

TIGERFLOW CD SERIES
VERTICAL MULTISTAGE PUMPS
60Hz



TIGERFLOW®

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TIGERFLOW **CD SERIES**

VERTICAL MULTISTAGE PUMPS
60Hz

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TIGERFLOW®



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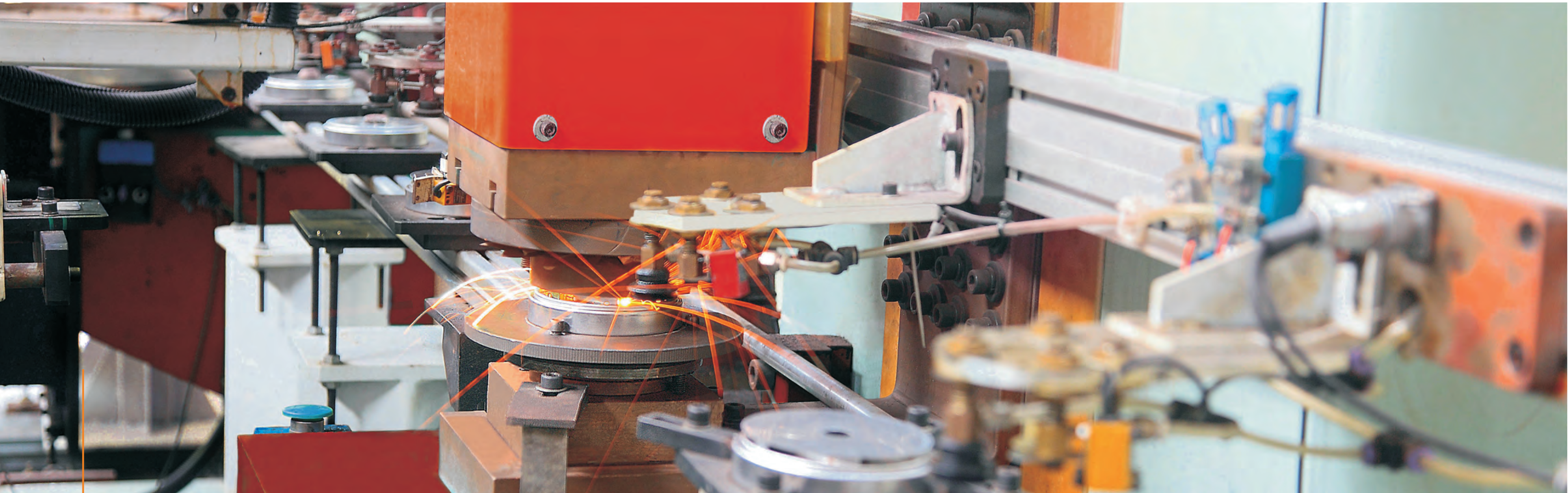
Company
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01



General Data
05



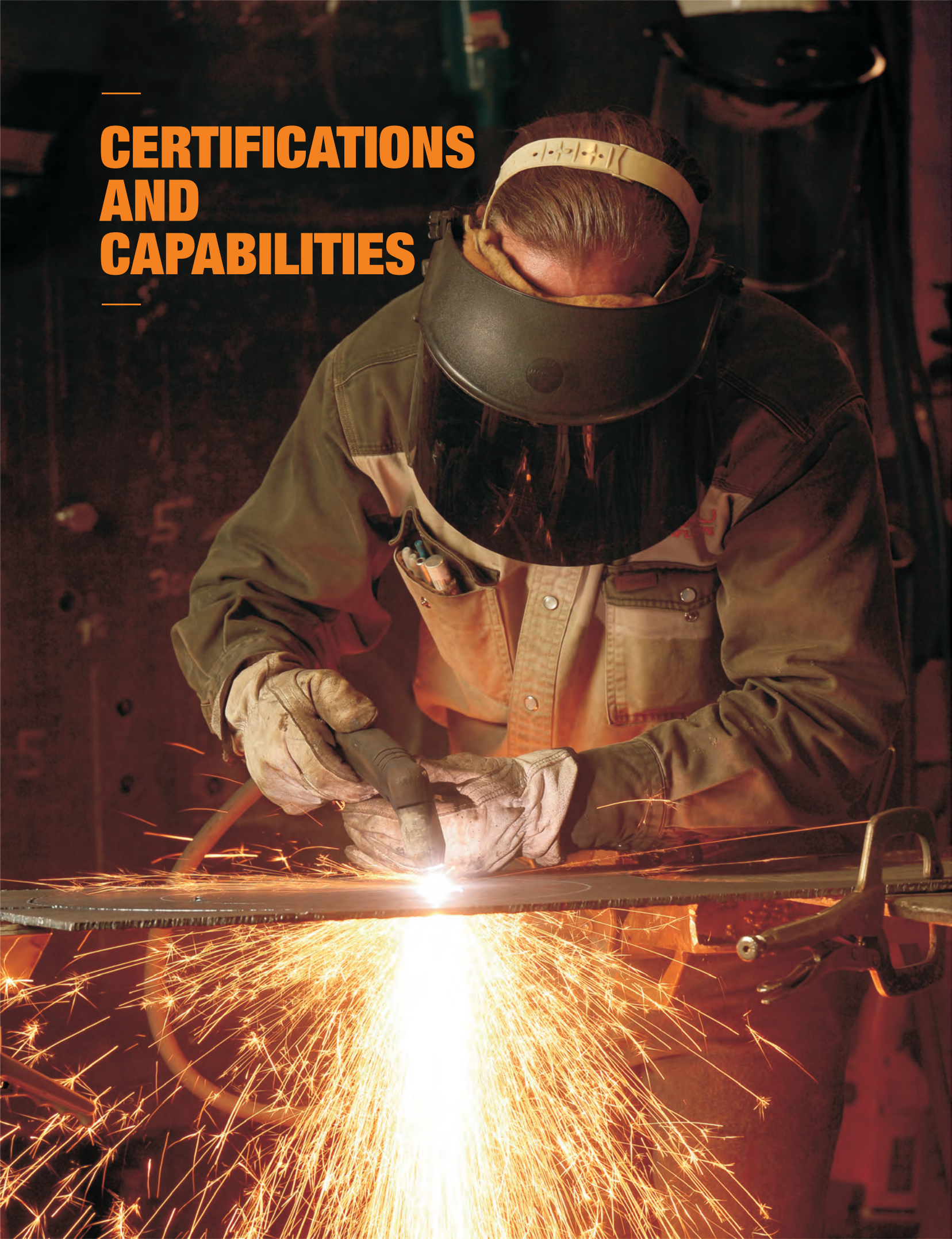
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13



TIGERFLOW PUMPS

Located in Dallas, TIGERFLOW has been designing and manufacturing pumping equipment for more than 35 years. Known for the ability to provide the greatest quality products with passion for customer service and innovation, TIGERFLOW strives to provide engineered pumping solutions to the world.

TIGERFLOW pumps are designed and built with the highest quality standards, including high-efficiency designs for the continuously improving energy-efficient buildings and plants. They are suitable for use in a wide variety of industries like commercial, industrial, pharmaceutical, water and wastewater among many others.



CERTIFICATIONS AND CAPABILITIES

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COMPANY PROFILE

WHY TIGERFLOW?

