Version 2009/2

Pumpen Intelligenz.

Pumps Certified for North American Market

WILO INTEC is part of the WILO AG group, which started as an historic family-run business and has grown into a modern international pump manufacturer, operating in over 50 countries with corporate headquarters in Dortmund, Germany.

WILO is active on the North American market with offices located in Chicago and Calgary and a network of representatives across USA and Canada.

WILO INTEC, based in France, is today one of the world market leader in the supply of OEM small circulator pumps. We are driven by a strong commitment to customer service, modern technology and continuous innovation. Our in depth knowledge of heating systems has qualified the company as a boiler competence centre. We are now pleased to grow this success with our customers in North America.

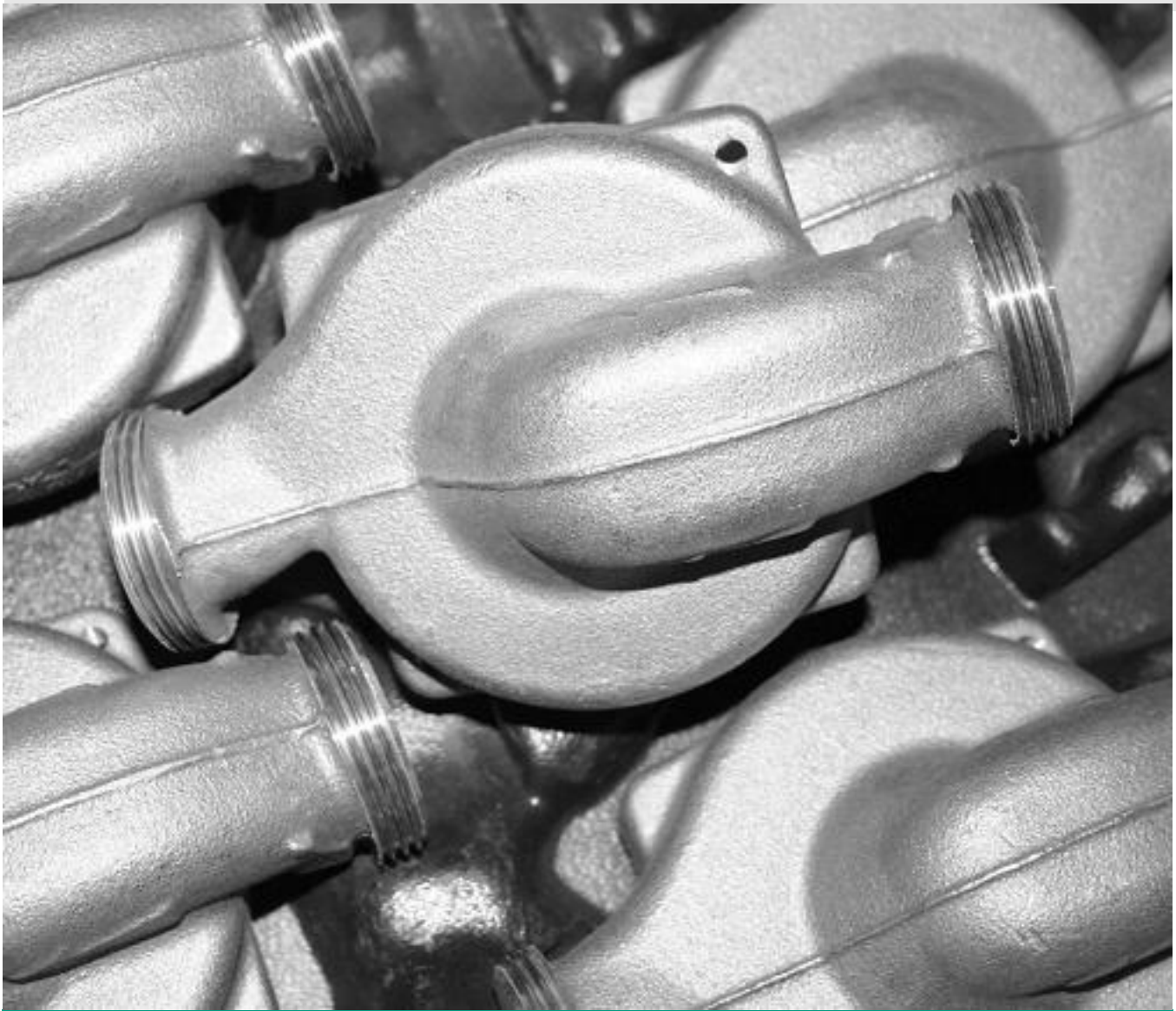
You will find in this catalogue our OEM pumps which have been especially certified with UL for use in North America.

Pumpen Intelligenz.

