1. Product data

Introduction

This data booklet deals with Grundfos CR, CRI and CRN as well as CRE, CRIE and CRNE pumps.

CR, CRI, CRN

GR 5381

Fig. 1 CR, CRI and CRN pumps

CR, CRI and CRN pumps are vertical, multistage centrifugal pumps. The in-line design of the pumps enables installation in a horizontal one-pipe system where the suction and discharge ports are in the same horizontal level and have the same pipe dimensions. This design provides a more compact pump design and pipework.

Grundfos CR pumps are available in various sizes and various numbers of stages to provide the flow and pressure required.

CR pumps are designed for a variety of applications ranging from the pumping of potable water to the pumping of chemicals. The pumps are therefore suitable for a wide diversity of pumping systems where the performance and material of the pump meet specific demands.

The CR pumps consist of two main components: the motor and the pump unit. The CR pump motor is a Grundfos motor designed to EN standards.

The pump unit consists of optimised hydraulics, various types of connections, a sleeve, a pump head and various other parts.

CR pumps are available in various material versions according to the pumped liquid.

CRE, CRIE, CRNE

TM02 7397 0511

Fig. 2 CRE, CRIE and CRNE pumps

CRE, CRIE and CRNE pumps are built on the basis of CR, CRI, CRN pumps.

CRE, CRIE and CRNE pumps belong to the so-called E-pump family. CRE, CRIE and CRNE pumps are referred to as E-pumps.

The difference between the CR and CRE pump ranges is the motor. CRE, CRIE and CRNE pumps are fitted with an E-motor, i.e. a motor with built-in frequency converter.

The CRE pump motor is a Grundfos MGE motor designed to EN standards.

The frequency converter enables continuously variable control of the motor speed, which makes it possible to set the pump to operation at any duty point. The purpose of continuously variable speed control of the motor speed is to adjust the performance to a given requirement.

CRE, CRIE and CRNE pumps are available with an integrated pressure sensor connected to the frequency converter.

The pump materials are identical to those of the CR, CRI and CRN pump range.

Selecting a CRE pump

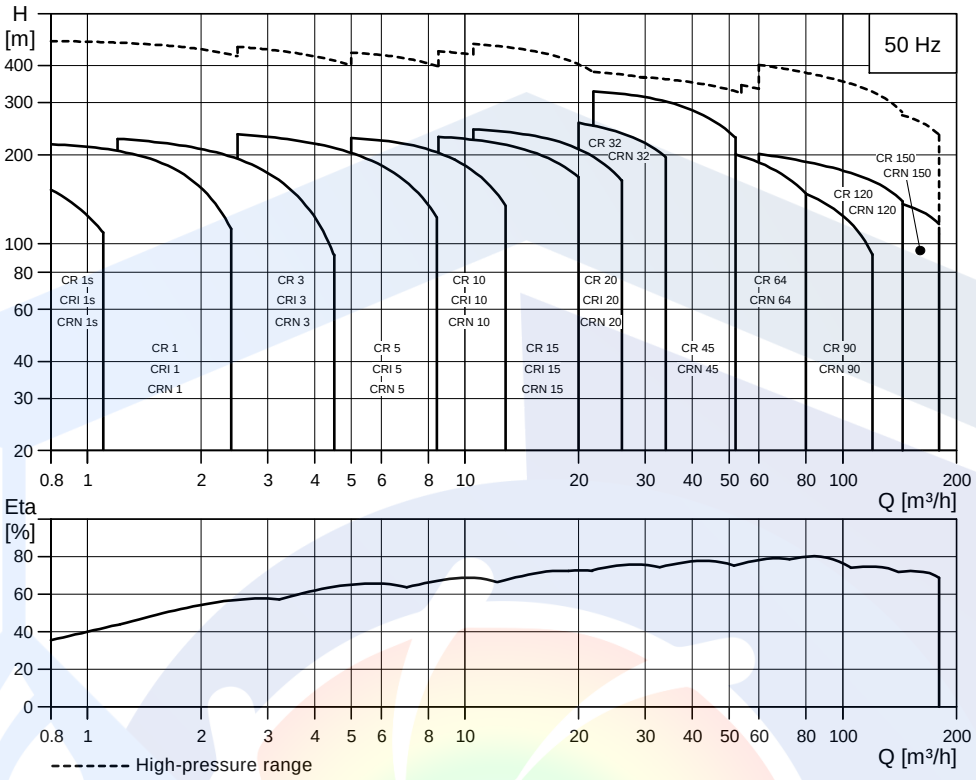
Select a CRE pump if the following features are required:

- Controlled operation, i.e. consumption fluctuates.
- Constant pressure.
- Communication with the pump.

