

**Date:** 10/11/2020

Qty. | Description

1 SP 160-15



Note! Product picture may differ from actual product

Product No.: 20064315

Submersible borehole pump, suitable for pumping clean water. Can be installed vertically or horizontally. All steel components are made in stainless steel, EN 1.4301 (AISI 304), that ensures high corrosive resistance. This pump carries drinking water approval.

The pump is fitted with a 190 kW MMS12000 motor with sand shield, water-lubricated journal bearings and a volume compensating diaphragm. The rewindable motor contruction allows complete access to the windings for easy rewinding. The stator windings are PE/PA insulated made for continous operations (S1). Suitable for temperatures up to 50 °C. The motor is fitted with a mechanical shaft seal.

The motor is not fitted with a temperature sensor. If temperature monitoring is desired, a Pt100 or Pt1000 sensor can be fitted.

The motor is for direct-on-line starting (DOL).

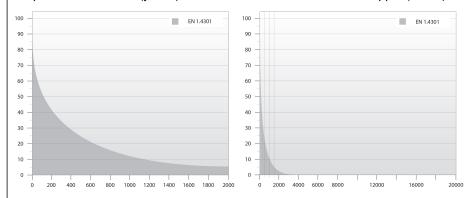
### Further product details

The pump is suitable for applications similar to the following:

- raw-water supply
- irrigation
- groundwater lowering
- pressure boosting
- fountain applications.

### **Pump**

All pump surfaces that are in contact with pumped liquids are made in stainless steel which makes them corrosionand wear-resistant. The corrosion diagram below shows the capabilities of the pump and motor in relation to the temperature in Celsius (y-axis) and the concentration of chloride in ppm (x-axis).



The elastomer parts in the pump are made of NBR (Nitrile-Butadiene Rubber) which ensures good wear resistance and long service intervals.

In case the pump is used for pumping water with high content of hydrocarbons or solvents, Grundfos offers FKM rubber parts (Fluorocarbon) which are oil and temperature-resistant up to 90 °C.



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The pump is built with octagonal bearings with sand flush channels that minimise wear. As wear of the pump is inevitable, the pump design allows for easy replacement of all internal wear parts (bearings, impeller, wear rings and seal rings) to maintain high performance and a long lifetime.

The suction interconnector is fitted with a strainer to prevent large particles from entering the pump.

#### Motor

The winding wire is made from pure electrolytic cobber insulated by extruded two layers of PE/PA with high dielectric strength properties allowing direct contact between the motor fluid and winding wire. This ensures the best possible cooling of the winding wire. The PA layer ensures high mechanical wear properties of the winding wire.

The shaft seal faces are SiC/SiC. The material combination gives good performance when abrasive particles (sand) is present. Together with the shaft seal housing, the sand shield forms a labyrinth seal, which during normal operating conditions prevents penetration of sand particles into the shaft seal. This shaft seal is drinking water approved.

The motor can be fitted with a Pt100 or Pt1000 sensor that together with a control unit ensures that the maximum operating temperature conditions are not exceeded.

Liquid:

Pumped liquid: Water

Maximum liquid temperature: 45 °C

Max liquid t at 0.15 m/sec: 40 °C

Max liquid t at 0.5 m/sec: 45 °C

Selected liquid temperature: 20 °C

Density: 998.2 kg/m³

Technical:

Pump speed on which pump data are based: 2900 rpm

Rated flow: 160 m³/h
Rated head: 305 m
Shaft seal for motor: SIC/SIC

Curve tolerance: ISO9906:2012 3B

Motor version: T45

Materials:

Pump: Stainless steel

EN 1.4301 AISI AISI 304

Impeller: Stainless steel EN 1.4301

AISI AISI 304

Motor: Cast iron

DIN W.-Nr. 0.6025 ASTM 35-40

Installation:

Pump outlet: RP6
Motor diameter: 12 inch

Electrical data:

Motor type: MMS12000
Rated power - P2: 190 kW
Power (P2) required by pump: 190 kW
Mains frequency: 50 Hz

 Rated voltage:
 3 x 380-400-415 V

 Rated current:
 390-390-395 A

 Starting current:
 580-620-620 %

 Cos phi - power factor:
 0.88-0.84-0.80

 Rated speed:
 2920-2930-2930 rpm

Start. method: direct-on-line

Enclosure class (IEC 34-5): IP68



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Built-in temp. transmitter: no Motor No: 96540339 Windings: PE2/PA

Others:

Minimum efficiency index, MEI ≥: -.--

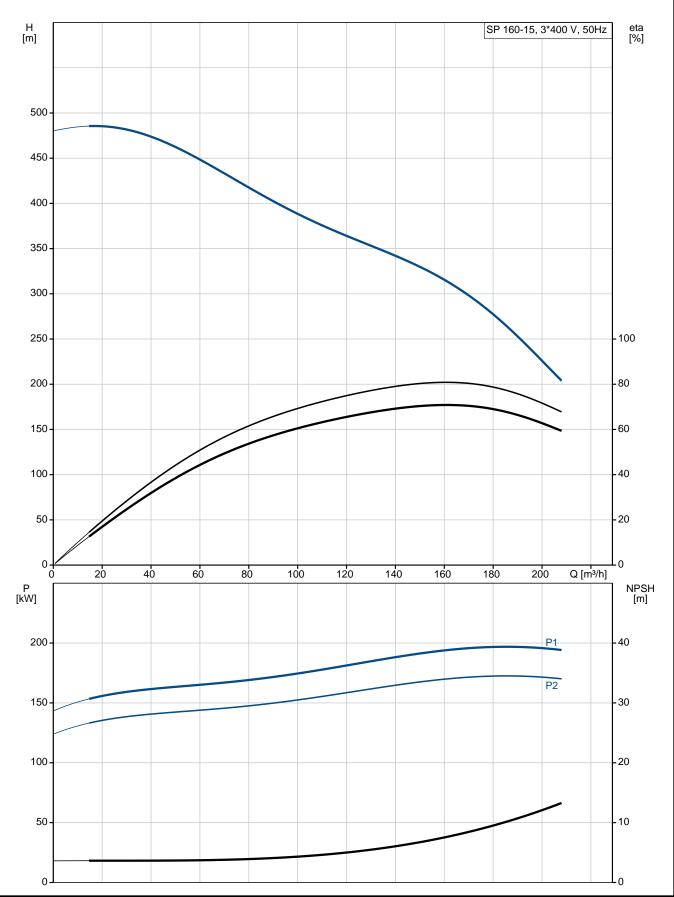
ErP status: EuP Standalone/Prod.

Net weight:815 kgGross weight:885 kgShipping volume:1.45 m³Country of origin:DKCustom tariff no.:84137029



