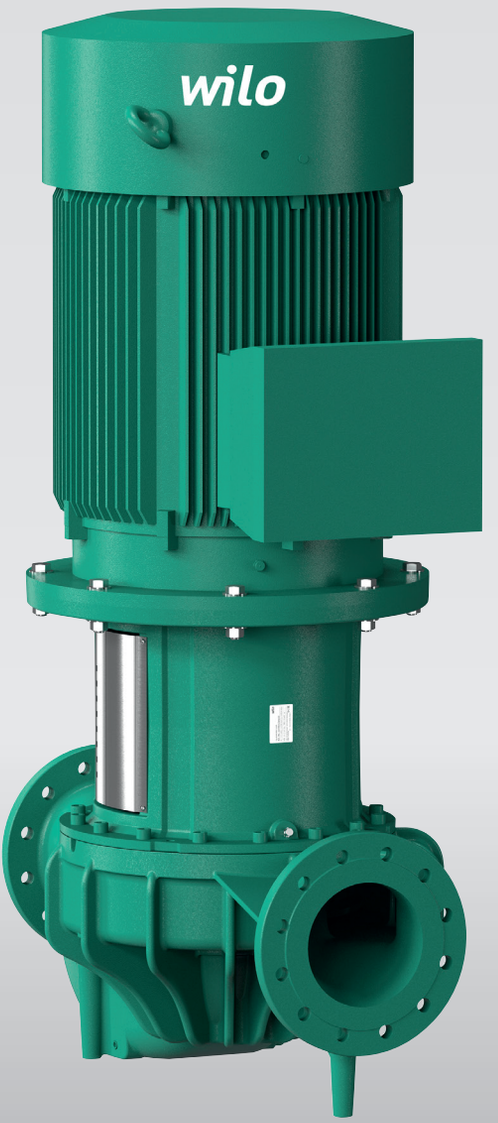
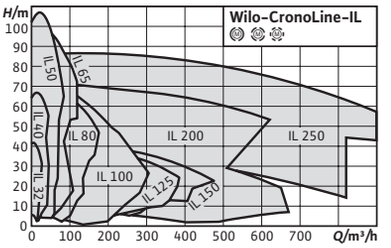
Pioneering for You

Range leaflet – Edition 03/2017 – 50 Hz

Wilo-CronoLine-IL





Accessories
Brackets for installation on a base
PTC thermistor sensor, PTC resistor tripping relay
Special motors
Special mechanical seals
SC-HVAC, CC-HVAC control systems and switchgears

Series extension

ErP READY – APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

Wilo-CronoLine-IL

Design
Glanded pump in in-line design with flange connection

Application
Pumping of heating water (acc. to VDI 2035), cold water and water/glycol mixtures without abrasive substances in heating, cold water and cooling systems.

Type key

Example	**IL 40/160-4/2**
IL	In-line pump
40	Nominal diameter DN of the pipe connection
160	Nominal impeller diameter
4	Rated motor power P_2 in kW
2	Number of poles

Special features/product advantages
- → Reduced life cycle costs thanks to optimized efficiency
- → Standard condensate drainage holes in the motor housings
- → Can be used flexibly in air-conditioning and cooling systems, with application benefits due to direct draining of condensate via optimised lantern design (patented)
- → High standard of corrosion protection thanks to cataphoretic coating
- → High worldwide availability of standard motors (according to Wilo specifications) and standard mechanical seals

Technical data (series)	
Minimum Efficiency Index (MEI)	≥ 0.4
Approved fluids (other fluids on request)	
Heating water (in accordance with VDI 2035)	•
Water-glycol mixtures (for 20-40 vol.% glycol and fluid temperature ≤ 40 °C)	•
Cooling and cold water	•
Heat transfer oil	Special version at additional charge
Permitted field of application	
Standard version for operating pressure p_{max}	13 bar (up to +140 °C) / 16 bar (up to +120 °C)
Special version for operating pressure p_{max}	25 bar
Temperature range at max. ambient temperature +40 °C	-20...+140 °C (depending on the fluid)

