



# RADIAL PISTON DOUBLE PUMPS

Model : 2RC\*\*\*\*

Ref. No. D 09046

Release 03 / 2016

ENGINEERING - 1 of 4

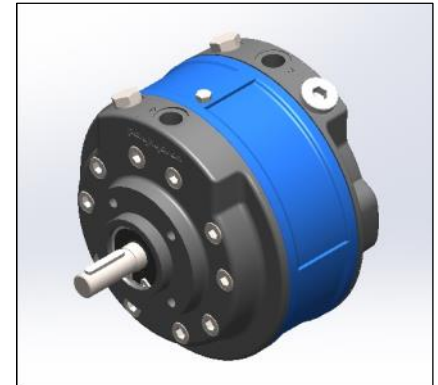
A Polyhydron Group Company

## Description

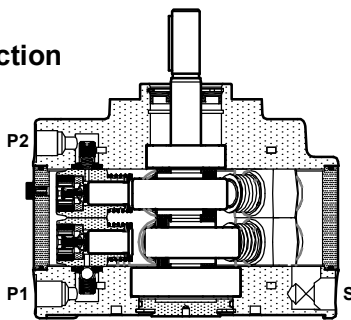
Model 2RC\*\*\*\* are rugged Radial Piston Double Pumps with 3, 5 or 7 pumping elements in each section of the pump. These pumps are valve controlled and there is no restriction on direction of rotation of the pump. These pumps can be submerged in oil or externally mounted above oil level.

Pumps with model code 2RCE\*\*\* 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.

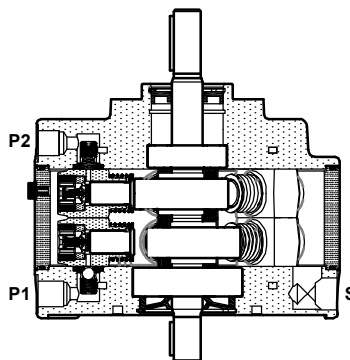
They are available with 18 displacements and 6 pressure ratings. These pumps give fixed output per revolution of the shaft.



## Section

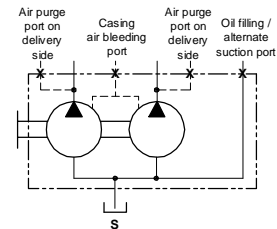


Model : 2RC\*\*\*

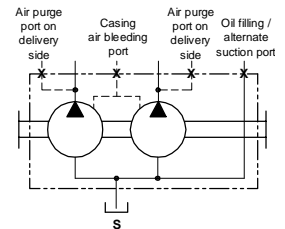


Model : 2RCE\*\*\*

## Hydraulic symbol



Model : 2RC\*\*\*



Model : 2RCE\*\*\*

## Technical specifications

Designation	:	2RC basic radial piston double pump with casing. 2RCE radial piston double pump with casing and 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 with Air purge port at highest level.
Interface	:	Factory standard.
Direction of rotation	:	2RC - No restriction on direction of rotation. 2RCE - Depends upon the direction rotation of pump attached.
Connection	:	Suction port - G1/2 female. Delivery (port P1 and P2) - G3/8 female.
Speed range	:	300 to 2000 r/min.
Max. Suction Head	:	At no time allow the oil level in the tank to fall 500 mm below the axis of the pump, when the pump is mounted horizontally, or 500 mm below the mounting face of the pump, when the pump is mounted vertically
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 : 2RC3 2RCE3 2RC5 2RCE5 2RC7 2RCE7 Kg : 12.64 12.83 16.00 16.12 17.24 17.36

