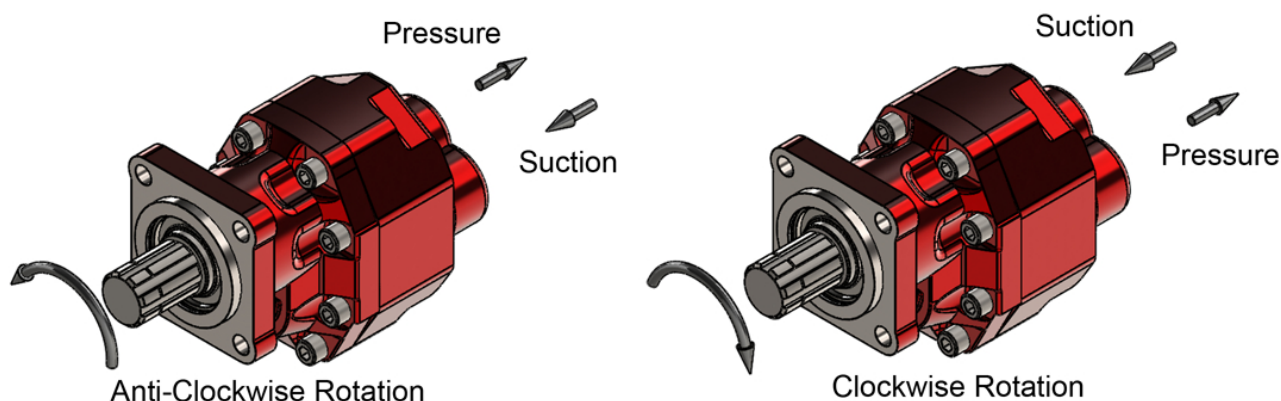


PRODUCT DATASHEET

4-BOLT ISO GEAR PUMPS

Bi-rotational gear pumps from 34 to 82 cm³/rev, with ISO 7653 flange and splined shaft for direct mounting on truck power take-offs.

Our 4-bolt ISO gear pumps bolt straight onto the gearbox PTO of tippers, hook-loaders, cranes and skip loaders. Every pump is bi-rotational: the same unit runs clockwise or anti-clockwise, so one part number covers either PTO rotation and the pressure and suction ports simply swap over. The EHASS 30 series runs from 34 to 82 cm³/rev across six sizes, at up to 260 bar continuous.



BI-ROTATIONAL — ONE PUMP FOR ANTI-CLOCKWISE OR CLOCKWISE PTO DRIVE

260 bar

Max continuous pressure (34 cm³)

34–82 cm³

Displacement per revolution

123 L/min

Theoretical flow (82 cm³ at 1500 rpm)

300 Nm

Max shaft torque

KEY FEATURES

- Bi-rotational as standard, so one pump suits clockwise or anti-clockwise PTOs
- Six sizes from 34 to 82 cm³/rev, up to 260 bar continuous
- Compact, robust housings for tipper, crane and hook-loader circuits
- ISO 7653 4-bolt flange with ø80 pilot and B8 × 32 × 36 splined shaft (DIN 5462 / ISO 14)
- G3/4 or G1 BSPP inlet and outlet ports, speeds from 300 to 2000 rpm
- Full troubleshooting guide included at the back of this datasheet

Ready to spec your pump?

Talk to us about sizing, PTO fitment, lead times and pricing.

CALL 01535 617880

EMAIL sales@cchdraulics.co.uk

WEB www.cchdraulics.co.uk

PRODUCT DATASHEET

Range Overview

Choose a pump by displacement, pressure and speed. Flow figures are theoretical (displacement × max speed) – allow for volumetric efficiency.

RANGE SELECTION

Code	Displacement	Max continuous pressure	Speed min – max	Theor. flow at max rpm	Ports (inlet / outlet)
G30034SF135	34 cm ³ /rev	260 bar	300 – 2000 rpm	68 L/min	G3/4 BSPP
G30043SF135	43 cm ³ /rev	250 bar	300 – 1800 rpm	77 L/min	G3/4 BSPP
G30051SF135	51 cm ³ /rev	200 bar	300 – 1800 rpm	92 L/min	G1 BSPP
G30061SF135	61 cm ³ /rev	195 bar	300 – 1600 rpm	98 L/min	G1 BSPP
G30073SF135	73 cm ³ /rev	190 bar	300 – 1600 rpm	117 L/min	G1 BSPP
G30082SF135	82 cm ³ /rev	180 bar	300 – 1500 rpm	123 L/min	G1 BSPP