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

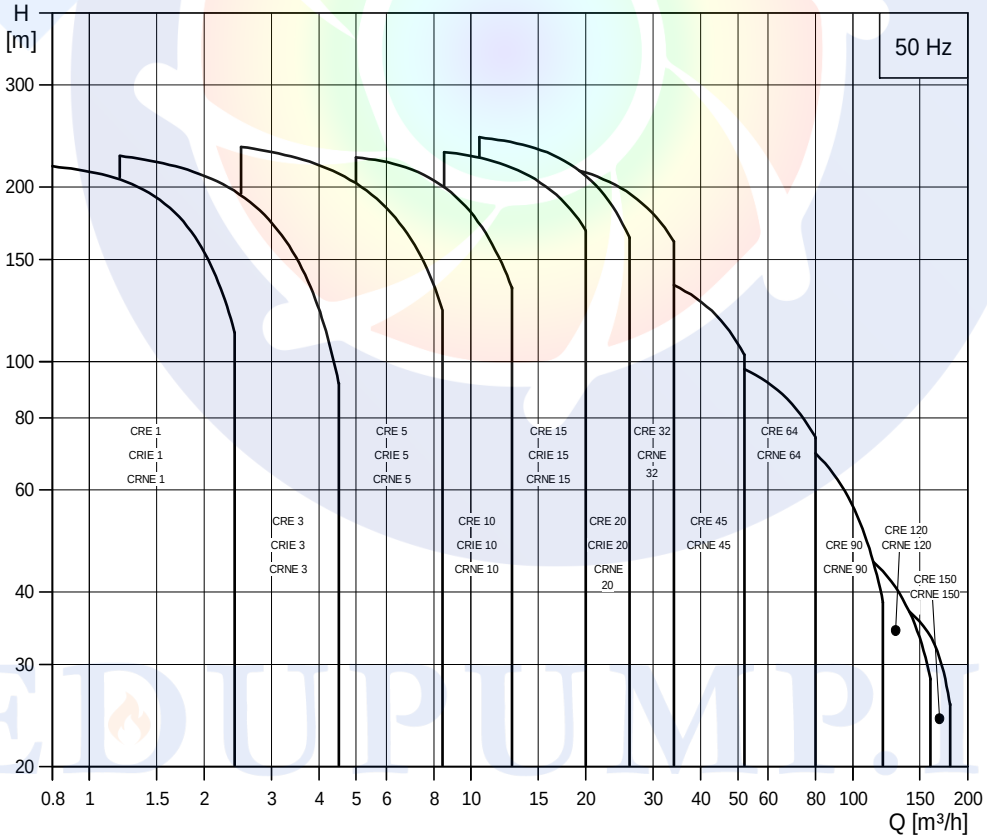
- energy savings
- increased comfort
- control and monitoring of the pump performance.

Performance range of CR, CRI, CRN



TM02 1192 4708

Performance range of CRE, CRIE, CRNE



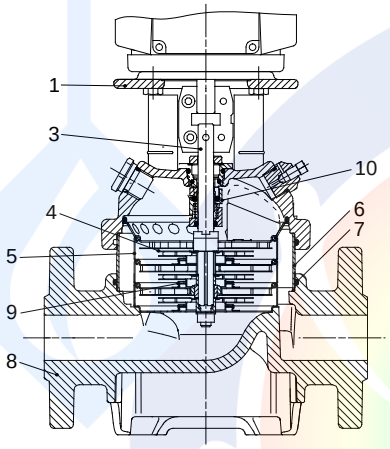
TM02 7281 4708

3. Construction

CR(E) 1s, 1, 3, 5, 10, 15 and 20

TM02 1198 0601 - GR7377 - GR7379

Sectional drawing



TM02 1194 1403

Materials, CR(E)