• Manufacturing Plant

- 88,000 square feet manufacturing facility
- Seven manufacturing work centers, including welding, assembly, control panel shop, electrical installation, painting, and testing
- AWS and ASME Certified structural and pipe welders
- NIST Traceable testing facility
- UL 508A Certified control panel shop
- In-house degreed and professional engineers for mechanical, electrical and software design

• Certifications

- ISO 9001: 2015 certified facility
- Certificate of product liability insurance
- ETL/C-ETL Listed packaged fire pump systems
- NFPA 20 certified engineers and designers
- UL/ C-UL listed packaged pumping system label "QCZJ"
- UL FDNP.MH61218 Drinking Water System Components NSF-61
- UL FDNP7.MH61218 Drinking Water System Components Certified for Canada NSF-61
- UL QNVB.MH61218 Lead Content Verification of Products in Contact with Potable Water NSF-372
- UL QNVB7.MH61218 Lead Content Verification of Products in Contact with Potable Water Certified for Canada NSF-372
- IAMPO 6940 California low lead AB1953/116875
- UL/C-UL 508/918 industrial control panel facility
- Pipe welders certified to ASME Section IX
- Structural welders certified per AWS D1.1
- CMR 248 Massachusetts Plumbing Code Approval #P3-0204-58
- State of Ohio Industrialized Buildings Authorization #308.02
- State of Washington, Dept. of Labor & Industries Approval

TIGERFLOW CD SERIES VERTICAL MULTISTAGE PUMPS



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TIGERFLOW CD SERIES
VERTICAL MULTISTAGE PUMPS

GENERAL DATA

● Specifications

- **Pump**
 - 304/316 impellers & body
 - Cast Iron/316 pump head & base
 - Cartridge mechanical seal
 - Flow: up to 570 U.S. GPM (130 m³/hr)
 - Head: up to 805 feet (246 m)
 - Liquid Temperature: 5°F to 248°F (-15°C to 120°C)
 - Minimum Efficiency Index (MEI) up to 0.7
 - Maximum Working Pressure 362 psi (25 bar)
 - **Motor**
 - NEMA TC frame, TEFC motors
 - 2-pole
 - The service factor shown on the motor nameplate indicates the amount of continuous overload the motor can be subjected to, under nameplate conditions, without damaging the motor. When the voltage and frequency are at the same values as shown on the motor nameplate, the motor may be overloaded up to the horsepower indicated by multiplying the rated horsepower by the service factor. When operated at service factor load, the motor may have an efficiency, power factor, and speed slightly different from those shown on the nameplate.
- Service factor can also be used to determine if a motor can be operated continuously at altitudes higher than 3300 feet satisfactorily. At altitudes greater than 3300 feet, the lower density of air reduces the motor's cooling ability thereby causing the temperature of the motor to be higher. This higher temperature is compensated for by reducing the effective service factor to 1.0 on motors nameplated with a 1.15 service factor or greater. If the motor is operated outdoors at higher altitudes, it's sometimes possible to use full horsepower and full service factor since ambient temperatures are usually lower at those altitudes.

GENERAL DATA

● Applications

- Pressure boosting for potable water systems
- Handling of solid free water in industrial and municipal facilities
- Fire system jockey pumps
- Boiler feed systems
- HVAC circulation systems
- Irrigation systems



GENERAL DATA

● NPSHr

Net Positive Suction Head Required is the minimum suction pressure (in absolute pressure) required at the pump suction to avoid cavitation within the pump. Net Suction Positive Head Available (NPSHa) must be greater than thanNPSHr. NPSHa is defined as follows:

$$NPSHr = h_a - h_{vp} - h_f + h_{st}$$

h_a = Absolute pressure (in feet of liquid being pumped) on the surface of the liquid supply level (this will be barometric pressure if suction is from an open tank or sump).

h_{vp} = The head in feet corresponding to the vapor pressure of the liquid at the temperature being pumped.

h_f = All suction line losses (in feet) including entrance losses and friction losses through pipe, valves and fittings, etc.

h_{st} = static height (in feet) that the liquid supply level is above the pump centerline or impeller eye.

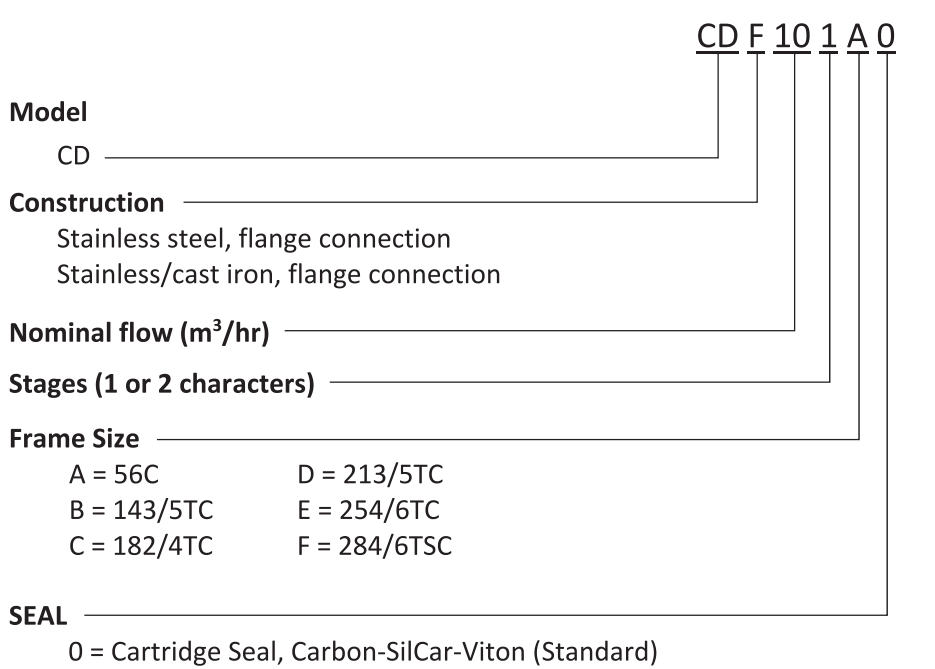
Atmospheric pressure vs elevation			
Elevation (ft)	psia	ft	Atm
0	14.7	34	1
328	14.5	33.5	1
500	14.4	33.3	1
656	14.3	33	1
1000	14.2	32.8	1
1312	14	32.3	1
1500	13.9	32.1	0.9
2000	13.7	31.6	0.9
2500	13.4	31	0.9
3000	13.2	30.5	0.9
3500	12.9	29.8	0.9
4000	12.7	29.3	0.9
4500	12.4	28.6	0.9
5000	12.2	28.2	0.8
5500	12	27.7	0.8
6000	11.8	27.3	0.8
6500	11.5	26.6	0.8
7000	11.3	26.1	0.8
7500	11.1	25.6	0.8
8000	10.9	25.2	0.7
8500	10.7	24.7	0.7

Water Vapor Pressure	
Temperature	Vapor Pressure
°F	(ft H2o)
50	0.4
55.4	0.5
66.2	0.7
71.6	0.9
75.2	1
80.6	1.2
86	1.4
89.6	1.6
95	1.9
100.4	2.2
105.8	2.6
109.4	2.9
114.8	3.4
120.2	3.9

