Equipment and solutions

CDMF Vertical Multistage Pump

Product technical datasheet

High-efficiency vertical multistage in-line pumps in stainless steel for industrial pressurization and water treatment.

FT-P098 · Rev. 1



The CDMF series consists of high-efficiency vertical multistage centrifugal pumps with in-line design (suction and discharge at the same level). Stainless steel construction and cartridge mechanical seal ensure high durability and ease of maintenance. These pumps are suitable for.

Applications

- Industrial processes and liquid transfer.
- Hydraulic pressure systems
- Water treatment
- Agricultural irrigation
- Boiler feed
- Washing and cleaning systems

Operating conditions

- High-efficiency vertical multistage pumps
- In-line design with suction and discharge on the same axis
- Strong AISI 304 stainless steel construction
- Cartridge mechanical seal (ALLOY/SIC/NBR)
- High-efficiency TEFC motor (IE2/IE3)
- DIN flange connection

Engineering note	Confirm the installation conditions, power supply and duty point before commissioning.
Complementary equipment	Contact JOVAL for compatible accessories and equipment.
Resources and support	Pump selection guide · JOVAL technical support
Contact	+351 253 490 740 · joval@joval.pt

Technical specifications

Type
Multistage centrifugal pump

Standard
In-line / DIN

Material
Stainless steel (AISI 304 / 316)

Voltage
220-240V (1~) / 380-415V (3~)

Max Flow
32 m³/h

Max Head
250 m

Protection
IP 55

Insulation
Class F

Liquid temp.
-15°C to +120°C

Maximum Pressure
25 bar / PN25

NPSH
2 m

Nominal Speed
2900 rpm

Standards
CE / ISO 9906

Mechanical Seal
ALLOY/SIC/NBR (Cartridge)

Motor Efficiency
Up to 87%

Pump Efficiency
Up to 72%

Connection Code
F (Flange)

Applications

- Industrial processes and liquid transfer.
- Hydraulic pressure systems
- Water treatment
- Agricultural irrigation
- Boiler feed
- Washing and cleaning systems

Operating conditions

- High-efficiency vertical multistage pumps
- In-line design with suction and discharge on the same axis
- Strong AISI 304 stainless steel construction
- Cartridge mechanical seal (ALLOY/SIC/NBR)
- High-efficiency TEFC motor (IE2/IE3)
- DIN flange connection

Engineering note Confirm the installation conditions, power supply and duty point before commissioning.

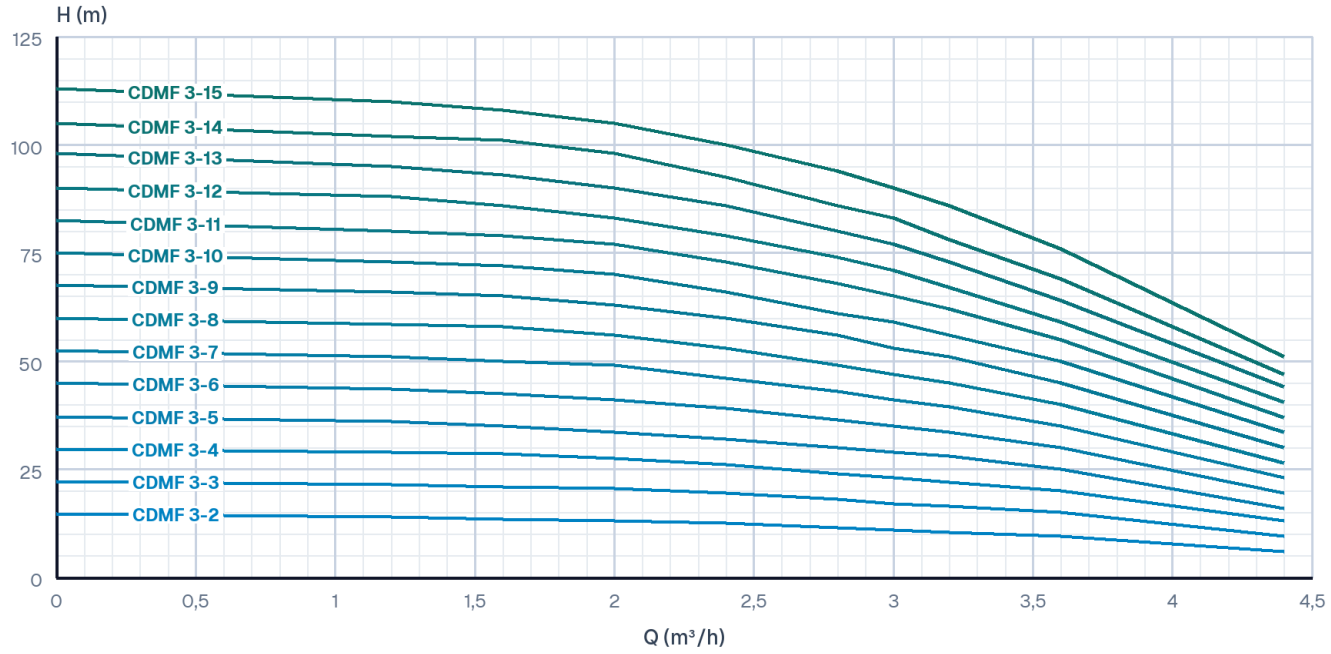
List of materials

Materials

Pos.	Description	Material (Standard)
1	Motor	-
2	Motor bracket	Cast iron
3	Seal base	Stainless steel (AISI 304/316)
4	Mechanical seal	Cartridge type
5	Discharge	Stainless steel (AISI 304/316)
6	Staybolt	Stainless steel (AISI 304/316)
7	Diffuser	Stainless steel (AISI 304/316)
8	Impeller	Stainless steel (AISI 304/316)
9	Shaft	Stainless steel (AISI 304/316)
10	Coupling	Carbon steel
11	Inlet	Stainless steel (AISI 304/316)
12	Base plate	Cast iron

Series CDMF 3 (1~ 230V) · part 1/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 3-2	0,37	0,5	2,1
CDMF 3-3	0,37	0,5	2,1
CDMF 3-4	0,37	0,5	2,1
CDMF 3-5	0,55	0,75	3,65
CDMF 3-6	0,55	0,75	3,65
CDMF 3-7	0,75	1	4,2
CDMF 3-8	0,75	1	4,2

Model	kW	HP	A (400 V)
CDMF 3-9	1,1	1,5	6,3
CDMF 3-10	1,1	1,5	6,3
CDMF 3-11	1,1	1,5	6,3
CDMF 3-12	1,1	1,5	6,3
CDMF 3-13	1,5	2	8,2
CDMF 3-14	1,5	2	8,2
CDMF 3-15	1,5	2	8,2

