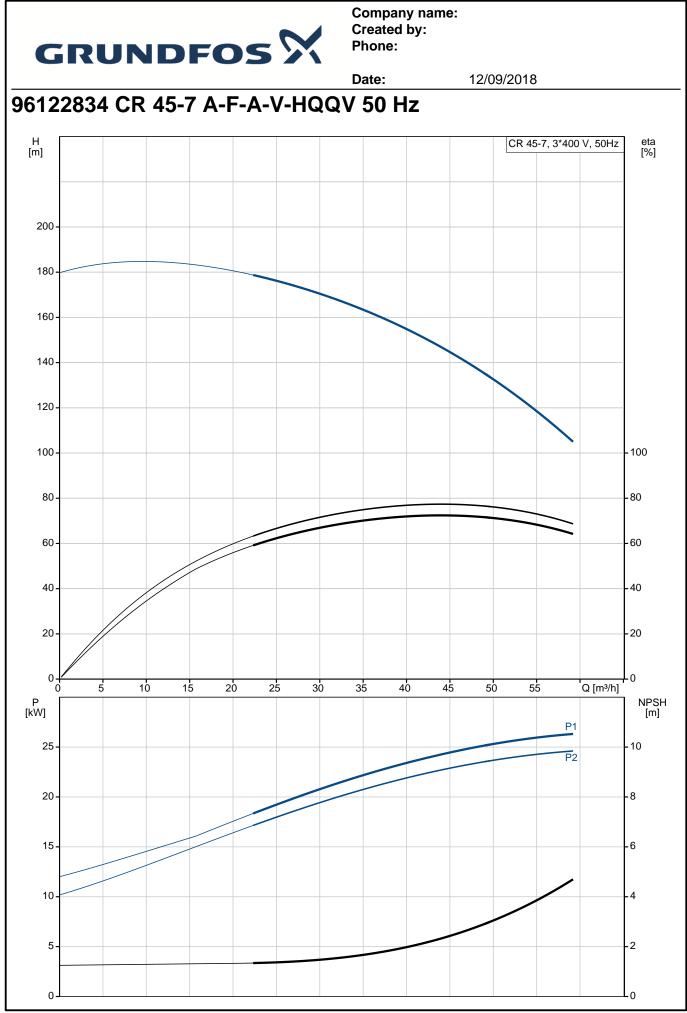
G	R	UNDFOS	Company name: Created by: Phone:		
			Date: 12/09/2018		
Position	Qty.	Description			
	1	CR 45-7 A-F-A-V-HQQV			
		Product No.: 96122834			
	Vertical, multistage centrifugal pump with suction and discharge ports on same the level enabling installation in a horizontal one-pipe system. The pump head and base are in cas other wetted parts are in stainless steel. A cartridge shaft seal ensures high reliability, sai and easy service and access. Power transmission is via a rigid split coupling. Pipework c via DIN flanges.				
		The pump is fitted with a 3-phase	e, fan-cooled asynchronous motor.		
