GRUNDFOS **PRODUCT GUIDE**

CRN MAGdrive

Custom-built multistage centrifugal pumps
60 Hz

BE > THINK > INNOVATE >

GRUNDFOS

Contents

Mission

It is our mission — the basis of our existence — to successfully develop, produce and sell high-quality pumps and pumping systems world-wide, contributing to a better quality of life and a healthy environment

Bjerringbro, Denmark

Fresno, California

Olathe, Kansas

Monterrey, Mexico

Allentown, Pennsylvania

Oakville, Ontario

- One of the 3 largest pump companies in the world
- The second largest manufacturer of submersible motors in the world
- World headquarters in Denmark
- North American headquarters in Kansas City - Manufacturing in Fresno, California
- 80 companies in 45 countries
- More than 16 million motors and pumps produced annually worldwide
- North American companies operating in USA, Canada and Mexico
- Continuous reinvestment in growth and development enables the company to **BE** responsible, **THINK** ahead, and **INNOVATE**

Product overview

Introduction to CRN MAGdrive

Grundfos CRN MAGdrive pumps operate according to a magnetic-drive system (patents pending) eliminating the need for shaft seals. The power from the motor is transmitted to the pump by magnetic force. Combined with a hermetically sealed liquid end, the pump is totally leak-free.

The pump incorporates a standard NEMA motor with keyway and deep-groove ball bearings.

GrA4445

Fig. 1 CRN MAGdrive pumps

The MAGdrive solution is available for these pumps:

Pump type	CRN pumps with magnetic drive										
	1s	1	3	5	10	15	20	32	45	64	90
CRN(E)	●	●	●	●	●	●	●	●*	●*	●*	●*

● Available.

●* Available up to 30 HP.

A soft starter is required on 25 and 30 HP motors (2 pole).

A soft starter is required on all 4-pole motors.

CRN MAGdrive features and benefits

- hermetically sealed drive system for 100 % leak-free pump operation
- special design and materials for low energy loss
- simple pump design for ease of service
- unique pump design for efficient cooling of the MAGdrive by means of the pumped liquid
- NEMA explosion proof motors optional. Class I, Group D and Class II, Group F&G. UL Listed and CSA Certified.

Applications

The CRN MAGdrive pump is suitable for wide selection of industrial applications such as:

- **Aggressive or corrosive liquids**
  Sulphuric acid, nitric acid, phosphoric acid, etc.
- **Toxic liquids**
  Trichloroethylene, chloroform, phenol, etc.
- **Flammable liquids**
  Petrol, jet fuels, LPG, alcohols, etc.
- **Refrigerants**
  Ammonia, synthetic chemicals, etc.

Design

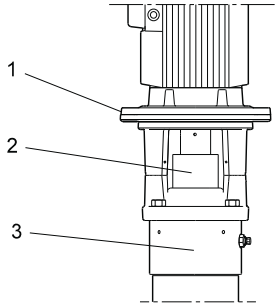

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Fig. 2 MAGdrive system

Pos.	Designation	Materials
1	Motor stool	Cast iron. Stainless steel on request.
2	MAGdrive	See page 5
3	Pump head	Stainless steel (AISI 316).

The standard CRN MAGdrive pump elastomer is EPDM. The optional CRN MAGdrive pump elastomers are:

FXM (Flouraz®)
FFKM (Kalrez®)
FKM (Viton®)

Connections

These connections available for CRN MAGdrive pumps:

Connection type	CRN	
	1s, 1, 3, 5, 10, 15, 20	32, 45, 64, 90
DIN, ANSI, JIS flange	●	●
PJE	●	●
FlexiClamp, union, oval flange, TriClamp	●	

● Available.

Product overview

Construction

A magnetic field is generated by two magnets; the outer magnet is driven by the motor, and the inner magnet is connected to the pump. The shafts are not connected.

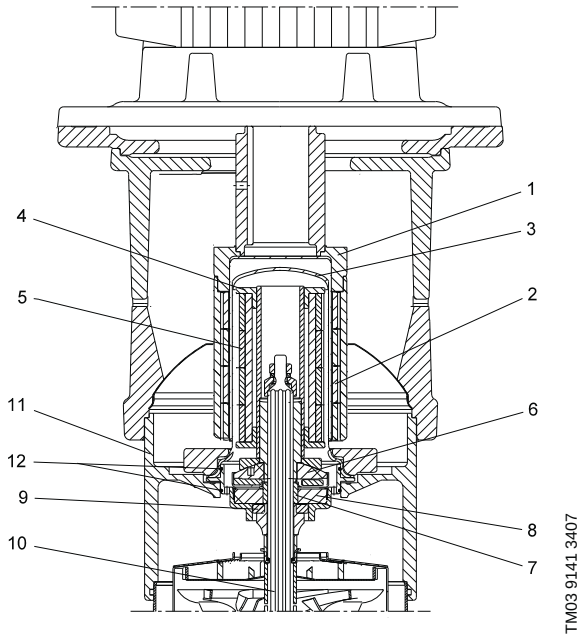


Fig. 3 Sectional drawing of MAGdrive system

Pos.	Designation	Material
1	Outer drive	AISI 304 SS
2	Outer magnets	NdFeB (neodymium)
3	Can	AISI 904L SS
4	Inner drive	AISI 316 SS
5	Inner magnets	NdFeB (neodymium)
6	Rotating thrust bearing	SiC-g (silicon carbide, carbon-filled)
7	Stationary thrust bearing	SiC-g (silicon carbide, carbon-filled)
8	Radial bearing	SiC (silicon carbide)
9	Upthrust bearing	Carbon-graphite-filled PTFE
10	Drive/pump shaft	CRN 1s-5 : AISI 316 SS CRN 10-20 : AISI 329 SS CRN 32-90 : SAF 2205
11	Pump head	CF 8M (cast equiv. of AISI 316 SS)
12	O-ring	EPDM, FKM, FXM, FFKM

Operating conditions

Maximum pressure

362 PSI

Temperature range

–4 °F to+248 °F

Viscosity range

0.25 to 100 Centipoise

Technical data

Motor range

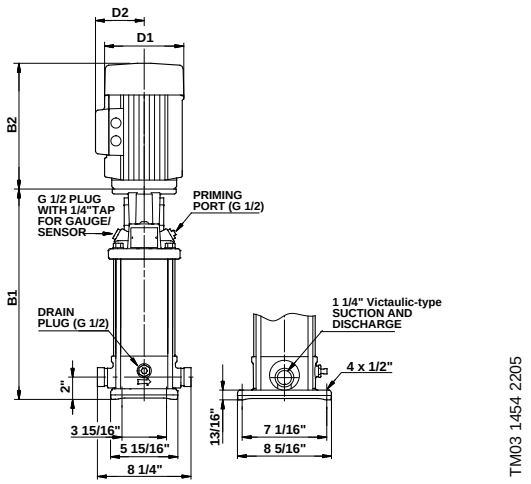
0.50 HP to 30 HP

Dimensions

The height of the MAGdrive system typically makes the pump taller than a standard CRN pump.

