



Highlights:

- On-board electronics
- High flow and pressure
- Flow reversible under working load
- Low pulsation pumping
- Highest dynamics, with short regulating times
- Controllers for every application
- Integrated design
- Easy and fast maintenance
- Field-proven for more than 50 years

RX Series I Technical Data

High-pressure radial piston pumps
with variable flow rate, **PLUG & PERFORM**

	Type	RX 160	RX 250	RX 360	RX 500
Geometric volume	cm ³ /Rev.	350	505	750	1015
Geometric capacity at n = 1000 min ⁻¹	l/min	350	505	750	1015
Continuous Pressure according to DIN 24312*	bar	350	350	350	350
Admissible working pressure for 50% displacement	bar	450	450	450	450
Lubrication oil flow	l/min	7	10	15	20
Minimum control time from 0-100% stroke	ms	50	65	90	100
External leakage at p _s = 315 bar and 35 cSt	l/min	30	40	60	80
Maximum speed	min ⁻¹	1800	1500	1200	1000
Moment of inertia	kgm ²	3,2	5,8	11,5	18,5
Weight	kg	680	930	1550	2150
Inlet pressure at low pressure connection P2		5-40 bar			
Inlet pressure at high pressure connection P1		5-450 bar			
Pressure liquid		Hydraulic oil HLP according to DIN 51524-2			
Pressure liquid viscosity		50-100 cSt			
Allowable start viscosity at p _e = 5 bar absolute		500 cSt (ISO 68 recommendation at 40°C)			
Pressure liquid temperature		10-60°C			
Purity class according to ISO 4406		19/16/13			
Drain flow pressure (casing pressure)		free drain flow required			
Lubrication pressure		≥ 3 bar			
for high pressure application identical to P1		(refer to order key)			

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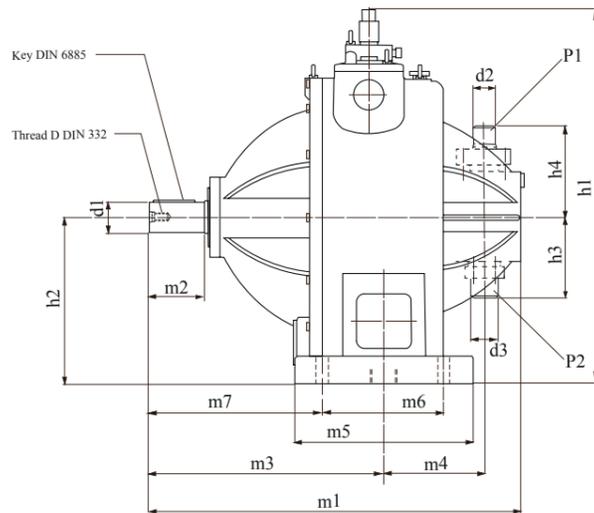
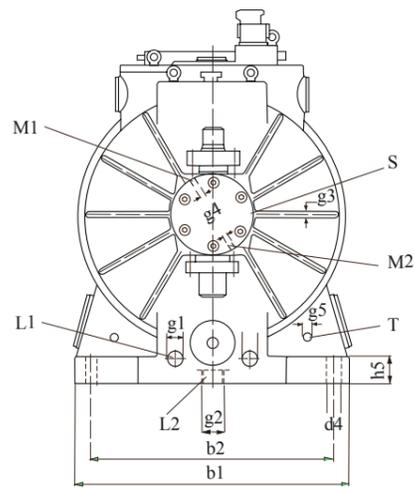
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* Norm withdrawn

Main dimensions

Drawing incorporates regulating device No. 6



All dimensions specified in mm.