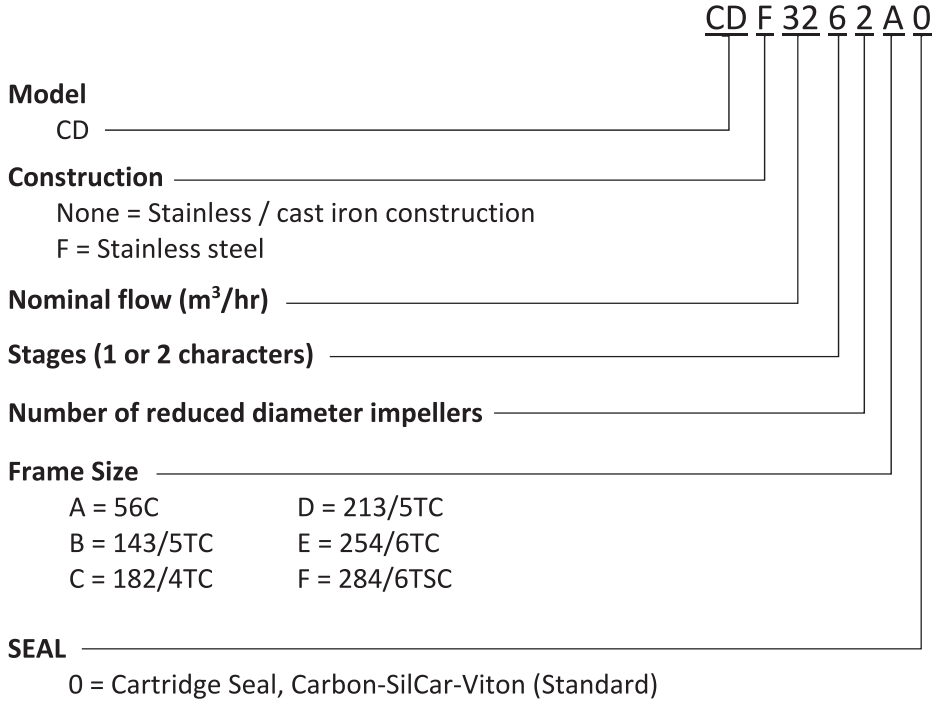
GENERAL DATA

Model Key

Wet - end only CD3-CD20

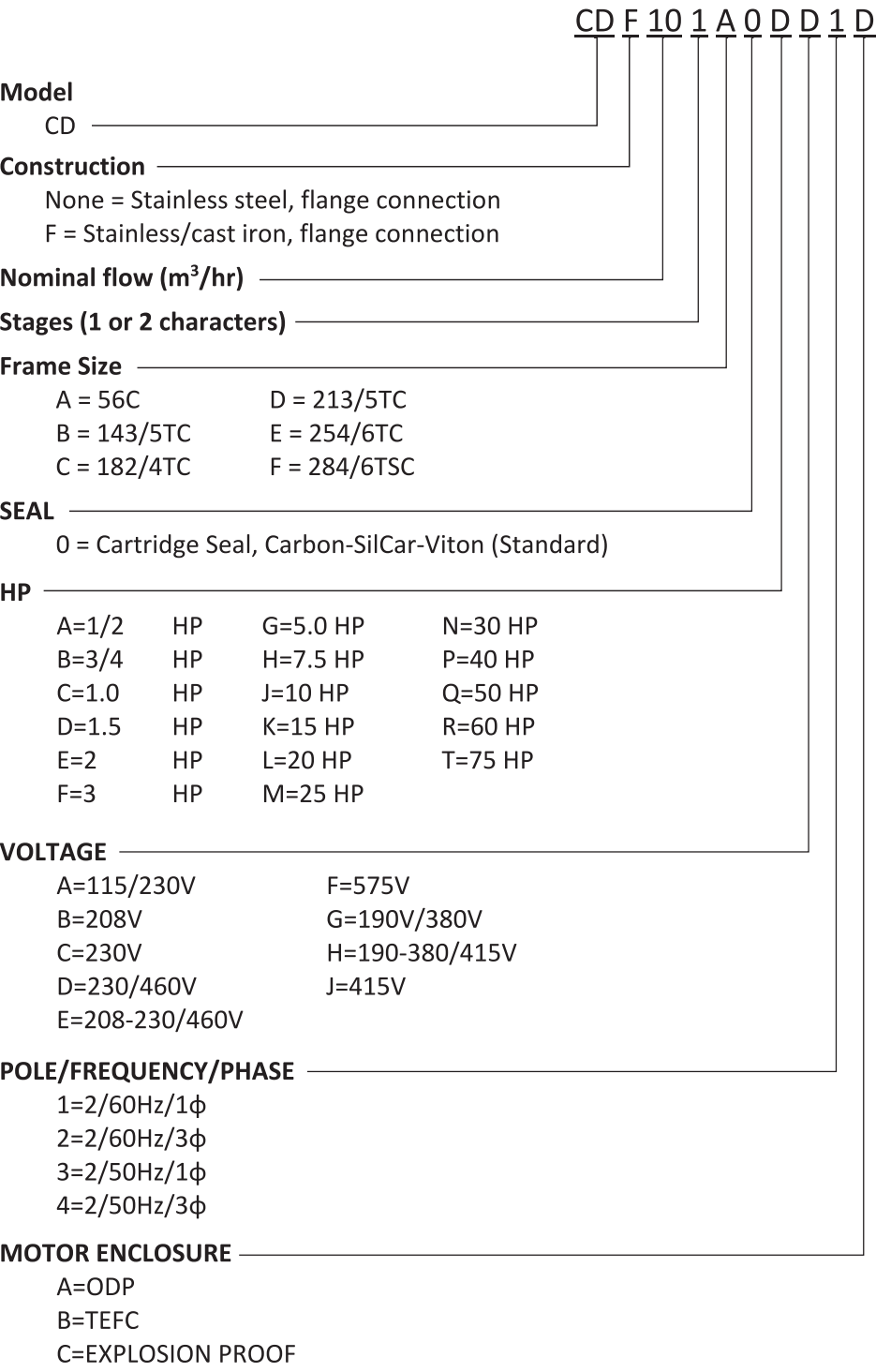


Wet - end only CD32-CD85



GENERAL DATA

Wet - end / Motor combination CD3-20



GENERAL DATA

• Wet - end / Motor combination CD32-85

CD F 32 4 2 A 0 D D 1 B

Model

CD

Construction

None = Stainless steel, flange connection
F = Stainless/cast iron, flange connection

Nominal flow (m³/hr)

Stages (1 or 2 characters)

Number of reduced diameter impellers