• = appropriate, – = not appropriate

Technical data (series)	
Ambient temperature	-15°C ... 40°C
Installation in closed buildings	•
Outdoor installation	Special version at additional charge
Electrical connection	
Mains connection	3~400 V, 50 Hz (others on request)
Motor/electronics	
Integrated full motor protection	Special version with PTC thermistor sensor (KLF) at additional charge
Protection class	IP 55
Insulation class	F
Installation options	

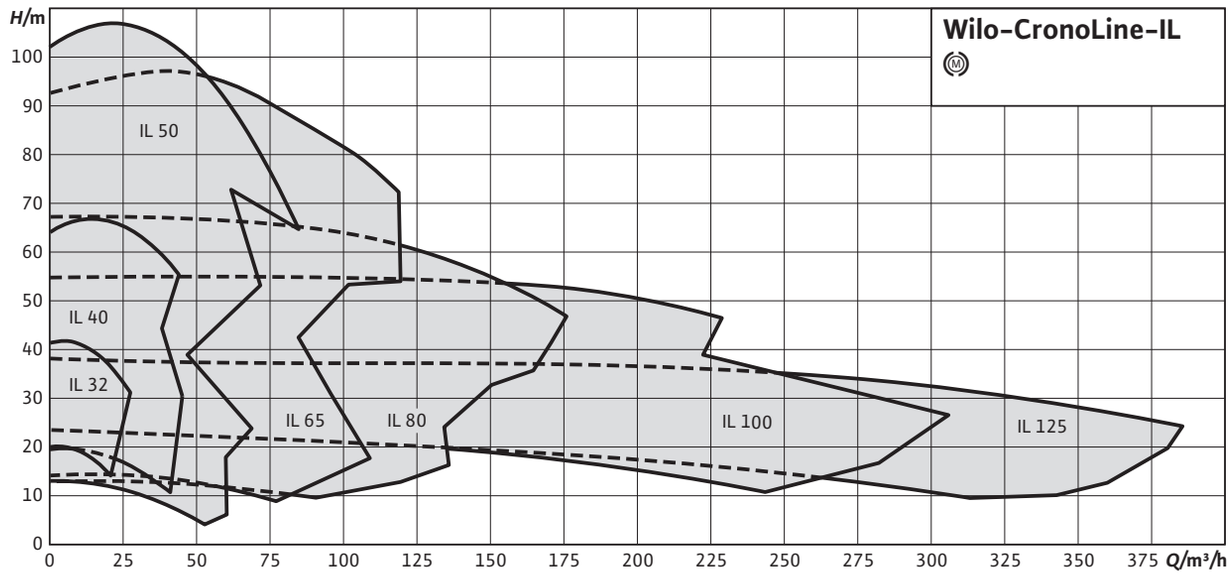
• = appropriate, – = not appropriate

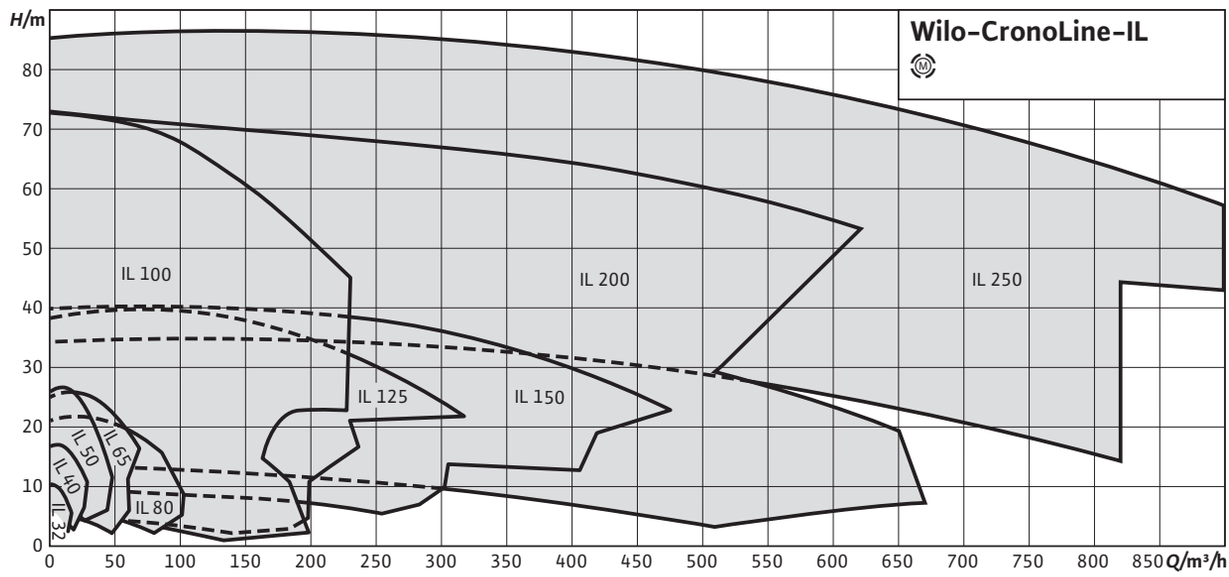
Technical data (series)	
Pipe installation (≤ 15 kW motor power)	•
Support-bracket mounting	•
Materials	
Pump housing	EN-GJL-250

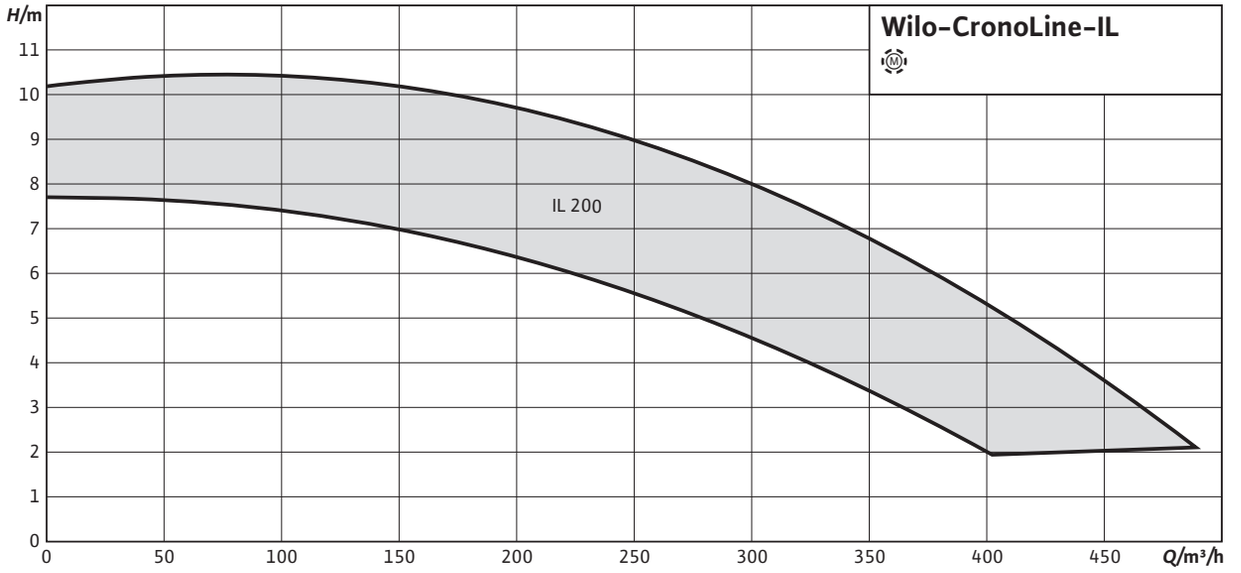
• = appropriate, – = not appropriate

Technical data (series)	
Lantern	EN-GJL-250
Impeller	EN-GJL-200
Pump shaft	1.4122
Mechanical seal	AQEGG
Other mechanical seals	On request