**Date:** 10/11/2020

# 20064315 SP 160-15 50 Hz

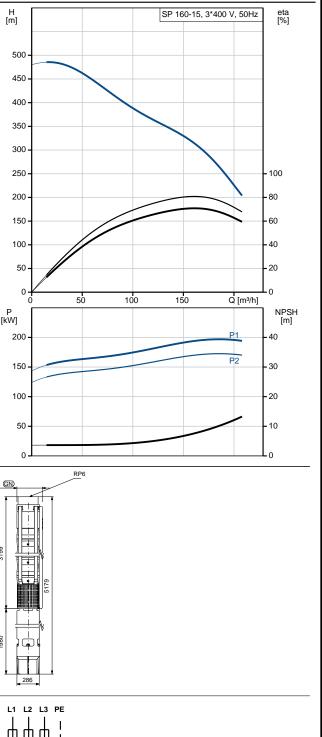




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**Date:** 10/11/2020

Product name: SP 160-15 Product No: 20064315 EAN number: 5710626356911  Technical:  Pump speed on which pump data are based: 2900 rpm  Rated flow: 160 m³/h Rated head: 305 m  Stages: 15 Impeller reduc.: NONE Shaft seal for motor: SIC/SIC Curve tolerance: ISO9906:2012 3B Model: B Valve: YES Motor version: T45  Materials:  Pump: Stainless steel Pump: AISI 304 Impeller: Stainless steel Impeller: Stainless steel Impeller: EN 1.4301 Impeller: AISI 304 Impeller: AISI 304 Impeller: AISI 304 Impeller: Pump: AISI 304 Impeller: Pump: AISI 304 Impeller: AISI AIS	Description General information:	Value	[
Product No:   20064315   EAN number:   5710626356911   Technical:   Pump speed on which pump data are based:   305 m   Rated flow:   160 m³/h   Rated head:   305 m   Stages:   15   Impeller reduc.:   NONE   Shaft seal for motor:   ISC/SIC   Curve tolerance:   ISO9906:2012 3B   Model:   B   Valve:   YES   Motor version:   T45   Materials:   Pump:   Stainless steel   Pump:   AISI AISI 304   Impeller:   EN 1.4301   Pump:   AISI AISI 304   Impeller:   EN 1.4301   Impeller:   EN 1.4301   Impeller:   EN 1.4301   Impeller:   EN 1.4301   Impeller:   AISI AISI 304   Motor:   Cast iron   Motor:   Cast iron   Motor:   ASTM 35-40   Installation:   Pump outlet:   RP6   Motor diameter:   12 inch   Liquid:   Liquid:   Pumped liquid:   Water   Maximum liquid temperature:   45 °C   Max liquid t at 0.15 m/sec:   45 °C   Selected liquid temperature:   20 °C   Density:   998.2 kg/m³   Electrical data:   Motor type:   MMS12000   Applic. motor:   GRUNDFOS   Rated power - P2:   190 kW   Power (P2) required by pump:   190 kW   Mains frequency:   50 Hz   Rated voltage:   3 x 380-400-415 V   Rated current:   390-390-395 A   Starting current:   580-620-620 %   Cos phi - power factor:   0.88-0.84-0.80   Rated speed:   2290-2930-2930 rpm   Start. method:   direct-on-line   Enclosure class (IEC 34-5):   IP68   Motor No:   96540339   Windings:   PE2/PA   Others:   Minimum efficiency index, MEI â%s¥:     ErP status:   EuP Standalone/Prod.		SD 160 15	
EAN number: 5710626356911  Technical:			
Technical:			
Pump speed on which pump data are based: Rated flow: 160 m³/h Rated head: 305 m Stages: 15 Impeller reduc.: NONE Shaft seal for motor: SIC/SIC Curve tolerance: ISO9906:2012 3B Model: YES Motor version: T45  Materials: Pump: Stainless steel Pump: Stainless steel Pump: AISI AISI 304 Impeller: Stainless steel Impeller: Stainless steel Impeller: Stainless steel Impeller: Stainless steel Impeller: AISI AISI 304 Motor: Cast iron Motor: DIN WNr. 0.6025 Motor: DIN WNr. 0.6025 Motor: DIN WNr. 0.6025 Motor: ASTM 35-40 Installation: Pump outlet: RP6 Motor diameter: 12 inch Liquid: Pumped liquid: Water Maximum liquid temperature: 45 °C Max liquid t at 0.15 m/sec: 40 °C Max liquid t at 0.15 m/sec: 45 °C Selected liquid temperature: 20 °C Density: 998.2 kg/m³ Electrical data: Motor type: MMS12000 Applic. motor: GRUNDFOS Rated power - P2: 190 kW Power (P2) required by pump: 190 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-400-415 V Rated voltage: 3 x 380-400-395 A Starting current: 580-620-620 % Cos phi - power factor: 968-08-080 Rated speed: 2920-2930-2930 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Motor protec: NONE Thermal protec: external Bullt-in temp. transmitter: no Motor No: 96540339 Windings: PE2/PA Others: Minimum efficiency index, MEI &%*: EuP Status:		5710020350911	
Rated flow:			
Rated head:   305 m   Stages:   15   Impeller reduc.:   NONE   Shaft seal for motor:   SIC/SIC   Curve tolerance:   ISO9906:2012 3B   Model:   B   Valve:   YES   Motor version:   T45   Materials:   Pump:   Stainless steel   Pump:   EN 1.4301   Pump:   AISI AISI 304   Impeller:   Stainless steel   Impeller:   EN 1.4301   Impeller:   EN 1.4		2900 rpm	
Stages:   15   Impeller reduc.:   NONE   Shaft seal for motor:   SIC/SIC   Curve tolerance:   ISO9906;2012 3B   Model:   B   Walve:   YES   Motor version:   T45   Materials:   Furnity   T45   Materials:   Furnity   T45   Materials:   Furnity   T45   Materials:   Furnity   F	Rated flow:	160 m³/h	
Impeller reduc.:	Rated head:	305 m	
Shaft seal for motor:	Stages:	15	
Curve tolerance:	Impeller reduc.:	NONE	
Model:	Shaft seal for motor:	SIC/SIC	
Valve:         YES           Motor version:         T45           Materials:         Pump:         Stainless steel           Pump:         EN 1.4301         Pump:           Pump:         AISI AISI 304         Impeller:           Impeller:         Stainless steel         Impeller:           Impeller:         EN 1.4301         Impeller:           Impeller:         AISI AISI 304         Motor:           Motor:         Cast iron         Motor:           Motor:         DIN WNr. 0.6025         Motor:           Motor:         ASTM 35-40         Installation:           Pump outlet:         RP6         Motor diameter:         12 inch           Liquid:         Water         Maximation:         Motor diameter:         45 °C           Maximum liquid temperature:         45 °C         Maximum liquid temperature:         45 °C         Maximum liquid temperature:         45 °C         Maximum liquid temperature:         45 °C         Maximum liquid temperature:         Mo °C         Mo °C         Maximum liquid temperature:         Mo °C         Mo °	Curve tolerance:	ISO9906:2012 3B	
