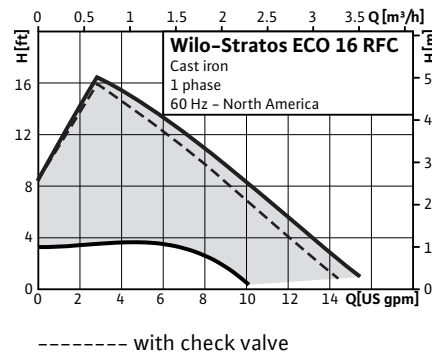


# High Efficiency Circulating Pumps

## Product review: Wilo-Stratos ECO

### Range: Wilo-Stratos ECO 16 RFC



#### > Single head pumps:

- Wet rotor circulator, with rotating flange connections and optional check valve, electrically commutated motor for automatic performance adaptation

#### > Applications:

- Residential closed loop hot water heating systems, water and water/glycol solutions up to 50% concentration

#### > Special features/product advantages:

- Energy efficiency class A
- Up to 80% power savings in comparison with uncontrolled circulators
- Highest efficiency thanks to ECM technology
- 3 x higher starting torque than conventional circulation pumps
- Electrical quick connection with spring clips
- 6 1/2" flange to flange dimension matches common models
- Pump equipped with rotating flanges for easy adaptation for all flanged types (F and FX types)
- High temperature check valve included for installation where required

# High Efficiency Circulating Pumps

Product review: Wilo-Stratos ECO



## Equipment/function Wilo-Stratos ECO

	Wilo-Stratos ECO...
	16 RFC
<b>Operating modes</b>	
Control mode $\Delta p-v$ for optimum load adjustment	•
<b>Manual functions</b>	
Red-button technology for simple operation	•
Setting the differential-pressure setpoint	•
Setting to "Autopilot" (automatic setback mode)	•
<b>Automatic functions</b>	
Stepless power adjustment depending on the operating mode	•
Automatic setback operation for further savings potential ("Autopilot")	•
Anti-seizing function	•
Soft start	•
Full motor protection with integrated trip electronics	•
<b>Equipment/Scope of delivery</b>	
Pump	•
Flange gaskets (2)	•
Check valve, not installed	•
Installation and operating instructions	•

• = available, — = not available

# High Efficiency Circulating Pumps

## Product review: Wilo-Stratos ECO

### Technical data Wilo-Stratos ECO

	Wilo-Stratos ECO...
	16 RFC
<b>Approved fluids (other fluids on request)</b>	
Heating water	•
Water/glycol mixtures (max. 1:1; mixtures with more than 20 % glycol require reassessment of the hydraulic criteria)	•
<b>Performance</b>	
Max. head [ft]	16
Max. head [m]	4.9
Max. rate of flow [USGPM]	15.5
Max. rate of flow [m³/h]	3.5
<b>Application limits</b>	
Temperature range for application in heating and cooling installations (closed systems)	60 °F (+15 °C) up to 230 °F (+110 °C)
Ambient temperature range	14 °F (–10 °C) up to 104 °F (+40 °C)
Max. working pressure p <sub>max</sub>	145 psi (10 bar)
<b>Pipe connections</b>	
Residential 2 bolt flanged	•
Residential 2 bolt flanged rotated 90°	•
Union connection	–
Internal sweat	–
<b>Electrical connections</b>	
Power supply 1~ [V]	115
Power supply 3~ [V]	–
Frequency [Hz]	60
• = available, – = not available	

# High Efficiency Circulating Pumps

Product review: Wilo-Stratos ECO



## Technical data Wilo-Stratos ECO

	Wilo-Stratos ECO...
	16 RFC
<b>Motor/Electronics</b>	
Electronic control	Frequency Converter
Degree of protection	Enclosure 2
Insulation class	H
<b>Materials</b>	
Pump housing	Cast iron (EN-GJL 200)
Rotating flange	Cast iron (FGS 250)
Impeller	Reinforced plastics PPS (polypropylene)
Shaft	Stainless steel (X30 Cr13 or X46 Cr13)
Bearing	Carbon, metal impregnated
Check valve	Glass filled Noryl + EPDM rubber
<b>Minimum inlet pressure [psi] to avoid cavitation at fluid temperatures</b>	
122 °F (50 °C)	1.0
203 °F (95 °C)	4.3
230 °F (110 °C)	14.0

• = available, — = not available

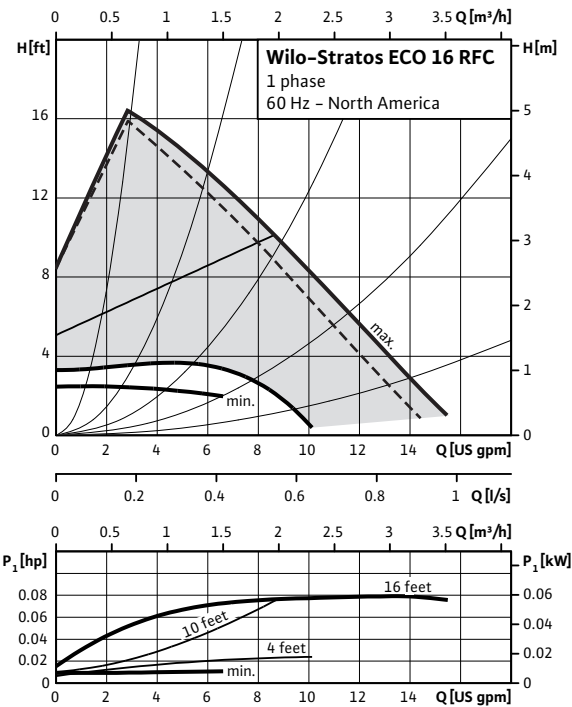
# High Efficiency Circulating Pumps

Wilo-Stratos ECO

## Pump curves

### Wilo-Stratos ECO 16 RFC

$\Delta p-v$  (variable)



