

# CME1-4 A-R-G-V-AQQV U-A-D-N

Grundfos pump 98394769



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https://www.lenntech.com/grundfos/CMEBASIS/98394769/CME1-4-A-R-G-V-AQQV.html

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#### Position | Qty. | Description

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#### CME1-4 A-R-G-V-AQQV



Product No.: On request

Compact, reliable, horizontal, multistage, end-suction centrifugal pump with axial suction port and radial discharge port. Pump materials in contact with the liquid are in high-grade stainless steel. The mechanical shaft seal is a special designed, unbalanced O-ring seal. Pipework connection is via internal Whitworth pipe threads, Rp (ISO 7/1).

The pump is fitted with a 1-phase, fan-cooled, permanent-magnet, synchronous motor. The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

The motor includes a frequency converter and PI controller in the motor terminal box. This enables continuously variable control of the motor speed, which again enables adaptation of the performance to a given requirement.

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
- "Alarm": Motor has stopped (flashing red indicator lights).

Communication with the pump is possible by means of Grundfos GO Remote (accessory). The remote control enables further settings as well as reading out of a number of parameters such as "Actual value", "Speed", "Power input" and total "Power consumption".

The terminal box holds terminals for these connections:

- one dedicated digital input
- two analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 3.5 V
- 5 V voltage supply to potentiometer and sensor
- · one configurable digital input or open-collector output
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal-relay outputs (potential-free contacts)
- GENIbus connection
- interface for Grundfos CIM fieldbus module.

### **Further product details**

Pump and motor are integrated in a compact and user-friendly design. The pump is fitted to a low base plate, making it ideal for installation in systems where compactness is important.

The state-of-the-art design and materials of the shaft seal ensure high wear resistance, improved sticking and dry-running capabilities and long operating life.

Servicing the pump requires no special service tools. Service parts are in stock for quick delivery and are available as kits, single parts or bulk. Service videos are available on www.youtube.com.

Frequency converter operation offers these functions:

- controlled operation, i.e. consumption flucturates
- constant pressure
- communication with the pump.

Adaption of performance through frequency-controlled speed offers obvious benefits such as:

- energy savings
- increased comfort

# Position | Qty. | Description

control and monitoring of the application and pump performance.

An operating panel on the motor terminal box enables setting of required setpoint as well as setting of pump to "Min." or "Max." operation or to "Stop". The Grundfos Eye indicator on the operating panel provides visual indication of pump status:

- "Power on": Motor is running (rotating green indicator lights) or not running (permanently green indicator lights)
- "Warning": Motor is still running (rotating yellow indicator lights) or has stopped (permanently yellow indicator lights)
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## **Pump**

A combination of a stop ring and a Nord-lock® washer secures a tight and reliable fixation of the impeller spacing pipes to the splined pump shaft. It is possible to remove and fit the hydraulic parts from the pump side. The inlet and outlet port are integrated in the pump sleeve. The inlet part, chambers and discharge part are hold together by four staybolts and a retaining flange.

The pump is fitted with an unbalanced O-ring seal with a rigid torque-transmission system. It has a fixed seal driver ensuring a reliable rotation of all parts. The dynamic secondary seal is an O-ring.

#### Primary seal:

- Rotating seal ring material: silicon carbide (SiC)
- Stationary seat material: silicon carbide (SiC)

This material pairing is used where higher corrosion resistance is required. The high hardness of this material pairing offers good resistance against abrasive particles.

Secondary seal material: FKM (fluorocarbon rubber)

FKM has excellent resistance to oils and chemicals. Above 90 °C, FKM should only be used in media without water.



The pump shaft is connected to the motor shaft through a left thread and tight fit. The shaft cannot be dismantled.

#### Motor

The motor is a totally enclosed, fan-cooled motor with principal dimensions to EN 50347. Electrical tolerances comply with EN 60034.

The motor efficiency is classified as IE5 in accordance with IEC 60034-30-2.

The motor requires no external motor protection. The motor control unit incorporates protection against slow- and quick-rising temperatures, e.g. constant overload and stalled conditions.