• = appropriate, – = not appropriate







Scope of delivery
- → Pump
- → Installation and operating instructions

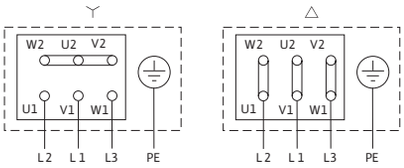
Options
- → ...-L1 variant with bronze impeller (at additional charge)
- → ...-H1 variant with housing made of spheroidal cast iron (at additional charge)
- → ...-P4 variant for maximum operating pressure of 25 bar (see Wilo price list)
- → Other voltages and frequencies as well as ATEX approval on request

Accessories
- → Mounting brackets for installation on a base
- → PTC thermistor sensor, PTC resistor tripping relay
- → Special motors
- → Special mechanical seals
- → SC-HVAC, CC-HVAC control systems and switchgears

Note
- → Motors with an energy efficiency class of IE3 for motors ≥ 0.75 kW

General notes - ErP (ecological design-) directive
- → The benchmark for most efficient water pumps is MEI ≥ 0.70
- → The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter.
- → The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system.
- → Information on benchmark efficiency is available at **www.europump.org/efficiencycharts**
- → Pumps with power consumption > 150 kW or a volume flow Q_{BEP} < 6 m³/h are not subject to the Ecodesign Directive for water pumps. Therefore, no MEI value is shown.

Terminal diagram



Δ: Connection diagram delta connection
Y: Connection diagram star connection

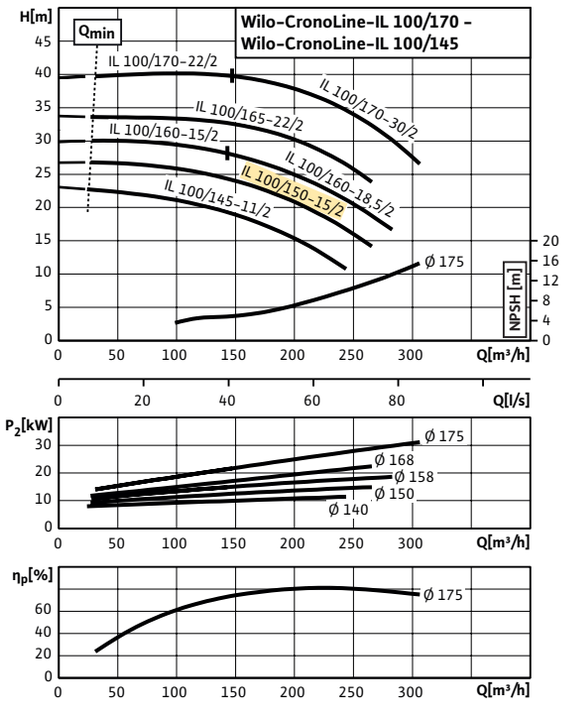
Motor protection switch required on-site. Check the direction of rotation! To change the direction of rotation, exchange any two phases.

$P_2 \leq 3$ kW	3~400 V Y
	3~230 V Δ
$P_2 \geq 4$ kW	3~690 V Y
	3~400 V Δ

After removing the bridges, Y-Δ start is possible.