		Liquid: Pumped liquid: Liquid temperature range: Liquid temperature during operation Density:	Water -20 90 °C tion: 20 °C 998.2 kg/m <sup>3</sup>		
		<b>Technical:</b> Rated flow: Rated head: Pump orientation: Shaft seal arrangement: Code for shaft seal: Approvals on nameplate: Curve tolerance:	45 m <sup>3</sup> /h 143.9 m Vertical Single HQQV CE, EAC ISO9906:2012 3B		
		<b>Materials:</b> Base:	Cast iron EN 1563 EN-GJS-500-7 ASTM A536 80-55-06		
		Impeller:	Stainless steel EN 1.4301 AISI 304		
		Bearing: Support bearing:	SIC Graflon		
		Installation: Maximum ambient temperature: Maximum operating pressure: Max pressure at stated temp:	30 bar 30 bar / 90 °C		
		Type of connection: Size of inlet connection: Size of outlet connection: Pressure rating for pipe connection	30 bar / -20 °C DIN DN 80 DN 80 on: PN 40		
		Flange size for motor: Electrical data:	FF350		
		Motor standard:	IEC		



Company name: Created by: Phone:

eition     Qty.     Description       IE Efficiency class:     IE3       Rated power - P2:     30 kW       Power (P2) required by pump.     50 H2       Rated voltage:     3 x 380-420D/660-725Y V       Rated voltage:     2 355 pm       Efficiency:     IE3 33,3%       Motor efficiency at 1/l load:     93.493.3 %       Motor efficiency at 1/l load:     93.493.4 %       Number of poles:     2       Enclosure class (IEC 34-5):     F       Controls:     F       Frequency converter:     NONE       Others:     Nimimum efficiency index, MEI       Nimimum efficiency index, MEI     0.7       Net weight:     378 kg       Shipping volume:     0.805 m <sup>3</sup> Country of origin:     GB       Custom tariff no.:     84137075				Date:	12/09/2018
IE Efficiency class:IE3Rated power - P2:30 kWPower (P2) required by pump:30 kWMains frequency:50 HzRated voltage:3 x 380-420D/660-725Y VRated current:56,0-51,0/32,0-29,5 AStarting current:660-660 %Cos phi - power factor:0.86Rated speed:2955 rpmEfficiency:IE3 93,3%Motor efficiency at full load:93.3-93.3 %Motor efficiency at 3/4 load:93.6-93.6 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:FFrequency converter:NONEOthers:NoneMinimum efficiency index, MEI:0.7Net weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB	osition	Qty.	Description		
Rated power - P2:30 kWPower (P2) required by pump:30 kWMains frequency:50 HzRated voltage:3 x 380-420D/660-725Y VRated current:56,0-51,0/32,0-29,5 AStarting current:660-660 %Cos phi - power factor:0.86Rated speed:2955 rpmEfficiency:IE3 93,3%Motor efficiency at full load:93.6-93.6 %Motor efficiency at 3/4 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:FFrequency converter:NONEOthers:Moinimum efficiency index, MEIMinimum efficiency index, MEI0.7Net weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Power (P2) required by pump:30 kWMains frequency:50 HzRated voltage:3 x 380-420D/660-725Y VRated current:56,0-51,0/32,0-29,5 AStarting current:660-660 %Cos phi - power factor:0.86Rated speed:2955 rpmEfficiency:IE3 93,3%Motor efficiency at full load:93.3-93.3 %Motor efficiency at 3/4 load:93.6-93.6 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:FFrequency converter:NONEOthers:339 kgMinimum efficiency index, MEI0.7Net weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Mains frequency:50 HzRated voltage:3 x 380-420D/660-725Y VRated current:56,0-51,0/32,0-29,5 AStarting current:660-660 %Cos phi - power factor:0.86Rated speed:2955 rpmEfficiency:IE3 93,3%Motor efficiency at full load:93.3-93.3 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FOthers:Minimum efficiency index, MEI : 0.7Net weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Rated voltage:3 x 380-420D/660-725Y VRated current:56,0-51,0/32,0-29,5 AStarting current:660-660 %Cos phi - power factor:0.86Rated speed:2955 rpmEfficiency:IE3 93,3%Motor efficiency at full load:93.3-93.3 %Motor efficiency