Motor version: T45  Materials: Pump: Stainless steel Pump: EN 1.4301 Pump: AISI AISI 304 Impeller: Stainless steel Impeller: EN 1.4301 Impeller: EN 1.4301 Impeller: AISI AISI 304 Motor: Cast iron Motor: DIN WNr. 0.6025 Motor: ASTM 35-40  Installation: Pump outlet: RP6 Motor diameter: 12 inch  Liquid: Vater Maximum liquid temperature: 45 °C Max liquid t at 0.15 m/sec: 40 °C Max liquid t at 0.5 m/sec: 45 °C Selected liquid temperature: 20 °C Density: 998.2 kg/m³  Electrical data: Motor type: MMS12000 Applic. motor: GRUNDFOS Rated power - P2: 190 kW Power (P2) required by pump: 190 kW Mains frequency: 50 Hz Rated current: 390-390-395 A Starting current: 580-620-620 % Cos phi - power factor: 0.88-0.84-0.80 Rated speed: 2920-2930-2930 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Motor No: 96540339 Windings: PE2/PA Others: Minimum efficiency index, MEI ≥: ErP status: EuP Standalone/Prod.	Model:	В	
Materials:         Pump:         Stainless steel           Pump:         EN 1.4301           Pump:         AISI AISI 304           Impeller:         Stainless steel           Impeller:         EN 1.4301           Impeller:         AISI AISI 304           Motor:         Cast iron           Motor:         DIN WNr. 0.6025           Motor:         ASTM 35-40           Installation:         Installation:           Pump outlet:         RP6           Motor diameter:         12 inch           Liquid:         Water           Pump outlet:         MP6           Motor diameter:         45 °C           Maximum liquid temperature:         45 °C           Max liquid t at 0.15 m/sec:         45 °C           Max liquid t at 0.5 m/sec:         45 °C           Selected liquid temperature:         20 °C           Density:         998.2 kg/m³           Electrical data:         MMS12000           Motor type:         MMS12000           Applic. motor:         GRUNDFOS           Rated power - P2:         190 kW           Power (P2) required by pump:         190 kW           Mains frequency:         50 Hz	Valve:	YES	
Pump:   Stainless steel	Motor version:	T45	
Pump: EN 1.4301 Pump: AISI AISI 304 Impeller: Stainless steel Impeller: EN 1.4301 Impeller: AISI AISI 304 Impeller: AISI AISI 304 Impeller: AISI AISI 304 Motor: Cast iron Motor: DIN WNr. 0.6025 Motor: ASTM 35-40 Installation: Pump outlet: RP6 Motor diameter: 12 inch Liquid: Pumped liquid: Water Maximum liquid temperature: 45 °C Max liquid t at 0.15 m/sec: 40 °C Max liquid t at 0.5 m/sec: 45 °C Selected liquid temperature: 20 °C Density: 998.2 kg/m³ Electrical data: Motor type: MMS12000 Applic. motor: GRUNDFOS Rated power - P2: 190 kW Power (P2) required by pump: 190 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-400-415 V Rated voltage: 3 x 380-400-415 V Rated current: 390-390-395 A Starting current: 580-620-620 % Cos phi - power factor: 0.88-0.84-0.80 Rated speed: 2920-2930-2930 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Motor protec: NONE Thermal protec: external Built-in temp. transmitter: no Motor No: 96540339 Windings: PE2/PA Others: Minimum efficiency index, MEI â%-¥: EuP Standalone/Prod.	Materials:		
Pump: Stainless steel Impeller: Stainless steel Impeller: EN 1.4301 Impeller: AISI AISI 304 Motor: Cast iron Motor: DIN WNr. 0.6025 Motor: ASTM 35-40  Installation: Pump outlet: RP6 Motor diameter: 12 inch  Liquid: Vater Maximum liquid temperature: 45 °C Max liquid t at 0.15 m/sec: 45 °C Max liquid t at 0.5 m/sec: 45 °C Selected liquid temperature: 20 °C Density: 998.2 kg/m³  Electrical data: Motor type: MMS12000 Applic. motor: GRUNDFOS Rated power - P2: 190 kW Power (P2) required by pump: 190 kW Mains frequency: 50 Hz Rated voltage: 3 x 380-400-415 V Rated current: 390-390-395 A Starting current: 580-620-620 % Cos phi - power factor: 0.88-0.84-0.80 Rated speed: 2920-2930-2930 rpm Start. method: Enclosure class (IEC 34-5): IP68 Motor protec: NONE Thermal protec: external Built-in temp. transmitter: no Motor No: 96540339 Windings: PE2/PA Others: Minimum efficiency index, MEI â%*: ErP status:	Pump:	Stainless steel	
Impeller:   Stainless steel   Impeller:   EN 1.4301   Impeller:   EN 1.4301   Impeller:   AISI AISI 304   Motor:   DIN WNr. 0.6025   Motor:   ASTM 35-40   Imstallation:   Pump outlet:   RP6   Motor diameter:   12 inch   Liquid:   Pumped liquid:   Water   Maximum liquid temperature:   45 °C   Max liquid t at 0.15 m/sec:   40 °C   Max liquid t at 0.5 m/sec:   45 °C   Selected liquid temperature:   20 °C   Density:   998.2 kg/m³   Electrical data:   Motor type:   MMS12000   Applic. motor:   GRUNDFOS   Rated power - P2:   190 kW   Mains frequency:   50 Hz   Rated voltage:   3 x 380-400-415 V   Rated current:   390-390-395 A   Starting current:   580-620-620 %   Cos phi - power factor:   0.88-0.84-0.80   Rated speed:   2920-2930-2930 rpm   Start. method:   direct-on-line   Enclosure class (IEC 34-5):   IP68   Motor protec:   NONE   Thermal protec:   external   Built-in temp. transmitter:   no   Motor No:   96540339   Windings:   PE2/PA   Others:   EuP Standalone/Prod.   EuP Standalone/Prod.	Pump:	EN 1.4301	