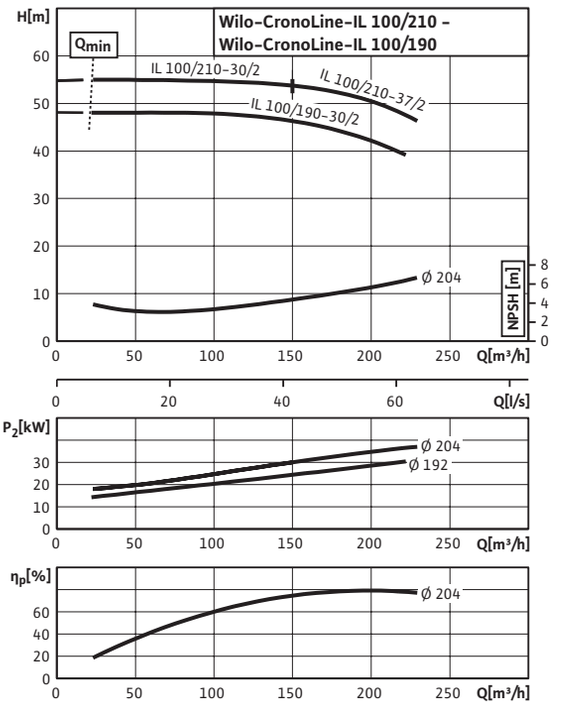
Pump curves

CronoLine-IL 100/145-11/2 – 100/170-30/2 (2-pole, 50 Hz)

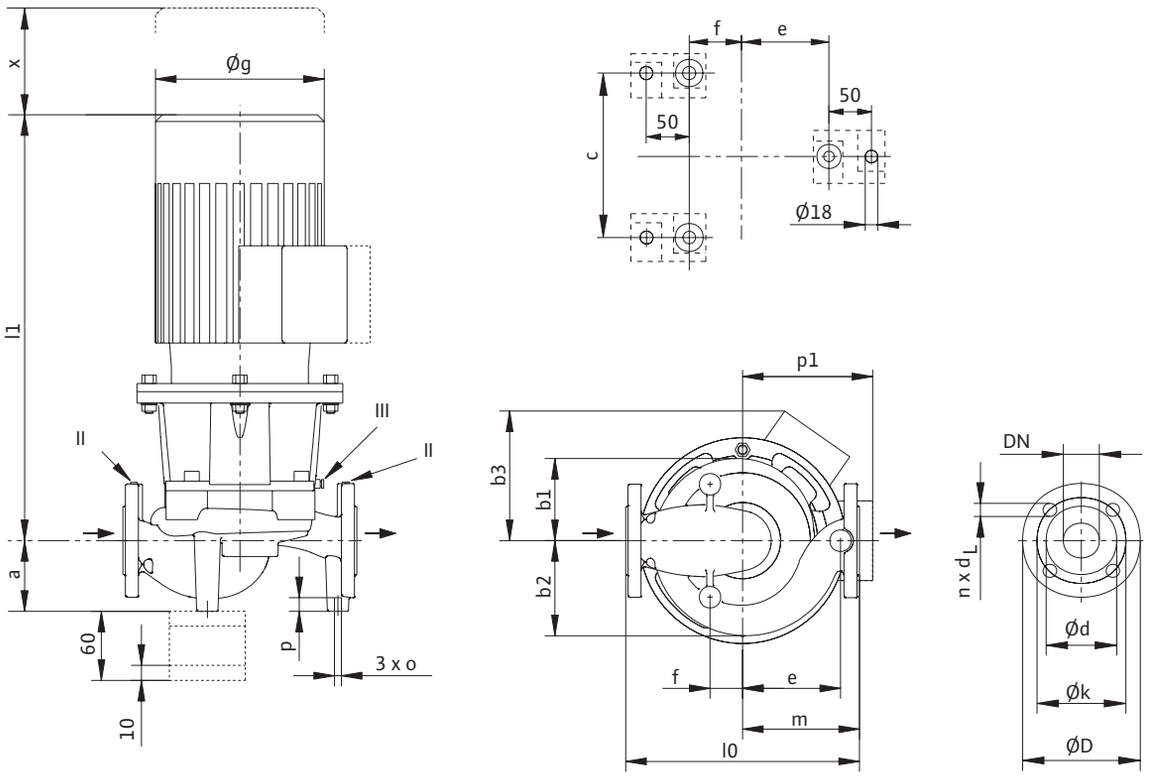


Pump curves

CronoLine-IL 100/190-30/2 – 100/210-37/2 (2-pole, 50 Hz)