The terminal box holds terminals for these connections:

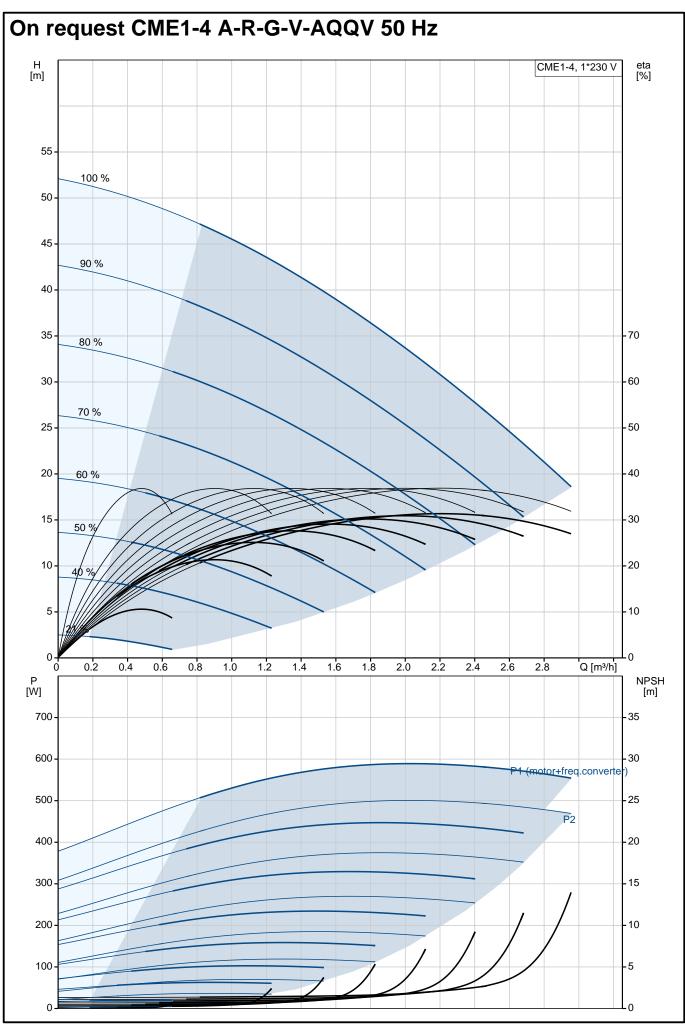
- · one dedicated digital input
- two analog inputs, 0(4)-20 mA, 0-5 V, 0-10 V, 0.5 3.5 V
- 5 V voltage supply to potentiometer and sensor
- one configurable digital input or open-collector output
- Grundfos Digital Sensor input and output
- 24 V voltage supply for sensors
- two signal-relay outputs (potential-free contacts)
- · GENIbus connection
- · interface for Grundfos CIM fieldbus module.

#### **Technical data**

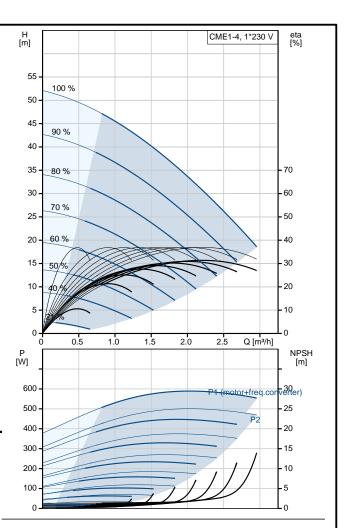
# Liquid:

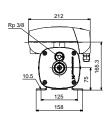
Pumped liquid: Water

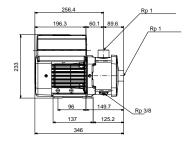
Position	Qty.	Description			
		Liquid temperature range: -20 90 °C			
		Liquid temperature during operation: 20 °C			
		Density:	998.2 kg/m³		
			-		
		Technical:			
		Rated flow:	2 m³/h		
		Rated head:	34.9 m		
1		Primary shaft seal:	AQQV		
1		Approvals on nameplate:	CE,TR,CURUS,EAC		
		Curve tolerance:	ISO9906:2012 3B		
1		l <b></b>			
1		Materials:	Otalisland start		
1		Pump housing:	Stainless steel		
1			DIN WNr. 1.4401		
1		Impollar	AISI 316		
1		Impeller:	Stainless steel		
1			DIN WNr. 1.4401 AISI 316		
1		Rubber:	FKM		
1		NUODEI.	1.130		
		Installation:			
1		Maximum ambient temperature:	40 °C		
		Maximum operating pressure:	16 bar		
		Max pressure at stated temp:	16 bar / 90 °C		
1		Flange standard:	WHITWORTH THREAD RP		
		Pump inlet:	Rp 1		
		Pump outlet:	Rp 1		
			•		
		Electrical data:			
		Motor type:	71A		
		IE Efficiency class:	IE5		
		Rated power - P2:	0.55 kW		
		Mains frequency:	50 Hz		
		Rated voltage:	1 x 200-240 V		
		Rated current:	3.45-2.90 A		
1		Rated speed:	360-4000 rpm		
1		Enclosure class (IEC 34-5):	IP55		
1		Insulation class (IEC 85):	F		
1		Othora			
1		Others:	. 0.68		
1		Minimum efficiency index, MEI Net weight:	: 0.68 13.9 kg		
1		Ret weight:	13.9 kg 17.4 kg		
1		Orosa weight.	11.7 NY		
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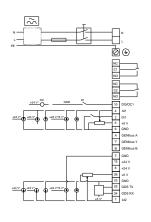


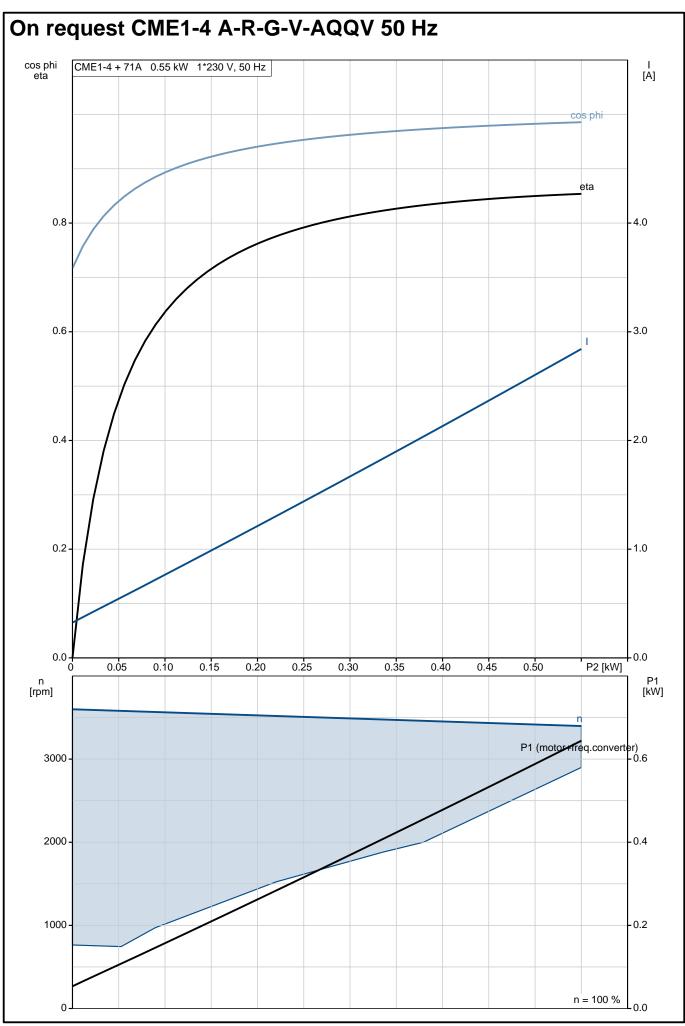
Description	Value		
General information:			
Product name:	CME1-4 A-R-G-V-AQQV		
Product No:	On request		
EAN number:	On request		
Technical:			
Rated flow:	2 m³/h		
Rated head:	34.9 m		
Impellers:	4		
Primary shaft seal:	AQQV		
Approvals on nameplate:	CE,TR,CURUS,EAC		
Curve tolerance:	ISO9906:2012 3B		
	A		
Pump version: Model:	A		
Materials:	A		
	Otainlana ataul		
Pump housing:	Stainless steel		
	DIN WNr. 1.4401		
	AISI 316		
Impeller:	Stainless steel		
	DIN WNr. 1.4401		
	AISI 316		
Material code:	G		
Rubber:	FKM		
Code for rubber:	V		
Installation:			
Maximum ambient temperature:	40 °C		
Maximum operating pressure:	16 bar		
Max pressure at stated temp:	16 bar / 90 °C		
Flange standard:	WHITWORTH THREAD RP		
Pump inlet:	Rp 1		
Pump outlet:	Rp 1		
Connect code:	R		
Liquid:			
Pumped liquid:	Water		
Liquid temperature range:	-20 90 °C		
Liquid temperature during operation:	20 °C		
Density:	998.2 kg/m³		
Electrical data:	200.2 Ng/III		
Motor type:	71A		
IE Efficiency class:	IE5		
	0.55 kW		
Rated power - P2: Mains frequency:			
· · ·	50 Hz		
Rated voltage:	1 x 200-240 V		
Rated current:	3.45-2.90 A		
Rated speed:	360-4000 rpm		
Enclosure class (IEC 34-5):	IP55		
Insulation class (IEC 85):	F		
Others:			
Minimum efficiency index, MEI :	0.68		
Net weight:	13.9 kg		
Gross weight:	17.4 kg		
Config. file no:	98498325		