Contents

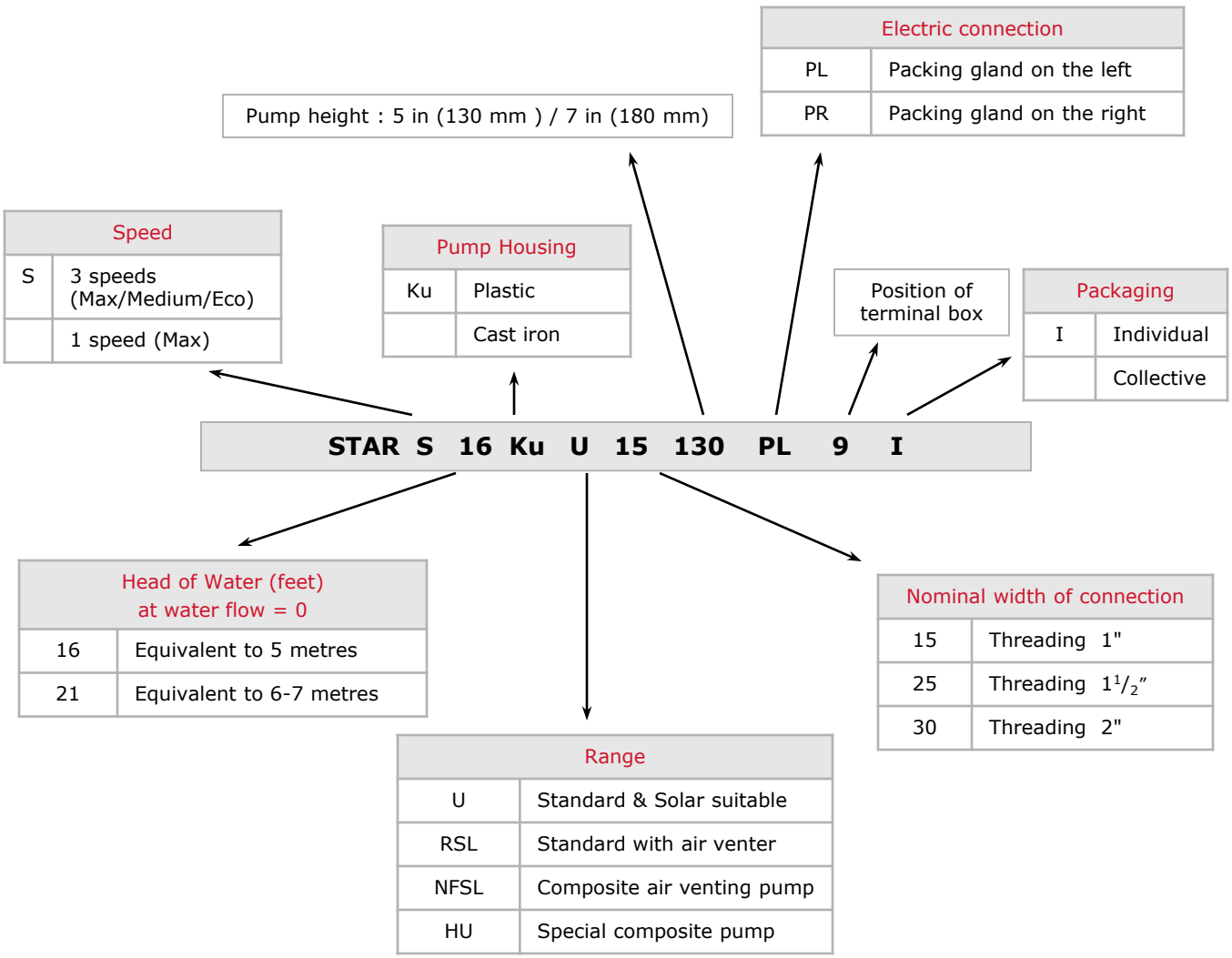
Pumpen Intelligenz.

Pumps



Pumpen Intelligenz.

General information: Pump Designations



Pumpen Intelligenz.

General information

Terminal Box and packing gland

Positioning

The terminal box is metallic to conform with UL requirements.

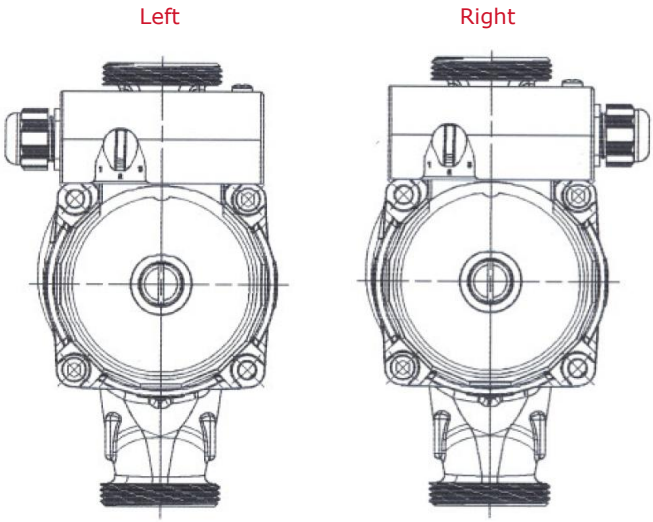
The standard position of the box is at 12 o'clock or 9 o'clock. Positioning at 12 o'clock is not recommended when the connection width is $1^1/_2$" due to lack of space.

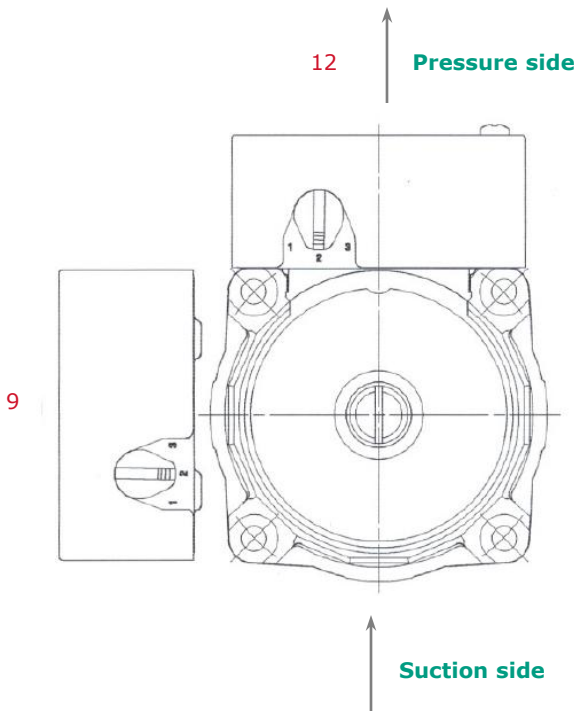
The box can be supplied with the Packing Gland on the left side or the right side according to the client's needs.

The standard configuration is packing gland left and cap (plug) on right hand side.