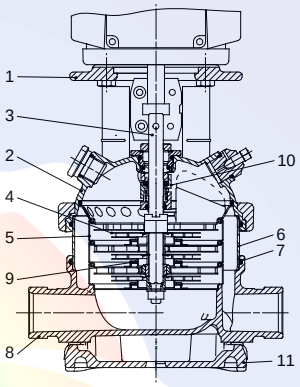
Pos.	Designation	Materials	EN/DIN	AISI/ASTM
1	Pump head	Cast iron EN-GJL-200	EN-JL1030	ASTM 25B
3	Shaft	Stainless steel	1.4401[1] 1.4057[2]	AISI 316 AISI 431
4	Impeller	Stainless steel	1.4301	AISI 304
5	Chamber	Stainless steel	1.4301	AISI 304
6	Sleeve	Stainless steel	1.4301	AISI 304
7	O-ring for sleeve	EPDM or FKM		
8	Base	Cast iron EN-GJL-200	EN-JL1030	ASTM 25B
9	Neck ring	PTFE		
10	Shaft seal			
	Rubber parts	EPDM or FKM		

[1] CR(E) 1S, 1, 3, 5.
[2] CR(E) 10, 15, 20.

CRI(E), CRN(E) 1s, 1, 3, 5, 10, 15 and 20

TM02 1808 2001 - GR7373 - GR7375

Sectional drawing



TM02 1195 1403

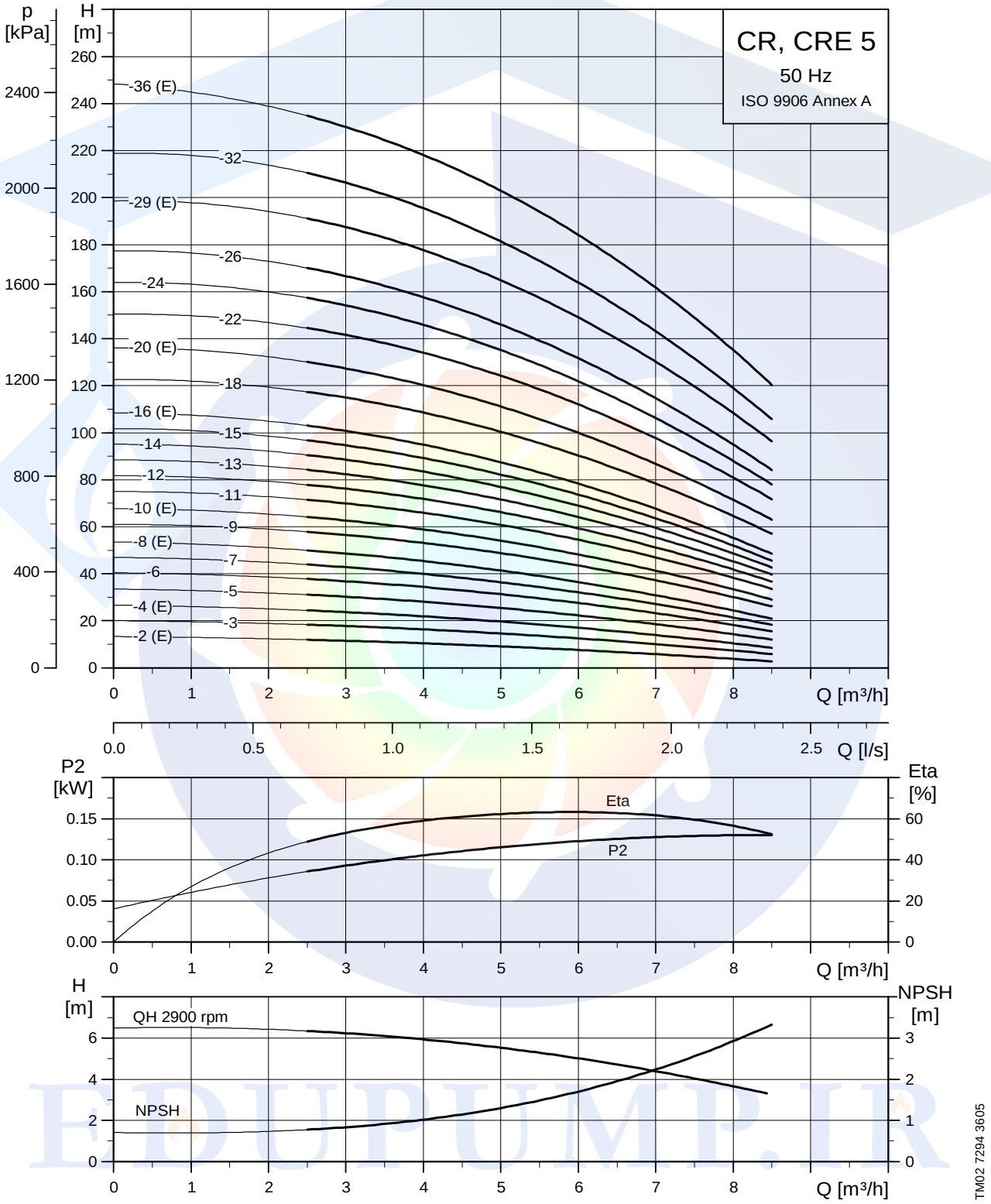
Materials, CRI(E) and CRN(E)