OPERATING CONDITIONS

Inlet pressure	0.3 – 2 bar
Operating viscosity range	12 – 100 cSt
Fluid temperature	-40 °C to +145 °C
Max shaft torque	300 Nm

FLUID CLEANLINESS & FILTRATION

Working pressure	NAS 1638	ISO 4406	Filter (β _x = 75)
Above 200 bar	Class 11	20/17	25 μm
Up to 200 bar	Class 12	21/18	40 μm

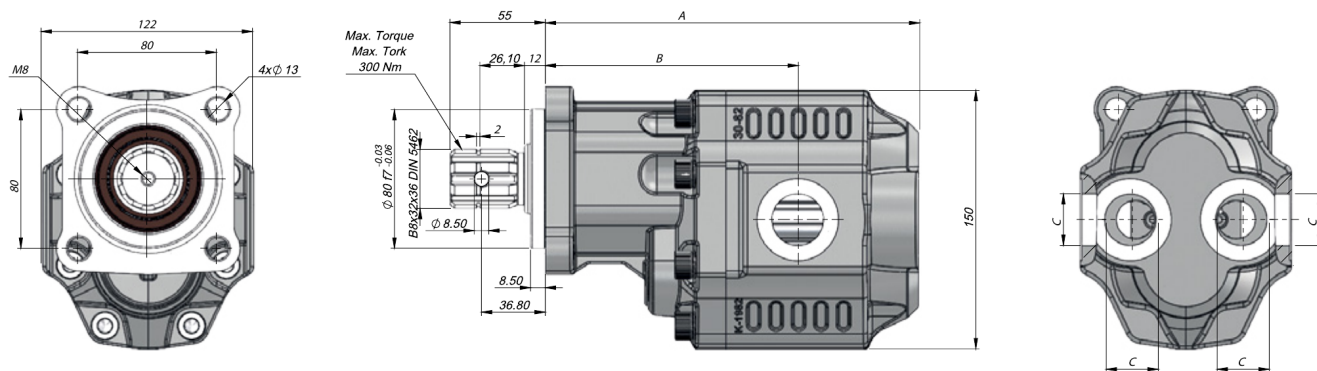
Keep the hydraulic fluid at or better than these cleanliness levels to protect pump life.

PRODUCT DATASHEET

EHASS 30 Dimensions

General arrangement of the EHASS 30 series 4-bolt ISO bi-rotational gear pumps — all dimensions in millimetres.

GENERAL ARRANGEMENT — EHASS 30 SERIES



Code	Displacement	A (mm)	B (mm)	Ports C (inlet / outlet)
G30034SF135	34 cm ³ /rev	187	130.5	G3/4 BSPP
G30043SF135	43 cm ³ /rev	193	135.5	G3/4 BSPP
G30051SF135	51 cm ³ /rev	198	135.5	G1 BSPP
G30061SF135	61 cm ³ /rev	206	142	G1 BSPP
G30073SF135	73 cm ³ /rev	211	144	G1 BSPP
G30082SF135	82 cm ³ /rev	216	147.5	G1 BSPP

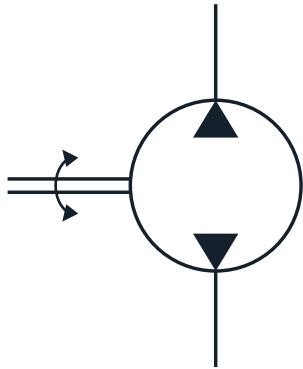
Reference	Dimension	Notes
Flange width	122 mm	4-hole ISO 7653 truck PTO flange
Mounting holes	4 × ø13 on 80 × 80	Square pattern
Pilot	ø80 f7	−0.03 / −0.06
Drive shaft	B8 × 32 × 36	DIN 5462 / ISO 14, M8 centre thread
Max shaft torque	300 Nm	
Overall height	150 mm	

PRODUCT DATASHEET

Function & Specification

Direction of rotation, installation guidance and specification summary for the 4-bolt ISO gear pump range.

HYDRAULIC SYMBOL



Fixed displacement, bi-rotational

BI-ROTATIONAL OPERATION

One pump, either rotation. The pressure and suction ports swap over with the direction of drive, so the same pump suits clockwise and anti-clockwise PTOs. Check the PTO rotation before connecting the hoses, and size the suction hose for the port on the suction side.

BEFORE START-UP

Bleed the pump after fitting and fill the tank to the correct level. Use a suction line of adequate bore with no restrictions, and keep the PTO and pump shafts parallel with the drive joint forks in line.

