, 125

Direction of rotation (viewed from shaft end)
clockwise and counterclockwise = R

Shaft extension
Flat key shaft = P
Spline shaft = S

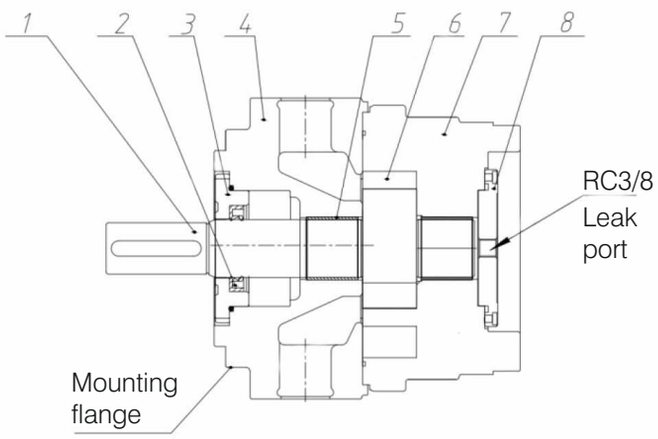
Sealed form
Fluorine rubber = V
Nitrile rubber NBR = W

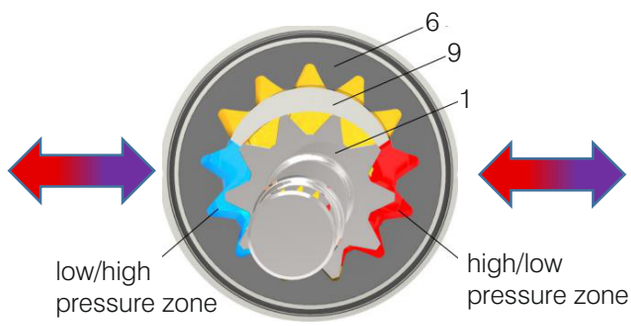
Design coding = S10

Structural description, Characteristics and Technical parameters

Structure

TH-IGPE series hydraulic pumps are linear conjugate 4-quadrant internal gear pumps with fixed displacement.
Its basic components are: (1) Gear shaft, (2) Skeleton oil seal, (3) Oil seal end cover, (4) Front cover, (5) Sliding bearing, (6) Inner Ring gear, (7) Pump body, (8) Rear end cover, (9) Crescent plate.





Technical parameters

Series				Q-IGPE2	
Specification			80	100	125
weight		kg	54	55.5	57
Speed range (when operating as pump[1])HLP hydraulic oil	n_{min}	r/min	200	200	200
	n_{max}	r/min	2500	2250	2000
Speed range (when operating as a motor)	n_{max}	r/min	4000	4000	4000
Displacement	V	mL/r	79.8	100.5	124.2
Flow[2]	q_v	l/min	118.3	148.9	184.1
Nominal pressure - output, continuous operation HLP hydraulic oil	P_N	bar	250	250	250
Intermittent operation[3]	P_{max}	Bar	280	280	280

(1) The minimum inlet absolute pressure is 0.98bar
(2)Measurement conditions n=1500r/min, p=1bar, V=46mm²/s, t=50°C
(3)Maximum 20 seconds/minute, but must not exceed 10% duty cycle

Technical data

Overview

Design	Linear conjugate type 4-quadrant internal gear pump
Connection type	Bore flange to SAE 2 standard according to ISO 3019-1
Pipe connection	Flange oil port
Drive mode	Flexible coupling
Direction of rotation (viewed from shaft end)	clockwise and counterclockwise

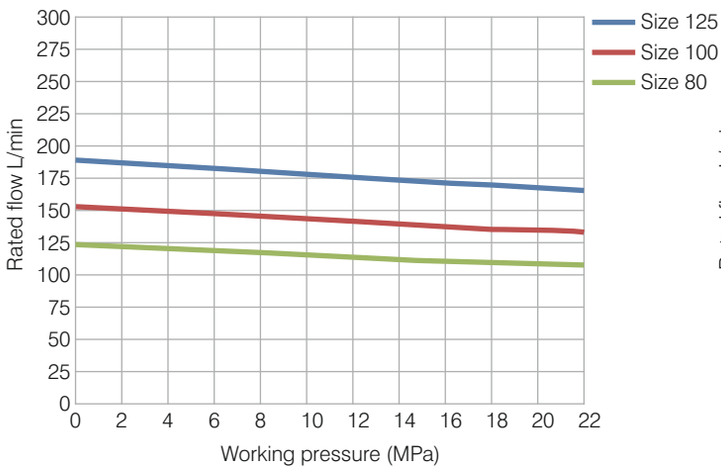
Hydraulic

Hydraulic oil		HLP - Mineral oil according to DIN52524 part 2
		HFD, HFB, HFC - hydraulic oil in compliance with VDMA24317 (1))
Hydraulic oil temperature range	°C	-20 to +80; ideal range (+30 to +60) For other temperatures please ask me Let's consult!
Ambient temperature range	°C	-10 to +60
Hydraulic oil		10 to 100
Viscosity range	mm^2/s	10 to 300 (please contact us for special circumstances)
Hydraulic oil recommended contamination level meets Cleanliness level of ISO4406©		Level 20/18/15 (2)
Maximum pressure of leakage port	Bar	1.5 (absolute value)
Total interface pressure		Port P1 + Port P2 ≤ allowable continuous pressure

