



HJ2 Pump

The central lubrication pump type HJ (Helios Junior) is a manually operated high-pressure pump used for the supply of grease or oil in progressive systems, or when equipped with one pressure line and one relief line, for small two-line lubrication systems.

Part No.	Description
603-40558-3	HJ2L-30 left-hand lever 1 outlet
603-40558-4	HJ2R-30 right-hand lever 1 outlet
603-40558-1	HJ2AL-30 left-hand lever 2 outlets*
603-40558-2	HJ2AR-30 right-hand lever 2 outlets*

\*for progressive systems

## Technical Data

	HJ2	HJ2A
number of outlets	1	2
lubricant output per lever movement	2 cm <sup>3</sup> (0.122 in <sup>3</sup> )	2x1 cm <sup>3</sup> (2 X 0.061 in <sup>3</sup> )
operating pressure	300 bars (4350psi)	
hand force at maximum pressure	300 N	
suitable lubricants	grease up to NGLI 3	
outlet threaded connection	G 1/4 female (BSPP)	
reservoir capacity	3 liters (183 in <sup>3</sup> )	
weight empty	8.7 kg (19 lbs)	8.9 kg (19.6) lbs
dimensions (L x W x H)	410 x 140 x 393 mm (16.1 x 5.5 x 15.5 in)	

## Accessories

Part No.	Description
223-13052-1	check valve for 6 mm tube
223-13052-2	check valve for 8 mm tube
223-13052-3	check valve for 10 mm tube

# ZPU01/02 Pumps



Depending on the number of pump elements, these high-pressure, high-volume pumps can be used for following applications:

1. As a supply pump for small to midsize two-line systems ('F' version with filter block, safety valve and pressure gauge) in conjunction with a pressure-controlled change-over valve. The supply range lies within a radius of approximately 50 m from the pump depending on the ambient temperature and type of lubricant.
2. As a supply pump for progressive and single-line systems ('F' or 'V' version).

The principle of operation is similar to the very reliable and efficient multi-line pump 215. They are available with or without an ultrasonic level control and come with a 3-phase multi-range motor for 380 – 420 volt at 50 Hz or 440 – 480 volt at 60 Hz or with a free shaft end for use with other motors. Gear ratio is 100:1.



ZPU02 ... F

## Popular Models

Part No.	Description	Motor	Reservoir Size			Level Control	Pump Element
			Liters	In <sup>3</sup>	Lbs.		
661-40692-3	ZPU02-M100-010XYBU-F-380-420/440-480	3-phase	10	610	20	yes	bracket with 2 elements, filter block, pressure gauge and safety valve
661-40710-3	ZPU02-M100-030XYBU-F-380-420/440-480	3-phase	30	1830	60	yes	
661-40644-7	ZPU02-M100-010XN-F-000	none	10	610	20	no	
661-40710-7	ZPU01-M100-010-XYBU-E-380-420/440-480	3-phase	10	610	20	yes	1 element only

## Technical Data

<b>Number of Elements</b>	<b>1 or 2</b>
threaded connection:	
E version	G 1/4 female (BSPP)
V or F versions	for 10 mm tube or G 3/8 female (BSPP)
filling connection	G 3/8 female (BSPP)
maximum operating pressure	300 bars 4350 psi
	"E" version must be protected with pressure relief valve (not included)
suitable lubricant	grease up to NGLI 2 / NLGI 3 on request oil with a viscosity of min. 20 cSt
lubricant output per pump element (output increases by 20% for 60 Hz applications)	800 cm <sup>3</sup> / hour (49 in <sup>3</sup> / hour)
reservoir sizes	10 or 30 liter (2.6 or 8 U.S. gal)
temperature range	-20° to 70° C (-4° to 158° F)

## Required Pressure Relief Valve for Single Element "E" Version

Part No.	Description	Tube Diameter	Pressure
624-25478-1	relief valve	6 mm tube	200 bars (2900 psi)
624-25479-1	relief valve	6 mm tube	350 bars (5076 psi)
624-25480-1	relief valve	8 mm tube	200 bars (2900 psi)
624-25481-1	relief valve	8 mm tube	350 bars (5076 psi)
624-25482-1	relief valve	10 mm tube	200 bars (2900 psi)
624-28483-1	relief valve	10 mm tube	350 bars (5076 psi)

