

# Dual stage pumps type RZ

Dual stage pumps consist of a high pressure section (radial piston pump, HP) and a directly coupled low pressure section (gear pump, LP). The pump is usually driven by one single electric motor, which is connected with the dual stage pump by means of a flange and a coupling.

Complete hydraulic control systems (e.g. for presses) can be created by directly mounting dual stage valves or valve banks to the cover plate of the hydraulic power pack.

**Nomenclature:** Dual stage pump (radial piston and gear pump)

**Design:** Individual pump  
Pump complete with motor  
Hydraulic power pack

**$P_{max}$ :** 700 bar (radial piston pump)  
150 bar (gear pump)

**$Q_{max}$ :** Radial piston pump  
91.2 lpm (high pressure)  
( $V_g = 64.18 \text{ cm}^3/\text{rev}$ )  
Gear pump  
135 lpm (low pressure)  
( $V_g = 89.6 \text{ cm}^3/\text{rev}$ )

**$V_{max \text{ tank}}$ :** approx. 470 l



## Basic types and general parameters

Basic type RZ.. with

High pressure section (like radial piston pump type R)

Design delivery flow  $Q_{pu}$  (lpm) and max. pressure  $p_{max}$  (bar) <sup>1)</sup>  
(approximate reference value at 1450 rpm)

	700 bar			450 bar			250 bar		
	Design	$Q_{pu}$ (lpm)	$p_{max}$ (bar)	Design	$Q_{pu}$ (lpm)	$p_{max}$ (bar)	Design	$Q_{pu}$ (lpm)	$p_{max}$ (bar)
7631	RZ 0,18...			RZ 0,64...			RZ 2,27...		
6910	RZ 0,9...			RZ 2,5...			RZ 5,1...		
6911	RZ 1,4...			RZ 5,8...			RZ 11,8...		
6912	RZ 2,7...			RZ 8,2...			RZ 16,8...		
6914	RZ 8,0...			RZ 23,0...			RZ 47,0...		
6916	RZ 12,7...			RZ 34,5...			RZ 70,0...		

Low pressure section (gear pump type Z)

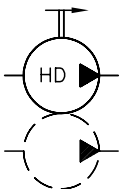
Size  $Q_{pu}$  (lpm) and max. pressure  $p_{max}$  (bar) <sup>1)</sup>

	120 bar			80 bar			40...60 bar		
	Size	$Q_{pu}$ (lpm)	$p_{max}$ (bar)	Size	$Q_{pu}$ (lpm)	$p_{max}$ (bar)	Size	$Q_{pu}$ (lpm)	$p_{max}$ (bar)
/1	5.2			8.8			11.3		
/2	12.3			16			37		
/3	24			110			135		

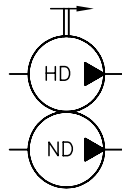
<sup>1)</sup> The parameter listed here represent only a choice from a variety of possibilities.

## Symbols

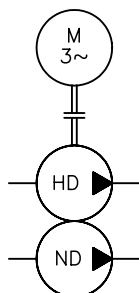
Individual pump, only high pressure section, low pressure section is customer furnished



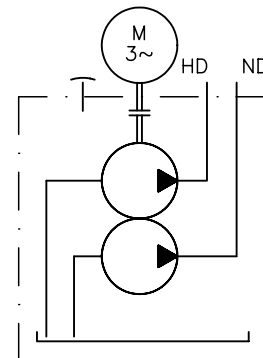
Individual pump, high pressure section and low pressure section



Pump complete with motor



Hydraulic power pack



**Additional parameter**

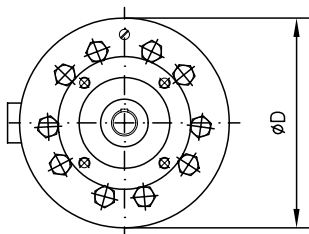
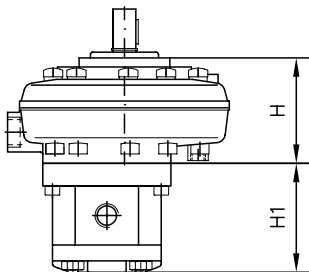
Design	Max. permissible drive power	Combination with gear pumps, size	Tank sizes (optional)
	$P_N$ (kW) <sup>2)</sup>		
7631	1.5	1	13 ... 42
6910	3	2	22 ... 80
6911	11	2 and 3	32 ... 400
6912	11	2 and 3	60 ... 400
6914	22	2 and 3	100 ... 400
6916	30	2 and 3	100 ... 400