*1 Low pressure connection
P2 also available.
*2 According to pressure level
and active ingredient

P1: Pressure connection*1
P2: Suction connection*1
E: Inlet for case flushing

(always at the lowest point)
L1; L2: Alternative drain-connection
M1: Measuring connection discharge

M2: Measuring connection suction
S: Lubrication connection
T: Connection for thermometer

	b1	b2	d1	d2*2	d3*2	d4	g1	g2	g3	g4	g5
RX 160	570	500	75	45/60	65/76	22	G1½"	G2"	G½"	G¼"	
RX 250	780	680	90	50/76	65/75	33	G1½"	G2"	G¾"	G¼"	G½"
RX 360	920	800	100	58/89	78/96	33	G2"	G3"	G¾"	G¼"	G½"
RX 500	1000	850	110	60/89	100/118	39	G2"	G3"	G¾"	G¼"	G½"

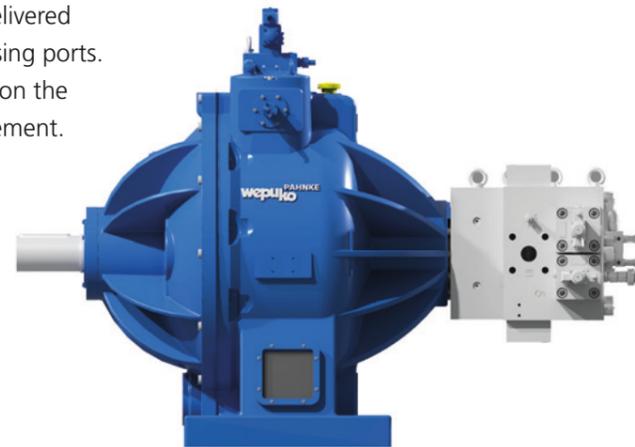
	h1	h2	h3	h4	h5	m1	m2	m3	m4	m5	m6	m7
RX 160	750	365	225	225	60	680	105	370	240	290	220	275
RX 250	1025	475	240	255	75	1043	130	611	282	450	350	436
RX 360	1185	560	255	335	90	1275	180	755	355	600	480	515
RX 500	1258	605	265	350	100	1435	200	850	390	650	500	600

Manifold porting option

For the large and diverse field of use, the RX pump can also be delivered along with a manifold block instead of having the two vertical casing ports. The manifold gets directly fixed by screws to the fluid end. Based on the request the manifold block gets designed to any need and requirement.

The following features can be included in the customized design:

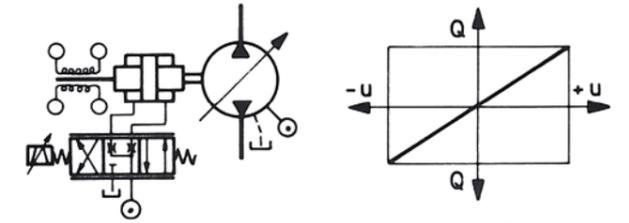
- Orientation and location of the ports.
- Type of port (standard, size, pressure rating).
- Possibility for multiple inlet- and, or outlet ports.
- Possibility to add pressure-relieve and -safety valves.
- Implementation of boost supply valves.
- Pressure measuring ports and pressure transducers.



Controllers / Regulators

Electro Hydraulic Servo Controller = no. 6

The pump can be controlled or reversed in flow direction electro-hydraulically with high precision in proportion to a selected control value.



Digital Electro Hydraulic Servo Controller = no. 6D



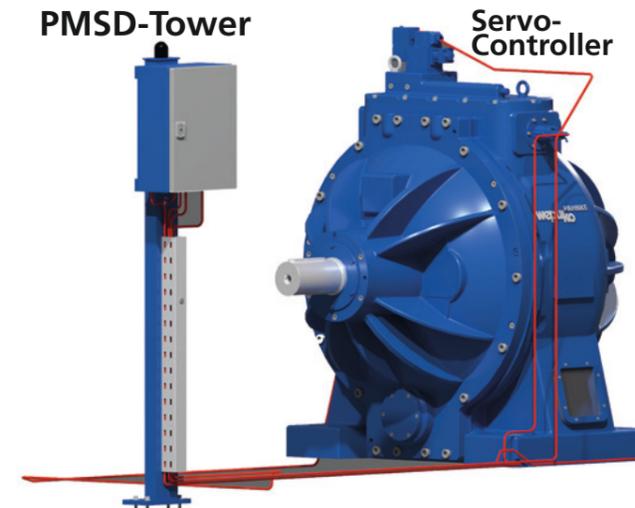
On-board electronics and controls, open in communication and ready for connection to any 3rd party control system.