Cable gland

	Cable's diameter	
	min	max
PG11	5	9



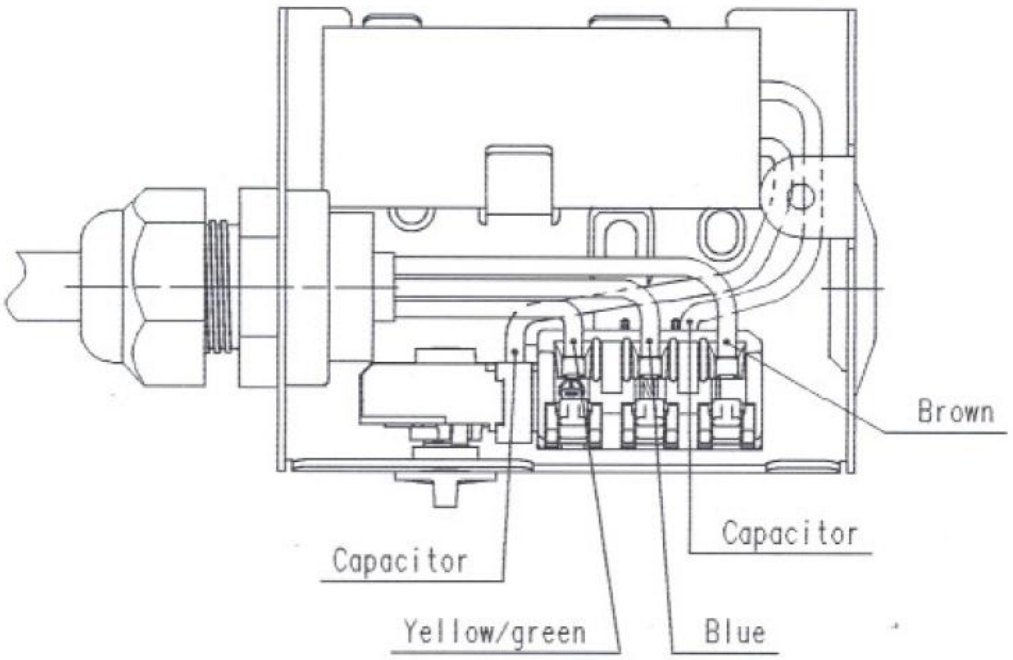


Pumpen Intelligenz.

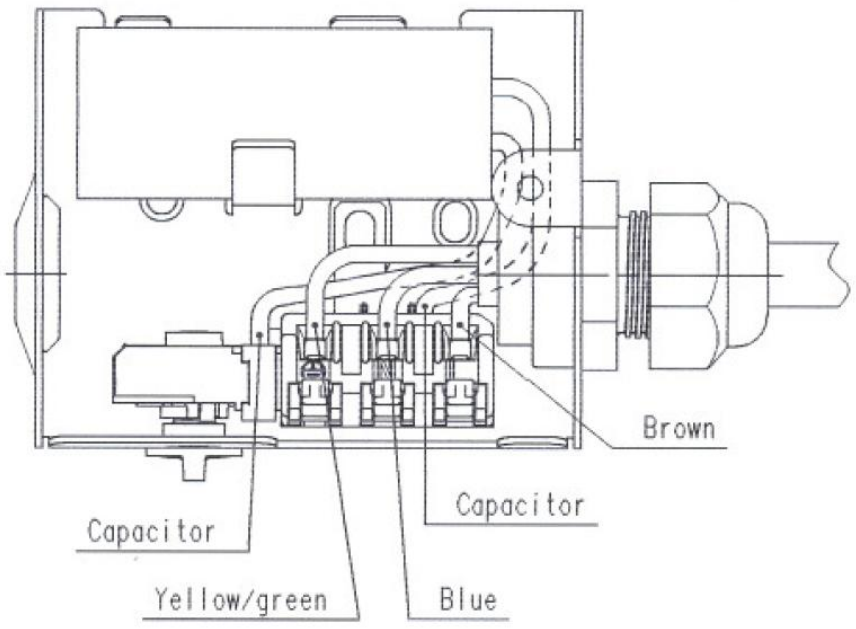
General information

Standard quick connection module V1

Connection type PL



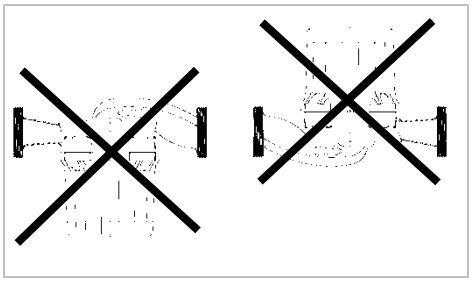
Connection type PR



Pumpen Intelligenz.

General information

Approved pump mounting arrangements :



Viscous fluids / Hydraulic datas

All hydraulic datas contained in this catalogue are based on handling water having a kinematic viscosity = 1 mm^2 / s

Water / glycol mixtures, max. mixing ratio 1:3. These data are measured after a minimum of 12 hours of running-in.

Minimum inlet pressure to prevent cavitation

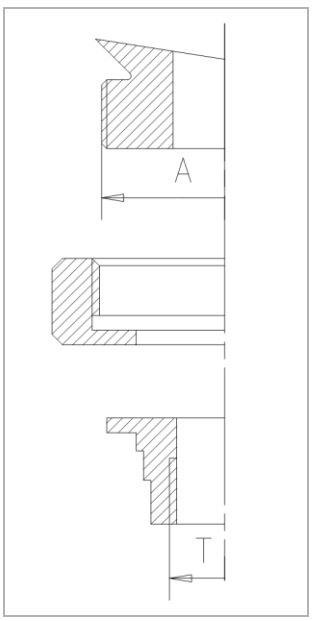
To avoid cavitation (vapour forming within the pump) it is necessary to maintain at the pump suction port an adequately high positive pressure (static head) in relation to the vapour pressure of the fluid being handled.

Minimum inlet pressure in psi (m) at the pump suction inlet to avoid cavitation noise at 104 °F (+40 °C) ambient and max. water temperatures	122 °F (50 °C)	0.7 psi (0.5 m)
	203 °F (95 °C)	4.4 psi (3.0 m)
	230 °F (110 °C)	14.5 psi (10.0 m)

For higher altitudes: add 0.14 psi (0.1 m) head / 328 ft (100 m) height increase.

These minimum heads must be respectively increased when handling fluids of higher temperatures or lower densities, higher resistances at the pump suction side and in regions of lower atmospheric pressures.

Circulating pump threaded connection



Designation	WILO Pump's section designation	15	25	30
A	Pump's thread diameter (inch)	1"	1½"	2"
	Pump's thread diameter (mm)	33,25	47,8	59,61
T	Pipe's diameter (inch)	½"	¾" or 1"	1¼"
	Pipe's designation (mm)	15/21	20/27 or 26/34	33/42

Pumpen Intelligenz.

General information

General reference

Permissible ambient air temperatures

From 32 °F to 140 °F - with a fluid temperature not exceeding 203 °F

(From 0 °C to +60 °C - with a fluid temperature not exceeding 95 °C)

Condensation

Pumps listed as being suitable of handling chilled water down to 14 °F (–10 °C) are fully condensation-proof.

Working Pressure

Maximum working pressures to which pumps can be internally subjected to are:

> pump housing cast iron: PN 10

> pump housing composite : PN 3 or PN 6 (please contact us)

Max. fluid temperature

> Cast iron pump housing: 230 °F (110 °C)

> Composite pump housing: 203 °F (95 °C)

Terminal box connections

> The connecting cable can be led by the client through the packing cable gland on either right or left

Electrical Wiring

> All Wilo Intec UL pumps are suitable for wiring to the appropriate North American standard voltage 115 V (±10%)

Frequency

> All Wilo Intec UL pumps operate at 60 Hz as required in North America

Replacement Pumps

Customers are requested to provide after sales service when replacement pumps are required by their customers in North America.

