



# RADIAL PISTON DOUBLE PUMPS

## Model : 2R\*\*\*\*

Ref. No. D 04894  
Release 03 / 2016

ENGINEERING - 1 of 4

A Polyhydron Group Company

### Description

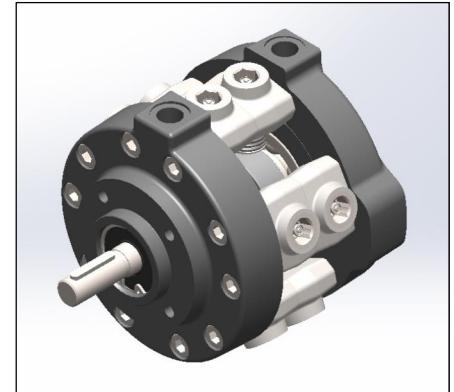
Model 2R\*\*\*\* are rugged oil immersed type Radial Piston Double Pumps with 3, 5 or 7 pumping elements in each section of the pump. These pumps are valve controlled therefore there no restriction on direction of rotation of the pump.

Pumps with model code 2RE\*\*\* have extension shaft for through drive and are available with extension bracket assembly for coupling a pump having standard flange as per ISO 3019/1.

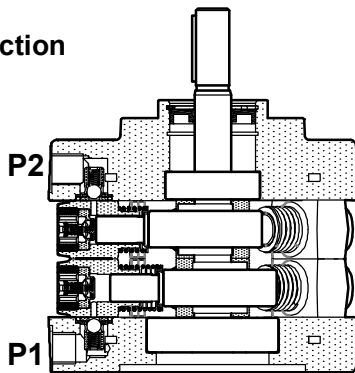
They are available with 18 displacements and 6 pressure ratings.

Flows can be combined internally, externally to feed one circuit or used independently to feed two circuits.

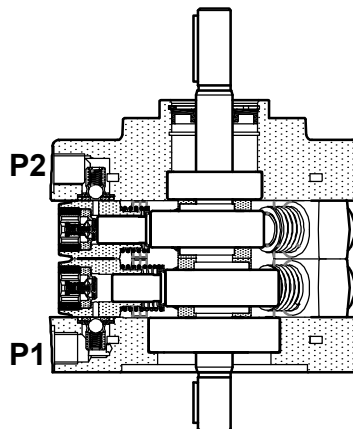
These pumps give fixed output per revolution of the shaft.