The RX-library, installed in the PMSD-Tower is part of the RX-6D package.

For maximum flexibility this includes independent function programs for controlling in closed-loop the speed, pressure and power of the pump.

This also includes software for pump calibration for fast and simple commissioning. **PLUG & PERFORM.**

PMSD-Tower



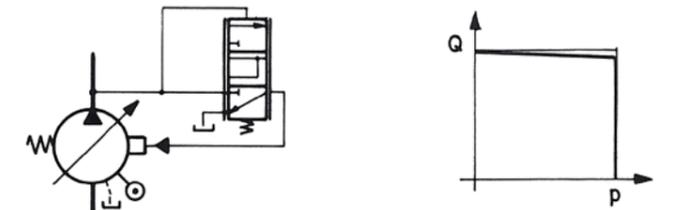
The PMSD-Tower is connected with the RX-pump by pre-configured cables communicating with the servo-controller and feed-back sensor.

The PMSD-Tower gets foot mounted next to the pump skid for disengaging vibrations, protecting the electronics inside the PMSD-Tower.

For visual pump status communication to operators and service personnel, a signal lamp is located on each PMSD-Tower.

Constant Pressure Regulator = no. 9

The pump regulates automatically after achieving the selectable pressure so that this can be kept constant, independent from the pumping capacity.

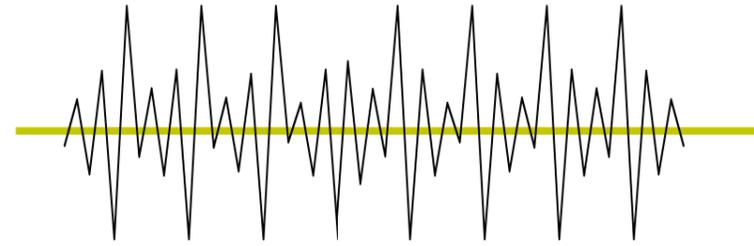


Note: All the other controllers no.: 1, 2, 3, 4, 5, 7, 8, are still available for machines active in the field.