Impeller:	Pump:	AISI AISI 304	. [k
Impeller:	Impeller:	Stainless steel	
Impeller:	Impeller:	EN 1.4301	
Motor:         DIN WNr. 0.6025           Motor:         ASTM 35-40           Installation:         RP6           Pump outlet:         RP6           Motor diameter:         12 inch           Liquid:         Water           Pumped liquid:         Water           Maxiquid tal 0.15 m/sec:         45 °C           Max liquid t at 0.5 m/sec:         45 °C           Max liquid temperature:         20 °C           Selected liquid temperature:         20 °C           Density:         998.2 kg/m³           Electrical data:         MMS12000           Applic. motor:         GRUNDFOS           Rated power - P2:         190 kW           Power (P2) required by pump:         190 kW           Mains frequency:         50 Hz           Rated voltage:         3 x 380-400-415 V           Rated current:         390-390-395 A           Starting current:         580-620-620 %           Cos phi - power factor:         0.88-0.84-0.80           Rated speed:         2920-2930-2930 rpm           Start. method:         direct-on-line           Enclosure class (IEC 34-5):         IP68           Motor protec:         NONE           Thermal protec:		AISI AISI 304	
Motor:         ASTM 35-40           Installation:         RP6           Pump outlet:         RP6           Motor diameter:         12 inch           Liquid:         Water           Pumped liquid:         Water           Maximum liquid temperature:         45 °C           Max liquid t at 0.15 m/sec:         45 °C           Max liquid t at 0.5 m/sec:         45 °C           Selected liquid temperature:         20 °C           Density:         998.2 kg/m³           Electrical data:         MMS12000           Motor type:         MMS12000           Applic. motor:         GRUNDFOS           Rated power - P2:         190 kW           Power (P2) required by pump:         190 kW           Mains frequency:         50 Hz           Rated voltage:         3 x 380-400-415 V           Rated current:         390-390-395 A           Starting current:         580-620-620 %           Cos phi - power factor:         0.88-0.84-0.80           Rated speed:         2920-2930-2930 rpm           Start. method:         direct-on-line           Enclosure class (IEC 34-5):         IP68           Motor protec:         NONE           Thermal protec:	•	Cast iron	
Note	Motor:	DIN WNr. 0.6025	
Pump outlet: RP6	Motor:	ASTM 35-40	
Motor diameter:         12 inch           Liquid:         Water           Pumped liquid:         Water           Maximum liquid temperature:         45 °C           Max liquid t at 0.15 m/sec:         40 °C           Max liquid t at 0.5 m/sec:         45 °C           Selected liquid temperature:         20 °C           Density:         998.2 kg/m³           Electrical data:         MMS12000           Applic. motor:         GRUNDFOS           Rated power - P2:         190 kW           Power (P2) required by pump:         190 kW           Mains frequency:         50 Hz           Rated voltage:         3 x 380-400-415 V           Rated current:         390-390-395 A           Starting current:         580-620-620 %           Cos phi - power factor:         0.88-0.84-0.80           Rated speed:         2920-2930-2930 rpm           Start. method:         direct-on-line           Enclosure class (IEC 34-5):         IP68           Motor protec:         NONE           Thermal protec:         external           Built-in temp. transmitter:         no           Motor No:         96540339           Windings:         PE2/PA           Others: </td <td>Installation:</td> <td></td> <td></td>	Installation:		
Motor diameter:         12 inch           Liquid:         Water           Pumped liquid:         Water           Maximum liquid temperature:         45 °C           Max liquid t at 0.15 m/sec:         40 °C           Max liquid t at 0.5 m/sec:         45 °C           Selected liquid temperature:         20 °C           Density:         998.2 kg/m³           Electrical data:         MMS12000           Applic. motor:         GRUNDFOS           Rated power - P2:         190 kW           Power (P2) required by pump:         190 kW           Mains frequency:         50 Hz           Rated voltage:         3 x 380-400-415 V           Rated current:         390-390-395 A           Starting current:         580-620-620 %           Cos phi - power factor:         0.88-0.84-0.80           Rated speed:         2920-2930-2930 rpm           Start. method:         direct-on-line           Enclosure class (IEC 34-5):         IP68           Motor protec:         NONE           Thermal protec:         external           Built-in temp. transmitter:         no           Motor No:         96540339           Windings:         PE2/PA           Others: </td <td>Pump outlet:</td> <td>RP6</td> <td></td>	Pump outlet:	RP6	