**Order examples****RZ 2,5/2**

Individual pump, high pressure section  $Q_{HP} = 2.5$  lpm at 1450 rpm,  $p_{max} = 450$  bar, connection hole pattern for gear pump (size 2) (Gear pump is customer furnished)

**RZ 0,9/2 - 16/B 75 NE 20 - 650/30 - V 1,5**

Passing hydraulic power pack consisting of dual stage pump, high pressure section  $Q_{HP} = 0.9$  lpm at 1450 rpm,  $p_{max} = 650$  bar, low pressure section  $Q_{LP} = 16$  lpm, tank B 75 ( $V_{usable}$  approx. 80 l), directly mounted two stage valve type NE (high pressure 650 bar, low pressure 30 bar) and electric motor  $P_N = 1.5$  kW

**Dimensions****Individual pump**

Design	H	D	m (kg)
7631	58	130	3.1
6910	85.5	175	3.1
6911	85	185	6.3
6912	125	185	10.5
6914	221	218	23.9
6916	320	238	39.1

**Gear pump**

Size	H1	m (kg)
/1	70 ... 86	1.2
/2	96 ... 132	3.1
/3	140 ... 178	8.4

All dimensions in mm, subject to change without notice!

**Additional versions**

- Pumps complete with motor and hydraulic power packs also available without motor
- Cover plate version for installation in customer furnished tanks
- Version of the high pressure pump (type RF) with 2-hole SAE-flange for e.g. Co. VICKERS type 20V, 25V
- Type RGZ.. utilizes slide bearing for increased the service life

<sup>2)</sup> Industry standard motor shape IM B 35 for pumps complete with motor or IM B 5 for hydraulic power packs

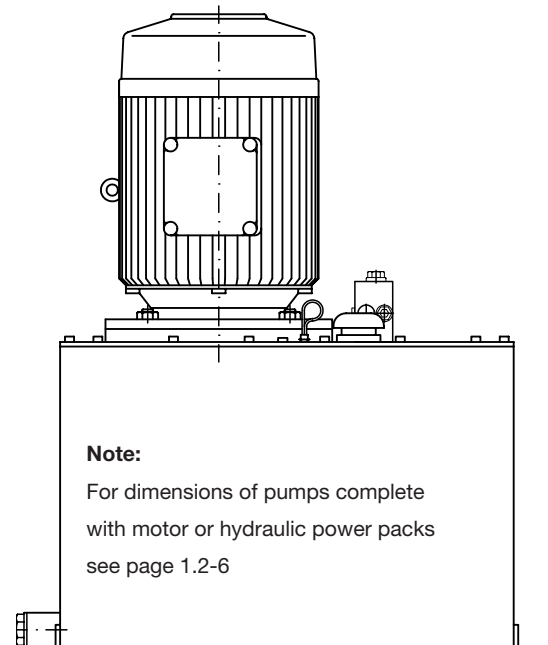
<sup>3)</sup> Minimum size determined by overall height of the pump

**RZ 8,0/3 - 110**

Individual pump, high pressure section  $Q_{HP} = 8.0$  lpm at 1450 rpm,  $p_{max} = 700$  bar,

Gear pump (size 3),  $Q_{LP} = 110$  lpm,  $p_{max} = 80$  bar

(Attention: Take into account max. permissible power rating!)

**Hydraulic power pack****Note:**

For dimensions of pumps complete with motor or hydraulic power packs see page 1.2-6

**Additional information**

- Dual stage pump type RZ D 6910
- Pumps with motor only and hydraulic power packs type RZ D 6910 H
- Radial piston pump type R and RG D 6010
- Hydraulic power packs type R and RG D 6010 H
- Dual stage pump type RF D 7410
- Two stage valves type NE D 7161
- Switching valves type CR D 7150
- see also section "Devices for special applications" (Press controls, Devices for up to 700 bar)

For section and page of the additionally listed devices, see type index