Some CRN MAGdrive pumps will have a larger motor than the standard range.

Technical data



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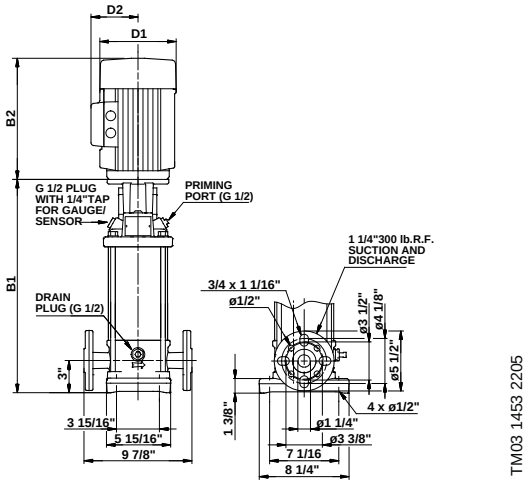

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Pump type	Hp	Ph	PJE*	Dimensions					Ship Wt. [lbs]
				B1	B2	D1	D2	B1 + B2	
CRN 1s-2	0.5	3	*	15.47	11.35	6.19	5.19	26.82	73
CRN 1s-3	0.5	3	*	15.47	11.35	6.19	5.19	26.82	73
CRN 1s-4	0.5	3	*	16.18	11.35	6.19	5.19	27.53	74
CRN 1s-5	0.5	3	*	16.88	11.35	6.19	5.19	28.23	75
CRN 1s-6	0.75	3	*	17.59	11.35	6.19	5.19	28.94	76
CRN 1s-7	0.75	3	*	18.30	11.35	6.19	5.19	29.65	77
CRN 1s-8	0.75	3	*	19.01	11.35	6.19	5.19	30.36	78
CRN 1s-9	1	3	*	19.72	11.35	6.19	5.19	31.07	79
CRN 1s-10	1	3	*	20.43	11.35	6.19	5.19	31.78	80
CRN 1s-11	1	3	*	21.14	11.35	6.19	5.19	32.49	81
CRN 1s-12	1	3	*	21.84	11.35	6.19	5.19	33.19	82
CRN 1s-13	1.5	3	*	22.55	11.97	6.19	5.19	34.52	87
CRN 1s-15	1.5	3	*	23.97	11.97	6.19	5.19	35.94	89
CRN 1s-17	1.5	3	*	25.39	11.97	6.19	5.19	37.36	89
CRN 1s-19	2	3	*	26.81	12.85	6.19	5.19	39.66	96
CRN 1s-21	2	3	*	28.22	12.85	6.19	5.19	41.07	98
CRN 1s-23	2	3	*	29.64	12.85	6.19	5.19	42.49	99
CRN 1s-25	3	3	*	32.18	12.55	7.19	5.72	44.73	142
CRN 1s-27	3	3	*	33.59	12.55	7.19	5.72	46.14	144

All pumps are three phase. All dimensions in inches unless otherwise noted.

* PJE flanged pump B1 and B1+B2 dimension is one inch less than ANSI flanged pump and weight is approximately 9 lbs. less.

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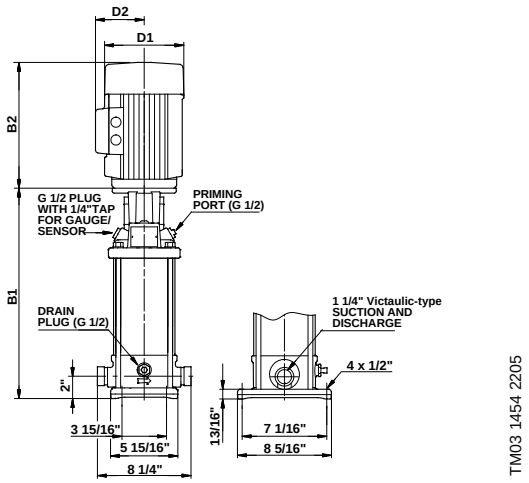
Technical data



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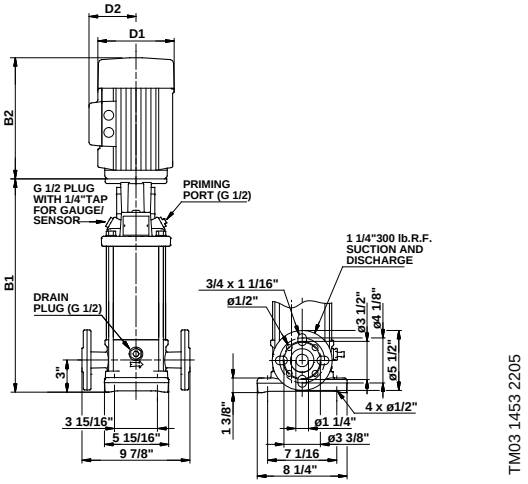

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Pump type	Hp	Ph	PJE*	Dimensions					Ship Wt. [lbs]
				B1	B2	D1	D2	B1 + B2	
CRN 1-2	0.5	3	*	15.47	11.35	6.19	5.19	26.82	73
CRN 1-3	0.5	3	*	15.47	11.35	6.19	5.19	26.82	73
CRN 1-4	0.75	3	*	16.18	11.35	6.19	5.19	27.53	74
CRN(E) 1-5	0.75	3	*	16.88	11.35	6.19	5.19	28.23	75
CRN 1-6	1	3	*	17.59	11.35	6.19	5.19	28.94	77
CRN(E) 1-7	1	3	*	18.30	11.35	6.19	5.19	29.65	78
CRN 1-8	1.5	3	*	19.01	11.97	6.19	5.19	30.98	83
CRN 1-9	1.5	3	*	19.72	11.97	6.19	5.19	31.69	84
CRN(E) 1-10	1.5	3	*	20.43	11.97	6.19	5.19	32.40	79
CRN 1-11	1.5	3	*	21.14	11.97	6.19	5.19	33.11	81
CRN 1-12	2	3	*	21.84	12.85	6.19	5.19	34.69	87
CRN(E) 1-13	2	3	*	22.55	12.85	6.19	5.19	35.40	88
CRN(E) 1-15	2	3	*	23.97	12.85	6.19	5.19	36.82	109
CRN 1-17	3	3	*	26.51	12.55	7.19	5.72	39.06	127
CRN(E) 1-19	3	3	*	26.81	12.55	7.19	5.72	39.36	132
CRN 1-21	3	3	*	29.32	12.55	7.19	5.72	41.87	172
CRN(E) 1-23	5	3	*	30.74	13.93	8.50	6.87	44.67	193
CRN 1-25	5	3	*	32.16	13.93	8.50	6.87	46.09	195
CRN(E) 1-27	5	3	*	33.58	13.93	8.50	6.87	47.51	197

All pumps are three phase. All dimensions in inches unless otherwise noted.