Series CDMF 3 (1~ 230V) · part 1/2

Hydraulic performance

Total head H in metres

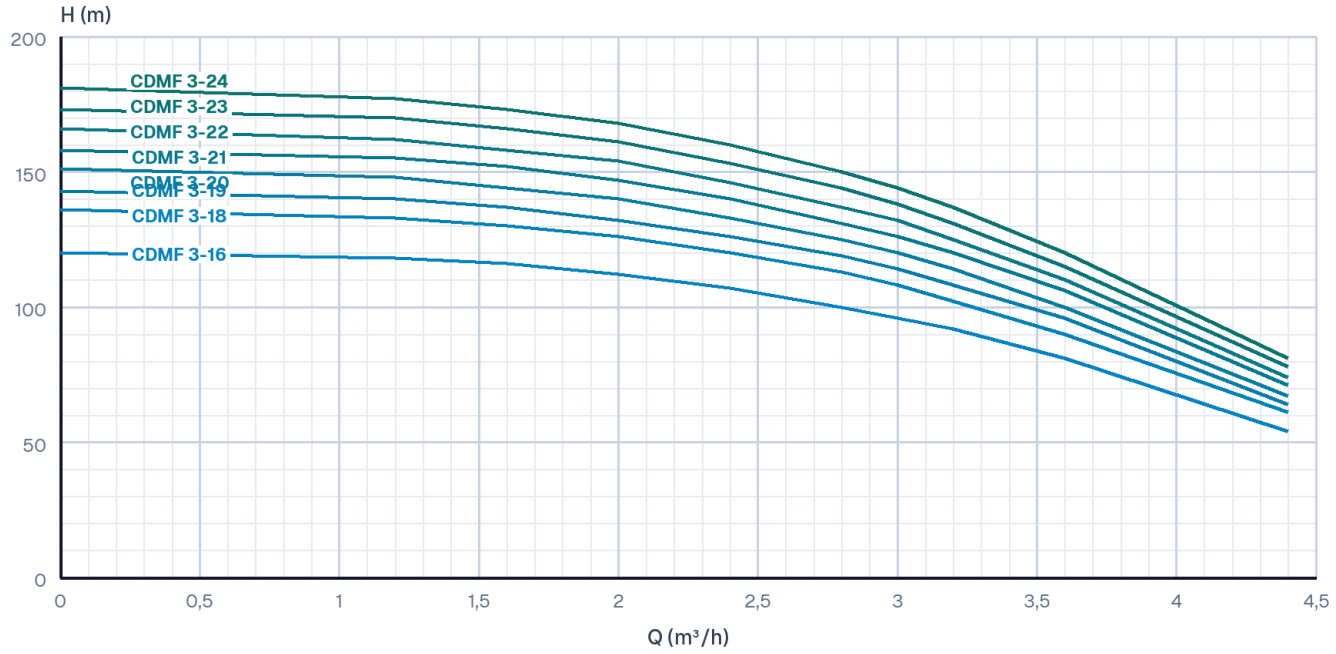
Q · Flow (m³/h)

Model	0	1,2	1,6	2	2,4	2,8	3	3,2	3,6	4,4
CDMF 3-2	14,7	14	13,5	13	12,5	11,5	11	10,5	9,5	6
CDMF 3-3	22,2	21,5	21	20,5	19,5	18	17	16,5	15	9,5
CDMF 3-4	29,7	29	28,5	27,5	26	24	23	22	20	13
CDMF 3-5	37,2	36	35	33,5	32	30	29	28	25	16
CDMF 3-6	45	43,5	42,5	41	39	36,5	35	33,5	30	19,5
CDMF 3-7	52,5	51	50	49	46	43	41	39,5	35	23
CDMF 3-8	60	58,5	58	56	53	49	47	45	40	26,5
CDMF 3-9	67,5	66	65	63	60	56	53	51	45	30
CDMF 3-10	75	73	72	70	66	61	59	56	50	33,5
CDMF 3-11	82,5	80	79	77	73	68	65	62	55	37
CDMF 3-12	90	88	86	83	79	74	71	67	59	40,5
CDMF 3-13	98	95	93	90	86	80	77	73	64	44
CDMF 3-14	105	102	101	98	92,5	86	83	78	69	47
CDMF 3-15	113	110	108	105	100	94	90	86	76	51

Select the duty point at the intersection of Q and H.

Series CDMF 3 (1~ 230V) · part 2/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 3-16	1,5	2	8,2
CDMF 3-18	2,2	3	12,1
CDMF 3-19	2,2	3	12,1
CDMF 3-20	2,2	3	12,1

Model	kW	HP	A (400 V)
CDMF 3-21	2,2	3	12,1
CDMF 3-22	2,2	3	12,1
CDMF 3-23	2,2	3	12,1
CDMF 3-24	2,2	3	12,1

Series CDMF 3 (1~ 230V) · part 2/2

Hydraulic performance

Total head H in metres

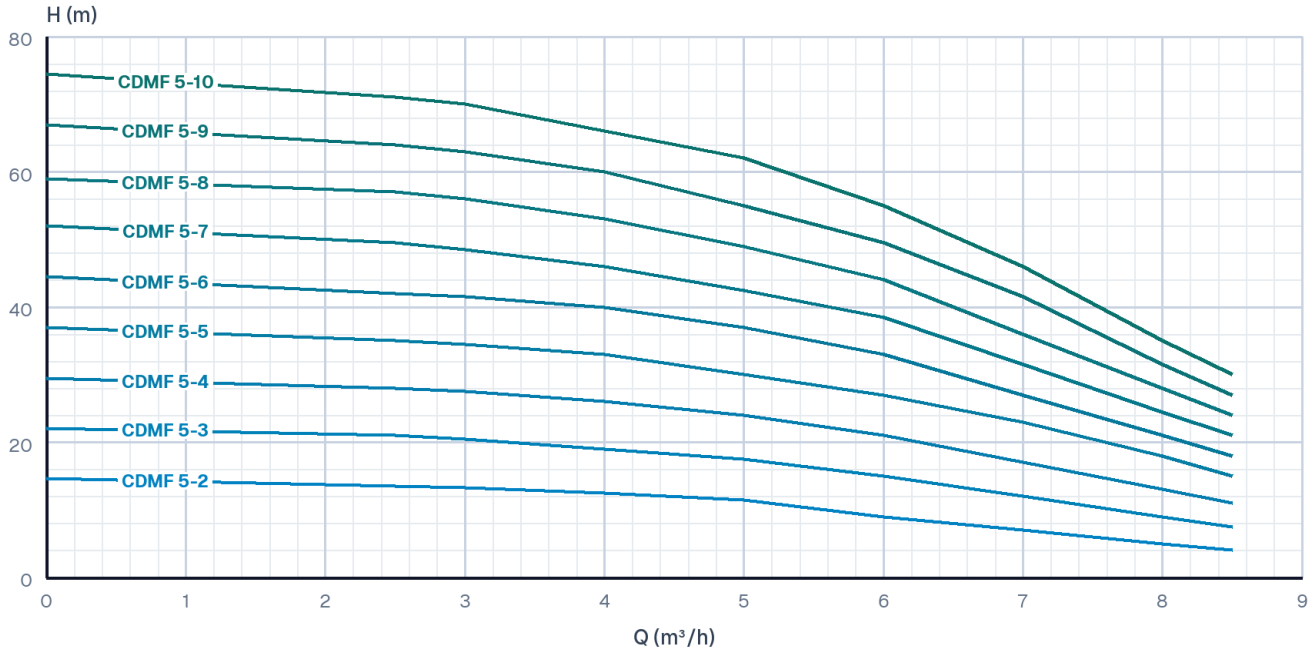
Q · Flow (m³/h)