at 3/4 load:93.6-93.6 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:FFrequency converter:NONEOthers:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Rated current:56,0-51,0/32,0-29,5 AStarting current:660-660 %Cos phi - power factor:0.86Rated speed:2955 rpmEfficiency:IE3 93,3%Motor efficiency at full load:93.3-93.3 %Motor efficiency at 3/4 load:93.6-93.6 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:FFrequency converter:NONEOthers:339 kgGross weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Starting current:       660-660 %         Cos phi - power factor:       0.86         Rated speed:       2955 rpm         Efficiency:       IE3 93,3%         Motor efficiency at full load:       93.3-93.3 %         Motor efficiency at 3/4 load:       93.6-93.6 %         Motor efficiency at 1/2 load:       93.4-93.4 %         Number of poles:       2         Enclosure class (IEC 34-5):       55 Dust/Jetting         Insulation class (IEC 85):       F         Controls:       Frequency converter:         Frequency converter:       NONE         Others:       Gross weight:         Minimum efficiency index, MEI       : 0.7         Net weight:       339 kg         Gross weight:       378 kg         Shipping volume:       0.805 m³         Country of origin:       GB					
Cos phi - power factor: 0.86 Rated speed: 2955 rpm Efficiency: IE3 93,3% Motor efficiency at full load: 93.3-93.3 % Motor efficiency at 3/4 load: 93.6-93.6 % Motor efficiency at 1/2 load: 93.4-93.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Controls: Frequency converter: NONE Others: Minimum efficiency index, MEI : 0.7 Net weight: 339 kg Gross weight: 378 kg Shipping volume: 0.805 m <sup>3</sup> Country of origin: GB					
Rated speed:2955 rpmEfficiency:IE3 93,3%Motor efficiency at full load:93.3-93.3 %Motor efficiency at 3/4 load:93.6-93.6 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:Frequency converter:NONEOthers:Minimum efficiency index, MEI : 0.7Net weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Efficiency:IE3 93,3%Motor efficiency at full load:93.3-93.3 %Motor efficiency at 3/4 load:93.6-93.6 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:Frequency converter:NONEOthers:Minimum efficiency index, MEI0.7Net weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Motor efficiency at full load:93.3-93.3 %Motor efficiency at 3/4 load:93.6-93.6 %Motor efficiency at 1/2 load:93.4-93.4 %Number of poles:2Enclosure class (IEC 34-5):55 Dust/JettingInsulation class (IEC 85):FControls:Frequency converter:NONEOthers:NONEMinimum efficiency index, MEI:0.7Net weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Motor efficiency at 3/4 load:       93.6-93.6 %         Motor efficiency at 1/2 load:       93.4-93.4 %         Number of poles:       2         Enclosure class (IEC 34-5):       55 Dust/Jetting         Insulation class (IEC 85):       F         Controls:         Frequency converter:       NONE         Others:       Minimum efficiency index, MEI : 0.7         Net weight:       339 kg         Gross weight:       378 kg         Shipping volume:       0.805 m³         Country of origin:       GB			Motor efficiency at full load:		
Motor efficiency at 1/2 load:       93.4-93.4 %         Number of poles:       2         Enclosure class (IEC 34-5):       55 Dust/Jetting         Insulation class (IEC 85):       F         Controls:         Frequency converter:       NONE         Others:       Minimum efficiency index, MEI : 0.7         Net weight:       339 kg         Gross weight:       378 kg         Shipping volume:       0.805 m³         Country of origin:       GB					