* PJE flanged pump B1 and B1+B2 dimension is one inch less than ANSI flanged pump and weight is approximately 9 lbs. less.

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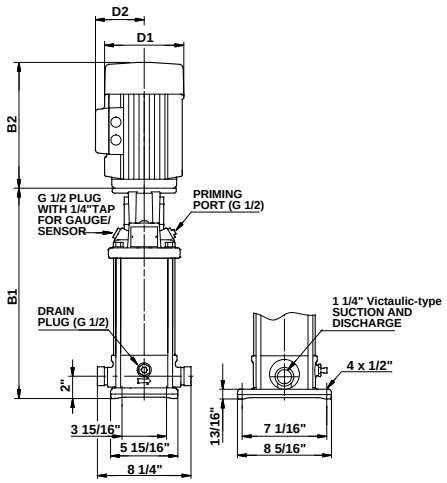

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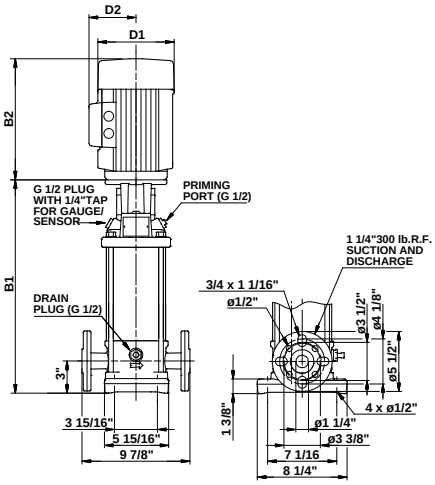

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Pump type	Hp	Ph	PJE*	Dimensions					Ship Wt. [lbs]
				B1	B2	D1	D2	B1 + B2	
CRN 3-2	0.5	3	*	15.47	11.35	6.19	5.19	26.82	73
CRN(E) 3-3	0.75	3	*	15.47	11.35	6.19	5.19	26.82	73
CRN 3-4	1	3	*	16.18	11.35	6.19	5.19	27.53	75
CRN(E) 3-5	1	3	*	16.88	11.35	6.19	5.19	28.23	76
CRN(E) 3-6	1.5	3	*	17.59	11.97	6.19	5.19	29.56	81
CRN 3-7	1.5	3	*	18.30	11.97	6.19	5.19	30.27	81
CRN 3-8	2	3	*	19.01	12.85	6.19	5.19	31.86	83
CRN(E) 3-9	2	3	*	19.72	12.85	6.19	5.19	32.57	84
CRN 3-10	2	3	*	20.43	12.85	6.19	5.19	33.28	101
CRN 3-11	3	3	*	22.26	12.55	7.19	5.72	34.81	127
CRN(E) 3-12	3	3	*	22.96	12.55	7.19	5.72	35.51	128
CRN 3-13	3	3	*	23.66	12.55	7.19	5.72	36.21	161
CRN(E) 3-15	5	3	*	25.07	13.93	8.50	6.87	39.00	183
CRN 3-17	5	3	*	26.49	13.93	8.50	6.87	40.42	185
CRN(E) 3-19	5	3	*	27.91	13.93	8.50	6.87	41.84	186
CRN 3-21	5	3	*	29.32	13.93	8.50	6.87	43.25	235
CRN 3-23	5	3	*	30.74	13.93	8.50	6.87	44.67	236
CRN(E) 3-25	5	3	*	32.16	13.93	8.50	6.87	46.09	238

All pumps are three phase. All dimensions in inches unless otherwise noted.

* PJE flanged pump B1 and B1+B2 dimension is one inch less than ANSI flanged pump and weight is approximately 9 lbs. less.

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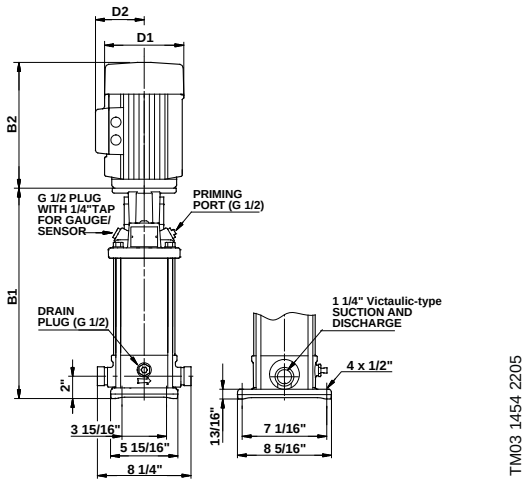

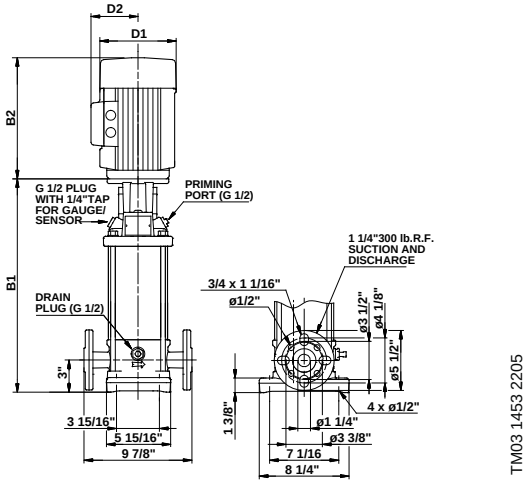

Pump type	Hp	Ph	PJE*	Dimensions					Ship Wt. [lbs]
				B1	B2	D1	D2	B1 + B2	
CRN(E) 5-2	1	3	*	15.47	11.35	6.19	5.19	26.82	74
CRN(E) 5-3	1.5	3	*	16.53	11.97	6.19	5.19	28.50	79
CRN 5-4	2	3	*	17.59	12.85	6.19	5.19	30.44	81
CRN(E) 5-5	2	3	*	18.66	12.85	6.19	5.19	31.51	98
CRN 5-6	3	3	*	20.84	12.55	7.19	5.72	33.39	121
CRN(E) 5-7	3	3	*	21.89	12.55	7.19	5.72	34.44	125
CRN 5-8	5	3	*	22.95	13.93	8.50	6.87	36.88	179
CRN 5-9	5	3	*	24.01	13.93	8.50	6.87	37.94	181
CRN(E) 5-10	5	3	*	25.07	13.93	8.50	6.87	39.00	184
CRN 5-11	5	3	*	26.14	13.93	8.50	6.87	40.07	226
CRN 5-12	5	3	*	27.20	13.93	8.50	6.87	41.13	231
CRN(E) 5-13	5	3	*	28.26	13.93	8.50	6.87	42.19	232
CRN 5-14	7.5	3	*	30.69	15.43	8.60	5.91	46.12	268
CRN 5-15	7.5	3	*	31.76	15.43	8.60	5.91	47.19	269
CRN(E) 5-16	7.5	3	*	32.82	15.43	8.60	5.91	48.25	270
CRN 5-18	7.5	3	*	34.96	15.43	8.60	5.91	50.39	272
CRN(E) 5-20	7.5	3	*	37.08	15.43	8.60	5.91	52.51	274
CRN 5-22	10	3	*	34.96	15.51	10.28	8.05	50.47	319