## Dimensions

Reservoir Size	Height	Width	Depth
10 liters (without low-level control)	514 mm (20.25 in)	379 mm (15 in)	317 mm (12.5 in)
30 liters (without low-level control)	754 mm (29.75 in)	431 mm (17 in)	377 mm (15 in)
low-level sensor	30 mm (1.2 in)	125 mm (5 in)	65 mm (2.75 in)

# Identification Code Models ZPU01/02



## Description

### Type Identification Code

Examples:

ZPU02      M    100    030    XYBU    F    380-420/440-480

#### Basic Type of Central Lubrication Pump:

ZPU01 : pump with 1 element  
ZPU02 : pump with 2 elements

#### Drive Assemblies:

M : three-phase flanged motor  
motor designation with extension, e.g.  
for voltages frequencies, explosion-  
proof design is added to the pump  
type code.

100 : gear ratio = 1 : 100

#### Reservoir Assemblies:

010 : reservoir capacity 10 l  
030 : reservoir capacity 30 l

XY : reservoir for grease and oil  
N : reservoir without level monitoring  
BU : reservoir with low and high-level control  
(ultrasonic sensor)

Note: The ultrasonic sensor is equipped with 2 switching points. If only one low-level control is desired, the corresponding contacts must be connected. A 24VDC supply voltage is required for the sensor.

#### Pump Elements:

E : element(s)  
V : bracket with element(s) and pressure gauge  
F : bracket with element(s), filter block,  
pressure gauge and safety valve

#### Extension for Motor Designation:

380-420/440-480 : standard multi-range motor for 380-420V/50 Hz  
and 440-480 V/60 Hz  
000 : pump without motor, however with connecting flange

# ZPU08/14/24 Pumps



The high-pressure ZPU08, ZPU14 and ZPU24 pumps are primarily used in two-line systems or as a supply pump.

The pump element, made of hardened steel, operates as a piston pump with two pistons operating in opposite directions which draw in lubricant alternately and feed it through the outlet hole to the

pressure line. The outlet channels of the high-pressure pistons are controlled by a floating piston.

These state-of-the-art pumps are extremely serviceable and reliable. All main components are easily accessible. The pumps come standard with a pressure relief valve, a check valve, a lubricant filter, and a pressure gauge.



ZPU08-40XL

## Popular Models

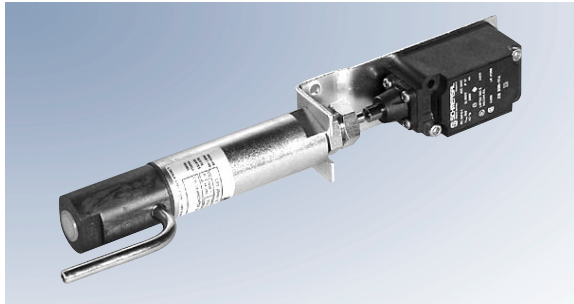
Part No.	Description	Reservoir Size			Level Control	Motor
		Liters	In <sup>3</sup>	Lbs.		
605-40272-5	ZPU08G-40XL-380-415, 420-480	40	2441	80	yes	3-phase
605-40273-3	ZPU08G-100XB-380-415, 420-80	100	6102	200	yes	3-phase
605-40276-3	ZPU14G-100XB-380-415, 420-480	100	6102	200	yes	3-phase
605-40279-3	ZPU24G-100XB-380-415, 420-480	100	6102	200	yes	3-phase