### Section

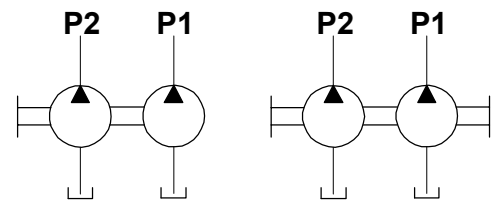


Model : 2R\*\*\*



Model : 2RE\*\*\*

### Hydraulic symbol



Model : 2R\*\*\*

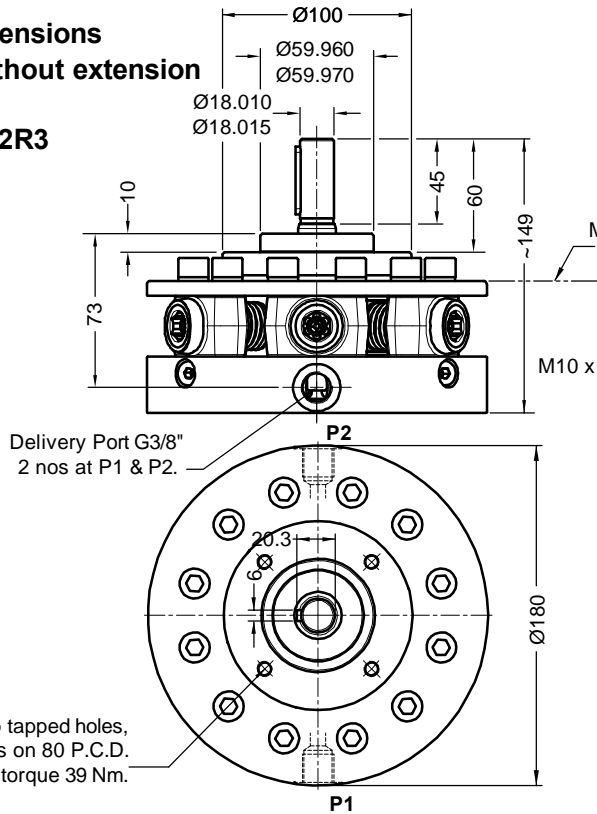
Model : 2RE\*\*\*

### Technical specifications

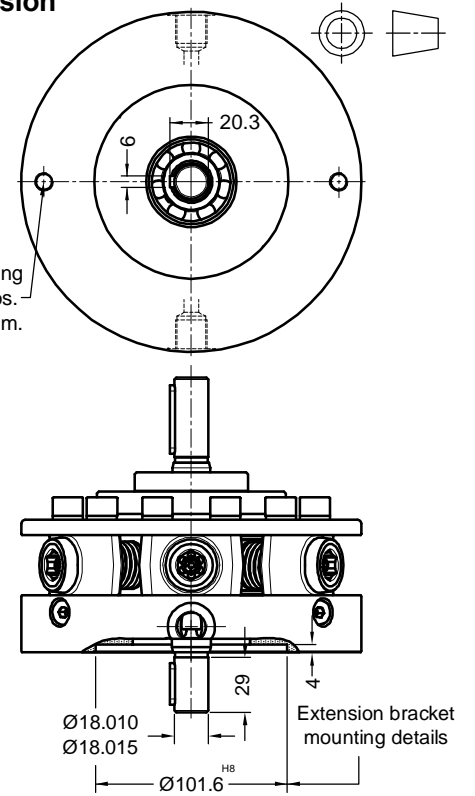
Designation	:	2R basic radial piston double pump. 2RE radial piston double pump with extension shaft.
Design	:	Radial piston, valve controlled.
No. of pistons	:	3, 5 or 7 elements each at P1 and P2 port depending upon flow requirement.
Mounting	:	Face mounting.
Interface	:	Factory standard.
Direction of rotation	:	2R - No restriction on directions of rotation. 2RE - Depends upon the direction rotation of pump attached.
Connection	:	Suction port - Sucks oil directly from tank no suction port is provided. Delivery (port P1 and P2) - G3/8 female.
Speed range	:	300 to 2000 r/min.
Flow and Pressure	:	Refer Table no.1
Torque limitations	:	Input drive shaft - 75 Nm Extension shaft - 53 Nm
Hydraulic medium	:	Mineral oil.
Temperature range	:	-20°C to + 80°C.
Viscosity range	:	10 cSt to 380 cSt.
Fluid cleanliness required	:	ISO 4406 20/18/15 or better.
Mass	:	Model : 2R3 2RE3 2R5 2RE5 2R7 2RE7 Kg : 10.39 10.47 13.36 14.10 14.71 15.45



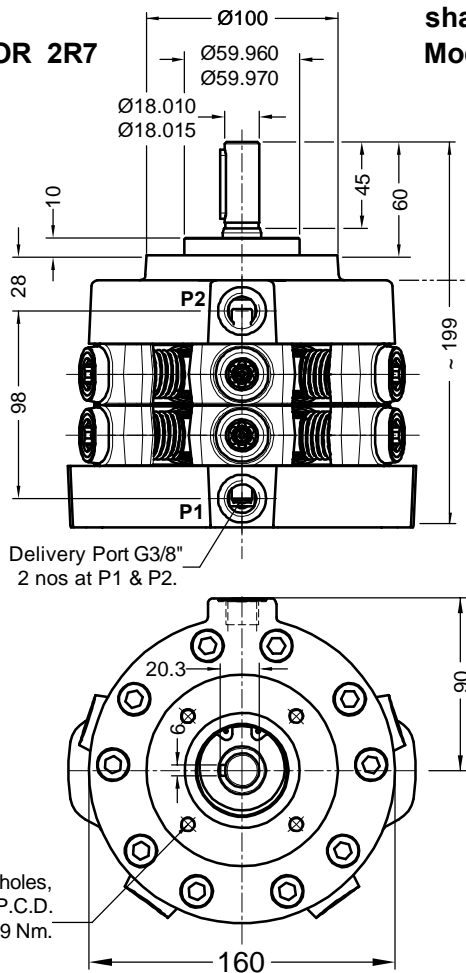
**Unit dimensions**  
**Pump without extension shaft**  
**Model - 2R3**