Model	0	1,2	1,6	2	2,4	2,8	3	3,2	3,6	4,4
CDMF 3-16	120	118	116	112	107	100	96	92	81	54
CDMF 3-18	136	133	130	126	120	113	108	102	90	61
CDMF 3-19	143	140	137	132	126	119	114	108	96	64
CDMF 3-20	151	148	144	140	133	125	120	114	100	67
CDMF 3-21	158	155	152	147	140	131	126	120	106	71
CDMF 3-22	166	162	158	154	146	137	132	125	110	74
CDMF 3-23	173	170	166	161	153	144	138	131	115	78
CDMF 3-24	181	177	173	168	160	150	144	137	120	81

Select the duty point at the intersection of Q and H.

Series CDMF 5 (1~ 230V) · part 1/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 5-2	0,37	0,5	2,1
CDMF 5-3	0,55	0,75	3,65
CDMF 5-4	0,55	0,75	3,65
CDMF 5-5	0,75	1	4,2
CDMF 5-6	1,1	1,5	6,3

Model	kW	HP	A (400 V)
CDMF 5-7	1,1	1,5	6,3
CDMF 5-8	1,1	1,5	6,3
CDMF 5-9	1,5	2	8,2
CDMF 5-10	1,5	2	8,2

Series CDMF 5 (1~ 230V) · part 1/2

Hydraulic performance

Total head H in metres

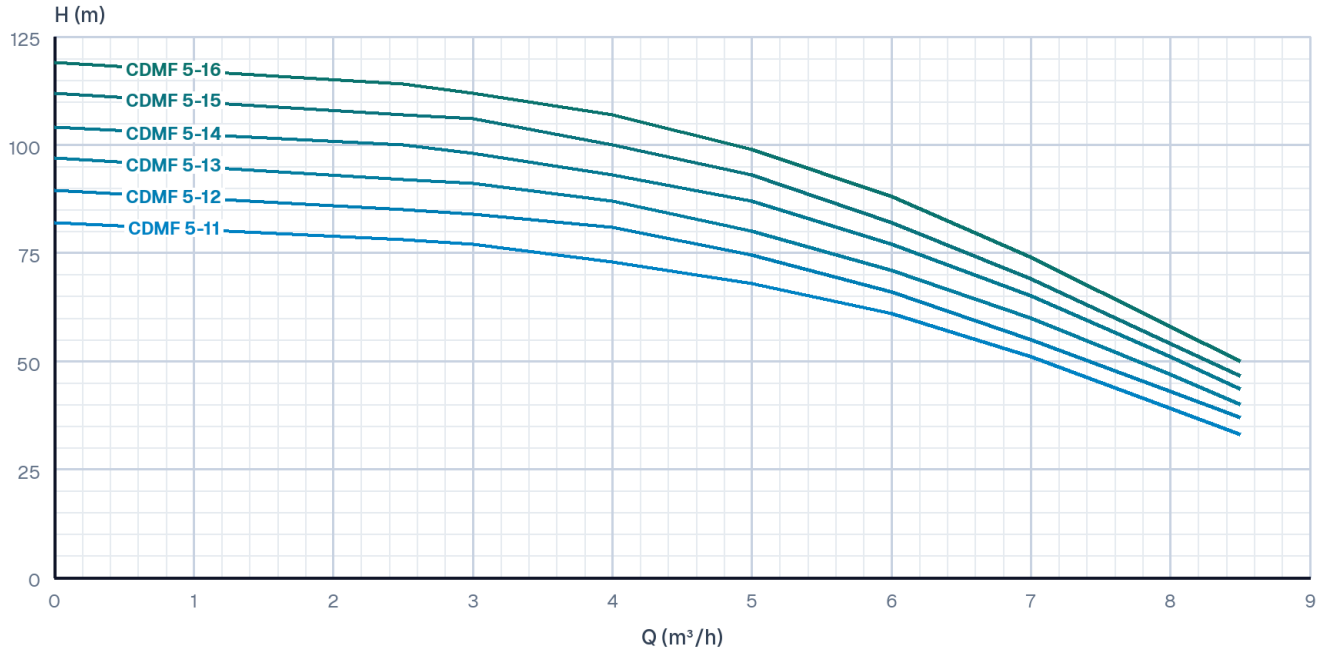
Q · Flow (m³/h)

Model	0	2,5	3	4	5	6	7	8	8,5
CDMF 5-2	14,7	13,5	13,3	12,5	11,5	9	7	5	4
CDMF 5-3	22,1	21	20,5	19	17,5	15	12	9	7,5
CDMF 5-4	29,5	28	27,5	26	24	21	17	13	11
CDMF 5-5	37	35	34,5	33	30	27	23	18	15
CDMF 5-6	44,5	42	41,5	40	37	33	27	21	18
CDMF 5-7	52	49,5	48,5	46	42,5	38,5	31,5	24,5	21
CDMF 5-8	59	57	56	53	49	44	36	28	24
CDMF 5-9	67	64	63	60	55	49,5	41,5	31,5	27
CDMF 5-10	74,5	71	70	66	62	55	46	35	30

Select the duty point at the intersection of Q and H.

Series CDMF 5 (1~ 230V) · part 2/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 5-11	1,5	2	8,2
CDMF 5-12	2,2	3	12,1
CDMF 5-13	2,2	3	12,1

Model	kW	HP	A (400 V)
CDMF 5-14	2,2	3	12,1
CDMF 5-15	2,2	3	12,1
CDMF 5-16	2,2	3	12,1