All pumps are three phase. All dimensions in inches unless otherwise noted.

* PJE flanged pump B1 and B1+B2 dimension is one inch less than ANSI flanged pump and weight is approximately 9 lbs. less.

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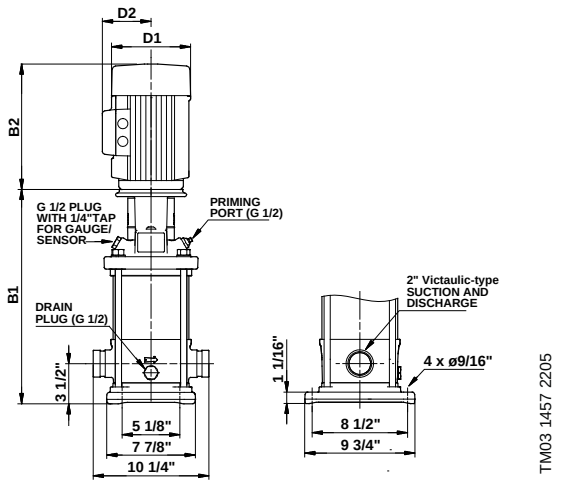
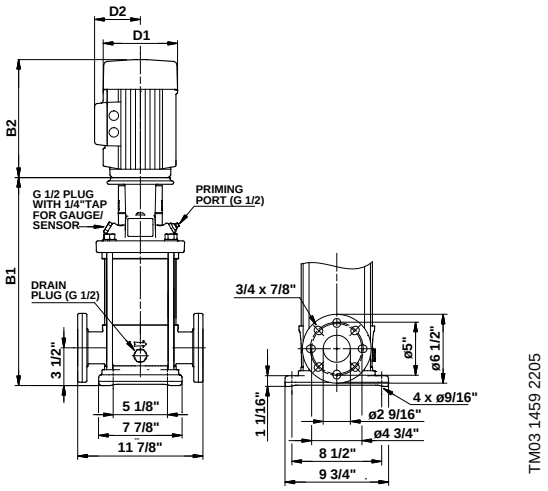
Technical data





Pump type	Hp	Ph	PJE*	Dimensions					Ship Wt. [lbs]
				B1	B2	D1	D2	B1 + B2	
CRN(E) 10-1	1	3	*	18.70	11.35	6.19	5.19	30.05	107
CRN(E) 10-2	2	3	*	18.70	12.85	6.19	5.19	31.55	115
CRN 10-3	3	3	*	20.63	12.55	7.19	5.72	33.18	198
CRN(E) 10-4	5	3	*	21.81	13.93	8.50	6.87	35.74	218
CRN 10-5	5	3	*	22.99	13.93	8.50	6.87	36.92	220
CRN(E) 10-6	7.5	3	*	24.67	15.43	8.60	5.91	40.10	223
CRN 10-7	7.5	3	*	25.67	15.43	8.60	5.91	41.10	228
CRN(E) 10-8	7.5	3	*	26.85	15.43	8.60	5.91	42.28	231
CRN 10-9	10	3	*	28.03	15.51	10.28	8.05	43.54	258
CRN(E) 10-10	10	3	*	29.21	15.51	10.28	8.05	44.72	260
CRN(E) 10-12	15	3	*	34.20	16.57	10.28	9.22	50.77	279
CRN(E) 10-14	15	3	*	36.45	16.57	10.28	9.22	53.02	452
CRN 10-16	15	3	*	38.81	16.57	10.28	9.22	55.38	462
CRN 10-17	20	3	*	41.18	19.57	10.28	9.40	60.75	491

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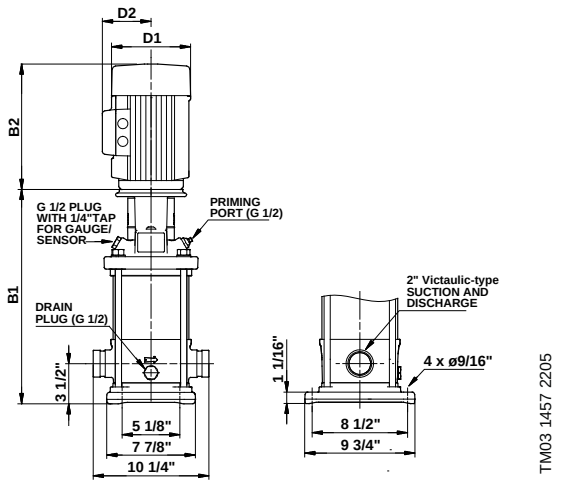
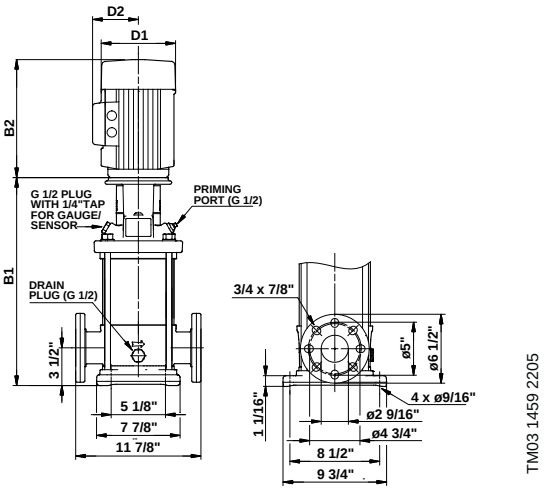
Technical data





Pump type	Hp	Ph	PJE*	Dimensions					Ship Wt. [lbs]
				B1	B2	D1	D2	B1 + B2	
CRN(E) 15-1	3	3	*	19.88	12.55	7.19	5.72	32.43	150
CRN(E) 15-2	5	3	*	20.63	13.93	8.50	6.87	34.56	207
CRN(E) 15-3	7.5	3	*	22.71	15.43	8.60	5.91	38.14	219
CRN(E) 15-4	10	3	*	24.48	15.51	10.28	8.05	39.99	247
CRN(E) 15-5	15	3	*	28.89	16.57	10.28	9.22	45.46	268
CRN(E) 15-6	15	3	*	30.55	16.57	10.28	9.22	47.12	385
CRN 15-7	15	3	*	32.32	16.57	10.28	9.22	48.89	418
CRN 15-8	20	3	*	34.09	19.57	10.28	9.40	53.66	475
CRN 15-9	20	3	*	35.86	19.57	10.28	9.40	55.43	491
CRN 15-10	25	3	*	36.76	22.40	12.94	11.52	59.16	504
CRN 15-12	25	3	*	40.55	22.40	12.94	11.52	62.95	524

All pumps are three phase. All dimensions in inches unless otherwise noted.