Dimension drawing



II pressure gauge connection $R^1/_8$; III venting $R^1/_8$

Dimensions, weights (2-pole)

Wilo-CronoLine-IL...	Over-all length	Dimensions													Weight ap-prox.
	l0	*a*	*b1*	*b2*	*c*	*e*	*f*	*Ø g*	*l1*	*m*	*o*	*p*	*p1*	*x*	*m*
	mm												mm		kg
100/145-11/2	500	120	159	197	200	226	60	312	821	250	M12	20	250	135	169
100/150-15/2	500	120	159	197	200	226	60	312	821	250	M12	20	250	135	187
100/160-15/2	500	120	159	197	200	226	60	312	821	250	M12	20	250	135	187
100/160-18,5/2	500	120	159	197	200	226	60	312	821	250	M12	20	250	135	203
100/165-22/2	500	120	159	197	200	226	60	349	883	250	M12	20	272	135	256
100/170-22/2	500	120	159	197	200	226	60	349	883	250	M12	20	272	135	256
100/170-30/2	500	120	159	197	200	226	60	356	932	250	M12	20	299	135	337
100/190-30/2	550	155	173	202	220	231	99	356	911	255	M12	20	299	120	355
100/210-30/2	550	155	173	202	220	231	99	356	911	255	M12	20	299	120	355
100/210-37/2	550	155	173	202	220	231	99	356	981	255	M12	20	299	120	374

Flange dimensions / nominal diameter of connection

Wilo-CronoLine-IL...	Nominal diameter of flange/pipe connection	Pressure stage	Pump flange dimensions			
	DN	*PN*	*Ø D*	*Ø d*	*Ø k*	*n x Ø d_L*
				mm		pcs. x mm
100/145-11/2						
100/150-15/2						
100/160-15/2						
100/160-18,5/2						
100/165-22/2	100	16	220	156	180	8 x 19
100/170-22/2						
100/170-30/2						
100/190-30/2						
100/210-30/2						
100/210-37/2						

Pump flange dimensions according to EN 1092-2, n = number of drilled holes

Motor data (2-pole), minimum efficiency index, article numbers

Wilo-CronoLine-IL...	Motor effi-ciency level	Rated power	Rated current (approx.)	Power factor	Rated speed	Motor efficiency	Art no.
		P_2 kW	I_N 3~400 V A	*cos φ*	*n* rpm	$\eta_{m\,50\%}/\eta_{m\,75\%}/\eta_{m\,100\%}$ %	
100/145-11/2	IE3	11.00	20.50	0.85	2900	89.4/91.0/91.2	2120925
100/150-15/2	IE3	15.00	26.80	0.88	2900	90.4/92.1/91.9	2120926
100/160-15/2	IE3	15.00	26.80	0.88	2900	90.4/92.1/91.9	2120927
100/160-18,5/2	IE3	18.50	31.80	0.91	2900	90.9/92.0/92.4	2120928
100/165-22/2	IE3	22.00	38.00	0.90	2900	91.7/92.9/92.7	2120929
100/170-22/2	IE3	22.00	38.00	0.90	2900	91.7/92.9/92.7	2120930
100/170-30/2	IE3	30.00	55.00	0.86	2900	91.8/93.0/93.3	2120931
100/190-30/2	IE3	30.00	55.00	0.86	2900	91.8/93.0/93.3	2120932
100/210-30/2	IE3	30.00	55.00	0.86	2900	91.8/93.0/93.3	2120933
100/210-37/2	IE3	37.00	64.80	0.92	2900	92.0/93.2/93.7	2120934

Observe motor name plate data

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