----- with check valve

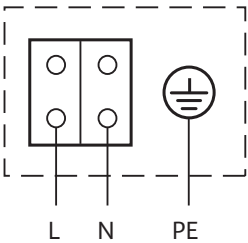
# High Efficiency Circulating Pumps

Wilo-Stratos ECO



## Wiring diagrams, motor data

### Wiring diagram



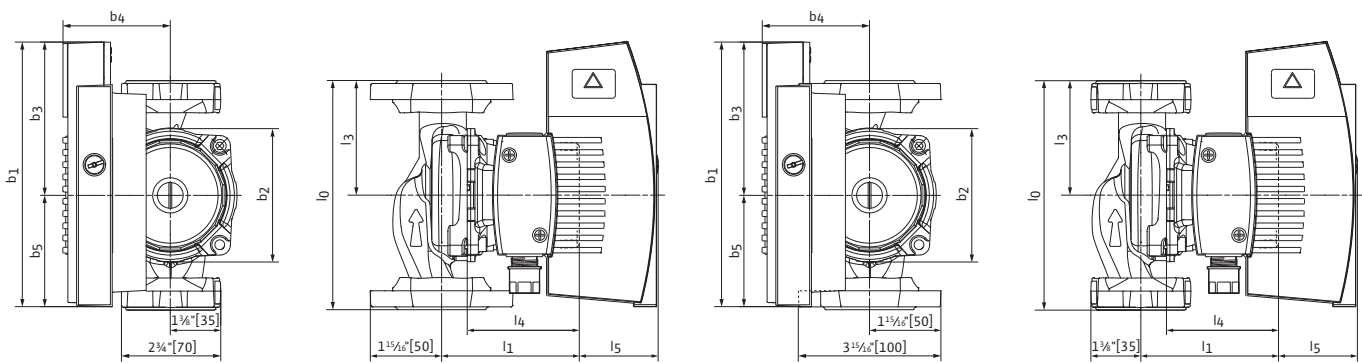
Motor data									
Wilo-Stratos ECO...	Rated Power		Speed	Power consumption		Current 1~115 V	Current 1~230 V	Motor protection	Screwed cable gland
	P <sub>2</sub>		n	P <sub>1</sub>		I		–	–
	[hp]	[W]	[rpm]	[hp]	[W]	[A]		–	[in]
16 RFC	1/25	32	1500 – 3400	0.008 – 0.079	5.8 – 59.0	0.10 – 0.90	0.06 – 0.46	integrated	1 x 5/16

# High Efficiency Circulating Pumps

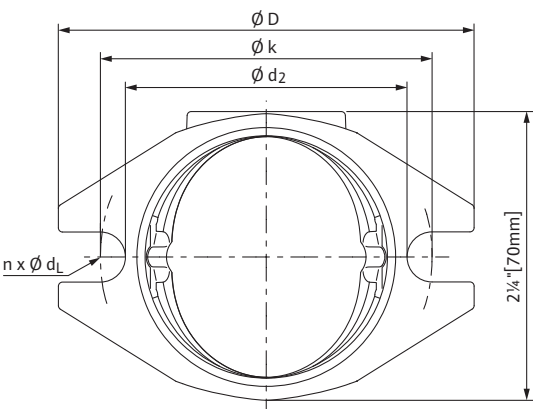
Wilo-Stratos ECO

## Dimensions, weights

Drawing no.: 1



Drawing no.: 2



## Dimensions, weights

### Dimensions, weights

Wilo-Stratos ECO...	Flange diameter		Pump dimensions									
	DN		l <sub>0</sub>		b <sub>1</sub>		b <sub>2</sub>		b <sub>3</sub>		b <sub>4</sub>	
	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]
16 RFC	3/4	20	6 1/2	162	7 5/16	185.5	3 11/16	93.5	4 1/4	107.5	2 15/16	75

### Dimensions, weights (continuation)

Wilo-Stratos ECO...	Pump dimension										Weight approx. net		Drawing No.
	b <sub>5</sub>		l <sub>1</sub>		l <sub>3</sub>		l <sub>4</sub>		l <sub>5</sub>		-		-
	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[lbs]	[kg]	-
16 RFC	3 1/16	78	3 15/16	100	3 3/16	81	3 1/16	78	2 3/16	55	7.72	3.50	1

### Flange dimensions

Wilo-Stratos ECO...	Nominal diameter		Flange dimension pump								Drawing No.	
	DN		Ø D		Ø d <sub>2</sub>		Ø k		n x d <sub>L</sub>		-	
	[in]	[mm]	[in]	[mm]	[in]	[mm]	[in]	[mm]	[units x in]	[units x mm]	-	
16 RFC	3/4	20	3 15/16	100	2 11/16	68	3 1/8	80	2 x Ø 1/2	2 x Ø 12	2	