Liquid:  Pumped liquid: Water  Maximum liquid temperature: 45 °C  Max liquid t at 0.15 m/sec: 40 °C  Max liquid t at 0.5 m/sec: 45 °C  Selected liquid temperature: 20 °C  Density: 998.2 kg/m³  Electrical data:  Motor type: MMS12000  Applic. motor: GRUNDFOS  Rated power - P2: 190 kW  Power (P2) required by pump: 190 kW  Mains frequency: 50 Hz  Rated voltage: 3 x 380-400-415 V  Rated current: 390-390-395 A  Starting current: 580-620-620 %  Cos phi - power factor: 0.88-0.84-0.80  Rated speed: 2920-2930-2930 rpm  Start. method: direct-on-line  Enclosure class (IEC 34-5): IP68  Motor protec: NONE  Thermal protec: external  Built-in temp. transmitter: no  Motor No: 96540339  Windings: PE2/PA  Others:  Minimum efficiency index, MEI ≥:  ErP status: EuP Standalone/Prod.	<u> </u>	12 inch	_
Pumped liquid:  Maximum liquid temperature:  Max liquid t at 0.15 m/sec:  Max liquid t at 0.5 m/sec:  Max liquid t at 0.15 m/sec:  Max liqui			<u>i</u> —
Maximum liquid temperature:  Max liquid t at 0.15 m/sec:  Max liquid t at 0.5 m/sec:  Selected liquid temperature:  Density:  Poss. 20 °C  Selectrical data:  Motor type:  Applic. motor:  Rated power - P2:  Power (P2) required by pump:  Mains frequency:  Rated voltage:  Rated voltage:  Rated current:  Savaba-400-415 V  Rated current:  Savab-620-620 %  Cos phi - power factor:  Cos phi - power factor:  Rated speed:  Sart. method:  Enclosure class (IEC 34-5):  Motor protec:  Thermal protec:  Built-in temp. transmitter:  Motor No:  Motor No:  Motor No:  Mothers:  Minimum efficiency index, MEI ≥:  EuP Standalone/Prod.	•	Water	286 ©
Max liquid t at 0.15 m/sec:  Max liquid t at 0.5 m/sec:  Selected liquid temperature:  Density:  Poesity:  Blectrical data:  Motor type:  Applic. motor:  Rated power - P2:  Power (P2) required by pump:  Rated voltage:  Rated voltage:  Rated current:  Senoity:  Senoity:  Rated current:  Senoity:		45 °C	Ŧ
Max liquid t at 0.5 m/sec:  Selected liquid temperature:  Density:  998.2 kg/m³  Electrical data:  Motor type:  Applic. motor:  Rated power - P2:  Power (P2) required by pump:  Mains frequency:  Rated voltage:  Rated voltage:  Starting current:  Cos phi - power factor:  Cos phi - power factor:  Rated speed:  Enclosure class (IEC 34-5):  Motor protec:  NONE  Thermal protec:  Built-in temp. transmitter:  Motor No:  Motor No:  Motor index, MEI â%¥:  ErP status:  Minimum efficiency index, MEI â%¥:  ErP status:  Motor Prod.  AMS12000  ARUNDFOS  RAUMS12000  ARUNDFOS  ARUNDFOS		40 °C	-
Selected liquid temperature:  Density:  Density:  998.2 kg/m³  Electrical data:  Motor type:  Applic. motor:  Rated power - P2:  Power (P2) required by pump:  Mains frequency:  Rated voltage:  3 x 380-400-415 V  Rated current:  390-390-395 A  Starting current:  580-620-620 %  Cos phi - power factor:  0.88-0.84-0.80  Rated speed:  2920-2930-2930 rpm  Start. method:  Enclosure class (IEC 34-5):  IP68  Motor protec:  NONE  Thermal protec:  Enclosure class (IEC 34-5):  Motor No:  Windings:  PE2/PA  Others:  Minimum efficiency index, MEI ≥:  ErP status:  EuP Standalone/Prod.		45 °C	-
Density: 998.2 kg/m³		20 °C	
Motor type:		998.2 kg/m³	318
Applic. motor:  Rated power - P2:  Power (P2) required by pump:  Mains frequency:  Rated voltage:  Rated current:  S80-620-620 %  Cos phi - power factor:  Rated speed:  Start. method:  Enclosure class (IEC 34-5):  Motor protec:  Thermal protec:  Built-in temp. transmitter:  Motor No:  Motor No:  Motors:  Minimum efficiency index, MEI ≥:  ErP status:  GRUNDFOS  190 kW  190 ku  190 kW  190 ku  190 kW  190 ku  190 kW  190 kW  190 ku  190 ku  190 ku  190 kW  190 ku  1	•		-
Applic. motor:  Rated power - P2:  Power (P2) required by pump:  Mains frequency:  Rated voltage:  Rated current:  S80-620-620 %  Cos phi - power factor:  Rated speed:  Start. method:  Enclosure class (IEC 34-5):  Motor protec:  Thermal protec:  Built-in temp. transmitter:  Motor No:  Motor No:  Motors:  Minimum efficiency index, MEI ≥:  ErP status:  GRUNDFOS  190 kW  190 ku  190 kW  190 ku  190 kW  190 ku  190 kW  190 kW  190 ku  190 ku  190 ku  190 kW  190 ku  1	Motor type:	MMS12000	-
Rated power - P2:       190 kW         Power (P2) required by pump:       190 kW         Mains frequency:       50 Hz         Rated voltage:       3 x 380-400-415 V         Rated current:       390-390-395 A         Starting current:       580-620-620 %         Cos phi - power factor:       0.88-0.84-0.80         Rated speed:       2920-2930-2930 rpm         Start. method:       direct-on-line         Enclosure class (IEC 34-5):       IP68         Motor protec:       NONE         Thermal protec:       external         Built-in temp. transmitter:       no         Motor No:       96540339         Windings:       PE2/PA         Others:         Minimum efficiency index, MEI â%**:          ErP status:       EuP Standalone/Prod.		GRUNDFOS	-   #