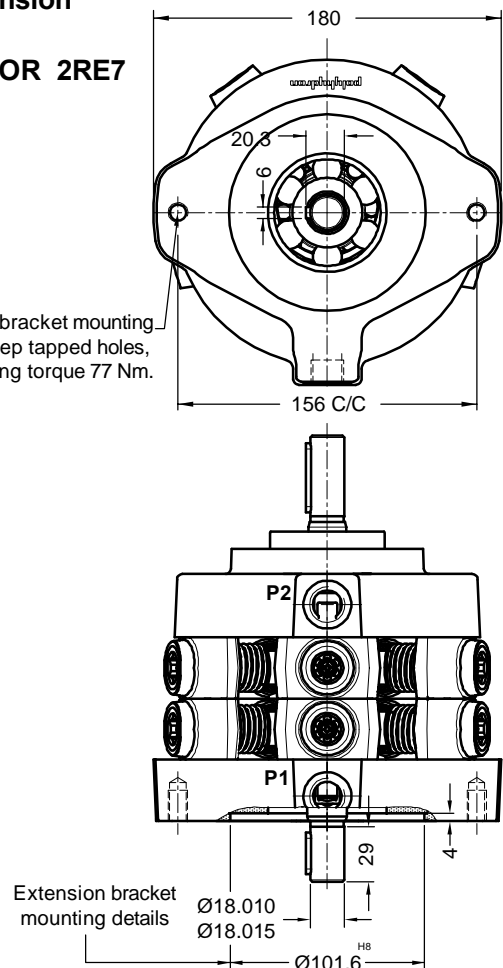
**Pump with extension shaft**  
**Model - 2RE3**



**Pump without extension shaft**  
**Model - 2R5 OR 2R7**



**Pump with extension shaft**  
**Model - 2RE5 OR 2RE7**





Performance  
Table no. 1

No. of pistons	Element type	Geometrical displacement in cm <sup>3</sup> /r	Pump output in l/min At 1450 r/min	Operating pressure in bar	Input power requirement (@ 1450 r/min)										
					50 bar	100 bar	150 bar	200 bar	250 bar	300 bar	350 bar	400 bar	450 bar	500 bar	550 bar
					kW	kW	kW	kW	kW	kW	kW	kW	kW	kW	kW
3	A	1.21	1.6	550	0.17	0.34	0.51	0.69	0.86	1.03	1.20	1.37	1.54	1.71	1.89
5		2.01	2.7		0.29	0.57	0.86	1.14	1.43	1.71	2.00	2.29	2.57	2.86	3.14
7		2.81	3.8		0.40	0.80	1.20	1.60	2.00	2.40	2.80	3.20	3.60	4.00	4.40
3	B	1.88	2.6	450	0.27	0.54	0.80	1.07	1.34	1.61	1.88	2.14	2.41		
5		3.14	4.3		0.45	0.89	1.34	1.79	2.23	2.68	3.13	3.57	4.02		
7		4.40	6.0		0.63	1.25	1.88	2.50	3.13	3.75	4.38	5.00	5.63		
3	C	2.71	3.7	350	0.39	0.77	1.16	1.54	1.93	2.32	2.70				
5		4.52	6.2		0.64	1.29	1.93	2.57	3.22	3.86	4.50				
7		6.33	8.6		0.90	1.80	2.70	3.60	4.50	5.40	6.30				
3	D	3.19	4.3	300	0.45	0.91	1.36	1.81	2.26	2.72					
5		5.31	7.2		0.75	1.51	2.26	3.02	3.77	4.53					
7		7.43	10.1		1.06	2.11	3.17	4.23	5.28	6.34					
3	E	3.69	5.0	250	0.53	1.05	1.58	2.10	2.63						
5		6.16	8.4		0.88	1.75	2.63	3.50	4.38						
7		8.62	11.7		1.23	2.45	3.68	4.90	6.13						
3	F	4.24	5.8	200	0.60	1.21	1.81	2.41							
5		7.07	9.6		1.00	2.01	3.01	4.02							
7		9.90	13.5		1.41	2.81	4.22	5.63							

1kW = 1.3410 hp

Ordering code

2R E 5 A D C 60

Radial piston, Fixed delivery, Open execution, oil immersed double row.

With extension shaft E  
Omit, if not required.

No. of pumping elements  
3 5 7

At port P1

At port P2

Design code subjected to change. Installation dimensions remain same for design code 60 thru 69.

C Combined delivery  
Omit, if not required.

Flow and pressure rating  
Element type A thru type F ( Refer table no. 1 )

Note :

1. A double pump of model code 2R5AD-15, for example, will have 5 pumping elements of 'A' flow and pressure rating at its P1 port end section and 5 pumping elements of 'D' flow and pressure rating at its P2 port end section.
2. An internally combined single flow pump of model code 2R5AD-C-15, for example, will have 5 pumping elements of 'A' flow and pressure rating at its P1 port end section and 5 pumping elements of 'D' flow and pressure rating at its P2 port end section. The maximum pressure available will be, minimum of above combination of pumping elements.

For Bell housing refer Data sheet no. D 09035 and For extension bracket refer Data sheet no. D 09090.