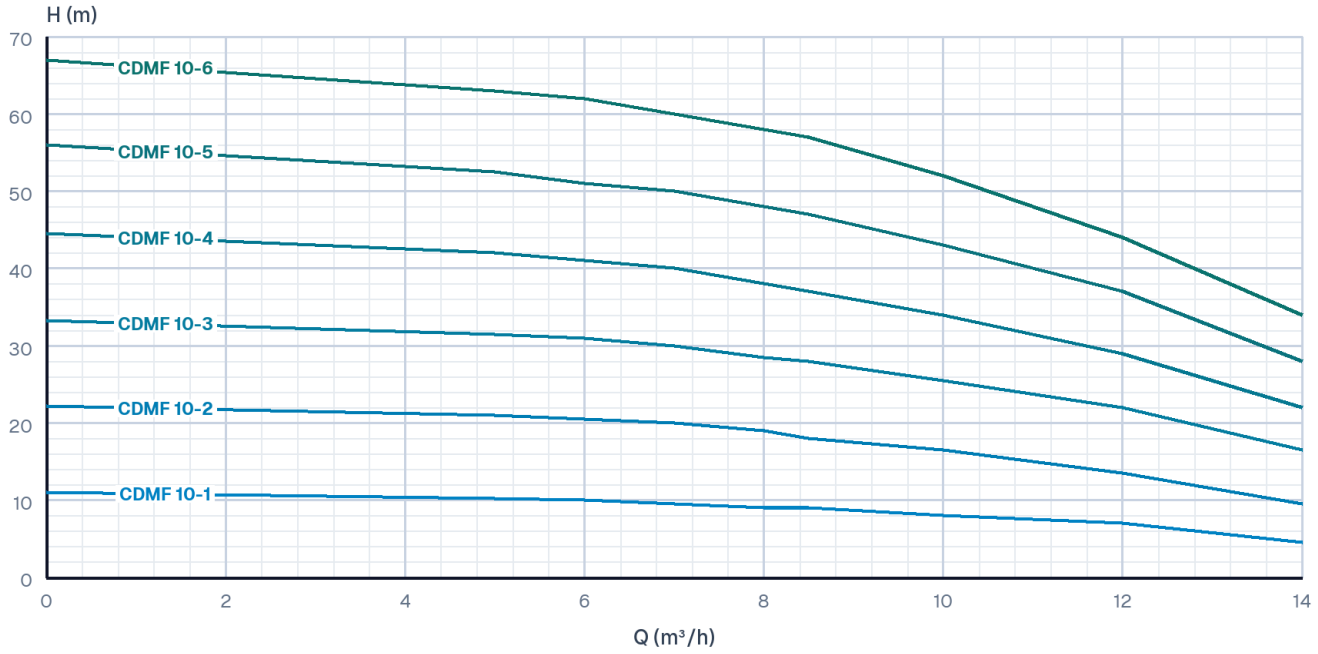
Hydraulic performance

	Q · Flow (m³/h)								
Model	0	2,5	3	4	5	6	7	8	8,5
CDMF 5-11	82	78	77	73	68	61	51	39	33
CDMF 5-12	89,5	85	84	81	74,5	66	55	43	37
CDMF 5-13	97	92	91	87	80	71	60	47	40
CDMF 5-14	104	100	98	93	87	77	65	51	43,5
CDMF 5-15	112	107	106	100	93	82	69	54	46,5
CDMF 5-16	119	114	112	107	99	88	74	58	50

Select the duty point at the intersection of Q and H.

Series CDMF 10 (1~ 230V)

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 10-1	0,75	1	4,2
CDMF 10-2	0,75	1	4,2
CDMF 10-3	1,1	1,5	6,3

Model	kW	HP	A (400 V)
CDMF 10-4	1,5	2	8,2
CDMF 10-5	2,2	3	12,1
CDMF 10-6	2,2	3	12,1

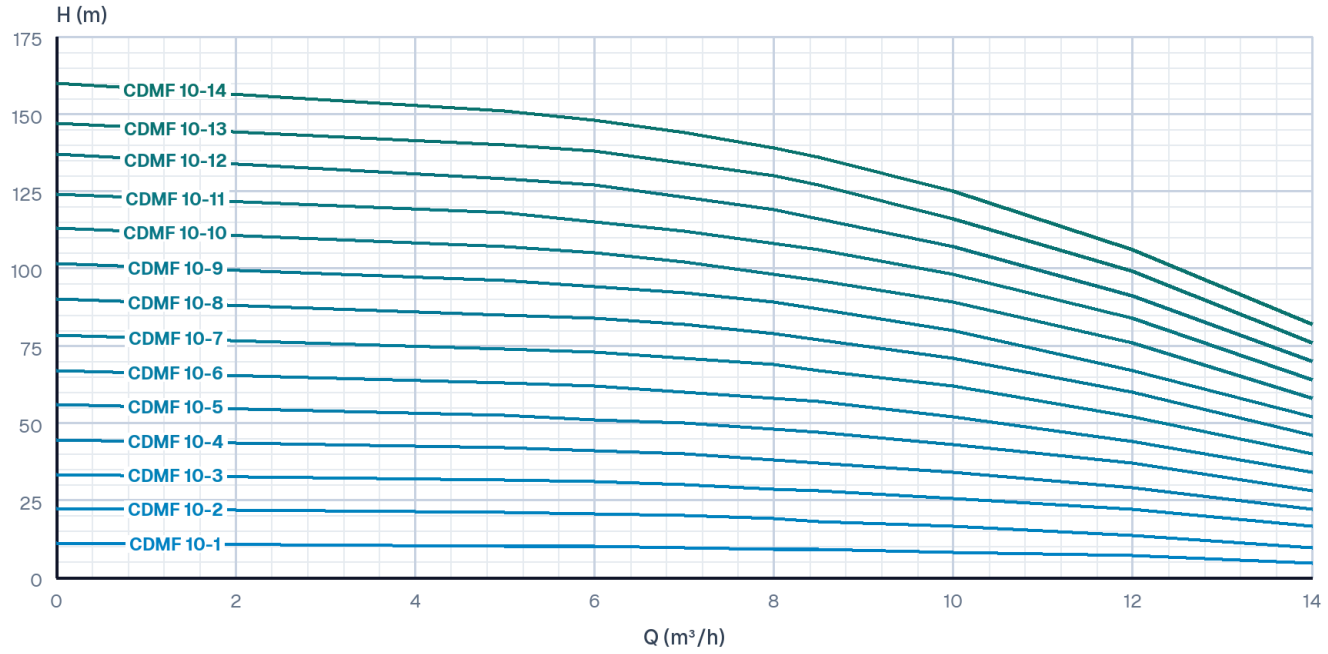
Hydraulic performance

	Q · Flow (m³/h)								
Model	0	5	6	7	8	8,5	10	12	14
CDMF 10-1	11	10,2	10	9,5	9	9	8	7	4,5
CDMF 10-2	22,2	21	20,5	20	19	18	16,5	13,5	9,5
CDMF 10-3	33,3	31,5	31	30	28,5	28	25,5	22	16,5
CDMF 10-4	44,5	42	41	40	38	37	34	29	22
CDMF 10-5	56	52,5	51	50	48	47	43	37	28
CDMF 10-6	67	63	62	60	58	57	52	44	34

Select the duty point at the intersection of Q and H.