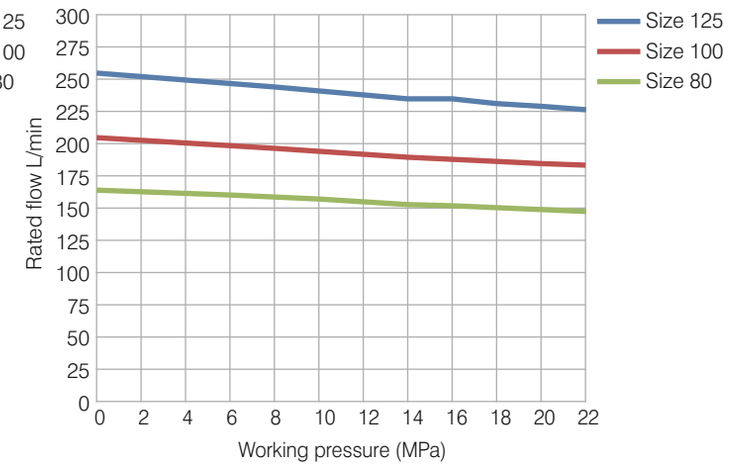
(1) For these media, restrictions for special hydraulic oils may apply.
(2) The specified component cleanliness level must be observed in the hydraulic system. Effective filtration can avoid failures and prolong the life of the hydraulic system. Component service life.

Flow and noise curve

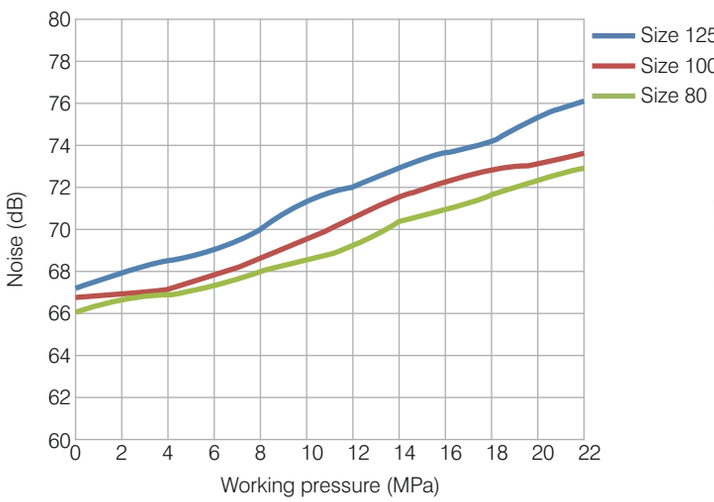
Flow pressure characteristics
(test conditions n=1500r/min,v=46mm²/s,t=50°)



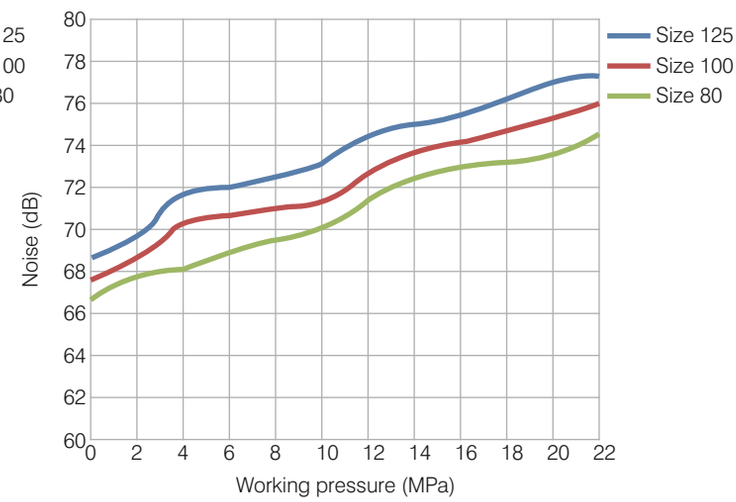
Flow pressure characteristics
(test conditions n=2000r/min,v=46mm²/s,t=50°)



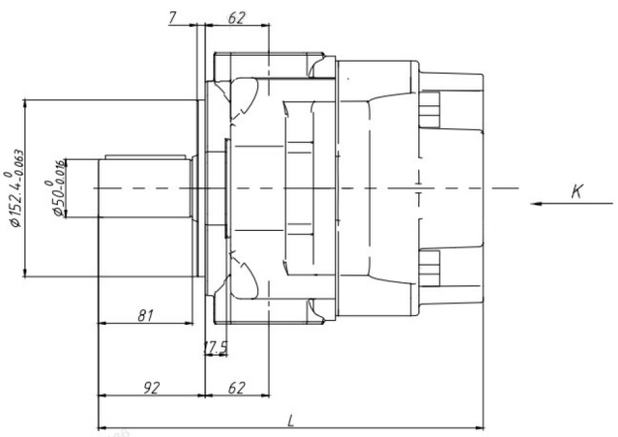
Noise pressure characteristics
(test conditions n=2000r/min,v=46mm²/s,t=50°)