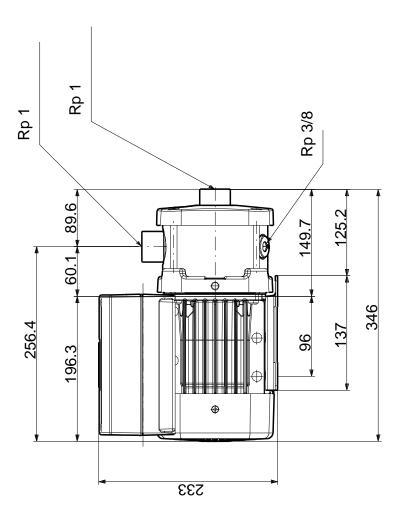


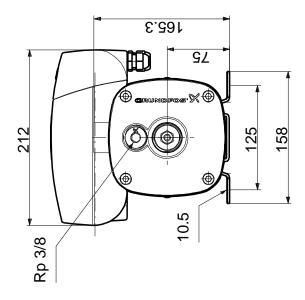




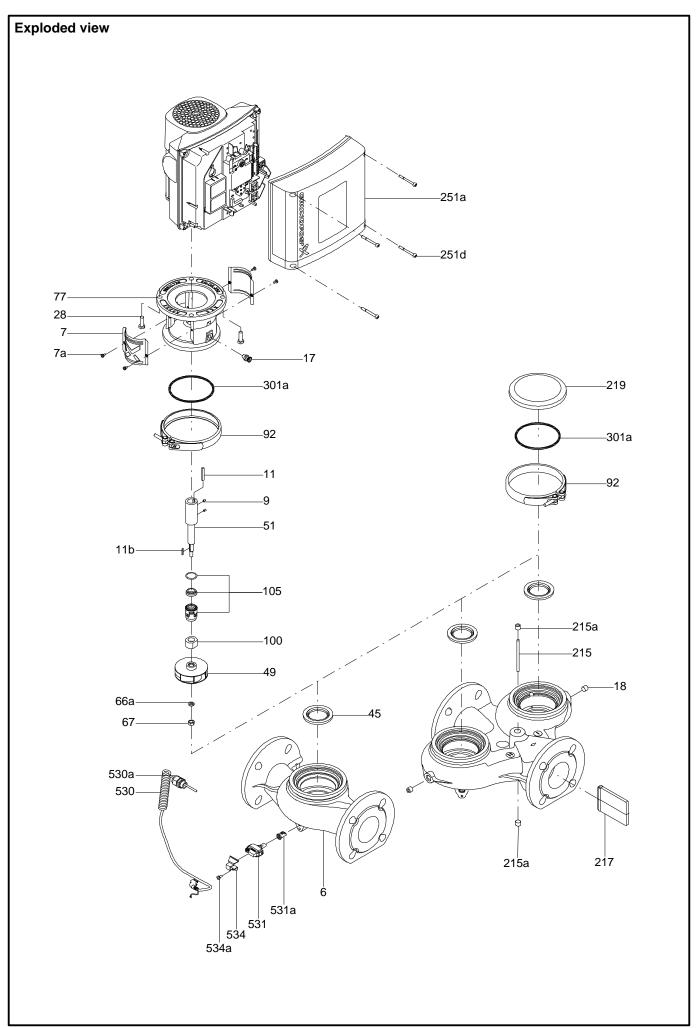


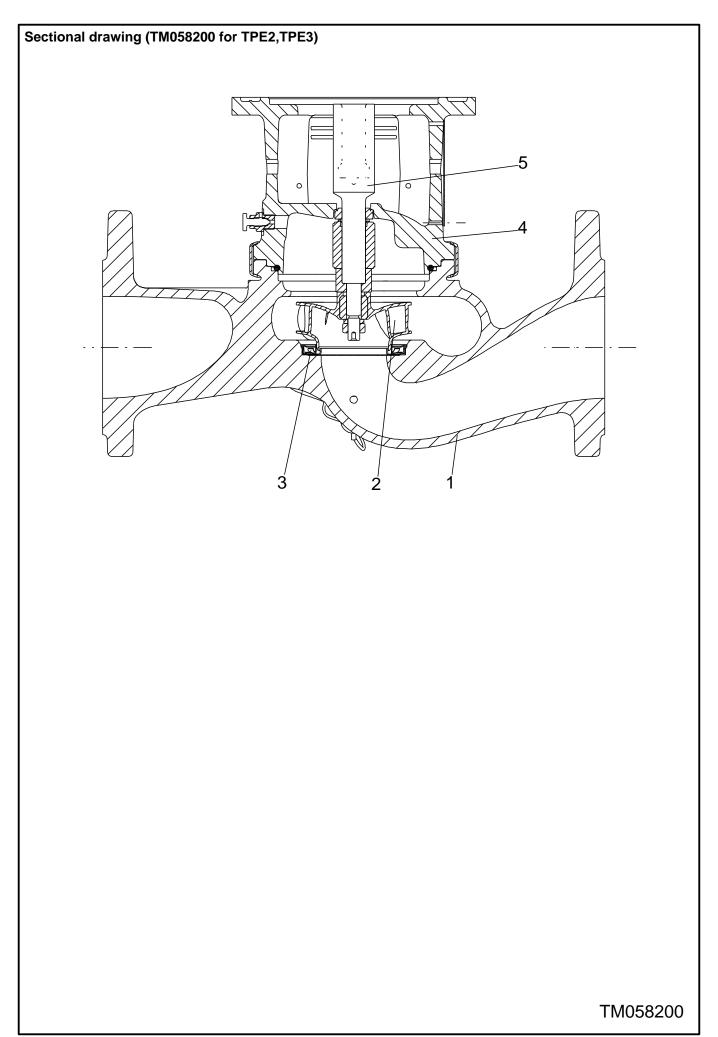
# On request CME1-4 A-R-G-V-AQQV 50 Hz

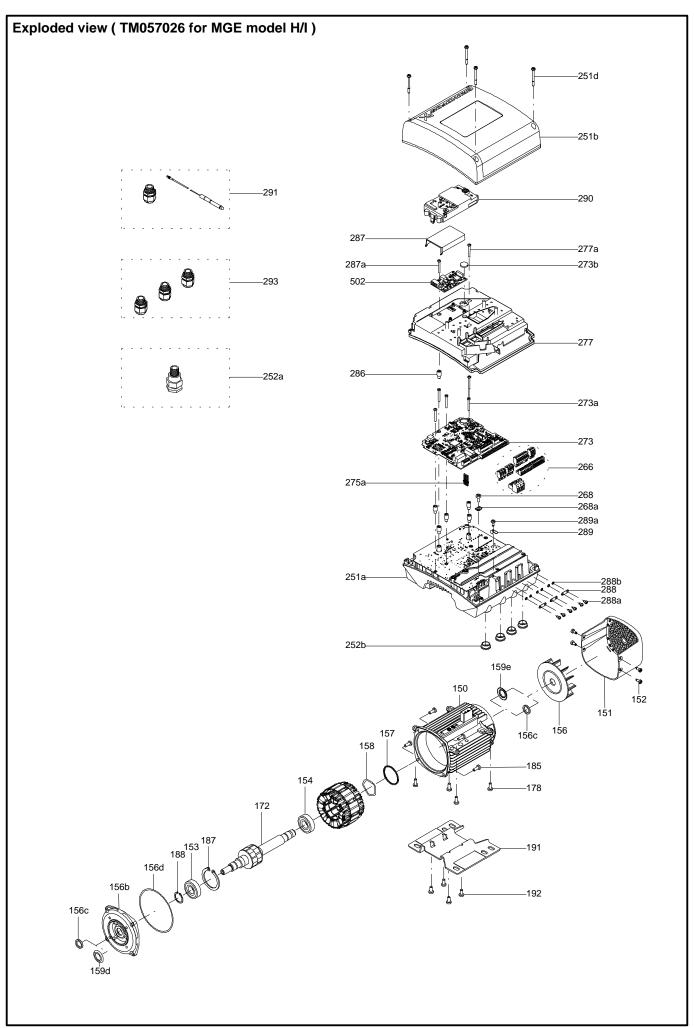




Note! All units are in [mm] unless others are stated. Disclaimer: This simplified dimensional drawing does not show all details.







# Parts list CME1-4, Product No. On request Valid from 2.1.2013 (1301)

Pos	Description	Annotation	Données de classification	Reference	Quantité	Unit
	MGE71A				1	pcs
	Cross recess countersunk screw				4	pcs
4	Chamber cpl.				2	pcs
4a	Intermediate chamber				1	
45	Neck ring				1	
65	Neck ring retainer				1	
4.d	Chamber cpl.				1	pcs
	Chamber				1	
	Retainer for seal ring				1	