Series CDMF 10 (3~ 400V) · part 1/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 10-1	0,75	1	1,7
CDMF 10-2	0,75	1	1,7
CDMF 10-3	1,1	1,5	2,4
CDMF 10-4	1,5	2	3,2
CDMF 10-5	2,2	3	4,6
CDMF 10-6	2,2	3	4,6
CDMF 10-7	3	4	6,0

Model	kW	HP	A (400 V)
CDMF 10-8	3	4	6,0
CDMF 10-9	4	5,5	7,8
CDMF 10-10	4	5,5	7,8
CDMF 10-11	4	5,5	7,8
CDMF 10-12	4,5	6	8,8
CDMF 10-13	5,5	7,5	10,6
CDMF 10-14	5,5	7,5	10,6

Series CDMF 10 (3~ 400V) · part 1/2

Hydraulic performance

Total head H in metres

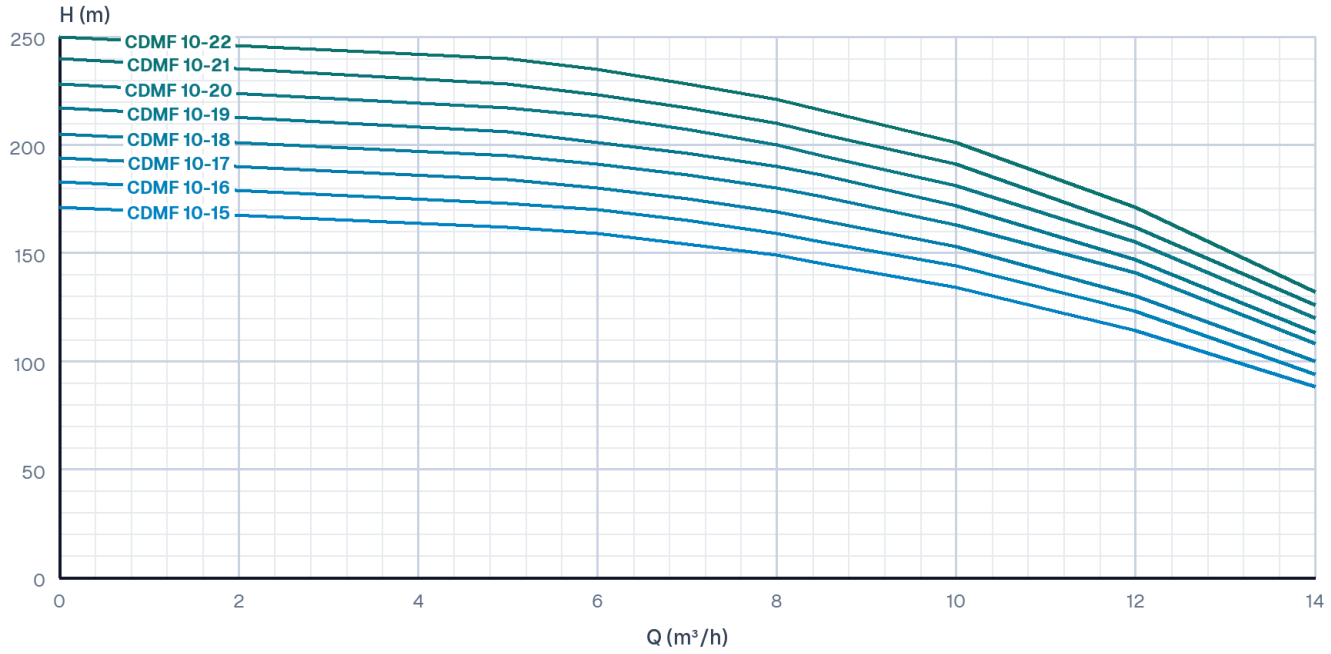
Q · Flow (m³/h)

Model	0	5	6	7	8	8,5	10	12	14
CDMF 10-1	11	10,2	10	9,5	9	9	8	7	4,5
CDMF 10-2	22,2	21	20,5	20	19	18	16,5	13,5	9,5
CDMF 10-3	33,3	31,5	31	30	28,5	28	25,5	22	16,5
CDMF 10-4	44,5	42	41	40	38	37	34	29	22
CDMF 10-5	56	52,5	51	50	48	47	43	37	28
CDMF 10-6	67	63	62	60	58	57	52	44	34
CDMF 10-7	78,5	74	73	71	69	67	62	52	40
CDMF 10-8	90	85	84	82	79	77	71	60	46
CDMF 10-9	101,5	96	94	92	89	87	80	67	52
CDMF 10-10	113	107	105	102	98	96	89	76	58
CDMF 10-11	124	118	115	112	108	106	98	84	64
CDMF 10-12	137	129	127	123	119	116	107	91	70
CDMF 10-13	147	140	138	134	130	127	116	99	76
CDMF 10-14	160	151	148	144	139	136	125	106	82

Select the duty point at the intersection of Q and H.

Series CDMF 10 (3~ 400V) · part 2/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 10-15	5,5	7,5	10,6
CDMF 10-16	7,5	10	14,4
CDMF 10-17	7,5	10	14,4
CDMF 10-18	7,5	10	14,4

Model	kW	HP	A (400 V)
CDMF 10-19	7,5	10	14,4
CDMF 10-20	7,5	10	14,4
CDMF 10-21	7,5	10	14,4
CDMF 10-22	11	15	20,6

Series CDMF 10 (3~ 400V) · part 2/2

Hydraulic performance

Total head H in metres

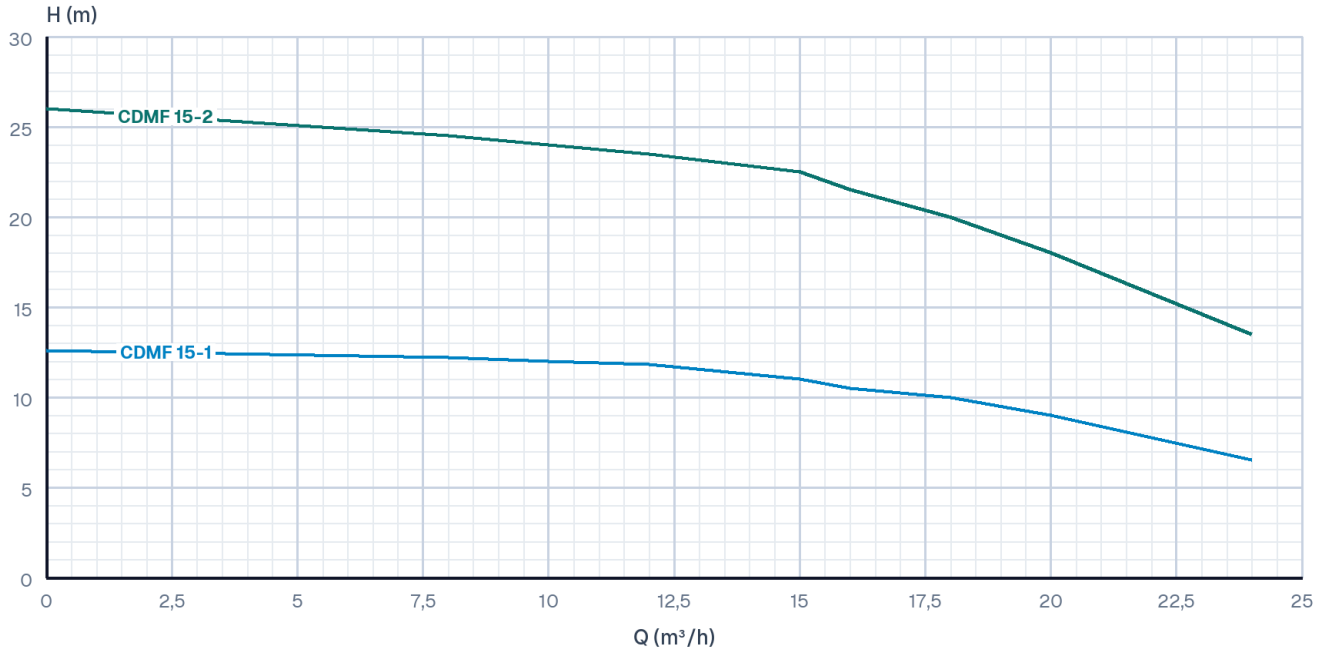
Q · Flow (m³/h)