By prior agreement, Wilo North America can provide spares from its stock in Chicago and Calgary for pumps with standard configurations. These are defined as pumps with the following:

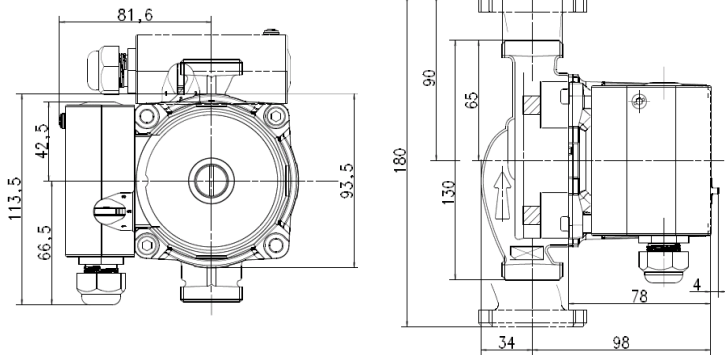
- 3 speeds
- 5 inch (130 mm) height
- Terminal box position 9 or 12 o'clock for 1 inch connection
- Terminal box position 9 o'clock for STAR U 25 (1.5 inch) and NFSL
- Packing gland left with cap (plug) on right hand side
- 16 ft (5 m)
- U, RSL, NFSL, HU pump housings.

Pumpen Intelligenz.

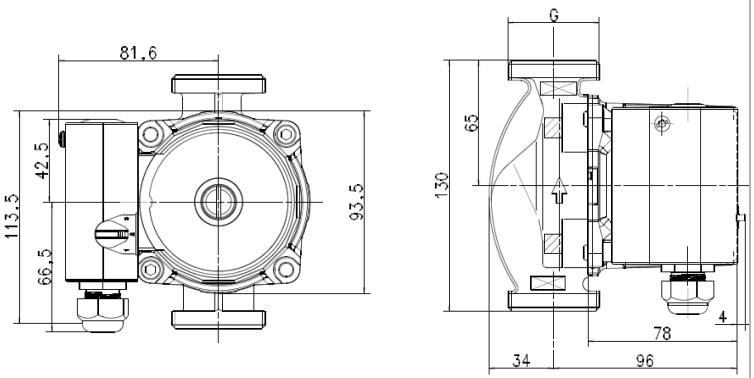
Heating pump STAR U

Type : Star U

Star S 16/21 U 15



Star S 16/21 U 25



Star U

Pump Body: Cast Iron

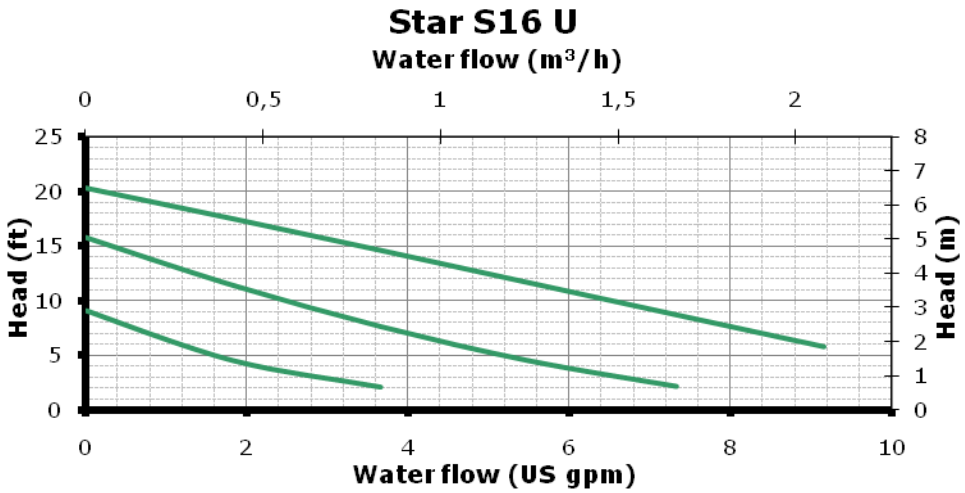
Connections Width: 1”, $1^1/_2$”, 2”

Pump Height: 5 inch (130 mm), 7 inch (180 mm)

1 speed or 3 speed

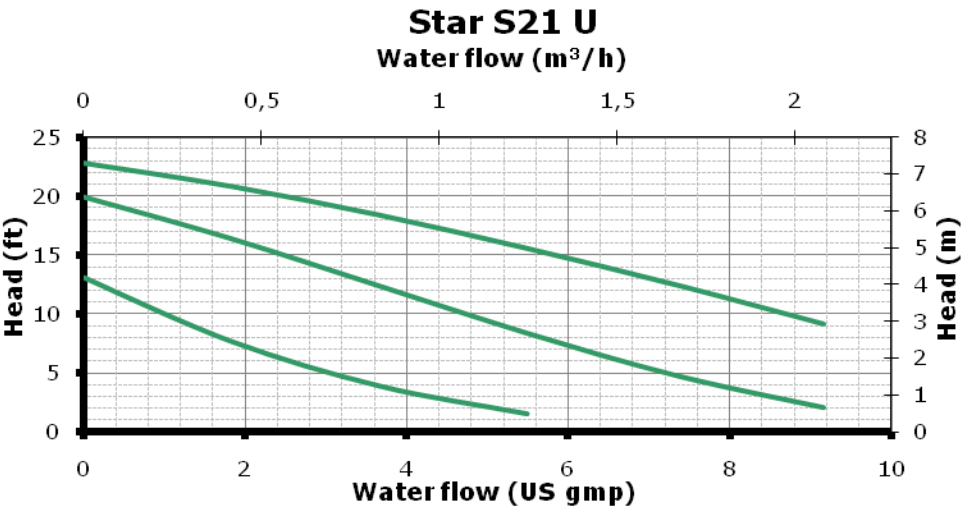
Pumpen Intelligenz.