Power (P2) required by pump:         190 kW           Mains frequency:         50 Hz           Rated voltage:         3 x 380-400-415 V           Rated current:         390-390-395 A           Starting current:         580-620-620 %           Cos phi - power factor:         0.88-0.84-0.80           Rated speed:         2920-2930-2930 rpm           Start. method:         direct-on-line           Enclosure class (IEC 34-5):         IP68           Motor protec:         NONE           Thermal protec:         external           Built-in temp. transmitter:         no           Motor No:         96540339           Windings:         PE2/PA           Others:         Minimum efficiency index, MEI â%**:           ErP status:         EuP Standalone/Prod.			• [
Mains frequency:       50 Hz         Rated voltage:       3 x 380-400-415 V         Rated current:       390-390-395 A         Starting current:       580-620-620 %         Cos phi - power factor:       0.88-0.84-0.80         Rated speed:       2920-2930-2930 rpm         Start. method:       direct-on-line         Enclosure class (IEC 34-5):       IP68         Motor protec:       NONE         Thermal protec:       external         Built-in temp. transmitter:       no         Motor No:       96540339         Windings:       PE2/PA         Others:         Minimum efficiency index, MEI ≥:          ErP status:       EuP Standalone/Prod.	•		
Rated voltage:         3 x 380-400-415 V           Rated current:         390-390-395 A           Starting current:         580-620-620 %           Cos phi - power factor:         0.88-0.84-0.80           Rated speed:         2920-2930-2930 rpm           Start. method:         direct-on-line           Enclosure class (IEC 34-5):         IP68           Motor protec:         NONE           Thermal protec:         external           Built-in temp. transmitter:         no           Motor No:         96540339           Windings:         PE2/PA           Others:         Minimum efficiency index, MEI ≥:            ErP status:         EuP Standalone/Prod.			198
Rated current:         390-390-395 A           Starting current:         580-620-620 %           Cos phi - power factor:         0.88-0.84-0.80           Rated speed:         2920-2930-2930 rpm           Start. method:         direct-on-line           Enclosure class (IEC 34-5):         IP68           Motor protec:         NONE           Thermal protec:         external           Built-in temp. transmitter:         no           Motor No:         96540339           Windings:         PE2/PA           Others:         Minimum efficiency index, MEI ≥:            ErP status:         EuP Standalone/Prod.			-
Starting current: 580-620-620 %  Cos phi - power factor: 0.88-0.84-0.80  Rated speed: 2920-2930-2930 rpm  Start. method: direct-on-line  Enclosure class (IEC 34-5): IP68  Motor protec: NONE  Thermal protec: external  Built-in temp. transmitter: no  Motor No: 96540339  Windings: PE2/PA  Others:  Minimum efficiency index, MEI ≥:  ErP status: EuP Standalone/Prod.			
Cos phi - power factor:  Rated speed:  Start. method:  Enclosure class (IEC 34-5):  Thermal protec:  Built-in temp. transmitter:  Motor No:  Windings:  Others:  Minimum efficiency index, MEI ≥:  ErP status:  0.88-0.84-0.80  2920-2930-2930 rpm  direct-on-line  IP68  NONE  external  po  96540  96540339  PE2/PA  Others:  EuP Standalone/Prod.			
Rated speed: 2920-2930-2930 rpm Start. method: direct-on-line Enclosure class (IEC 34-5): IP68 Motor protec: NONE Thermal protec: external Built-in temp. transmitter: no Motor No: 96540339 Windings: PE2/PA Others: Minimum efficiency index, MEI ≥: ErP status: EuP Standalone/Prod.			
Start. method:  Enclosure class (IEC 34-5):  Motor protec:  Thermal protec:  Built-in temp. transmitter:  Motor No:  96540339  Windings:  PE2/PA  Others:  Minimum efficiency index, MEI ≥:  ErP status:  direct-on-line IP68  NONE  external  po  94540339  PE2/PA  Thermal protec:  EuP Standalone/Prod.			
Enclosure class (IEC 34-5):  Motor protec:  Thermal protec:  Built-in temp. transmitter:  Motor No:  96540339  Windings:  PE2/PA  Others:  Minimum efficiency index, MEI ≥:  ErP status:  IP68  NONE  external  po 96540339  FE2/PA  Others:  EuP Standalone/Prod.	·		
Motor protec: Thermal protec: Built-in temp. transmitter: no Motor No: 96540339 Windings: PE2/PA Others: Minimum efficiency index, MEI ≥: ErP status:  NONE external po640339 FE2/PA  EuP Standalone/Prod.			-
Thermal protec: external Built-in temp. transmitter: no Motor No: 96540339 Windings: PE2/PA Others: Minimum efficiency index, MEI ≥: ErP status: EuP Standalone/Prod.			
Built-in temp. transmitter:  Motor No:  96540339  Windings:  PE2/PA  Others:  Minimum efficiency index, MEI ≥:  ErP status:  BuP Standalone/Prod.			-
Motor No: 96540339 Windings: PE2/PA  Others: Minimum efficiency index, MEI ≥: ErP status: EuP Standalone/Prod.			-
Windings: PE2/PA  Others:  Minimum efficiency index, MEI ≥:  ErP status:  EuP Standalone/Prod.			.
Others:  Minimum efficiency index, MEI ≥:  ErP status:  EuP Standalone/Prod.			
Minimum efficiency index, MEI ≥:  ErP status:   EuP Standalone/Prod.		PE2/PA	
ErP status: EuP Standalone/Prod.			
			. /
· · · · · · · · · · · · · · · · · · ·	Net weight:	815 kg	. (