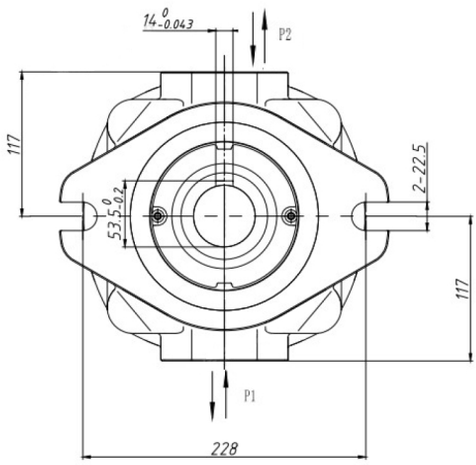


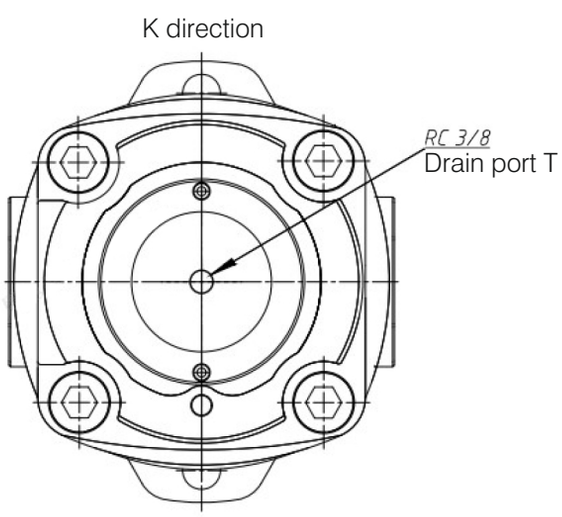
Noise pressure characteristics
(test conditions n=2000r/min,v=46mm²/s,t=50°)

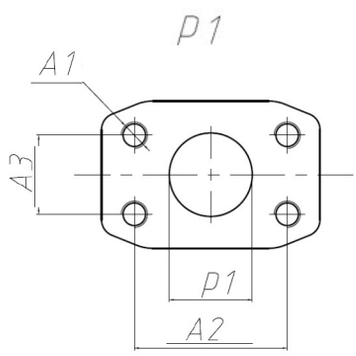


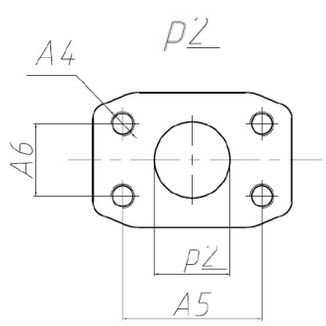
Unit Dimensions (Dimensions in mm)











Model	L	Oil port flange size							
		P1	A1	A2	A3	P2	A4	A5	A6
Q-IGPE2-080***-S10	303.5	Ø38	M12 depth 25	69.9	35.7	Ø38	M12, depth 25	69.9	35.7
Q-IGPE2-100***-S10	310.5								
Q-IGPE2-125***-S10	318.5								

General description

This project planning information refers to a basic overview of Oulide internal gear pumps
Content and guidance suggestions.
1.1 Intended use
OLED internal gear pumps must not be used in explosive environments.
1.2 Technical data
The system or machine manufacturer must ensure compliance with the permitted technical data and work make conditions.

Precautions for safe operation

Repairs performed by the user are not covered by the warranty. To ensure that the internal gear teeth for reliable operation and durability of the wheel pump, be sure to provide the drive unit, Machine or system maintenance schedule. The maintenance plan must ensure The Q-IGPE2 internal gear unit is under acceptable conditions during operation. In particular, it must be ensured that the following operating conditions are met:

- Required oil cleanliness
- Operating temperature range
- Oil level

In addition, the internal gear unit and system must be inspected regularly to understand the changes in the following conditions:

- Vibration
- Noise
- The temperature difference between the shell and the oil in the tank
- Foam in the fuel tank
- Is there any leakage?

Changes in the above conditions indicate possible component wear (e.g. drive motor, coupling, internal gear unit, etc.).
Be sure to identify and resolve the problem immediately.
To ensure high performance of internal gear units in a machine or system
To ensure operational reliability, we recommend that you continuously check the above items through automated means. software and allow the system to automatically shut down when operating conditions exceed the normal fluctuation range. close. The plastic parts in the coupling should be replaced regularly (at the latest 5 years).

The specified data is for product description purposes only and may not be deemed to be guaranteed unless expressly confirmed in the contract.

THM Huade Hydraulics Pvt Ltd
F-127, Phase-VIII, Focal Point,
Ludhiana-141010, Punjab (INDIA)
PH: 0161-2672777, 0161-2672778
E-mail: sales@thmhuade.com
Website: www.thmhuade.com

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