Model	0	5	6	7	8	8,5	10	12	14
CDMF 10-15	171	162	159	154	149	145	134	114	88
CDMF 10-16	183	173	170	165	159	155	144	123	94
CDMF 10-17	194	184	180	175	169	165	153	130	100
CDMF 10-18	205	195	191	186	180	176	163	141	108
CDMF 10-19	217	206	201	196	190	186	172	147	113
CDMF 10-20	228	217	213	207	200	195	181	155	120
CDMF 10-21	240	228	223	217	210	205	191	162	126
CDMF 10-22	250	240	235	228	221	216	201	171	132

Select the duty point at the intersection of Q and H.

Series CDMF 15 (1~ 230V)

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 15-1	1,1	1,5	6,3
CDMF 15-2	2,2	3	12,1

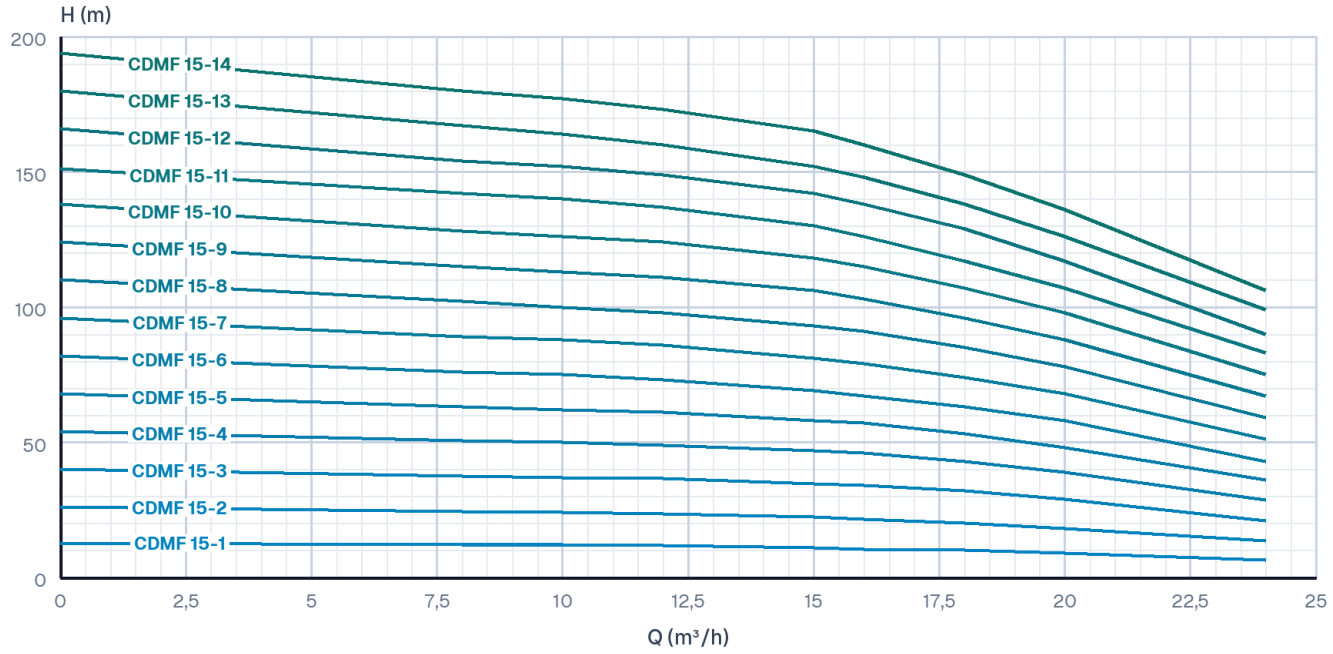
Hydraulic performance

	Q · Flow (m³/h)								
Model	0	8	10	12	15	16	18	20	24
CDMF 15-1	12,6	12,2	12	11,8	11	10,5	10	9	6,5
CDMF 15-2	26	24,5	24	23,5	22,5	21,5	20	18	13,5

Select the duty point at the intersection of Q and H.

Series CDMF 15 (3~ 400V) · part 1/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 15-1	1,1	1,5	2,4
CDMF 15-2	2,2	3	4,6
CDMF 15-3	3	4	6,0
CDMF 15-4	4	5,5	7,8
CDMF 15-5	4	5,5	7,8
CDMF 15-6	5,5	7,5	10,6
CDMF 15-7	5,5	7,5	10,6

Model	kW	HP	A (400 V)
CDMF 15-8	7,5	10	14,4
CDMF 15-9	7,5	10	14,4
CDMF 15-10	11	15	20,6
CDMF 15-11	11	15	20,6
CDMF 15-12	11	15	20,6
CDMF 15-13	11	15	20,6
CDMF 15-14	11	15	20,6