Pos.	Designation	Materials	EN/DIN	AISI/ASTM
1	Pump head	Cast iron EN-GJL-200[1]	EN-JL1030	ASTM 25B
2	Pump head cover	Stainless steel	1.4408	CF 8M equal to AISI 316
3	Shaft	Stainless steel	1.4401[2] 1.4460[3]	AISI 316 AISI 329
8	Base	Stainless steel	1.4408	CF 8M equal to AISI 316
9	Neck ring	PTFE		
10	Shaft seal	Cartridge type		
11	Base plate	Cast iron EN-GJL-200[1]	EN-JL1030	ASTM 25B
	Rubber parts	EPDM or FKM		
	CRI(E)			
4	Impeller	Stainless steel	1.4301	AISI 304
5	Chamber	Stainless steel	1.4301	AISI 304
6	Sleeve	Stainless steel	1.4301	AISI 304
7	O-ring for sleeve	EPDM or FKM		
	CRN(E)			
4	Impeller	Stainless steel	1.4401	AISI 316
5	Chamber	Stainless steel	1.4401	AISI 316
6	Sleeve	Stainless steel	1.4401	AISI 316
7	O-ring for sleeve	EPDM or FKM		

[1] Stainless steel available on request.
[2] CRI(E), CRN(E) 1S, 1, 3, 5.
[3] CRI(E), CRN(E) 10, 15, 20.