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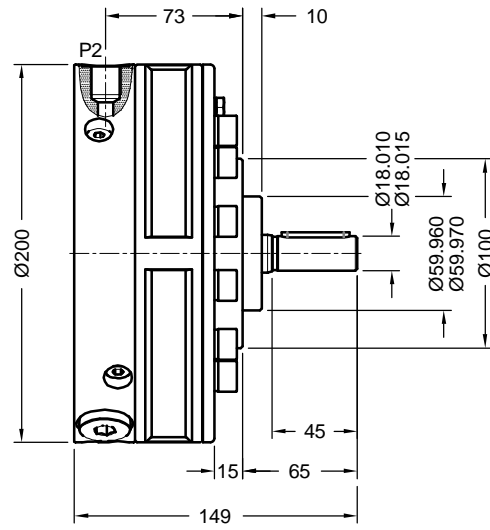
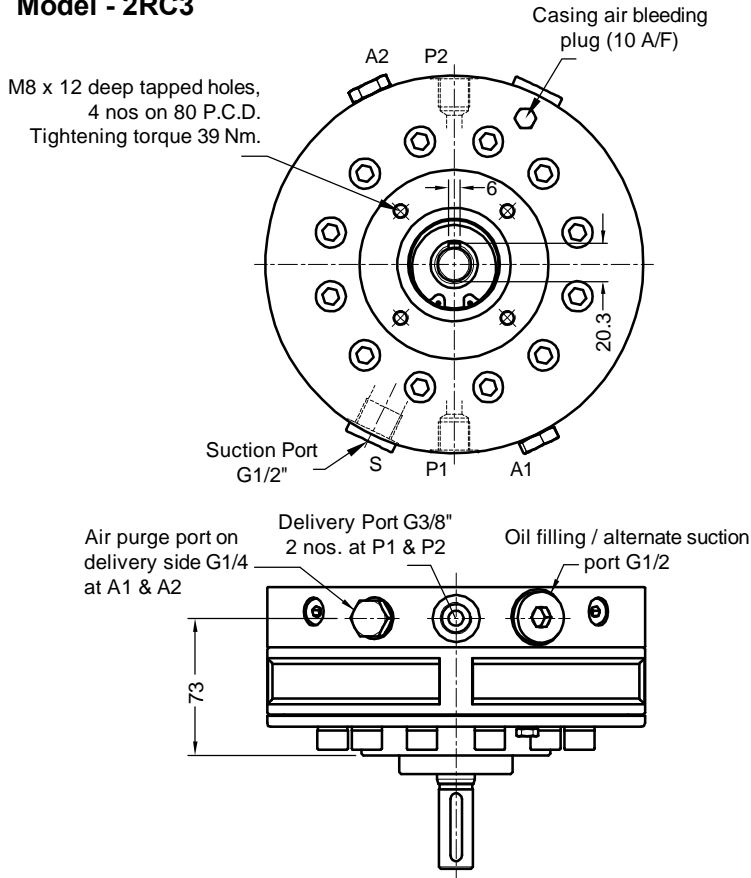
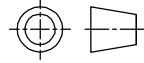


Unit dimensions

Dimensions in mm.