Heating pump STAR U



Wilo-Star S16 U25 130

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I 1
	[US gpm]	[m³/h]	[ft]	[mw g]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	14.6	4.5	0.101	74.5	0.65
Av. Speed	4.4	1.00	7.6	2.3	0.082	60.4	0.55
Min. speed	4.4	1.00	2.1	0.6	0.056	41.5	0.38



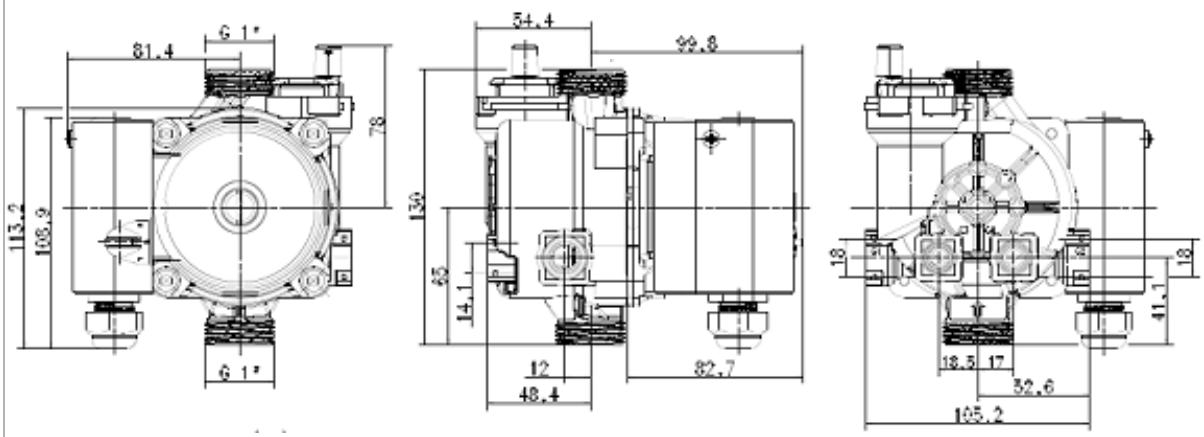
Wilo-Star S21 U25 130

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I_1
	[US gpm]	[m³/h]	[ft]	[mw g]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	18.3	5.6	0.119	88	0.77
Av. Speed	4.4	1.00	12.4	3.7	0.100	73.3	0.66
Min. speed	4.4	1.00	3.9	1.2	0.074	54.6	0.50

Pumpen Intelligenz.

Heating pump STAR Ku RSL

STAR S16 / S21 Ku RSL



Maximal torque on connections G 1" : 40 Nm

Star Ku RSL

Pump Body: Composite

Integrated air venter

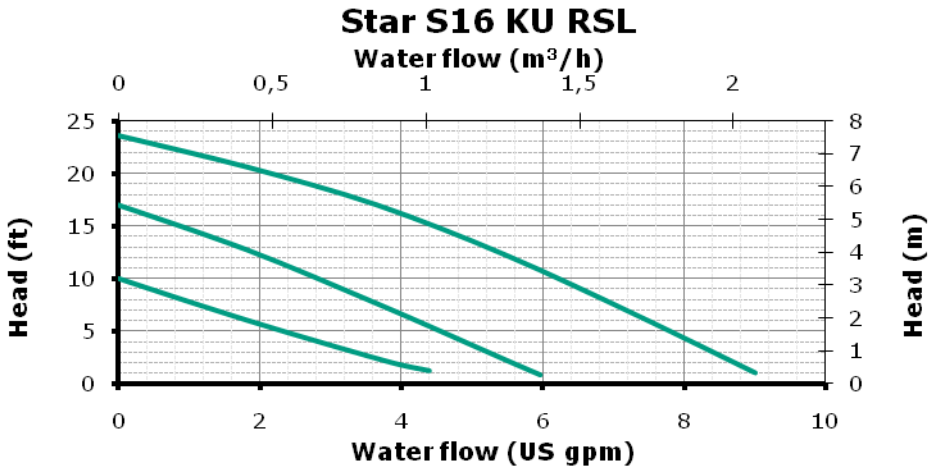
Connections Width: 1"

Pump Height: 5 inch (130 mm)

1 speed or 3 speed

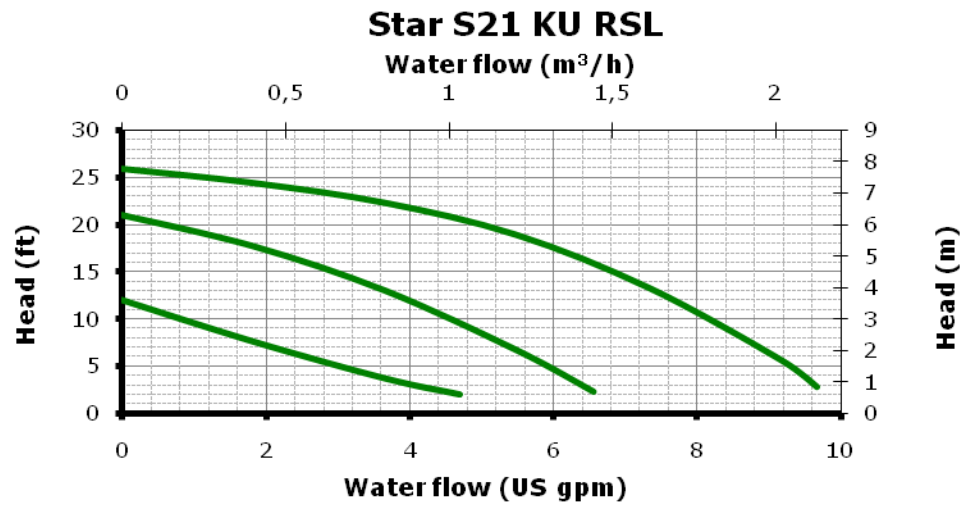
Pumpen Intelligenz.