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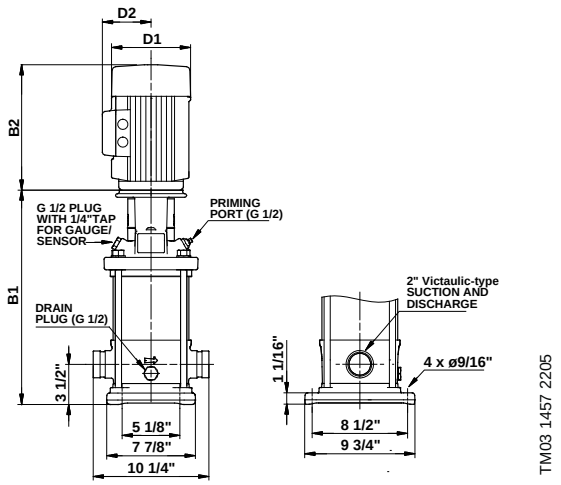
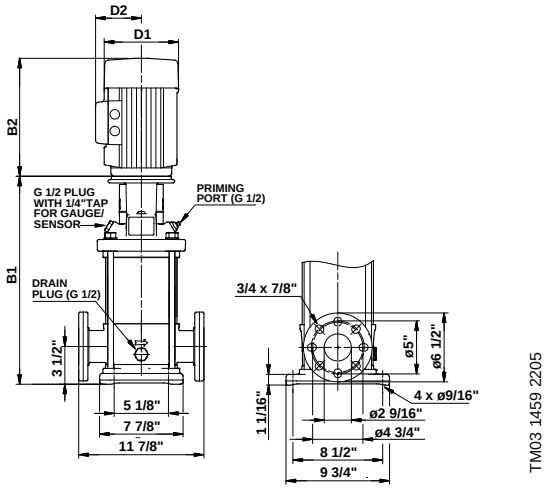


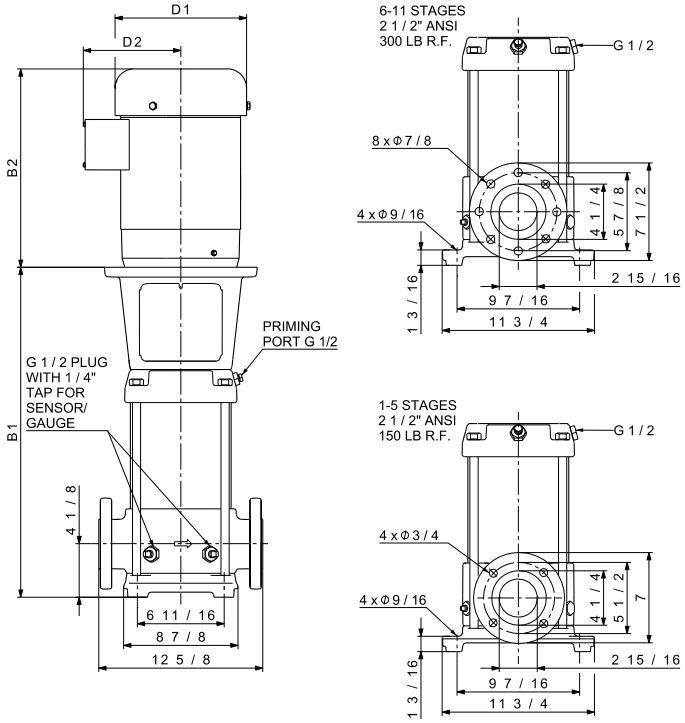


Pump type	Hp	Ph	PJE*	Dimensions					Ship Wt. [lbs]
				B1	B2	D1	D2	B1 + B2	
CRN(E) 20-1	3	3	*	20.63	12.55	7.19	5.72	33.18	156
CRN(E) 20-2	7.5	3	*	21.13	15.43	8.60	5.91	36.56	242
CRN(E) 20-3	10	3	*	22.71	15.51	10.28	8.05	38.22	251
CRN(E) 20-4	15	3	*	27.11	16.57	10.28	9.22	43.68	262
CRN 20-5	15	3	*	28.78	16.57	10.28	9.22	45.35	414
CRN 20-6	20	3	*	30.55	19.57	10.28	9.40	50.12	440
CRN 20-7	20	3	*	32.32	19.57	10.28	9.40	51.89	454
CRN 20-8	25	3	*	33.22	22.40	12.94	11.52	55.62	519

All pumps are three phase. All dimensions in inches unless otherwise noted.

* PJE flanged pump B1 and B1+B2 dimension is one inch less than ANSI flanged pump and weight is approximately 9 lbs. less.