Frame Size

A = 56C D = 213/5TC
B = 143/5TC E = 254/6TC
C = 182/4TC F = 284/6TSC

SEAL

0 = Cartridge Seal, Carbon-SilCar-Viton (Standard)

HP

A=1/2 HP G=5.0 HP N=30 HP
B=3/4 HP H=7.5 HP P=40 HP
C=1.0 HP J=10 HP Q=50 HP
D=1.5 HP K=15 HP R=60 HP
E=2 HP L=20 HP T=75 HP
F=3 HP M=25 HP

VOLTAGE

A=115/230V F=575V
B=208V G=190V/380V
C=230V H=190-380/415V
D=230/460V J=415V
E=208-230/460V

POLE/FREQUENCY/PHASE

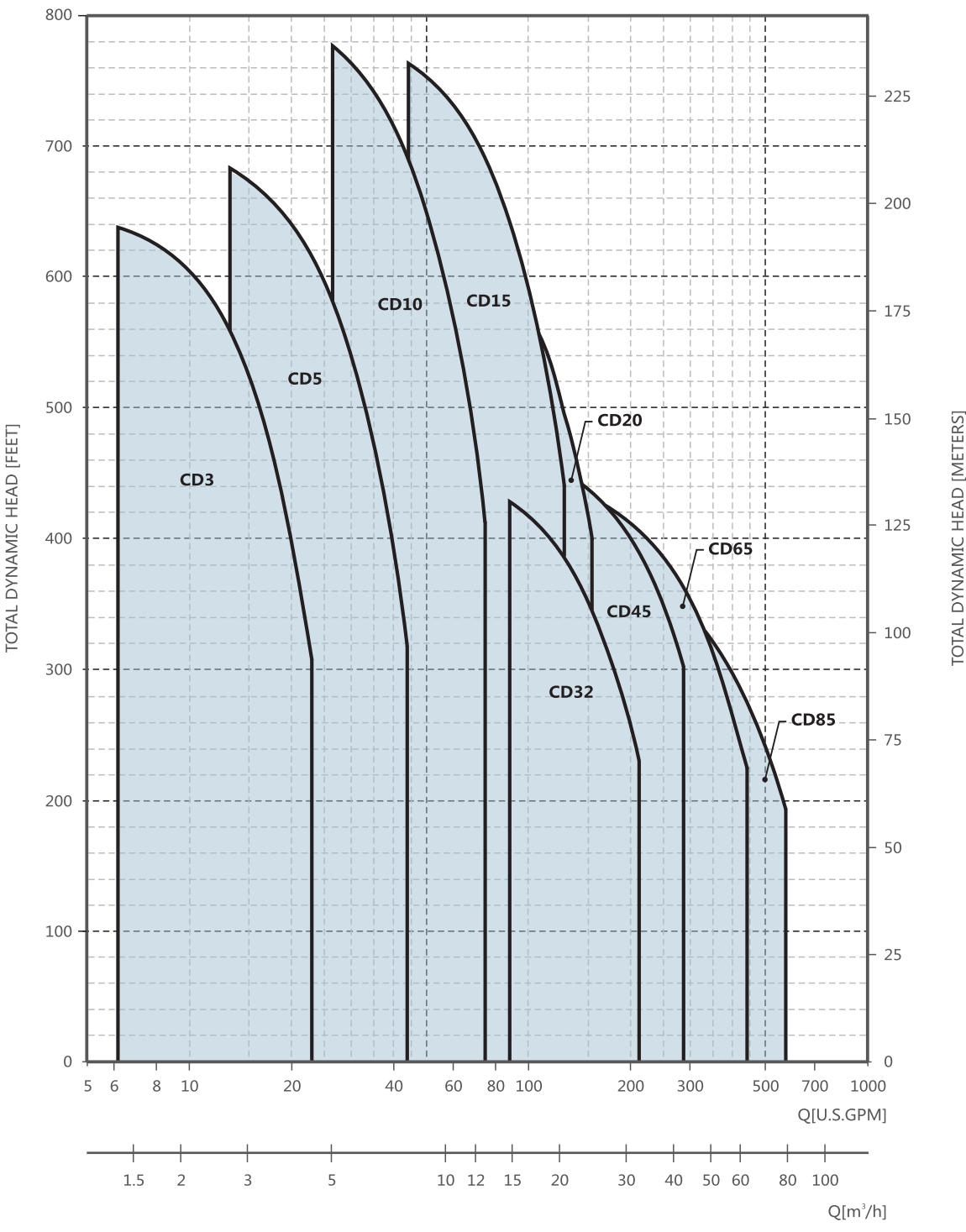
1=2/60Hz/1φ
2=2/60Hz/3φ
3=2/50Hz/1φ
4=2/50Hz/3φ