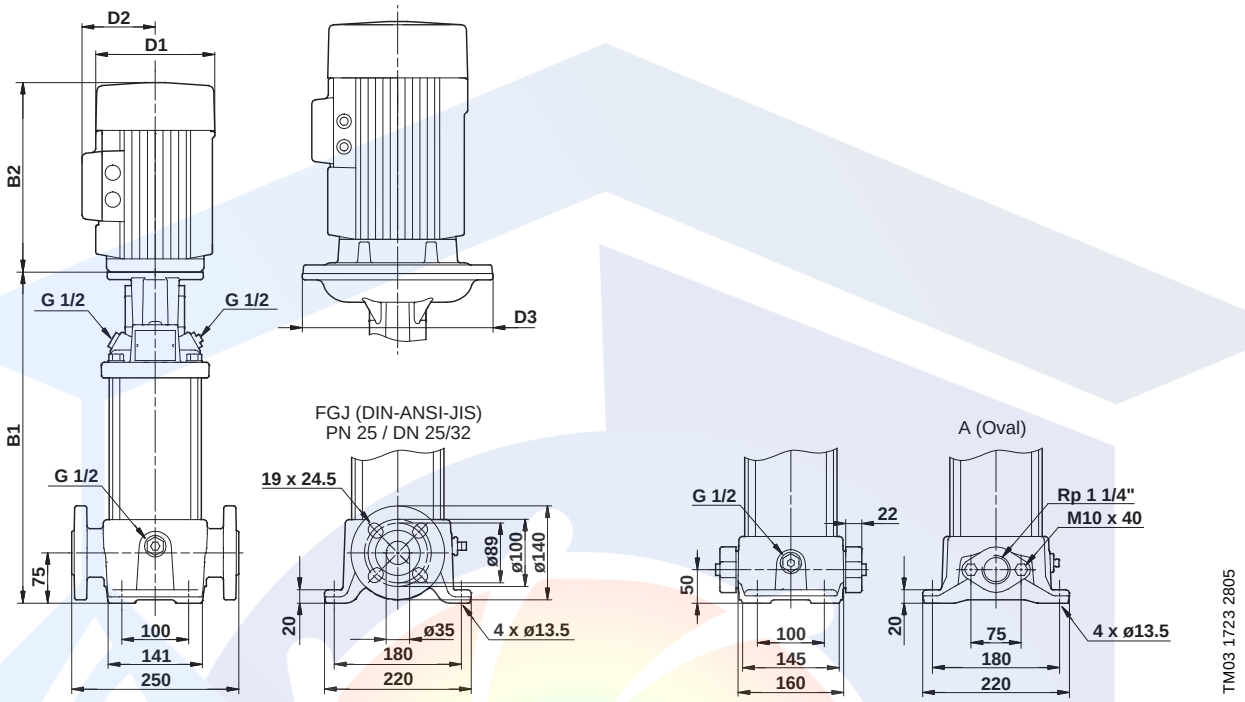
Performance curves

CR, CRE 5



Technical data

Dimensional sketch



Dimensions and weights

Pump type	Motor P_2 [kW]	CR									CRE								
		Dimension [mm]							Net weight [kg]		Dimension [mm]							Net weight [kg]	
		Oval flange		DIN flange		D1	D2	D3	Oval flange	DIN flange	Oval flange		DIN flange		D1	D2	D3	Oval flange	DIN flange
		B1	B1+B2	B1	B1+B2						B1	B1+B2	B1	B1+B2					
CR(E) 5-2	0.37	254	445	279	470	141	109	-	18	23	254	445	279	470	141	140	-	21	26
CR 5-3	0.55	281	472	306	497	141	109	-	20	24	-	-	-	-	-	-	-	-	-
CR(E) 5-4	0.55	308	499	333	524	141	109	-	20	25	308	499	333	524	141	140	-	23	27
CR(E) 5-5	0.75	341	572	366	597	141	109	-	22	27	341	572	366	597	178	167	-	25	30
CR 5-6	1.1	368	619	393	644	141	109	-	25	30	-	-	-	-	-	-	-	-	-
CR 5-7	1.1	395	646	420	671	141	109	-	26	30	-	-	-	-	-	-	-	-	-
CR(E) 5-8	1.1	422	673	447	698	141	109	-	26	31	422	653	447	678	178	167	-	28	33
CR 5-9	1.5	465	746	490	771	178	110	-	34	38	-	-	-	-	-	-	-	-	-
CR(E) 5-10	1.5	492	773	517	798	178	110	-	34	39	492	773	517	798	178	167	-	41	46
CR 5-11	2.2	519	840	544	865	178	110	-	36	40	-	-	-	-	-	-	-	-	-
CR 5-12	2.2	546	867	571	892	178	110	-	36	41	-	-	-	-	-	-	-	-	-
CR 5-13	2.2	573	894	598	919	178	110	-	37	41	-	-	-	-	-	-	-	-	-
CR 5-14	2.2	600	921	625	946	178	110	-	37	42	-	-	-	-	-	-	-	-	-
CR 5-15	2.2	627	948	652	973	178	110	-	38	43	-	-	-	-	-	-	-	-	-
CR(E) 5-16	2.2	654	975	679	1000	178	110	-	38	43	654	975	679	1000	178	167	-	49	53
CR 5-18	3	712	1047	737	1072	198	120	-	46	50	-	-	-	-	-	-	-	-	-
CR(E) 5-20	3	766	1101	791	1126	198	120	-	47	52	766	1101	791	1126	198	177	-	55	60
CR 5-22	4	820	1192	845	1217	220	134	-	57	62	-	-	-	-	-	-	-	-	-
CR 5-24	4	-	-	899	1271	220	134	-	-	63	-	-	-	-	-	-	-	-	-
CR 5-26	4	-	-	953	1325	220	134	-	-	64	-	-	-	-	-	-	-	-	-
CR(E) 5-29	4	-	-	1034	1406	220	134	-	-	66	-	-	1034	1406	220	188	-	-	76
CR 5-32	5.5	-	-	1145	1536	220	134	300	-	82	-	-	-	-	-	-	-	-	-
CR(E) 5-36	5.5	-	-	1253	1644	220	134	300	-	84	-	-	1253	1644	220	188	-	-	91

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آمـــــوزش

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تهـــران، سعـدی شمـالـی، خیـابان مـرادی نور، پـلاک ۳۱
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