• Available

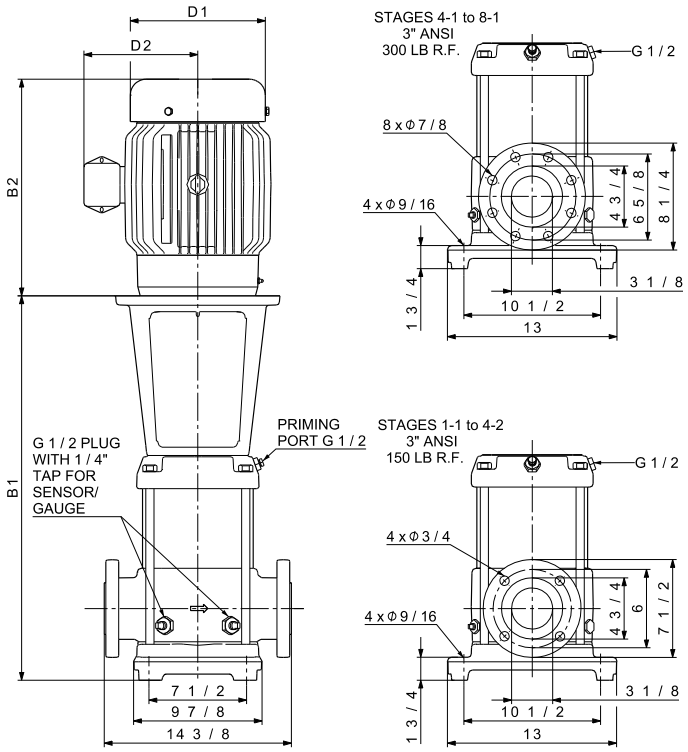


TM02 7703 1009

Pump type	Hp	Ph	Dimensions					Ship Wt. [lbs]
			B1	B2	D1	D2	B1 + B2	
CRN(E) 32-1-1	5	3	19.88	13.93	8.50	6.87	33.81	235
CRN(E) 32-1	7.5	3	20.76	15.43	8.60	5.91	36.19	244
CRN 32-2-2	7.5	3	23.52	15.43	8.60	5.91	38.95	248
CRN 32-2-1	10	3	22.64	15.51	10.28	8.05	38.15	273
CRN(E) 32-2	10	3	22.64	15.51	10.28	8.05	38.15	282
CRN(E) 32-3-2	15	3	29.52	16.57	10.28	9.22	46.09	295
CRN 32-3	15	3	29.72	16.57	10.28	9.22	46.29	386
CRN 32-4-2	20	3	32.48	19.57	10.28	9.40	52.05	416
CRN 32-4	20	3	32.48	19.57	10.28	9.40	52.05	428
CRN 32-5-2	25	3	35.24	22.40	12.94	11.52	57.64	463
CRN 32-5	25	3	35.24	22.40	12.94	11.52	57.64	472
CRN 32-6-2	30	3	37.99	22.40	12.94	11.52	60.39	501
CRN 32-6	30	3	37.99	22.40	12.94	11.52	60.39	513
CRN 32-7-2	30	3	40.75	22.40	12.94	11.52	63.15	658

All pumps are three phase. All dimensions in inches unless otherwise noted.

• Available

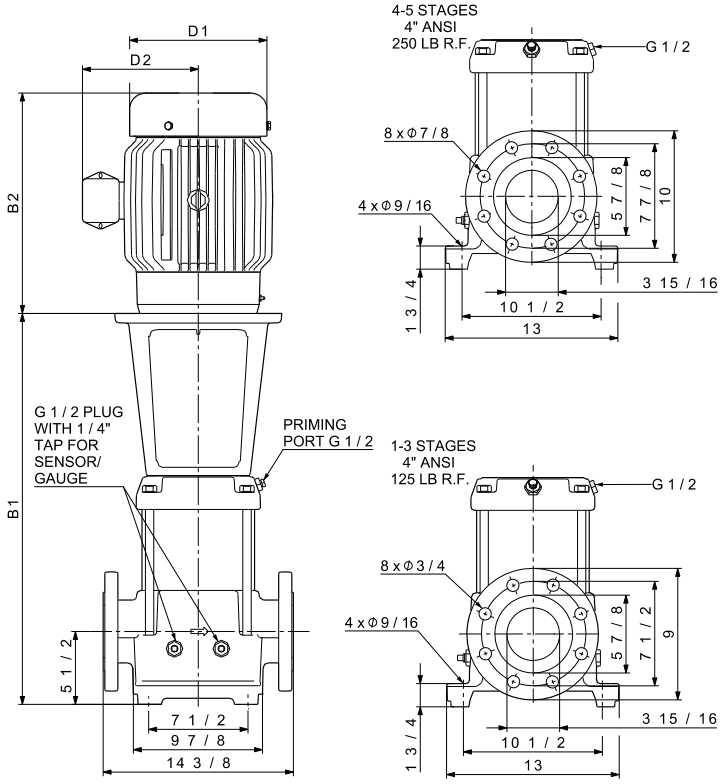


TM02 7704 1009

Pump type	Hp	Ph	Dimensions					Ship Wt. [lbs]
			B1	B2	D1	D2	B1 + B2	
CRN 45-1-1	10	3	22.01	15.51	10.28	8.05	37.52	283
CRN(E) 45-1	10	3	22.01	15.51	10.28	8.05	37.52	292
CRN 45-2-2	15	3	29.49	16.57	10.28	9.22	46.06	396
CRN 45-2-1	20	3	29.49	19.57	10.28	9.40	49.06	420
CRN 45-2	20	3	29.49	19.57	10.28	9.40	49.06	430
CRN 45-3-2	25	3	32.64	22.40	12.94	11.52	55.04	469
CRN 45-3-1	25	3	32.64	22.40	12.94	11.52	55.04	479
CRN 45-3	30	3	32.64	22.40	12.94	11.52	55.04	500

All pumps are three phase. All dimensions in inches unless otherwise noted.

• Available

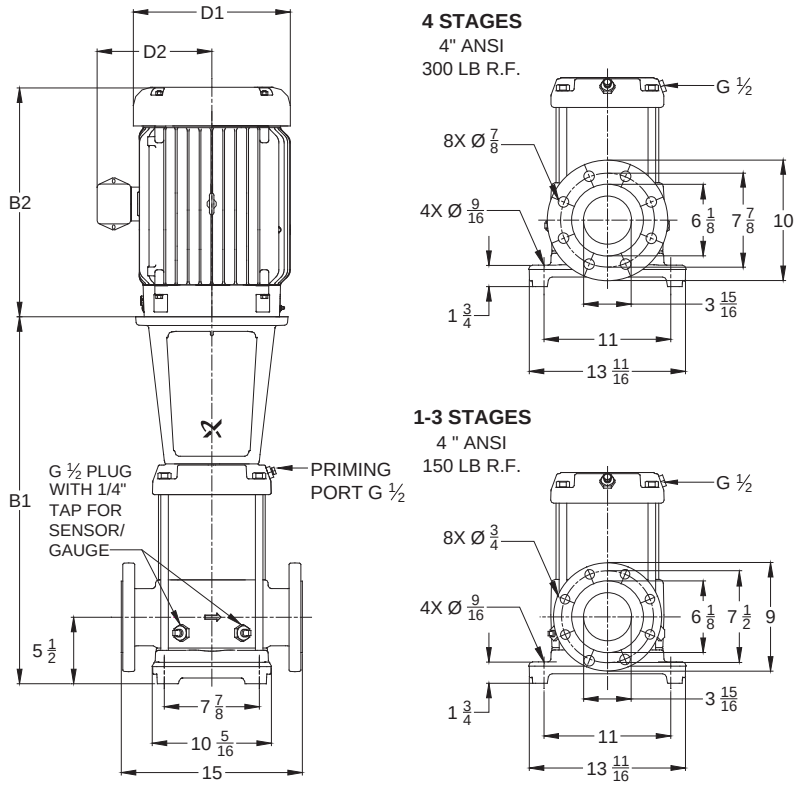


TM02 7705 1009

Pump type	Hp	Ph	Dimensions					Ship Wt. [lbs]
			B1	B2	D1	D2	B1 + B2	
CRN 64-1-1	10	3	22.09	15.51	10.28	8.05	37.60	270
CRN 64-1	15	3	26.42	16.57	10.28	9.22	42.99	398
CRN 64-2-2	20	3	29.69	19.57	10.28	9.40	49.26	416
CRN 64-2-1	25	3	29.69	22.40	12.94	11.52	52.09	472
CRN 64-2	30	3	29.69	22.40	12.94	11.52	52.09	503

All pumps are three phase. All dimensions in inches unless otherwise noted.