## Technical Data

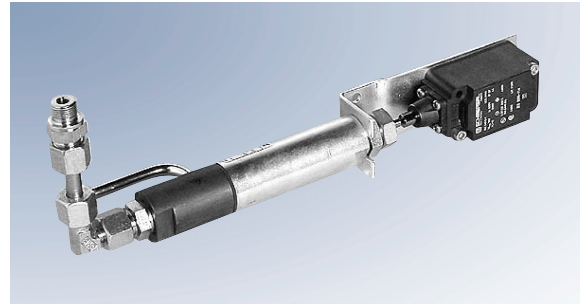
Model	ZPU08	ZPU14	ZPU24
lubricant output (output increases by 20% for 60 Hz applications)	8 liters/hour (2.1 U.S. gal/h)	14 liters/hour (3.7 U.S. gal/h)	24 liters/hour (6.3 U.S. gal/h)
	488 in <sup>3</sup> /h	854 in <sup>3</sup> /h	1464 in <sup>3</sup> /h
drive speed	60 rpm	100 rpm	180 rpm
operating pressure	400 bars (5800 psi)		
connection thread	pressure line	G 3/4 female (BSPP)	
	relief line	G 3/4 female (BSPP)	
	filling line	G 3/4 female (BSPP)	
direction of rotation of the drive	optional		
reservoir capacity	40 or 100 liters/(10 or 26 U.S. gal)		
	2441 in <sup>3</sup> or 6102 in <sup>3</sup>		
lubricant filter	filter area 5.1 cm <sup>2</sup>		
	grade of filtration 280 μm		
overpressure valve	fixed setting to 410 bars (5946 psi) tamper-proof		
operating temperature	-20° to 80 °C		(-4° to 176 °F)

## Dimensions

Reservoir Size	Height	Width	Depth
40 liters	760 mm (30 in)	670 –735 mm (26–29 in)	410 mm (16 in)
(without low-level control)		depending on version	
100 liters	975 mm (38.5 in)	760–825 mm (30–32.5 in)	500 mm (20 in)
(without low-level control)		depending on version	



623-25461-2



623-37243-1

## Accessories

Part No.	Description
623-25456-2	electric pressure switch 75 – 170 bars (1087 – 2465 psi)
623-25461-2	electric pressure switch 160 – 400 bars (2320 – 5800 psi)
623-37243-1	electric pressure switch kit for 40 l reservoir versions (includes part number 623-25461-2 and required connection fittings)
623-37242-1	electric pressure switch kit for 100 l reservoir versions (includes part number 623-25461-2 and required connection fittings)
623-37567-1	electronic pressure transducer kit for 40 and 100 l reservoir versions (includes electronic pressure switch with digital display, part number 234-13194-4, see accessories)



Electronic Pressure Transducer Kit  
623-37567-1

# Identification Code Pump Models ZPU08, ZPU14 & ZPU24



## Model Designation

The complete pump unit is defined by a model designation (mentioned on the nameplate).

Examples of model designations:

ZPU08	F	40	XL	000	
ZPU08	G	40	XYBU	380-415/420-480	C
ZPU14	G	100	XB	500	
ZPU14	S	40	XYBU	380-415/420-480	

### Lubricant Output:

08	= 8 dm <sup>3</sup> h <sup>-1</sup>
14	= 14 dm <sup>3</sup> h <sup>-1</sup>
24	= 24 dm <sup>3</sup> h <sup>-1</sup>

### Type of Drive:

F	: with free shaft end
G	: with flanged gear motor construction IMB5
S	: with worm gear and 3-phase motor construction IMV1
SF	: with worm gear and shaft end, suitable for 3-phase motor construction

S and SF only available for model 08

### Reservoir Capacity:

40	= 40 dm <sup>2</sup>
100	= 100 dm <sup>2</sup>

### Reservoir Design:

XN	= grease reservoir, standard design
XV	= grease reservoir with high-level control
XVD	= grease with high-level control and cover interlock switch
XL	= grease reservoir with low-level control
XB	= grease reservoir with high and low-level control
XYBU	= reservoir for grease or oil with low-level control via ultrasonic sensor

### Supply Voltage of the Motors:

380-415/420-480 = standard multi-range motor for 380-415/420-480V 50 Hz and 420-480V 60 Hz

500	= 500V, 50 Hz
000	= unit without motor
other voltages on request	

C = version as feed pump for COBRA