MOTOR ENCLOSURE

A=ODP
B=TEFC
C=EXPLOSION PROOF

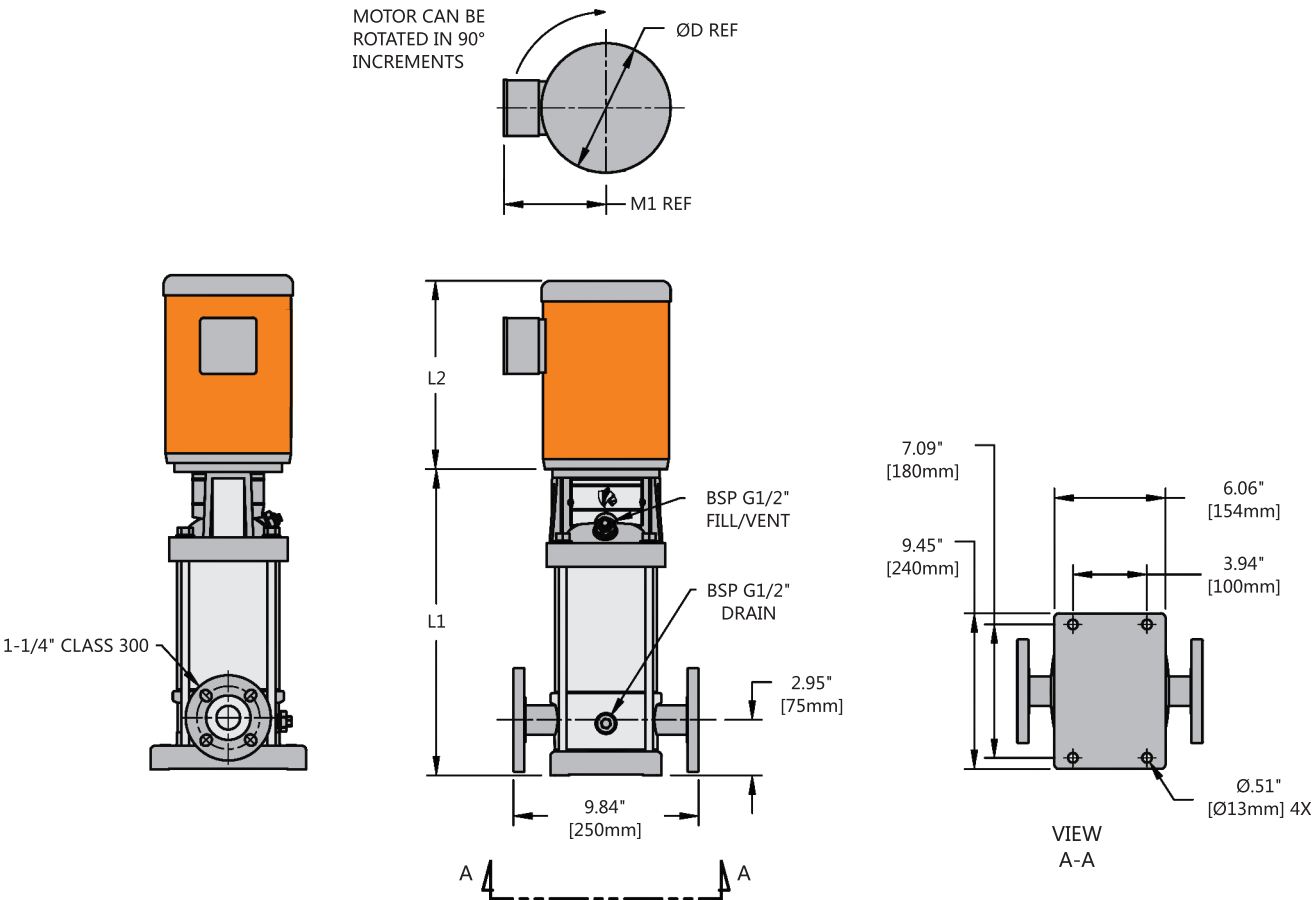
GENERAL DATA

• CD Coverage & Curves



TECHNICAL DATA
CD3.60Hz

● Installation Sketch

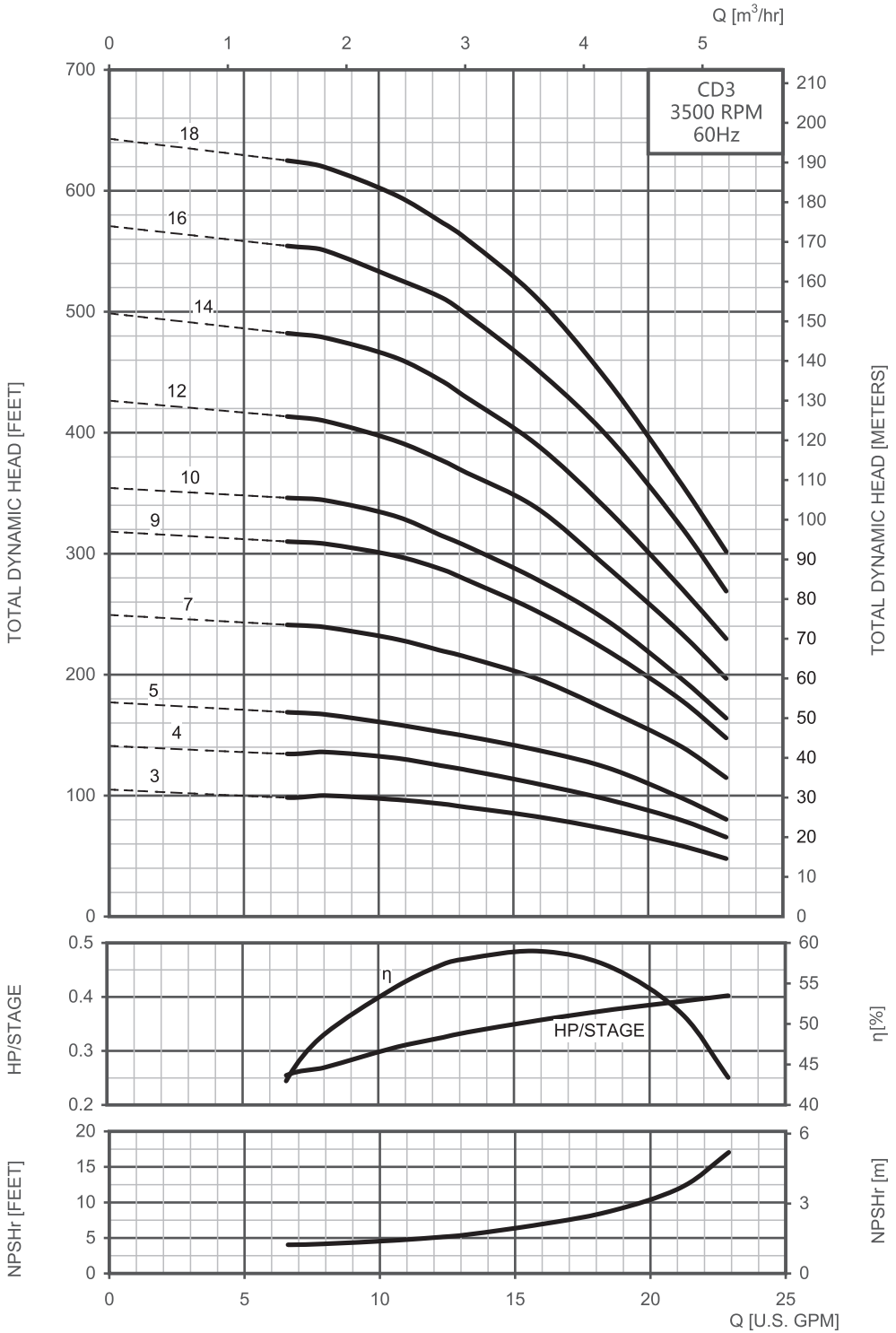


● Size and Weight

Model	HP	FRAME	DIMENSIONS (in)							WEIGHT (lbs)		
			L1	TEFC 1Φ			TEFC 3Φ			PUMP TEFC 1Φ	PUMP TEFC 3Φ	WET-END ONLY
				L2	D	M1	L2	D	M1			
CD3-3	0.75	56C	11.10	9.94	7	5.5	8.64	9	5.5	57.78	56.78	30.28
CD3-4	0.75	56C	12.28	9.94	7	5.5	8.64	9	5.5	58.82	57.82	31.32
CD3-4	1	56C	12.28	9.94	7	5.5	8.64	9	5.5	61.02	60.02	31.32
CD3-5	1	56C	13.07	9.94	7	5.5	8.64	9	5.5	61.99	60.99	32.29
CD3-7	1.5	56C	14.65	9.94	7	5.5	8.64	9	5.5	78.13	77.13	45.13
CD3-9	2	56C	16.61	9.94	7	5.5	8.64	9	5.5	72.50	71.50	37.30
CD3-10	2	56C	17.40	9.94	7	5.5	8.64	9	5.5	73.47	72.47	38.27
CD3-12	3	182TC	18.98	15.73	9.2	8.2	13.22	9.2	7	106.11	105.11	40.21
CD3-14	3	182TC	20.55	15.73	9.2	8.2	13.22	9.2	7	130.29	129.29	64.39
CD3-16	3	182TC	22.52	15.73	9.2	8.2	13.22	9.2	7	110.36	109.36	44.46
CD3-16	5	184TC	22.52				13.22	9.2	7		126.56	44.46
CD3-18	5	184TC	24.09				13.22	9.2	7		128.50	46.40