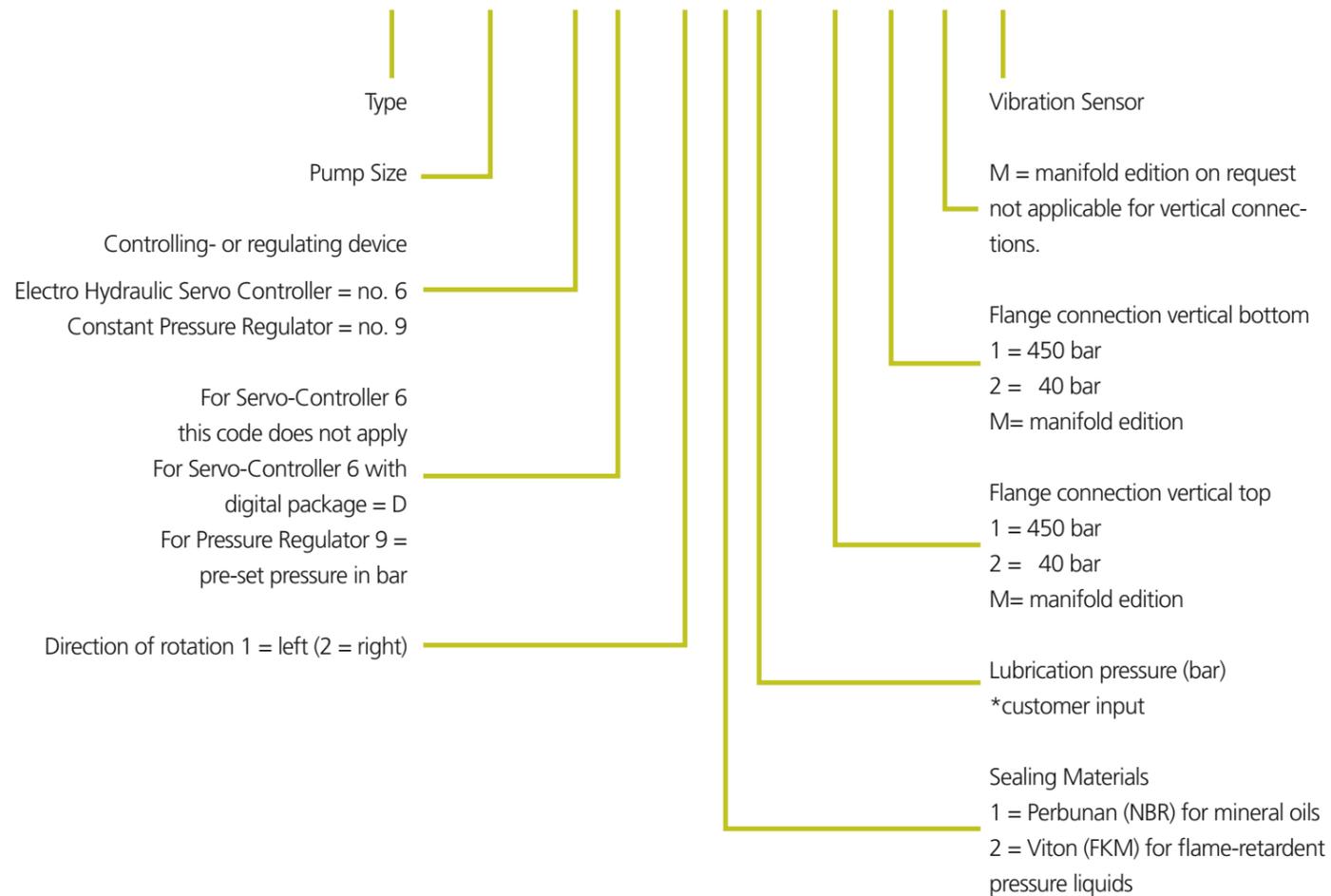
Vibration sensor

For maximizing the transparency of the pumps condition, a vibration sensor can be selected. The vibration of the the pump gets recorded to ensure the readiness for predictive maintenance for the pump within the installed application or drive system.



Ordering key

RX - 250 - 6/D - 1 1 3 - M-M-M- V



Application examples

- General hydraulic equipment
- Forging presses
- Bending presses
- Slab shears
- Extruders
- Upsetting presses
- Chip board presses
- Packing presses
- Stripper cranes
- Stretching benches
- Forging manipulators
- Embossing machines
- Pipe test presses
- Pulsation drives
- Pressure transmitters
- Power supplies
- Direct drives for hydraulic cylinders
- And many more applications!

Is your application not mentioned here? Please give us a call. We'll be pleased to advise you!

RX-pumps are the perfect solution wherever the toughest operating conditions are required and where reliability and durability are of highest importance.