Series CDMF 15 (3~ 400V) · part 1/2

Hydraulic performance

Total head H in metres

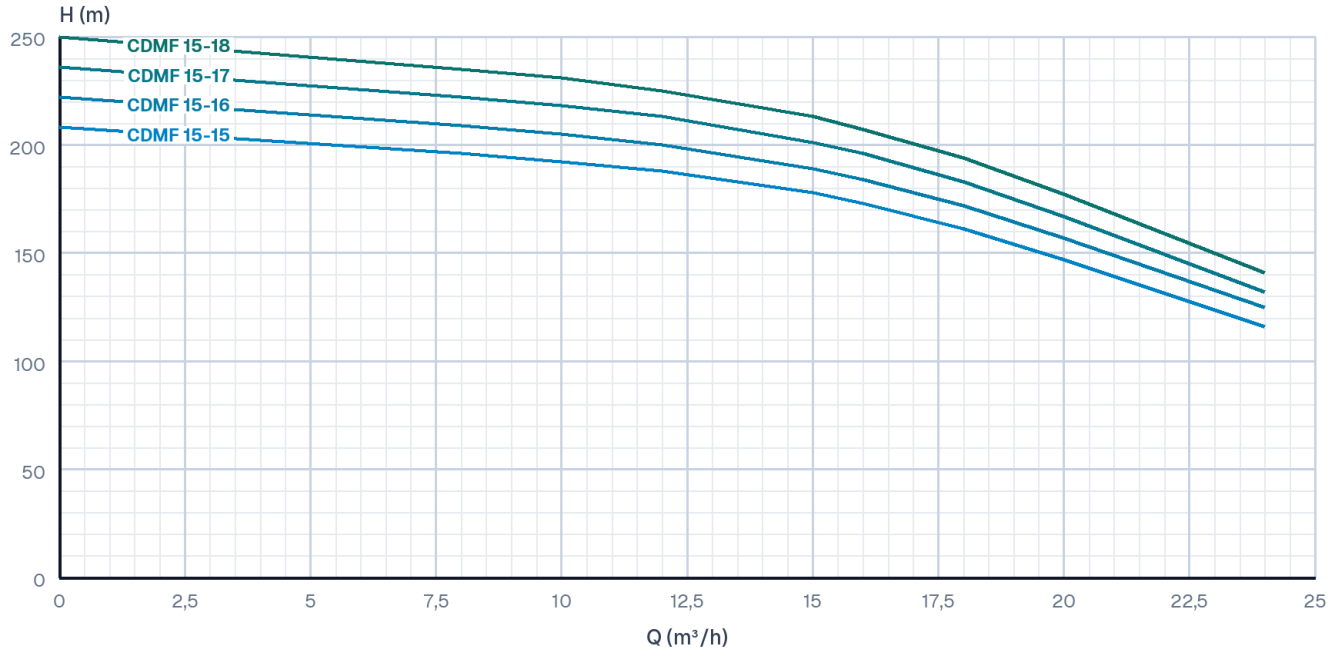
Q · Flow (m³/h)

Model	0	8	10	12	15	16	18	20	24
CDMF 15-1	12,6	12,2	12	11,8	11	10,5	10	9	6,5
CDMF 15-2	26	24,5	24	23,5	22,5	21,5	20	18	13,5
CDMF 15-3	40	37,5	37	36,5	34,5	34	32	29	21
CDMF 15-4	54	50,5	50	49	47	46	43	39	28,5
CDMF 15-5	68	63	62	61	58	57	53	48	36
CDMF 15-6	82	76	75	73	69	67	63	58	43
CDMF 15-7	96	89	88	86	81	79	74	68	51
CDMF 15-8	110	102	100	98	93	91	85	78	59
CDMF 15-9	124	115	113	111	106	103	96	88	67
CDMF 15-10	138	128	126	124	118	115	107	98	75
CDMF 15-11	151	142	140	137	130	126	117	107	83
CDMF 15-12	166	154	152	149	142	138	129	117	90
CDMF 15-13	180	167	164	160	152	148	138	126	99
CDMF 15-14	194	180	177	173	165	160	149	136	106

Select the duty point at the intersection of Q and H.

Series CDMF 15 (3~ 400V) · part 2/2

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 15-15	15	20	27,9
CDMF 15-16	15	20	27,9
CDMF 15-17	15	20	27,9
CDMF 15-18	15	20	27,9

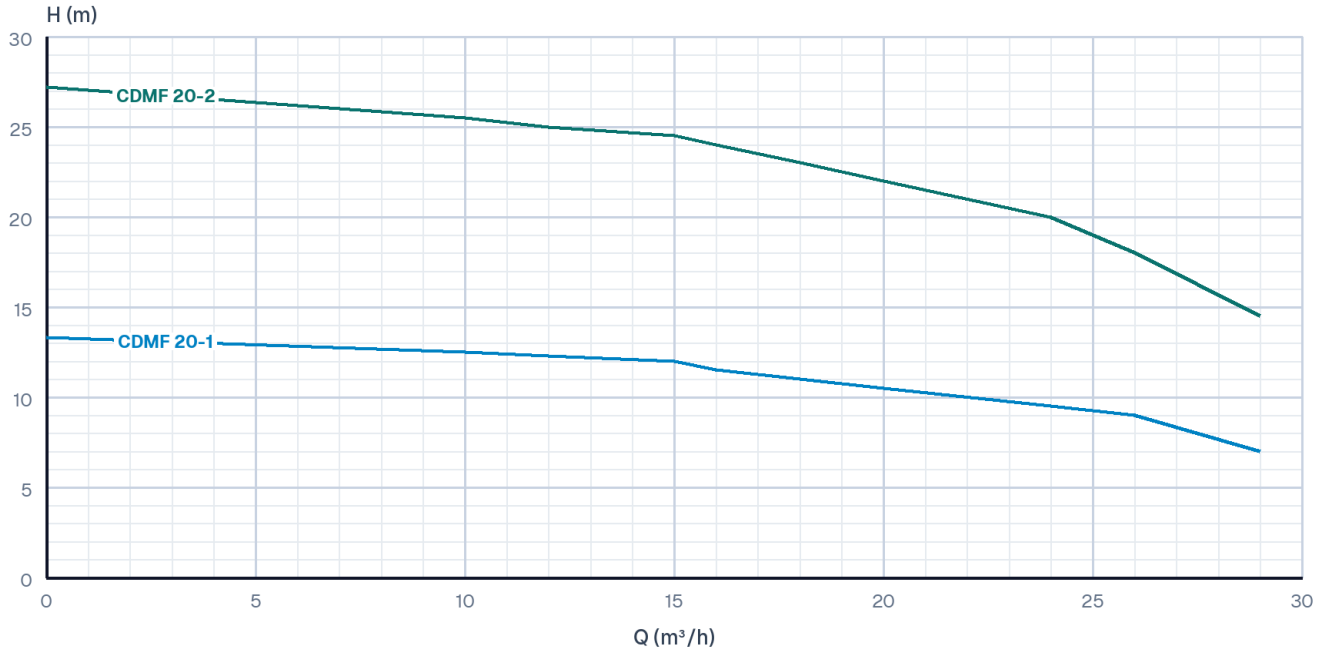
Hydraulic performance

	Q · Flow (m³/h)								
Model	0	8	10	12	15	16	18	20	24
CDMF 15-15	208	196	192	188	178	173	161	147	116
CDMF 15-16	222	209	205	200	189	184	172	157	125
CDMF 15-17	236	222	218	213	201	196	183	167	132
CDMF 15-18	250	235	231	225	213	207	194	177	141

Select the duty point at the intersection of Q and H.