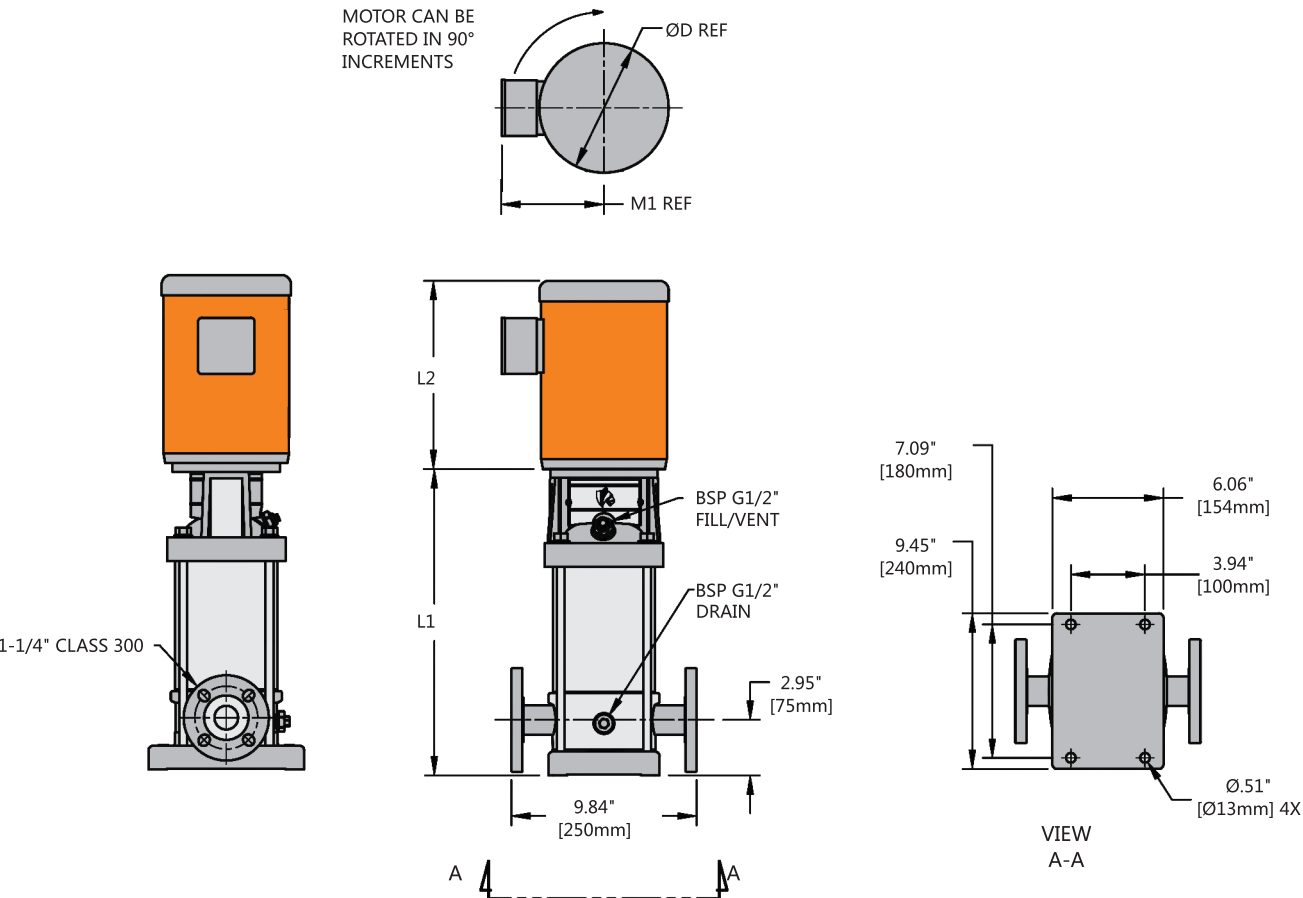
TECHNICAL DATA
CD3.60Hz

● Performance Curve



TECHNICAL DATA
CD5.60Hz

● Installation Sketch

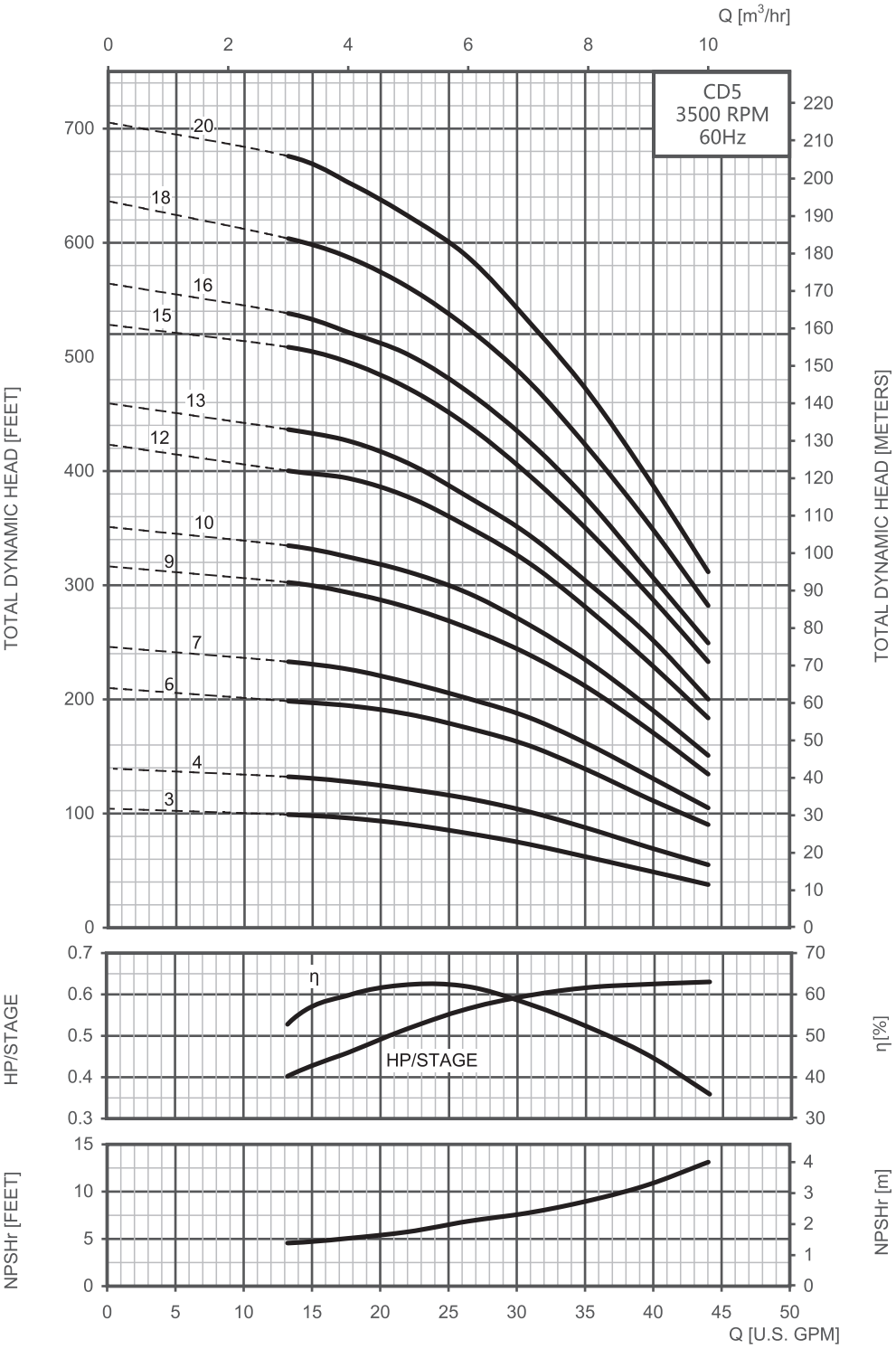


● Size and Weight

Model	HP	FRAME	L1	DIMENSIONS (in)						WEIGHT (lbs)		
				TEFC 1Φ			TEFC 3Φ			PUMP TEFC 1Φ	PUMP TEFC 3Φ	WET-END ONLY
				L2	D	M1	L2	D	M1			
CD5-3	1	56C	12.32	9.94	7	5.5	8.64	9	5.5	58.26	57.26	28.56
CD5-4	1.5	56C	13.39	9.94	7	5.5	8.64	9	5.5	64.31	63.31	31.31
CD5-6	2	56C	15.91	9.94	7	5.5	8.64	9	5.5	69.88	68.88	34.68
CD5-7	3	182TC	16.97	15.73	9.2	8.2	13.22	9.2	7	101.04	100.04	35.14
CD5-9	3	182TC	19.09	15.73	9.2	8.2	13.22	9.2	7	103.27	102.27	37.37
CD5-10	3	182TC	20.55	15.73	9.2	8.2	13.22	9.2	7	104.74	103.74	38.84
CD5-10	5	184TC	20.55				13.22	9.2	7		120.94	38.84
CD5-12	5	184TC	22.68				13.22	9.2	7		123.16	41.06
CD5-13	5	184TC	23.74				13.22	9.2	7		124.15	42.05
CD5-15	5	184TC	25.87				13.22	9.2	7		126.37	44.27
CD5-16	5	184TC	26.93				13.22	9.2	7		127.48	45.38
CD5-18	7.5	213TC	32.01				17.32	10.6	8.5		177.27	57.27
CD5-20	7.5	213TC	34.13				17.32	10.6	8.5		179.49	59.49