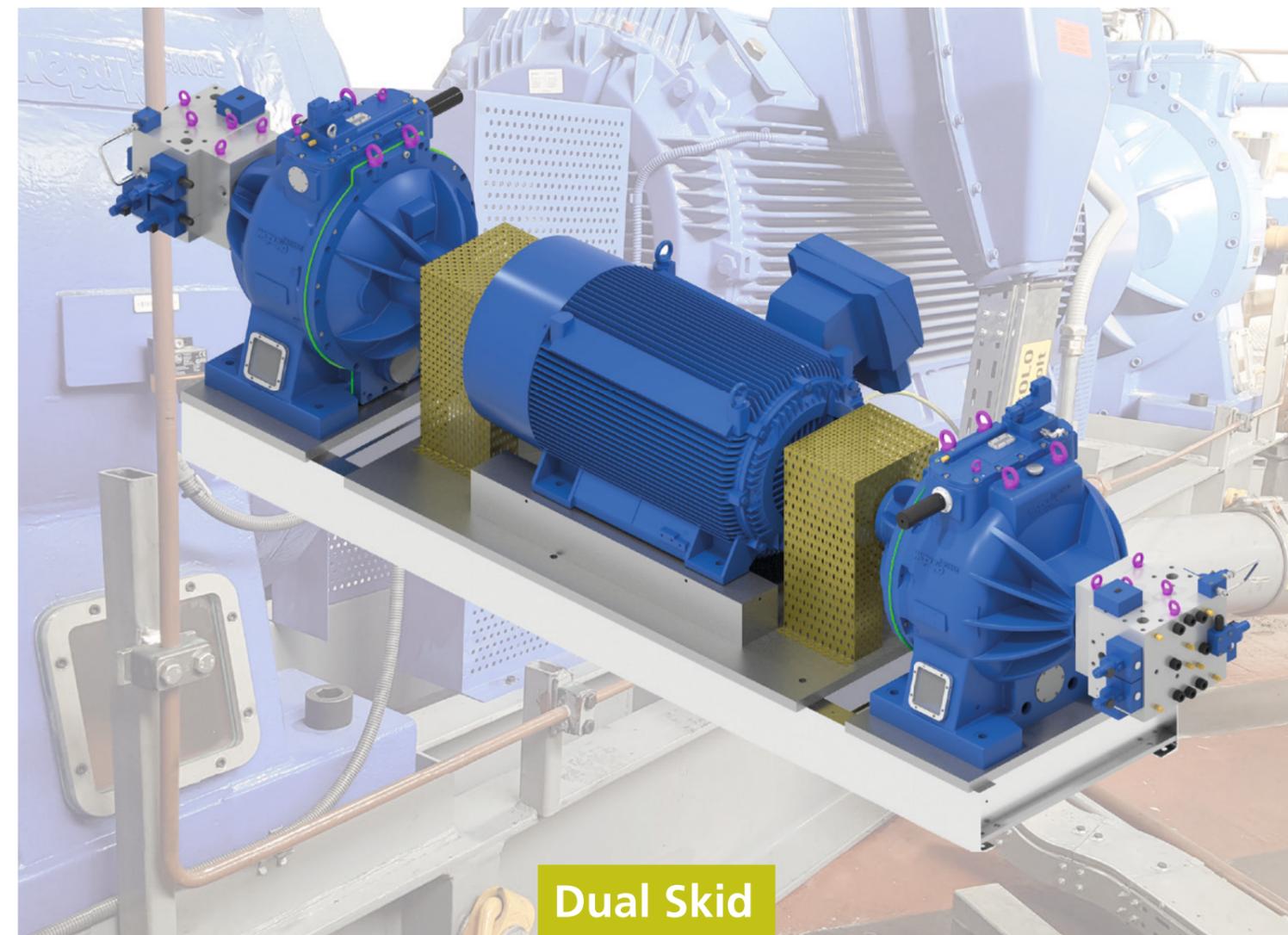
Customized turn-key solutions

With more than 50 years of design and development experience for pumps, skids and drive systems, Wepuko PAHNKE offers to share this know-how with our customers.

Entire skids, including the pump base frame, motor, coupling, distribution block, pressure valves, sensors, etc. and can on request be designed and manufactured by our team.

Mechanical, hydraulic and electrical design as well as the software programming

WE DO IT ALL IN HOUSE TO YOUR NEEDS!



Dual Skid





The PMSD Drive

This drive system does not require any valves for controlling the press movement, it works with rapidly controllable high-pressure pumps of the RX series. Due to that it is able to determine quickly and precisely the force, the speed and the direction of movement of the press.

This drive system is characterized by particularly smooth, shock-free motion and is thus extremely reliable.

Especially, since the RX pumps can easily withstand 30,000, in some cases well over 50,000 operating hours without repair. Elementary advantage is also the fact that this drive system requires significantly less energy than all comparable drives. Energy savings range between 20 % and 30 %, depending on the design and utilization, compared to other oil-hydraulic drives and up to over 60 % compared to water-hydraulic drives.



We perform under high pressure.

