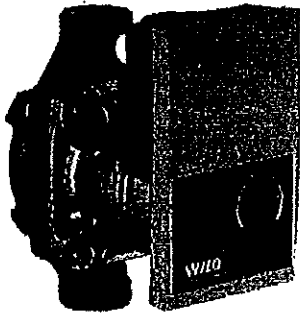


# Heating and cooling

High-efficiency pumps



## Series description Wilo-Yonos PARA Red Knob 15/6, 20/6, 25/6, 30/6



Energiepartnerschaft

### Design

Glandless circulation pump with cast iron pump housing and threaded connection, EC-motor with automatic power adjustment and self-protecting modes. Operation by Red Knob technology and delivered with power cable.

### Application

Hot-water heating systems of all kinds, cooling applications

### Type key

<b>Example:</b>	Wilo-Yonos PARA RS 15/6 RKA FS 130 12 I
<b>Yonos</b>	Electronically controlled high-efficiency pump
<b>PARA</b>	pump range adapted to requirements of the OEM market
<b>RS</b>	Heating inline cast iron pump housing
<b>15/</b>	Nominal diameter: 15 threading 1" <ul style="list-style-type: none"> <li>20 threading 1 1/4"</li> <li>25 threading 1 1/2"</li> <li>30 threading 2"</li> </ul>
<b>6</b>	Max delivery height in [m] at Q = 0 m <sup>3</sup> /h
<b>RKA</b>	The pump is controlled by Red Knob technology: ΔP-v / ΔP-c RKC = ΔP-v, constant speed I, II, III
<b>FS</b>	Overmoulded cable with braided end splices. Optional: connector
<b>130</b>	Pump housing length: 130 mm or 180 mm
<b>12</b>	Box orientation
<b>I</b>	Individual packaging
<b>(not specified)</b>	Collective packaging (standard)

### Technical data

#### Approved fluids (other fluids on request)

Heating water (in accordance with VDI 2035)	•
Water-glycol mixtures (max. 1:1; above 20% admixture, the pumping data must be checked)	•

#### Power

Max. delivery head	6.2 m
Max. volume flow	3.3 m <sup>3</sup> /h

#### Permitted field of application

Temperature range for applications in HVAC systems at max. ambient temperature	of 57°C = 0°C to 95°C of 59°C = 0°C to 90°C of 67°C = 0°C to 70°C
Maximum static pressure	6 bar

#### Electrical connection

Main connection	1-230 V, 50/60 Hz
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#### Motor/electronics

Electromagnetic compatibility	EN 61800-3
Emitted interference	EN 61000-6-3/EN 61000-6-4
Interference resistance	EN 61000-6-2/EN 61000-6-1
Speed control	Frequency converter
Protection class	IPX 4D
Insulation class	F

Minimum suction head at suction port for avoiding cavitation at water pumping temperature

Minimum suction head at 50/95/110°C	0.5 / 4.5 / 11 m
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• = available, - = not available

## Wilo-Yonos PARA



The Wilo-Yonos PARA is the latest high-efficiency pump series which is specially designed in order to fulfill the special demands of the OEM industry. The Wilo-Yonos PARA sets the standard for energy-saving solutions required for integrated hydraulic systems. Equipped with a self controlled Red button or externally PWM control, the Wilo-Yonos PARA is the perfect choice for a one-to-one replacement of most existing electronic pumps. This series is available in various cast iron and composite (available 09/2012) pump housings and is thus highly versatile. At the leading edge of technology, the Wilo-Yonos PARA provides best-in-class performances: it has a three times higher starting torque than most comparable heating pumps and fulfils highest mechanical, electrical and hydraulic requirements.

### Special features/product benefits

- "Best in class" High Efficiency pump of the market due to ECM technology
- Up to 80% electricity savings compared to previous uncontrolled range of heating pumps
- Self controlled pump (Red button) or externally controlled (PWM signal)
- Unique LED user interface gives information about the pump functioning
- High starting torque for reliable start-up
- Hot water heating systems of all kinds, in the temperature range of 0 °C to +95 °C
- Designed for easy integration due to compact design
- Inrush current peak less than 3A
- Self protecting modes of electronic motor
- Preventing flow noises
- Stand-by consumption less than 1 W
- Functions adapted specially to the demands of the OEM market
- Standard delivery with power cable and signal cable
- Cathodically coated (KTL) cast iron pump housing to prevent corrosion when condensation occurs, or OEM composite (available 09/2012) pump housing

### Heating application

In nearly all circulation systems, correctly sized controlled glandless pumps ensure adequate heat supply at all times at significantly reduced energy costs, while at the same time preventing noise generation.