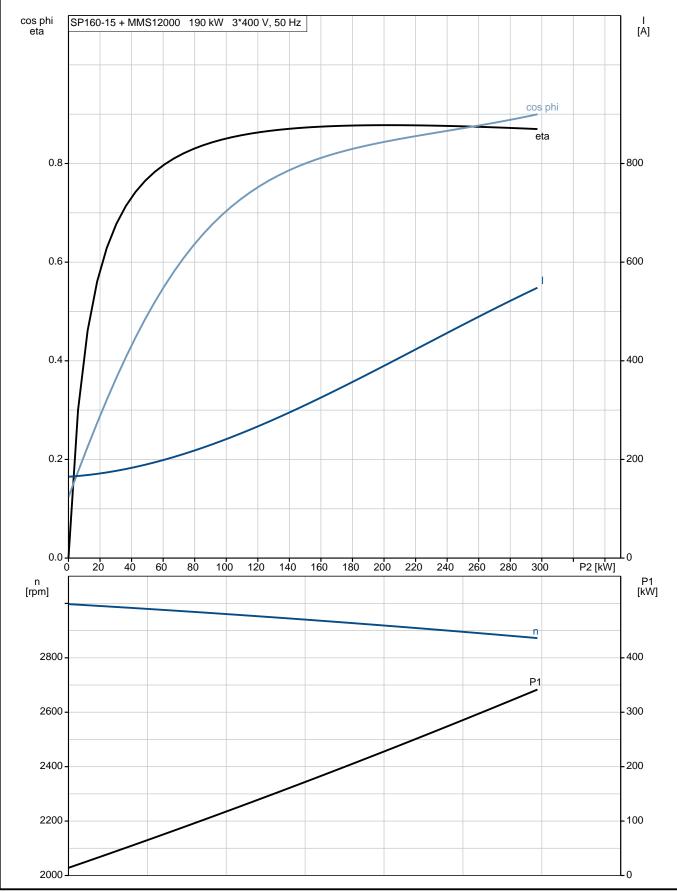
**Date:** 10/11/2020

Description	Value
Gross weight:	885 kg
Shipping volume:	1.45 m³
Country of origin:	DK
Custom tariff no.:	84137029



**Date:** 10/11/2020

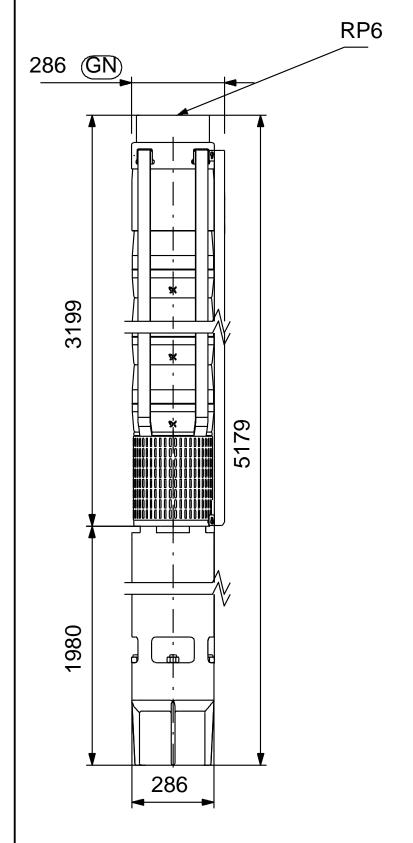
# 20064315 SP 160-15 50 Hz





Date: 10/11/2020

# 20064315 SP 160-15 50 Hz

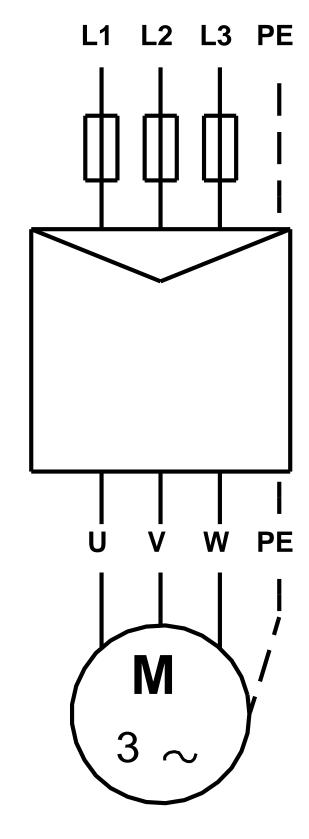


Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.



**Date:** 10/11/2020

20064315 SP 160-15 50 Hz



Note! All units are in [mm] unless others are stated.