• Available



TM02 7706 1009

Pump type	Hp	Ph	Dimensions					Ship Wt. [lbs]
			B1	B2	D1	D2	B1 + B2	
CRN 90-1-1	15	3	26.81	16.57	10.28	9.22	43.38	413
CRN 90-1	20	3	26.81	19.57	10.28	9.40	46.38	421
CRN 90-2-2	30	3	30.43	22.40	12.94	11.52	52.83	519

All pumps are three phase. All dimensions in inches unless otherwise noted.

• Available

Motor data

TEFC motor data for CRN MAGdrive pumps (2 pole)

(Totally Enclosed Fan Cooled, constant speed)

Hp	Ph	RPM	Frame	S.F.	Voltage [V]	Mtr. eff. [%]	Insul. class	KVA code	Full load current [A]	Service factor current [A]	Start current [A]	Motor type
0.5	3	3600	56C	1.25	230/460	68	B	J	2 / 1	2.4 / 1.2	12/6	Baldor
0.75	3	3600	56C	1.25	230/460	74	B	K	2.6/1.3	3/1.5	15.2/7.6	Baldor
1	3	3600	56C	1.25	230/460	75.5	B	H	3.6/1.8	3.8/1.9	22/11	Baldor
1.5	3	3600	56C	1.15	208-230/460	80	B	L	4.9-4.6/2.3	5.3-5.0/2.5	39.2-36.8/18.4	Baldor
2	3	3600	56C	1.15	208-230/460	80	B	H	6.2-5.8/2.9	6.6-6.2/3.1	44.5-41.6/20.8	Baldor
3	3	3600	182TC	1.15	208-230/460	85.5	F	L	7.9-7.4/3.7	9.2-8.6/4.3	75.8-71/35.5	Baldor
5	3	3600	184TC	1.15	208-230/460	87.5	F	K	12.6-11.6/5.8	14.5-13.32/6.66	117.3-108/54	Baldor
7.5	3	3600	213TC	1.15	208-230/460	88.5	F	M	18.5-17.4/8.7	20.9-19.66/9.83	210.1-197.6/98.8	Baldor
10	3	3600	215TC	1.15	208-230/460	89.5	F	H	25-23/11.5	63.7-58.6/29.3	321.7-296/148	Baldor
15	3	3600	254TC	1.15	208-230/460	90.2	F	K	37.5-34/17	43-39/19.5	335.3-304/152	Baldor
20	3	3600	256TC	1.15	208-230/460	90.2	F	H	51-46/23	59.9-54/27	374.7-338/169	Baldor
25	3	3600	284TSC	1.15	230/460	91	F	J	56/28	65.2/32.6	454/227	Baldor
30	3	3600	286TSC	1.15	208-230/460	91	F	J	74-68/34	85.3-78.4/39.2	613.1-563.4/281.7	Baldor

TEFC motor data for CRN MAGdrive pumps (4 pole)

(Totally Enclosed Fan Cooled, constant speed)

Hp	Ph	RPM	Frame	S.F.	Voltage [V]	Mtr. eff. [%]	Insul. class	KVA code	Full load current [A]	Service factor current [A]	Start current [A]	Motor type
0.5	3	1800	56C	1.25	230/460	74	B	L	2 / 1	2.4/1.2	13/6.5	Baldor
0.75	3	1800	56C	1.25	208-230/460	75.5	B	K	3.2-3/1.5	3.4-3.2/1.6	21.3-20/10	Baldor
1	3	1800	56C	1.15	208-230/460	78.5	B	M	3.7-3.4/1.7	4.1-3.74/1.87	28.3-26/13	Baldor
1.5	3	1800	56C	1.15	208-230/460	81.5	F	L	5-4.6/2.3	5.5-5.04/2.52	38-35/17.5	Baldor
2	3	1800	56C	1.15	208-230/460	82.5	F	L	6.5-6/3	7-6.5/3.25	53.7-49.6/24.8	Baldor
3	3	1800	182TC	1.15	208-230/460	87.5	F	L	9.1-8.4/4.2	10.1-9.32/4.66	79.3-73.2/36.6	Baldor
5	3	1800	184TC	1.15	208-230/460	87.5	F	J	14.2-13.6/6.8	16-15.36/7.68	101.1-96.8/48.4	Baldor
7.5	3	1800	213TC	1.15	208-230/460	89.5	F	K	22-20.2/10.1	24.8-22.8/11.4	168.8-155/77.5	Baldor
10	3	1800	215TC	1.15	208-230/460	89.5	F	K	28-27/13.5	31.3-30.2/15.1	221.9-214/107	Baldor

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Submittal data

CRN MAGdrive

Vertical Multistage Centrifugal Pumps

Company name:
Prepared by:
Phone number: ( )
Fax number: ( )
Date: Page 1 of:
Quote number:

Client Information

Project title:
Reference number:
Client contact:

Client name:
Client number:
Client phone number: ( )

Location Information

For:
Site:
Address:

Unit:
Service:
City: State: Zip Code:

Application Information

Operating Conditions

	Max.	Norm.	Min.
Capacity (gpm)			
Suction Pressure (psig)			
Discharge Pressure (psig)			
Differential Head (ft)			
Hydraulic Power (hp) at designated capacity			
NPSH Available (ft)			

Pumped Fluid

Fluid type:

	Rated	Max.	Norm.
Fluid Temperature (°F)			
at designated temperature			
Specific Gravity			
Vapor Pressure (psia)			
Viscosity (cp)			

Fluid ph: Chlorides (ppm):
Hazardous: Corrosion/Erosion caused by:
Flammable:
Other:

Service

Continuous
Intermittent (starts/day):

Pump Information

Model Information from Type Key and Codes: ----> (Example: CR 5-10 M-FGJ-A-E-HQQE)
Quantity Required:
Minimum required flow: NPSH required at duty point:

Product Guide additional information pages

Materials page number: Performance curve page number:
Technical data page number: Motor data page number:

Motor Information

HP: Phase: Voltage: Enclosure:

Custom-built pump information (optional):

Additional Information

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CRN MAGdrive

Vertical, non-self-priming, multistage, in-line, centrifugal pump for installation in pipe systems and mounting on a foundation.