Heating pump STAR Ku RSL



Wilo-Star S16 Ku RSL

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I_1
	[US gpm]	[m³/h]	[ft]	[mwg]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	16.1	4.9	0.102	75.8	0.66
Av. Speed	4.4	1.00	6.2	1.9	0.082	61.5	0.56
Min. speed	4.4	1.00	1.0	0.3	0.055	40.7	0.37



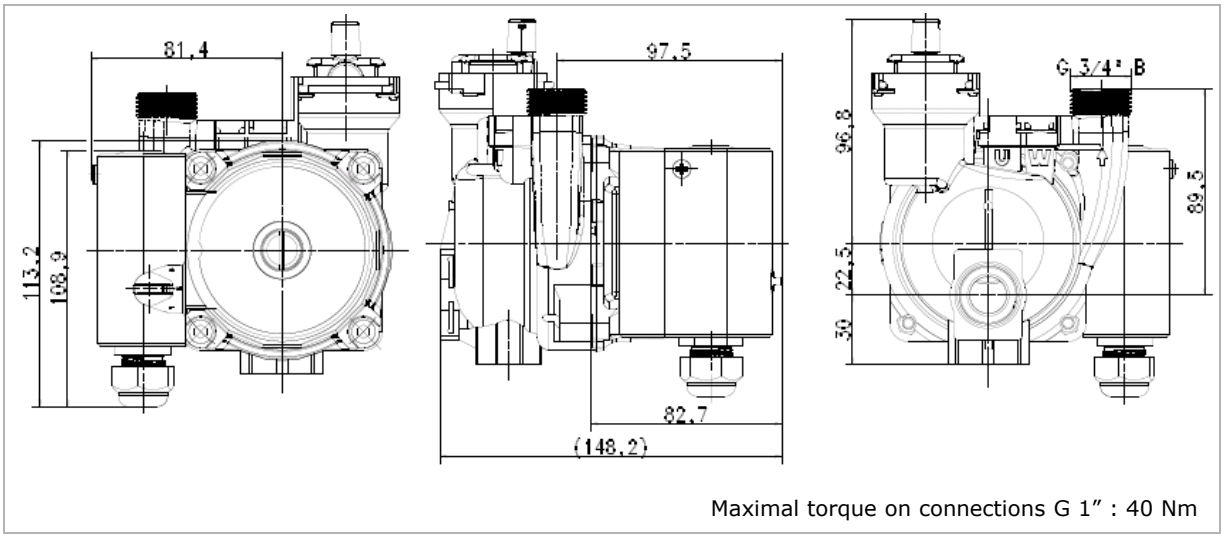
Wilo-Star S21 Ku RSL

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I_1
	[US gpm]	[m³/h]	[ft]	[mwg]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	20.7	6.3	0.118	88.2	0.77
Av. Speed	4.4	1.00	9.8	3.0	0.106	78.8	0.71
Min. speed	4.4	1.00	2.0	0.6	0.074	55.1	0.51

Pumpen Intelligenz.

Heating pump STAR Ku NFSL

STAR S16 / S21 Ku NFSL



Maximal torque on connections G 1" : 40 Nm

Star Ku NFSL

Pump Body: Composite

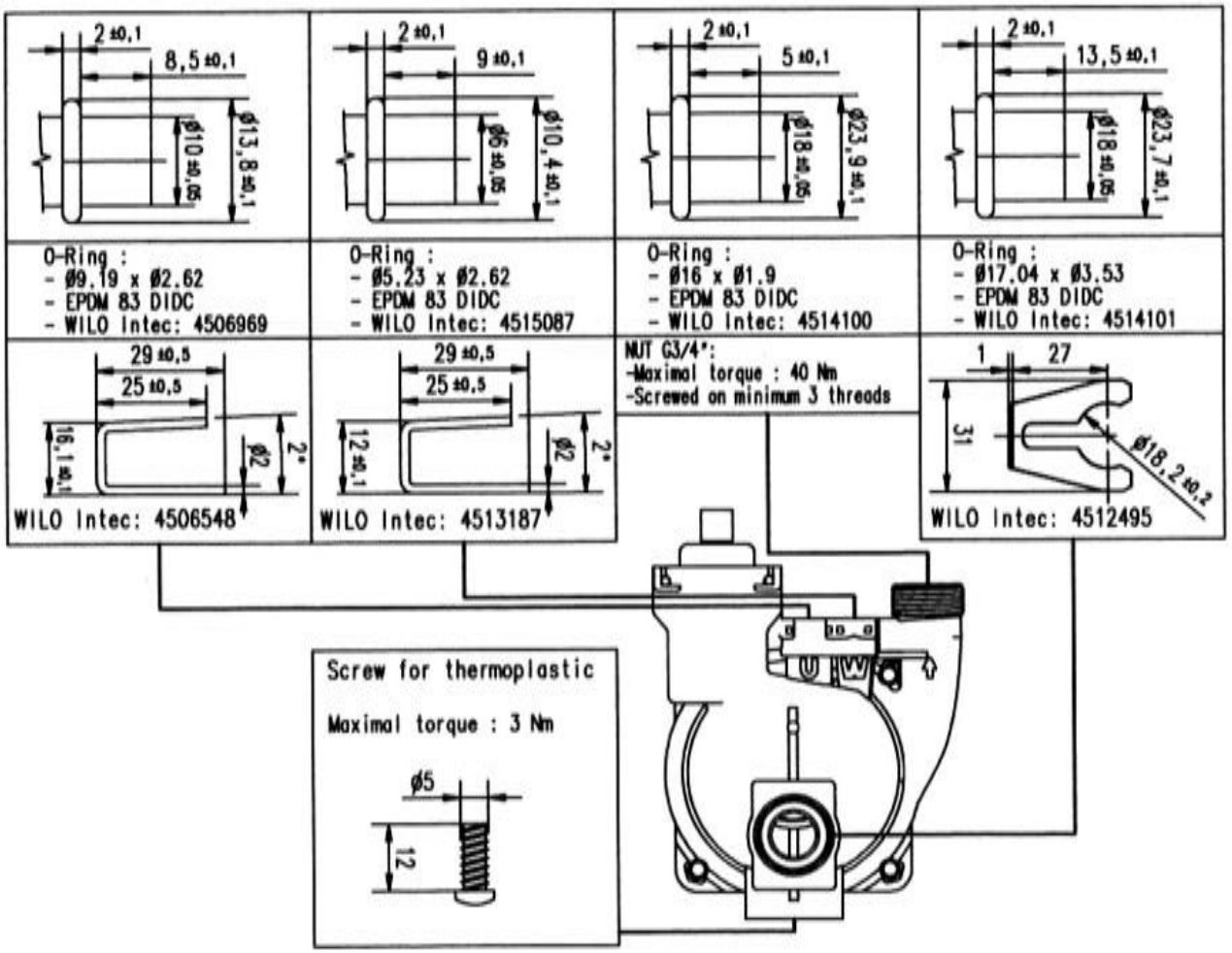
Integrated air venter

Connections Width: $^3/_4$"

1 speed or 3 speed

Pumpen Intelligenz.