Pump without extension shaft

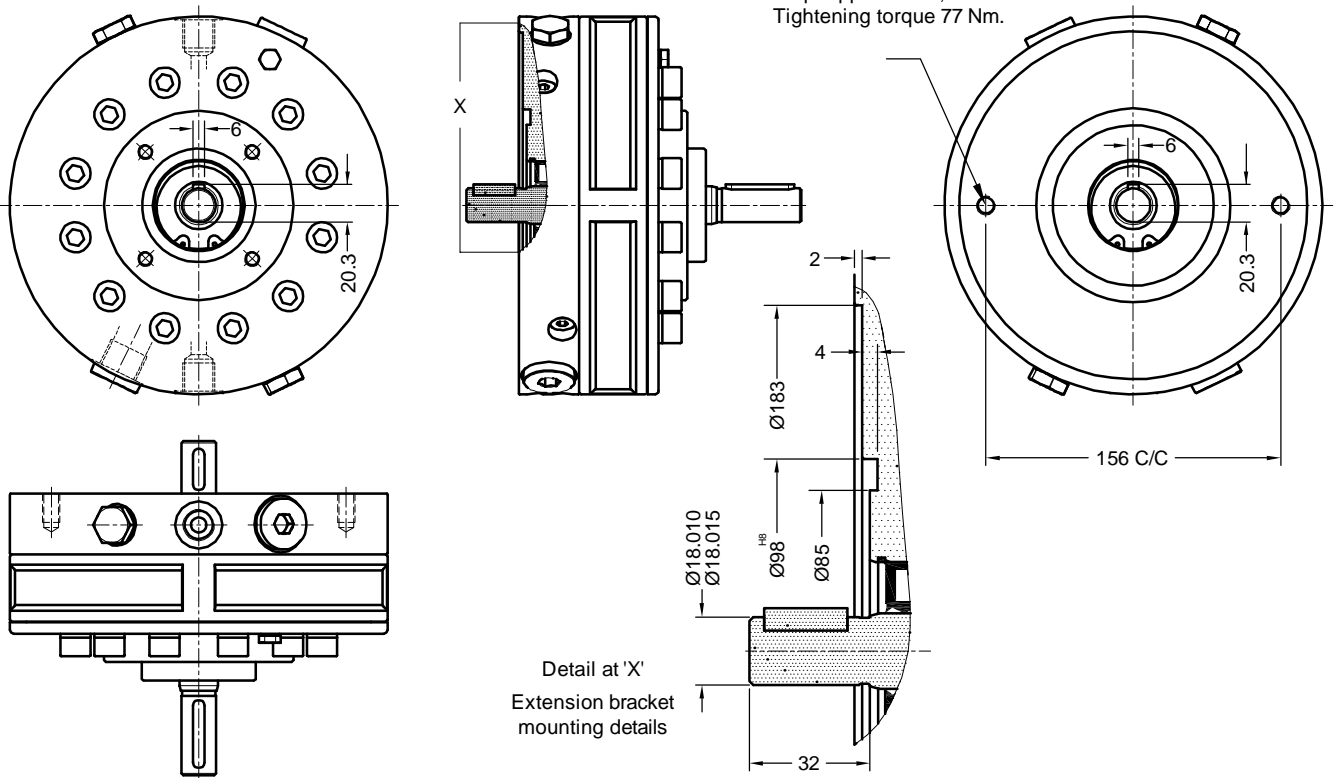
Model - 2RC3



Pump with extension shaft

Model - 2RCE3

Extension bracket mounting  
M10 x 17 deep tapped holes, 2 nos.  
Tightening torque 77 Nm.



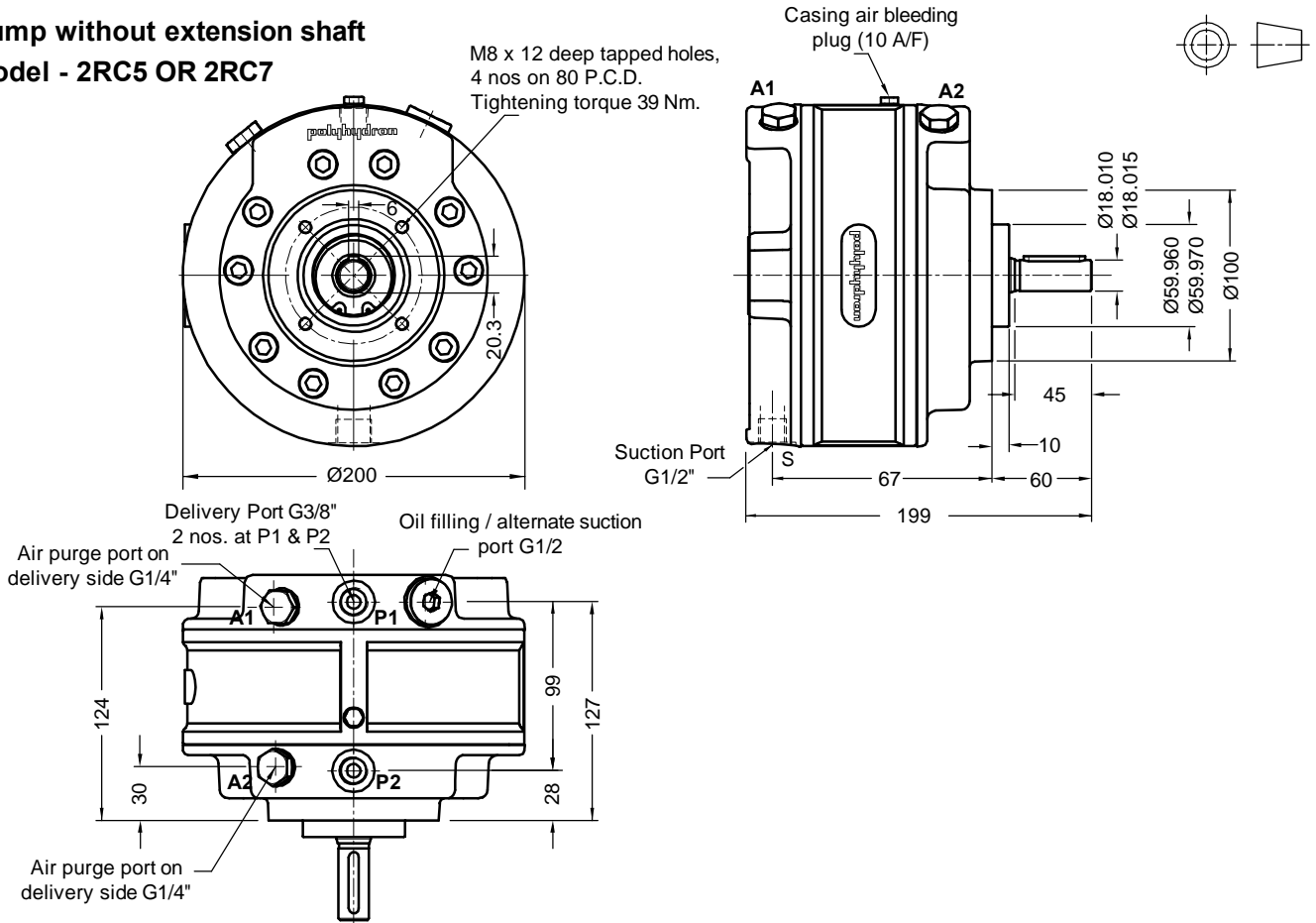


### Unit dimensions

Dimensions in mm.