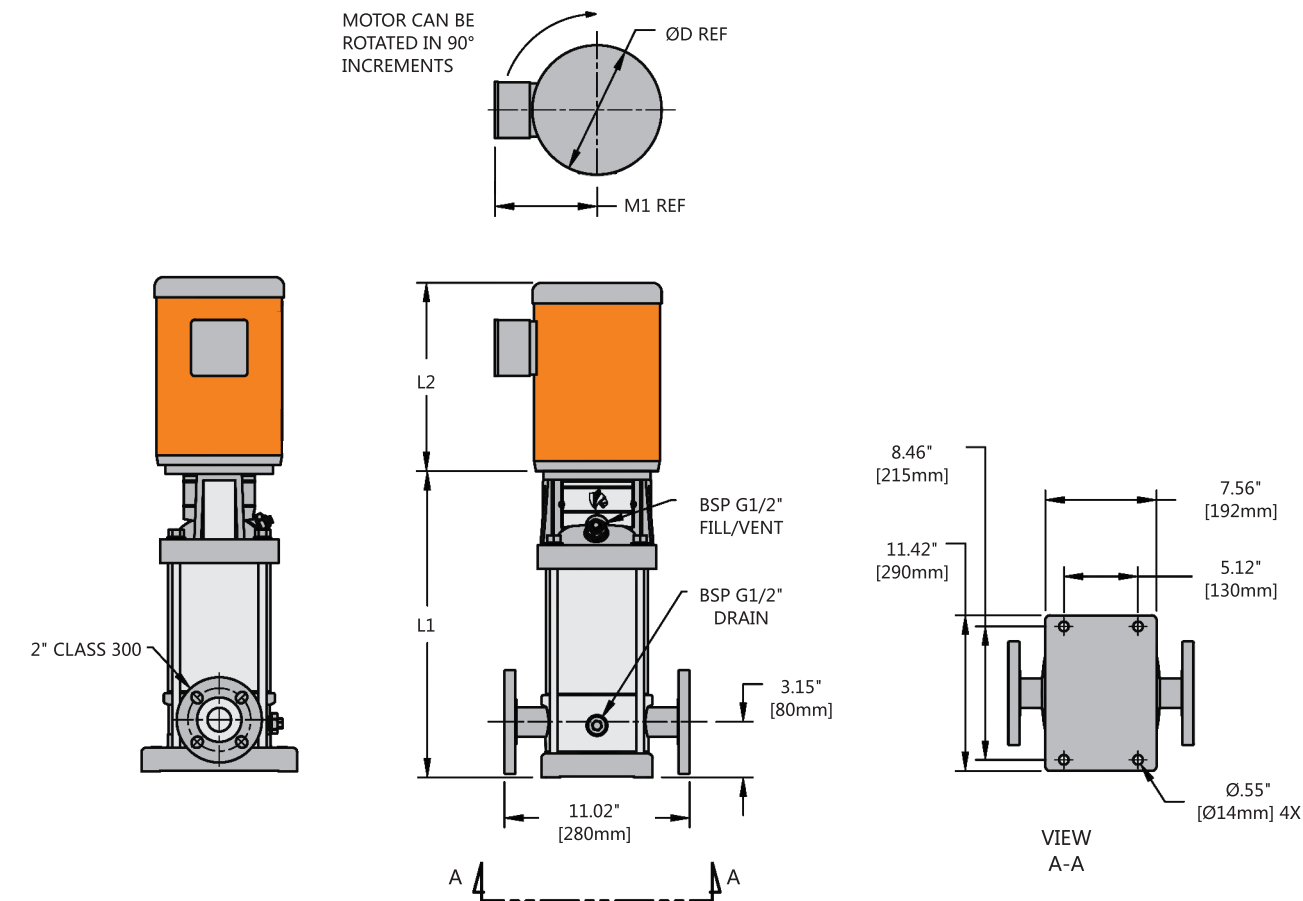
TECHNICAL DATA
CD5.60Hz

● Performance Curve



TECHNICAL DATA
CD10.60Hz

● Installation Sketch

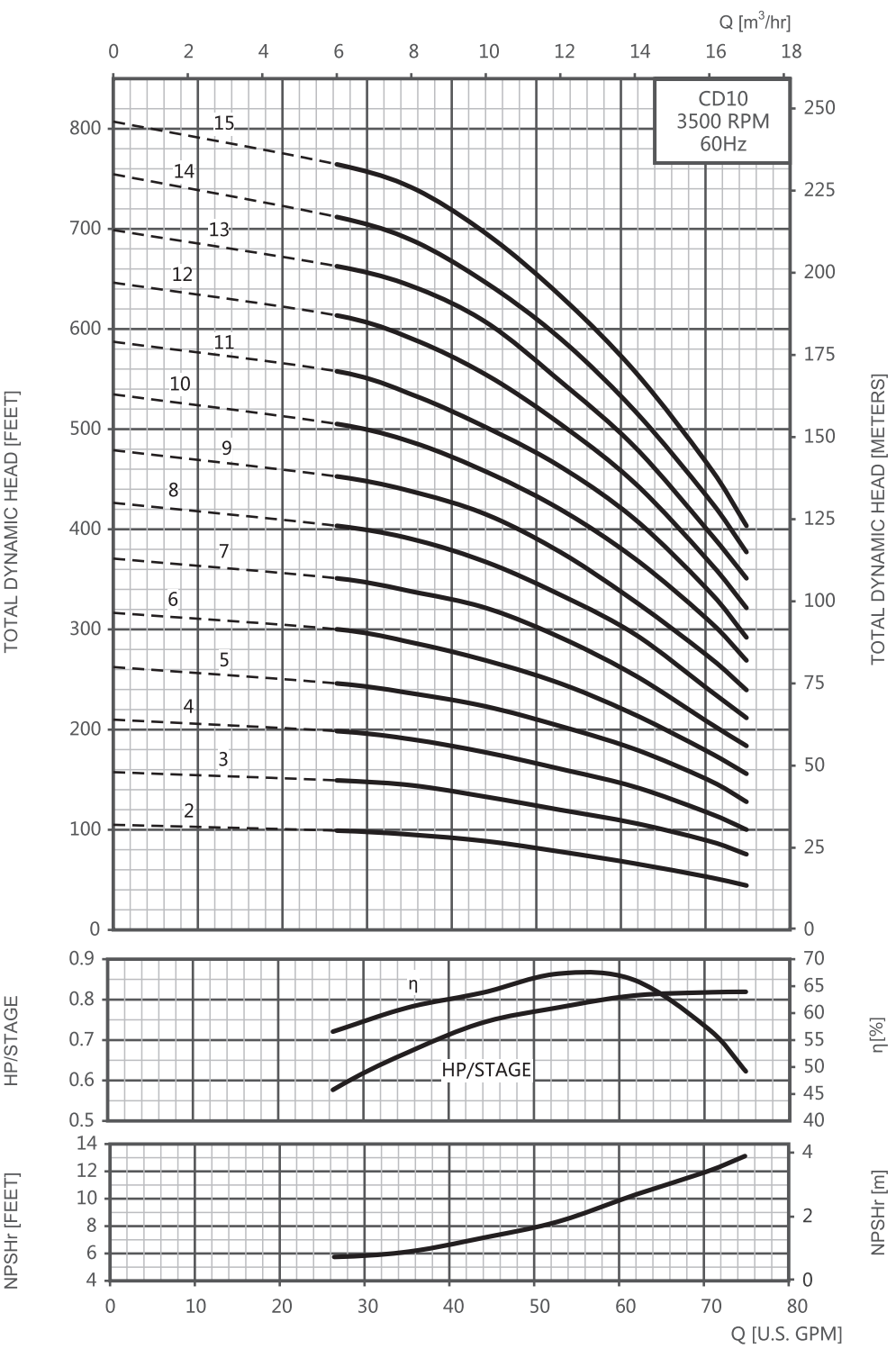


● Size and Weight

Model	HP	FRAME	L1	DIMENSIONS (in)						WEIGHT (lbs)		
				TEFC 1Φ			TEFC 3Φ			PUMP TEFC 1Φ	PUMP TEFC 3Φ	WET-END ONLY
CD10-2	2	56C	14.06	9.94	7	5.5	8.64	9	5.5	79.31	78.31	44.11
CD10-3	3	182TC	15.24	15.73	9.2	8.2	13.22	9.2	7	112.10	111.10	46.20
CD10-4	5	184TC	16.81				13.22	9.2	7		132.05	49.95
CD10-5	5	184TC	17.99				13.22	9.2	7		136.40	54.30
CD10-6	5	184TC	19.17				13.22	9.2	7		138.49	56.39
CD10-7	7.5	213TC	23.43				17.32	10.6	8.5		189.42	69.42
CD10-8	7.5	213TC	24.61				17.32	10.6	8.5		191.51	71.51
CD10-9	7.5	213TC	25.79				17.32	10.6	8.5		182.57	62.57
CD10-10	10	215TC	26.97				17.32	10.6	8.5		214.66	64.66
CD10-11	10	215TC	28.15				17.32	10.6	8.5		216.75	66.75
CD10-12	10	215TC	29.33				17.32	10.6	8.5		218.84	68.84
CD10-13	15	254TC	31.69				19.9	12.56	11		349.36	94.36
CD10-14	15	254TC	32.87				19.9	12.56	11		351.45	96.45
CD10-15	15	254TC	34.06				19.9	12.56	11		353.54	98.54