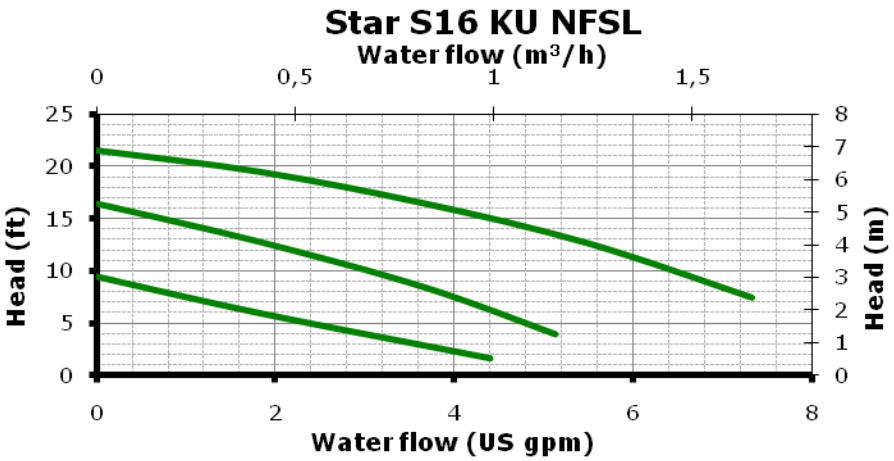
Heating pump STAR Ku NFSL



Please note that the connections U and W can be delivered open or closed

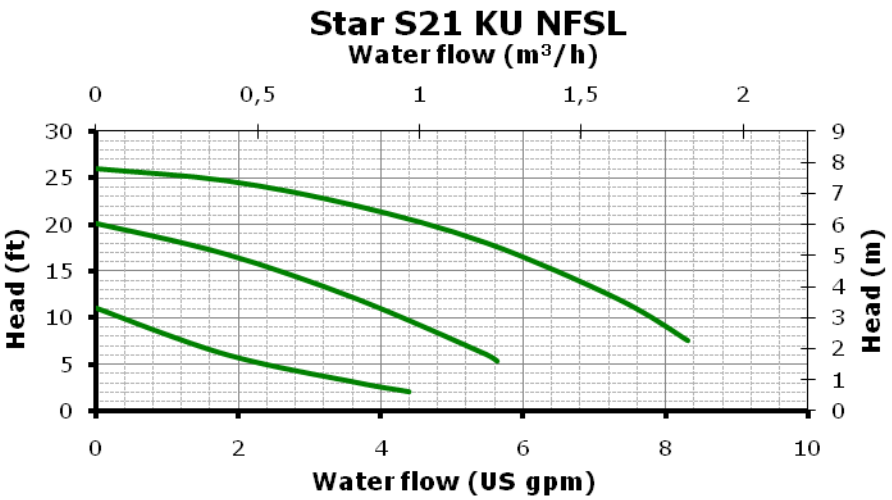
Pumpen Intelligenz.

Heating pump STAR Ku NFSL



Wilo-Star S16 Ku NFSL

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I_1
	[US gpm]	[m³/h]	[ft]	[mw g]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	15.7	4.8	0.103	76.9	0.67
Av. Speed	4.4	1.00	6.6	2.0	0.084	62.8	0.57
Min. speed	4.4	1.00	1.3	0.4	0.057	42.3	0.39



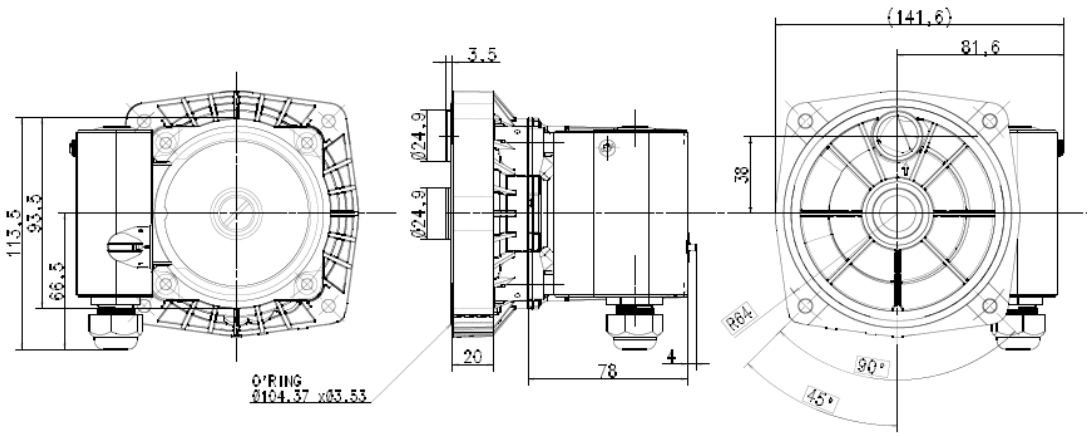
Wilo-Star S21 Ku NFSL

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I_1
	[US gpm]	[m³/h]	[ft]	[mw g]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	20.0	6.1	0.121	90.5	0.78
Av. Speed	4.4	1.00	9.2	2.8	0.107	80.0	0.72
Min. speed	4.4	1.00	2.0	0.6	0.075	55.7	0.51

Pumpen Intelligenz.

Heating Pump STAR Ku HU

STAR S16 / S21 Ku HU



Maximal torque on connections G 1" : 40 Nm

The arrow indicates the top side of the HU25. The HU25 should only be used in this orientation with the pressure outlet at 12 o'clock.

Star Ku HU

Pump Body: Composite

Connections Width: $1^1/_2$"

1 speed or 3 speed

Pumpen Intelligenz.