	Guide vane				6	
	Plate				1	
	Vane				1	
45	Neck ring				1	
65	Neck ring retainer				1	
4e	Chamber cpl.				1	pcs
4a	Intermediate chamber				1	,. 55
45	Neck ring				1	
65	Neck ring retainer				1	
6.a	Flange				1	pcs
16	Collar sleeve cpl.				1	pcs
25	Drain plug cpl.				2	pcs
11	O-ring		Diameter: 18,5		1	pus
11	O mig		Material type: FKM		1	
			Thickness: 2			
25	Plug		THIONIGOS. Z		1	
31			Diameter: 114		1	noc
31	O-ring				1	pcs
			Material type: FKM Thickness: 3,9			
32	Cover		11110N11033. J,3		1	ncc
JZ	Cover plate				1	pcs
	Plate				1	
36			Throad: Mo			noc
36	Lock nut		Thread: M8		1	pcs
49	Impeller cpl.		Diameter: D40		4	pcs
51	Pump shaft		Diameter: D12		1	pcs
64	Spacing pipe				3	pcs
64.c	Clamp				1	pcs
66	Wedge lock washer				1	pcs
76	Nameplate				2	pcs
105	Shaft seal				1	pcs
102	O-ring		Diameter: 17,86		1	
			Material type: FKM			
			Thickness: 2,62			
103	Seal ring, stationary				1	
104	Seal ring, rotating				1	
107	O-ring		Diameter: 11,5		1	
			Material type: FKM			
			Thickness: 3,18			
108	Compression spring				1	
111	Retainer				1	
112	Driver for shaft seal				1	
111.a	Stop ring				1	pcs
151	Fan cover				1	pcs
152	Pan head thread forming screw				4	pcs
156	Fan				1	pcs
181	Hex socket head cap screw		Length (mm): 95		4	pcs

Disclaimer: The information about the Grundfos pump in this document may be outdated. Data may be subject to alterations without further notice.

Please contact us to verify the data above is still accurate/up-to-date.

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