Number of poles:       2         Enclosure class (IEC 34-5):       55 Dust/Jetting         Insulation class (IEC 85):       F         Controls:       Frequency converter:         Frequency converter:       NONE         Others:       Minimum efficiency index, MEI : 0.7         Net weight:       339 kg         Gross weight:       378 kg         Shipping volume:       0.805 m³         Country of origin:       GB					
Enclosure class (IEC 34-5):       55 Dust/Jetting         Insulation class (IEC 85):       F         Controls:       Frequency converter:         Frequency converter:       NONE         Others:       Minimum efficiency index, MEI : 0.7         Net weight:       339 kg         Gross weight:       378 kg         Shipping volume:       0.805 m³         Country of origin:       GB					
Insulation class (IEC 85): F Controls: Frequency converter: NONE Others: Minimum efficiency index, MEI : 0.7 Net weight: 339 kg Gross weight: 378 kg Shipping volume: 0.805 m <sup>3</sup> Country of origin: GB					
Frequency converter: NONE Others: Minimum efficiency index, MEI : 0.7 Net weight: 339 kg Gross weight: 378 kg Shipping volume: 0.805 m³ Country of origin: GB				F	
Others:         Minimum efficiency index, MEI : 0.7         Net weight:       339 kg         Gross weight:       378 kg         Shipping volume:       0.805 m³         Country of origin:       GB					
Minimum efficiency index, MEI: 0.7Net weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB				NONE	
Net weight:339 kgGross weight:378 kgShipping volume:0.805 m³Country of origin:GB				: 0.7	
Gross weight:378 kgShipping volume:0.805 m³Country of origin:GB					
Shipping volume:0.805 m³Country of origin:GB					
Custom tariff no.: 84137075					
			Custom tariff no.:	84137075	





## Company name: Created by: Phone:

		Date:	12/09/2018
Description	Value	H [m]	CR 45-7, 3*400 V, 50Hz
General information:		· · ·	
Product name:	CR 45-7 A-F-A-V-HQQV	-	
Product No:	96122834	200 -	
EAN number:	5700396688787	180	
Price:	7.952,00 GBP	100 -	
Technical:		160 -	
Rated flow:	45 m³/h	_	
Rated head:	143.9 m	140 -	
Stages:	7	120 -	
Impellers:	7	120-	
Low NPSH:	N	100 -	
Pump orientation:	Vertical	_	
Shaft seal arrangement:	Single	80 -	
Code for shaft seal:	HQQV	-	
Approvals on nameplate:	CE, EAC	60 -	
Curve tolerance:	ISO9906:2012 3B	40 -	
Pump version:	A	- //	
Model:	B	20	
Materials:	U	// _	
Base:	Cast iron	- 0 <u>¥</u>	10 20 30 40 50 Q [m³/h]
Dase.	EN 1563 EN-GJS-500-7	P [kW]	
	ASTM A536 80-55-06	[kW] 25 -	P1
Impollori	Stainless steel	23-	P2
Impeller:	EN 1.4301	20 -	
		_	
Material code:	AISI 304	15 -	
	A V	- //	
Code for rubber:	SIC	10-	
Bearing:			
Support bearing:	Graflon	5-	
Installation:	55.00		
Maximum ambient temperature:	55 °C	_	
Maximum operating pressure:	30 bar		
Max pressure at stated temp:	30 bar / 90 °C		
	30 bar / -20 °C		
Type of connection:	DIN		
Size of inlet connection:	DN 80		
Size of outlet connection:	DN 80		
Pressure rating for pipe connection:	PN 40		
Flange size for motor:	FF350		
Connect code:	F		
Liquid:			
Pumped liquid:	Water		
Liquid temperature range:	-20 90 °C		
Liquid temperature during operation:	20 °C		
Density:	998.2 kg/m³		
Electrical data:			
Motor standard:	IEC		
Motor type:	SIEMENS		
IE Efficiency class:	IE3		
Rated power - P2:	30 kW		
Power (P2) required by pump:	30 kW		
Mains frequency:	50 Hz		
Rated voltage:	3 x 380-420D/660-725Y V		
Rated current:	56,0-51,0/32,0-29,5 A		
Starting current:	660-660 %		
Cos phi - power factor:	0.86		
Rated speed:	2955 rpm		



Company name: Created by: Phone:

Date: 12/09/2018 Description Value Motor efficiency at full load: 93.3-93.3 % Motor efficiency at 3/4 load: 93.6-93.6 % Motor efficiency at 1/2 load: 93.4-93.4 % Number of poles: 2 Enclosure class (IEC 34-5): 55 Dust/Jetting Insulation class (IEC 85): F Motor protec: PTC Motor No: 81U15332 Controls: NONE Frequency converter: Others: Minimum efficiency index, MEI : 0.7 Net weight: 339 kg Gross weight: 378 kg 0.805 m<sup>3</sup> Shipping volume: Country of origin: GB Custom tariff no .: 84137075