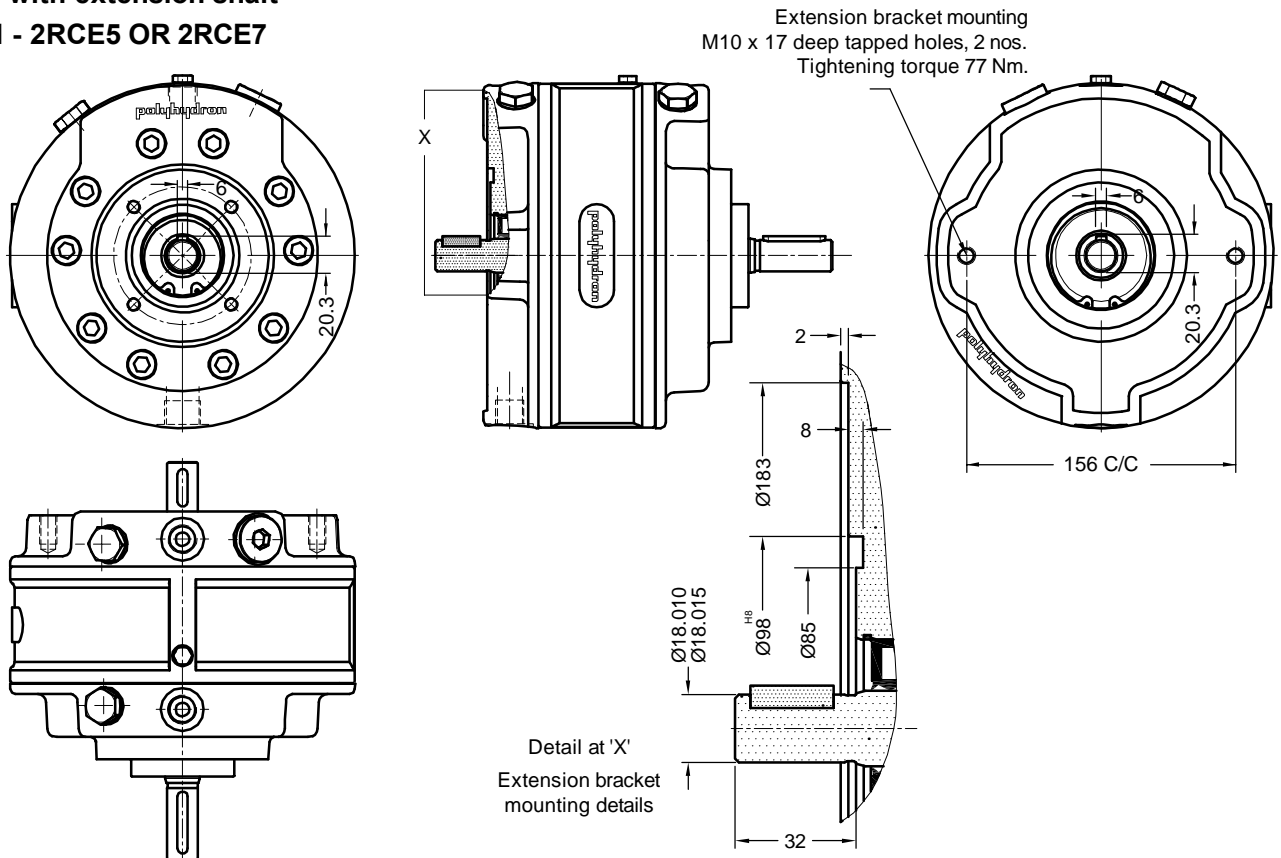
#### Pump without extension shaft

##### Model - 2RC5 OR 2RC7



#### Pump with extension shaft

##### Model - 2RCE5 OR 2RCE7





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

2RC E 5 A D C - 60

Radial piston Fixed delivery  
Double pump, Closed execution,  
with casing

With extension shaft  
**Omit, if not required.** E

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.  
For commissioning of pump refer datasheet no. D 11200 P.