Series CDMF 20 (1~ 230V)

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 20-1	1,1	1,5	6,3
CDMF 20-2	2,2	3	12,1

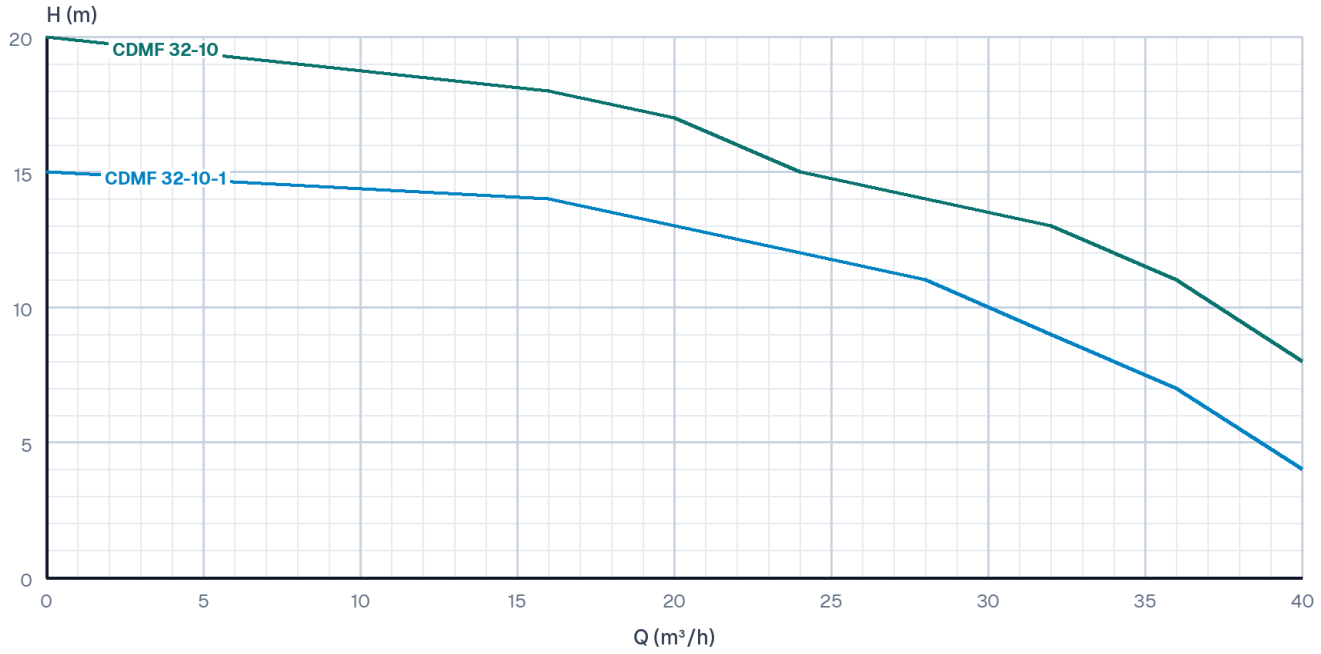
Hydraulic performance

	Q · Flow (m³/h)									
Model	0	10	12	15	16	18	20	24	26	29
CDMF 20-1	13,3	12,5	12,3	12	11,5	11	10,5	9,5	9	7
CDMF 20-2	27,2	25,5	25	24,5	24	23	22	20	18	14,5

Select the duty point at the intersection of Q and H.

Series CDMF 32 (1~ 230V)

Performance curves



Electrical data

Rated values at 400 V

Model	kW	HP	A (400 V)
CDMF 32-10-1	1,1	1,5	8,2
CDMF 32-10	2,2	3	12,1

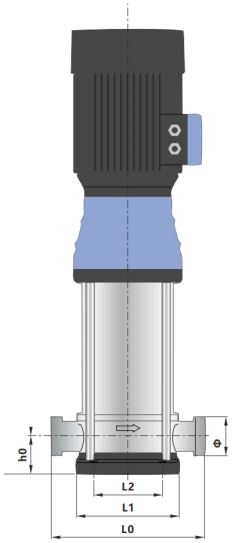
Hydraulic performance

	Q · Flow (m³/h)							
Model	0	16	20	24	28	32	36	40
CDMF 32-10-1	15	14	13	12	11	9	7	4
CDMF 32-10	20	18	17	15	14	13	11	8

Select the duty point at the intersection of Q and H.

Dimensions and models

Dimensions and models

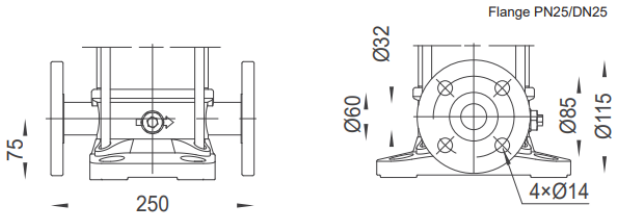


Model	L	L0	L1	L2	W	W1	D	h	h0
CDMF 3	250	210	158	100	240	180	13	75	50
CDMF 5	250	210	158	100	240	180	13	75	50
CDMF 10	280	260	192	130	290	215	14	80	80
CDMF 15	300	260	192	130	290	215	14	90	90
CDMF 20	300	260	192	130	290	215	14	90	90

Features

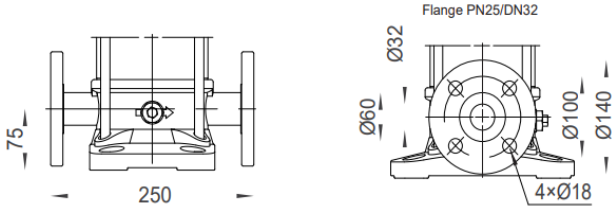
- High-efficiency vertical multistage pumps
- In-line design with suction and discharge on the same axis
- Strong AISI 304 stainless steel construction
- Cartridge mechanical seal (ALLOY/SIC/NBR)
- High-efficiency TEFC motor (IE2/IE3)
- DIN flange connection
- Never run the pump dry. Not even for a short trial run.

Dimensions Flange CDMF 3



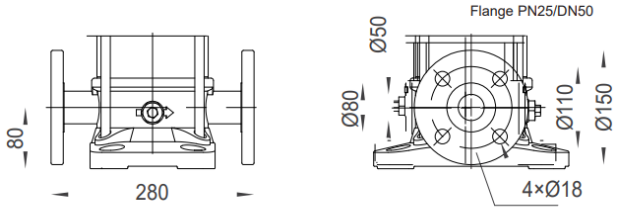
CDMF 3

Dimensions Flange CDMF 5



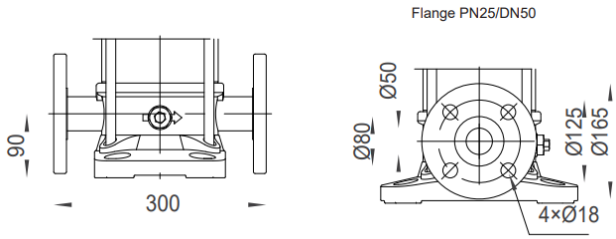
CDMF 5

Dimensions Flange CDMF 10



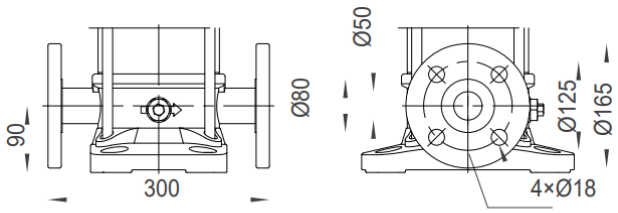
CDMF 10

Dimensions Flange CDMF 15



CDMF 15

Dimensions Flange CDMF 20



CDMF 20