SPECIFICATION SUMMARY

Pump type	External gear pump, bi-rotational, open circuit
Sizes	34, 43, 51, 61, 73 and 82 cm ³ /rev
Max continuous pressure	180 – 260 bar, depending on size
Speed	300 rpm min.; 1500 – 2000 rpm max., depending on size
Max shaft torque	300 Nm
Mounting	ISO 7653 4-bolt flange, ø80 pilot
Drive shaft	B8 × 32 × 36 spline to DIN 5462 / ISO 14
Ports	G3/4 BSPP (34, 43 cm ³) or G1 BSPP (51 – 82 cm ³)
Hydraulic fluid	Mineral oil, 12 – 100 cSt; –40 °C to +145 °C

PRODUCT DATASHEET

Troubleshooting Guide

Common gear pump faults, where to look and how to put them right.

EQUIPMENT WORKS UNEVENLY

Check whether the flow in the supply hose from the pump is pulsing. Oil marks on the pump and suction line can point to an air leak. Check the oil level in the tank and whether the oil is foaming.

CAUSE	ACTION
1 Pump not bled after fitting	Bleed the pump
2 Air leaking into the equipment	Repair the air leak
3 Low oil level	Fill to the correct level
4 No canister around the return filter	Change the return filter
5 Oil tank ventilation area too small	Fit a tank with better ventilation
6 Dirt in the pressure or suction valve	Remove the dirt
7 Defective pressure or suction valve	Replace the pump

UNEVEN WHEN STARTING AND AT HIGH SPEED

Check whether the pump is cavitating. This shows as flow pulsation and pump noise that drop away when the speed is reduced.

CAUSE	ACTION
1 Suction line bore too small	Replace the suction line
2 Restriction in the suction line	Remove the restriction
3 Blocked suction strainer	Replace the suction strainer
4 Oil too viscous	Change to a lower-viscosity oil
5 Oil tank pressure below ideal	Make sure the tank vent is not blocked

OIL IS ABNORMALLY HOT

Run the pump off-load at working speed and measure the back pressure in the supply line.

CAUSE	ACTION
1 Restriction in the supply or return line	Change to larger-diameter lines
2 Dirty pressure or return filter	Replace the filter inserts
3 Excessive oil flow	Reduce speed or fit a smaller pump
4 Relief valve opening at too low a pressure	Adjust or replace the valve
5 Oil not viscous enough	Change to a higher-viscosity oil
6 Oil tank too small	Fit a larger oil tank
7 Low oil level	Fill to the correct level
8 High continuous output	Fit an oil cooler

EQUIPMENT HAS INSUFFICIENT FORCE

Check that the pressure reaches the correct value whenever a function is operated to its limit.

CAUSE	ACTION
1 Relief valve opening at too low a pressure	Adjust or replace the valve
2 Pump is worn	Replace the pump

PRODUCT DATASHEET

Troubleshooting Guide (cont.)

Common gear pump faults, where to look and how to put them right.

EQUIPMENT ABNORMALLY SLOW UNDER LOAD

Fit a flow meter close to the pump and check the flow. If it is correct off-load but abnormally low under load, check the following.

CAUSE

- 1 Relief valve opening at too low a pressure
- 2 Pump is worn

ACTION

- Adjust or replace the valve
- Replace the pump

NOISE FROM THE PUMP

Check whether the pump is cavitating: flow pulsation and noise drop away when the speed is reduced. If the noise is there at all speeds, suspect wear.

CAUSE

- 1 Suction line bore too small
- 2 Restriction in the suction line
- 3 Blocked suction strainer
- 4 Oil too viscous
- 5 Oil tank pressure below ideal
- 6 Worn pump (noise at all speeds)

ACTION

- Replace the suction line
- Remove the restriction
- Replace the suction strainer
- Change to a lower-viscosity oil
- Make sure the tank vent is not blocked
- Replace the pump

OIL LEAKING FROM THE PUMP

Locate the oil leak.

CAUSE

- 1 Leak at the suction connection
- 2 Leak at the shaft seal
- 3 Leak at the vent bolts

ACTION

- Change the O-ring and tighten the hose clips
- Replace the shaft seals
- Tighten the vent bolts and replace the seal washers

THE PUMP VIBRATES

Check whether the pump vibrates even without flow pulsation, i.e. the equipment runs unevenly.

CAUSE

- 1 Play in the drive shaft
- 2 Wrong joint angles on the drive shaft
- 3 Imbalance in the drive shaft
- 4 Joint forks not aligned

ACTION

- Replace or repair the drive shaft
- Make sure the PTO and pump shafts are parallel
- Replace or repair the drive shaft
- Turn the splined joint so the forks are in line