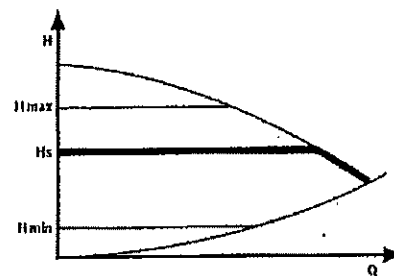
### Electronic performance control

#### Self controlled model with Red button (Typa RKA/RKC)

##### Available control modes

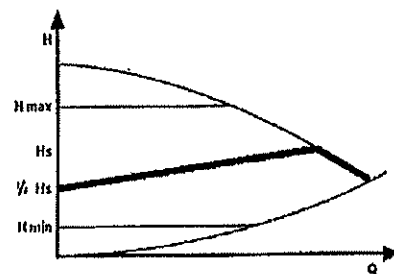
##### Control mode $\Delta p-c$ :

In the  $\Delta p-c$  control mode, the electronic module keeps the differential pressure generated by the pump constant at the set differential pressure setpoint  $H_s$  over the permissible volume flow range.



##### Control mode $\Delta p-v$ :

In the  $\Delta p-v$  control mode, the electronic module changes the differential pressure setpoint to be maintained by the pump in linear fashion between  $H_s$  and  $\frac{1}{2} H_s$ . The differential pressure setpoint value  $H$  varies with the volume flow  $Q$ .



### Venting routine

The integrated venting routine supports a bleeding of the overall heating system. After a manual setting, the routine runs for 10 minutes alternating at low and high speed of the pump. At the end of the process, the pump switches automatically to a pre-set speed. After that, the desired control mode can be set at the red button.

### Constant speed I, II, III

In this operating mode the pump is not self regulating its speed. The pump is operating constantly with a fixed speed in pre-set position.

# Heating and cooling

## High-efficiency pumps



### Dimensions, motor data Wilo-Yonos PARA Red Knob 15/6, 20/6, 25/6, 30/6

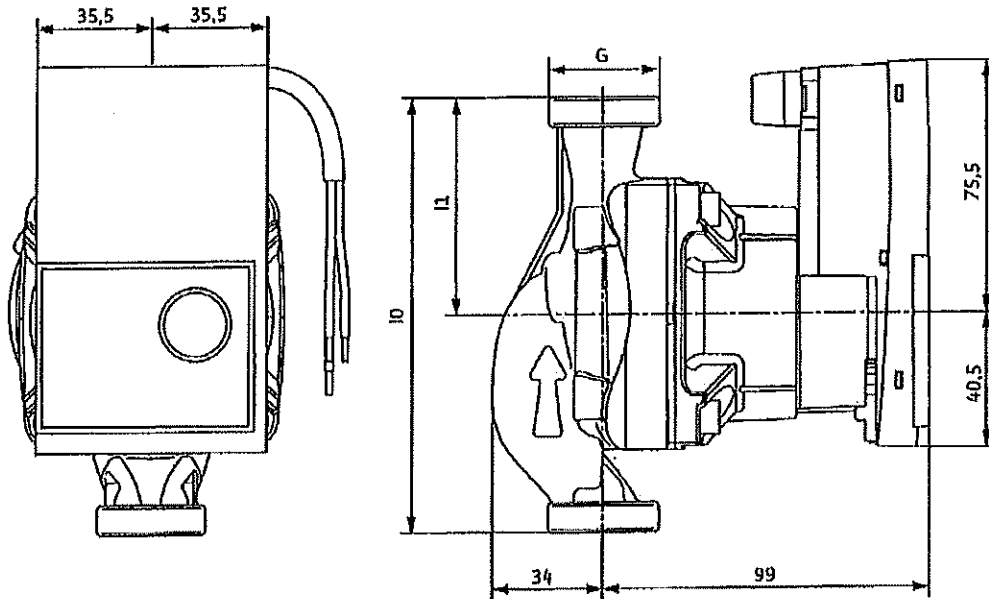
#### Motor data

Wilo-Yonos PARA	Nominal motor power	Speed	Power consumption 1-230 V	Current at 1-230V	Motor protection
	$P_2$	$n$	$P_1$	$I$	-
	W	rpm	W	A	-
RS 15/6 RKA/RKC	37	800 - 4250	3-45	0.03 - 0.44	Integrated

#### Materials

Wilo-Yonos PARA	Pump housing	Impeller	Pump shaft	Bearing
RS 15/6 RKA/RKC	Cast iron with cathaphoresis treatment	PP composite with GF 40%	Stainless steel	Carbon, metal impregnated

#### Dimension drawing



#### Dimensions, weights

Wilo-Yonos PARA	Threaded pipe union	Thread	Overall length	Dimensions	Weight approx.
	-	-	$l_0$	$l_1$	m
	-	-		mm	kg
RS 15/6	Rp 1/2	G 1	130	65	1.6
RS 20/6	Rp 3/4	G 1 1/4	130	65	1.6
RS 25/6	Rp 1	G 1 1/2	130	65	1.7
RS 25/6	Rp 1	G 1 1/2	180	90	2
RS 30/6	Rp 1 1/4	G 2	180	90	2.1