The pump has the following characteristics:

- impellers and intermediate chambers are made of AISI _____ Stainless steel
- Pump head and base are made of _____
- Power transmission is via cast iron split coupling.
- pipework connections is via _____

The motor is a _____ -phase AC motor.

Technical

Rated flow:	_____ GPM
Rated head:	_____ Feet
Minimum liquid temperature:	_____ °F
Maximum liquid temperature:	_____ °F
Type of shaft seal:	_____

Materials

Material, pump housing:	AISI_____ Stainless Steel
Material, shaft:	AISI_____ Stainless Steel
Material, impeller:	AISI_____ Stainless Steel
Material, sleeve:	AISI_____ Stainless Steel
Material, seal metal:	AISI_____ Stainless Steel
- seal face:	_____
- seal face	_____
- seal elastomer:	_____

Installation

Maximum ambient temperature:	_____ °F
Max. pressure at stated temp.:	_____ PSI/ °F
Standard, pipe connection:	_____
Size, pipe connection:	_____
Rated pressure, pipe connection:	_____ PSI
Frame size for motor:	_____ NEMA

Electrical data

Motor type:	_____
Rated power (P2):	_____ HP
Frequency:	_____ Hz
Rated voltage:	_____ V
Rated current:	_____ A
Service factor:	_____
Starting current:	_____ A
Rated speed:	_____ RPM
Full load motor efficiency:	_____ %
Insulation class:	_____

Additional

Gross weight:	_____ Lbs.
Shipping volume:	_____
Model:	_____

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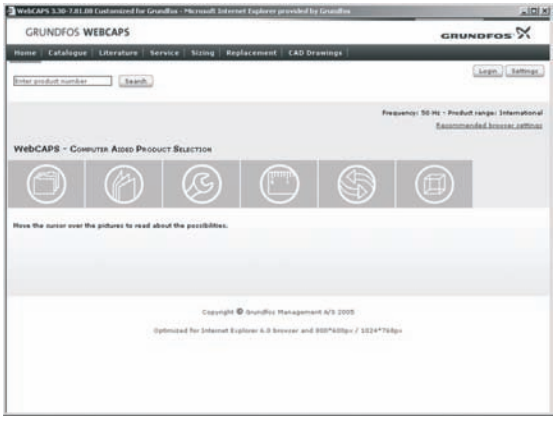
Further documentation

WebCAPS

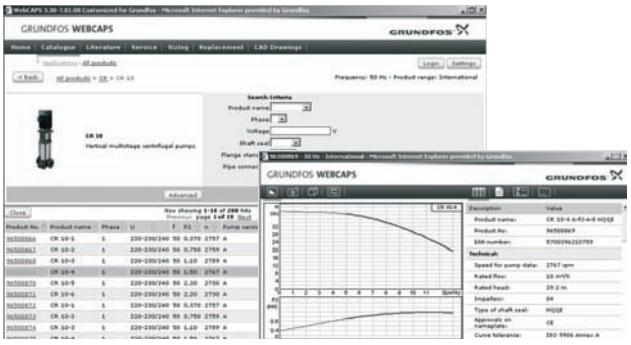


WebCAPS is a **Web**-based **C**omputer **A**ided **P**roduct **S**election program available on www.grundfos.com.

WebCAPS contains detailed information on more than 185,000 Grundfos products in more than 22 languages.

In WebCAPS, all information is divided into 6 sections:

- Catalog
- Literature
- Service
- Sizing
- Replacement
- CAD drawings.



Catalog

This section is based on fields of application and pump types, and contains
- technical data
- curves (QH, Eta, P1, P2, etc) which can be adapted to the density and viscosity of the pumped liquid and show the number of pumps in operation
- product photos
- dimensional drawings
- wiring diagrams
- quotation texts, etc.

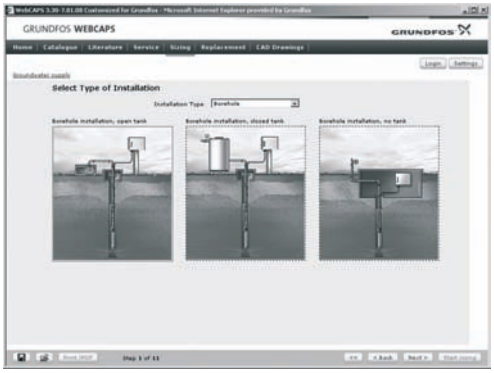
Literature

In this section you can access all the latest documents of a given pump, such as
- product guides
- installation and operating instructions
- service documentation, such as Service kit catalog and Service kit instructions
- quick guides
- product brochures, etc.

Service

This section contains an easy-to-use interactive service catalog. Here you can find and identify service parts of both existing and discontinued Grundfos pumps.
Furthermore, this section contains service videos showing you how to replace service parts.

Further documentation



Sizing

This section is based on different fields of application and installation examples, and gives easy step-by-step instructions in how to
- select the most suitable and efficient pump for your installation
- carry out advanced calculations based on energy consumption, payback periods, load profiles, life cycle costs, etc.
- analyse your selected pump via the built-in life cycle cost tool
- determine the flow velocity in wastewater applications, etc.

Replacement

In this section you find a guide to selecting and comparing replacement data of an installed pump in order to replace the pump with a more efficient Grundfos pump.
The section contains replacement data of a wide range of pumps produced by other manufacturers than Grundfos.

Based on an easy step-by-step guide, you can compare Grundfos pumps with the one you have installed on your site. When you have specified the installed pump, the guide will suggest a number of Grundfos pumps which can improve both comfort and efficiency.

CAD drawings

In this section it is possible to download 2-dimensional (2D) and 3-dimensional (3D) CAD drawings of most Grundfos pumps.

These formats are available in WebCAPS:

2-dimensional drawings:
- .dxf, wireframe drawings
- .dwg, wireframe drawings.

3-dimensional drawings:
- .dwg, wireframe drawings (without surfaces)
- .stp, solid drawings (with surfaces)
- .eprt, E-drawings.

WinCAPS

WinCAPS CD-ROM

WinCAPS is a **Win**dows-based **C**omputer **A**ided **P**roduct **S**election program containing detailed information on more than 185,000 Grundfos products in more than 22 languages.

The program contains the same features and functions as WebCAPS, but is an ideal solution if no Internet connection is available.

WinCAPS is available on CD-ROM and updated once a year

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L-CRN-PG-01 1210	**US**
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Subject to alterations.

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