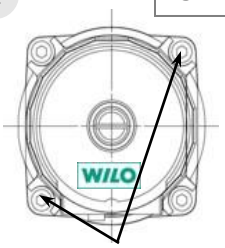
Heating Pump STAR Ku HU

Type HU25 Ku : screwing instructions

The guarantee of the water tightness on the pump is linked to :

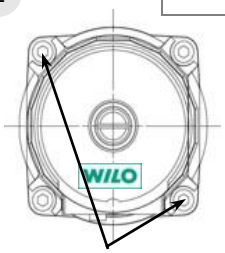
> The way all its parts are correctly assembled
> The way the 4 screws are screwed, according
> The following instruction

1 **3Nm**



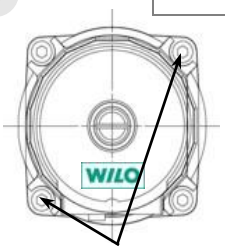
Screw first simultaneously two opposite screws to a torque of 3Nm

2 **3Nm**



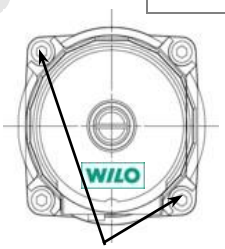
Then screw simultaneously the two opposite screws to a torque of 3Nm

3 **5Nm**



Screw first simultaneously two opposite screws to a torque of 5Nm

4 **5Nm**

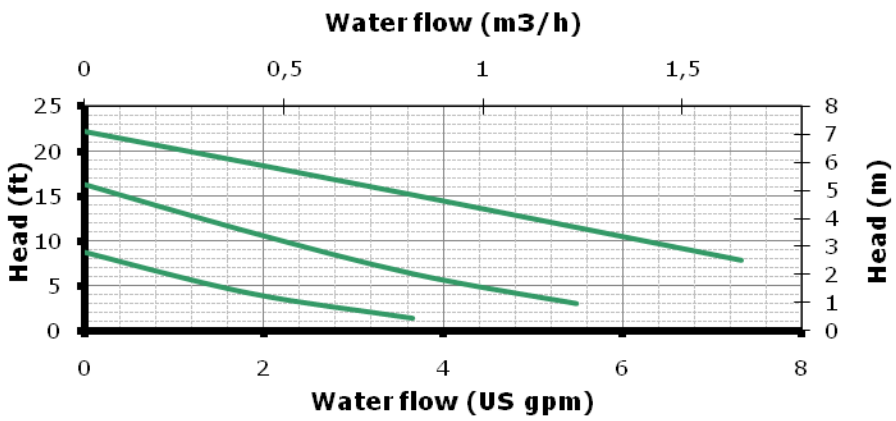


Then screw simultaneously the two opposite screws to a torque of 5Nm

Pumpen Intelligenz.

Heating Pump STAR Ku HU

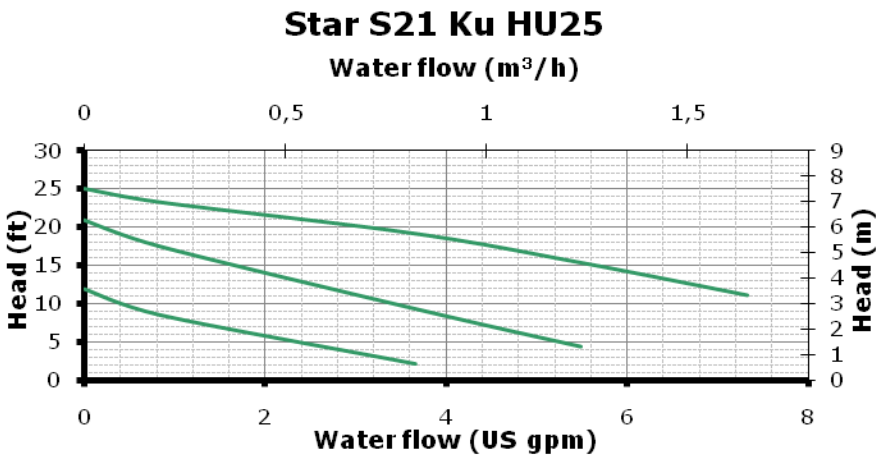
Star S16 Ku HU25



Wilo-Star S16 Ku HU

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I_1
	[US gpm]	[m^3/h]	[ft]	[mw g]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	15.1	4.6	0.103	76.5	0.67
Av. Speed	4.4	1.00	1.3	0.4	0.083	61.9	0.56
Min. speed	4.4	1.00	1.3	0.4	0.055	41.3	0.38

Star S21 Ku HU25



Wilo-Star S21 Ku HU

	Flow		Head		Power consumption		Current
	Q		max delivery Head		P_1		I_1
	[US gpm]	[m^3/h]	[ft]	[mw g]	[hp]	[W]	[A]
Max. Speed	4.4	1.00	19.0	5.8	0.119	88.9	0.77
Av. Speed	4.4	1.00	9.2	2.8	0.105	78.1	0.71
Min. speed	4.4	1.00	2.0	0.6	0.073	54.4	0.51

Pumpen Intelligenz.

WILO USA LLC
1290 N 25th Ave.
Melrose Park, IL, 60160 USA
Phone: +1 866-945-6872

WILO Canada Inc.
Bay #7-2915 10th Ave. NE
Calgary, Alberta
T2A 5L4 Canada
Phone : (403) 276-9456

WILO INTEC
50 av. Casella
Aubigny sur Nère, 18700 France
Tel : +33 2 48 81 62 62
Fax: +33 2 48 58 20 29
information@wilointec.com

Vice President of Sales
Mark D'Agostino
Tel : +1 708 338-9456
Fax: +1 708-338-9455
Email: mark.dagostino@wilo-usa.com

Sales & Marketing Director
Michael Ranft
Tel : +33 2 48 81 62 88
Fax: +33 2 48 58 20 29
michael.ranft@wilointec.com

Sales Administration Manager
Vincent Fleurier
Tel : +33 2 48 81 62 74
Fax: +33 2 48 58 20 29
vincent.fleurier@wilointec.com

Sales Manager Germany
Thomas Merscheim
Tel : +49 172 352 3933
Fax: +49 231 410 2578
thomas.merscheim@wilo.de

Sales Manager Subsidiaries
Gilles Moulin
Tel : +33 2 48 81 62 25
Fax: +33 2 48 58 20 29
gilles.moulin@wilointec.com

Sales Manager UK
Kevin Padmore
Tel : +44 776 801 8879
Fax : +44 128 373 2380
kevin.padmore@wilointec.com

Sales Manager France & Spain
Vincent Fleurier
Tel : +33 2 48 81 62 74
Fax : +33 2 48 58 20 29
vincent.fleurier@wilointec.com

Sales Manager Italy
Dario Frazza
Tel : +39 335 762 6181
Fax : +39 059 286 0855
dario.frazza@wilointec.com

Sales Manager Netherlands
Ronald Rijkhoff
Tel : +31 653 126 749
Fax : +31 251 215 214
ronald.rijkhoff@wilo.nl