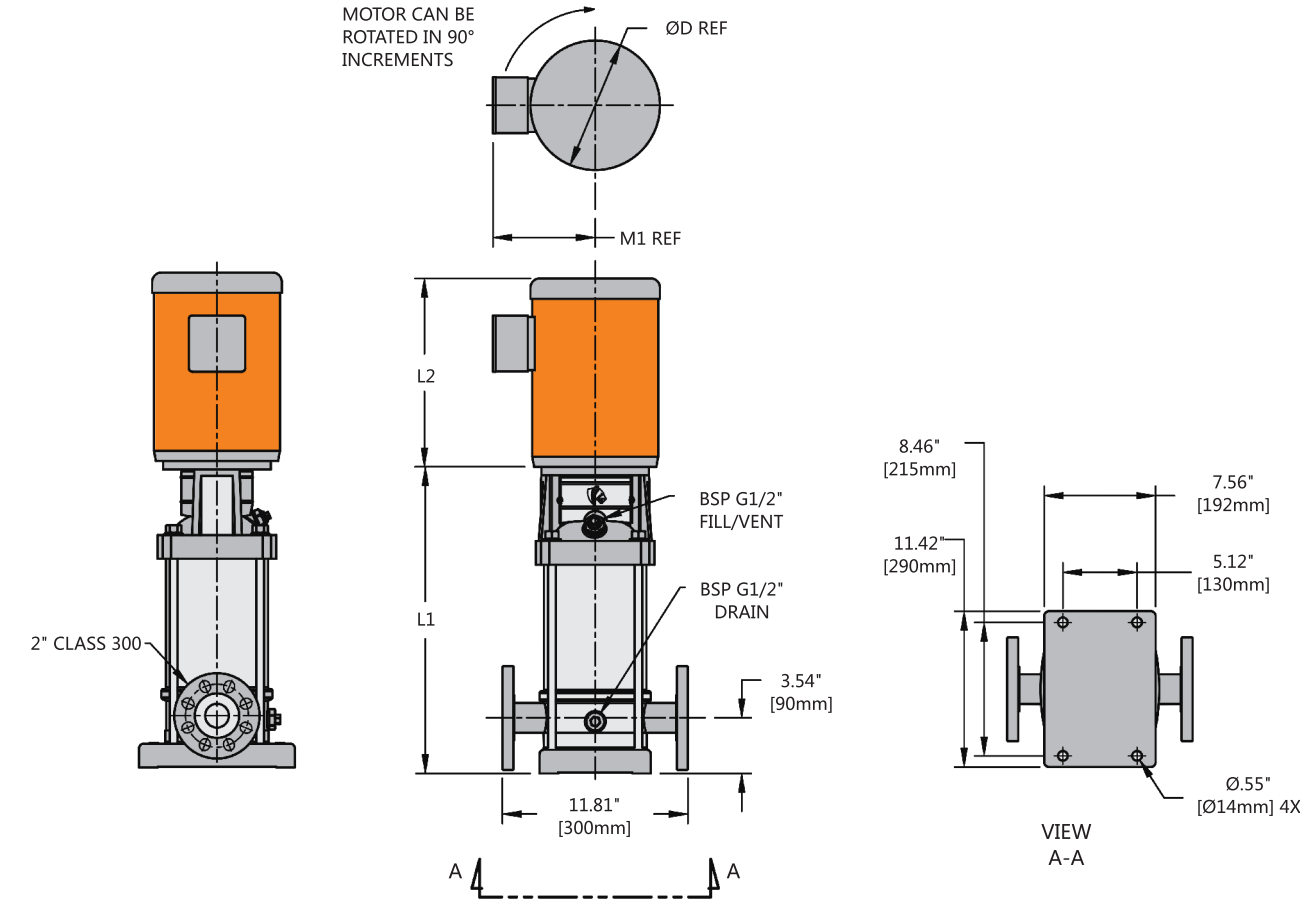
TECHNICAL DATA
CD10.60Hz

● Performance Curve



TECHNICAL DATA
CD15.60Hz

● Installation Sketch

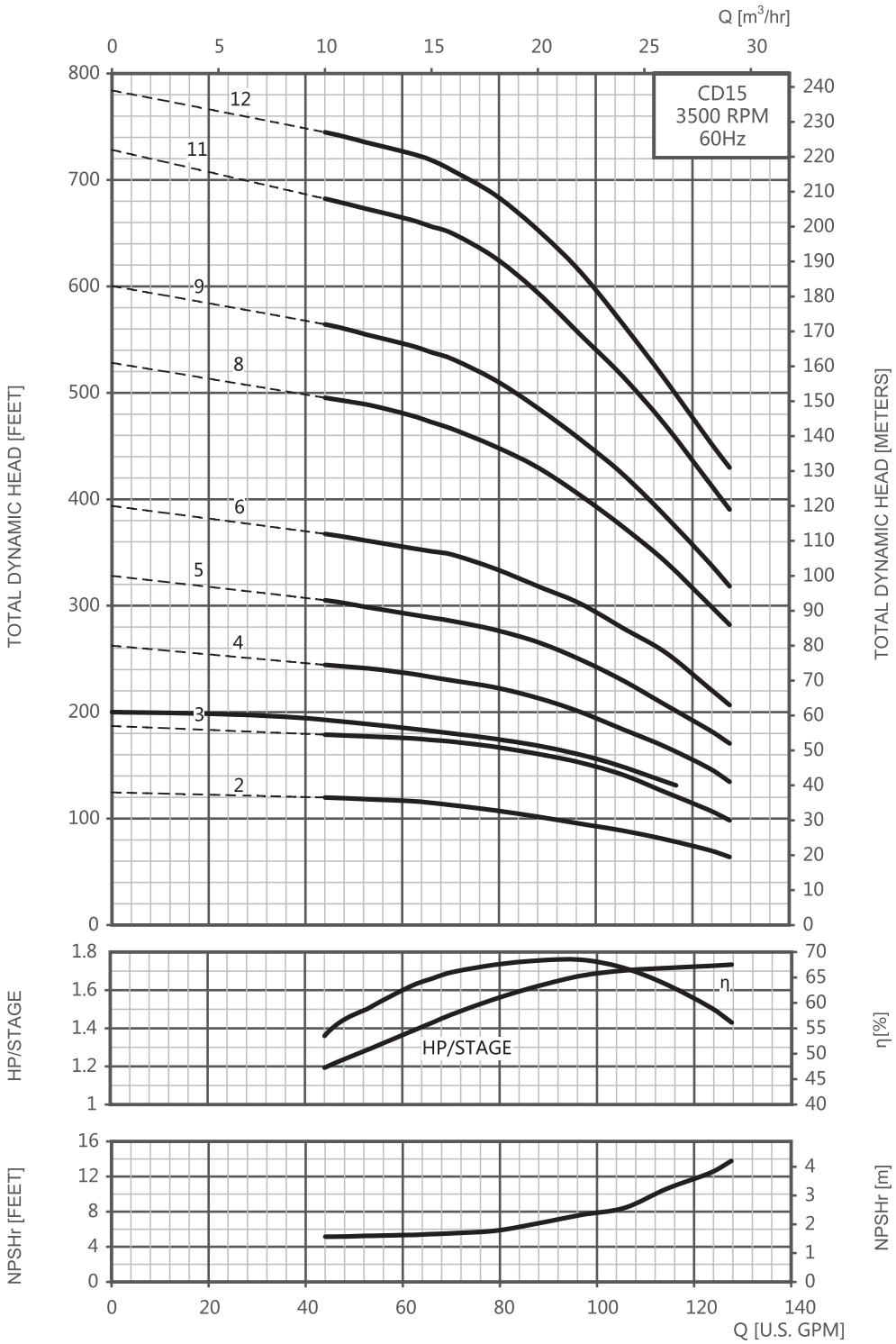


● Size and Weight

Model	HP	FRAME	DIMENSIONS (in)				WEIGHT (lbs)	
			L1	L2	D	M1	PUMP & MOTOR	WET-END ONLY
CD15-2	5	184TC	16.02	13.22	9.2	7	136.46	54.36
CD15-3	5	184TC	17.80	13.22	9.2	7	139.54	57.44
CD15-3	7.5	213TC	17.80	17.32	10.6	8.5	177.44	57.44
CD15-4	7.5	213TC	22.64	17.32	10.6	8.5	191.46	71.46
CD15-5	10	215TC	24.41	17.32	10.6	8.5	213.52	63.52
CD15-6	10	254TC	27.36	17.32	10.6	8.5	263.10	113.10
CD15-6	15	254TC	27.36	19.9	12.56	11	368.10	113.10
CD15-8	15	254TC	30.91	19.9	12.56	11	374.25	119.25
CD15-9	15	254TC	32.68	19.9	12.56	11	344.72	89.72
CD15-9	20	256TC	32.68	21.6	12.56	11	397.72	89.72
CD15-11	20	256TC	36.22	21.6	12.56	11	403.88	95.88
CD15-12	20	256TC	37.99	21.6	12.56	11	406.95	98.95
CD15-12	25	284TSC	37.99	22.95	14.6	11	513.95	98.95

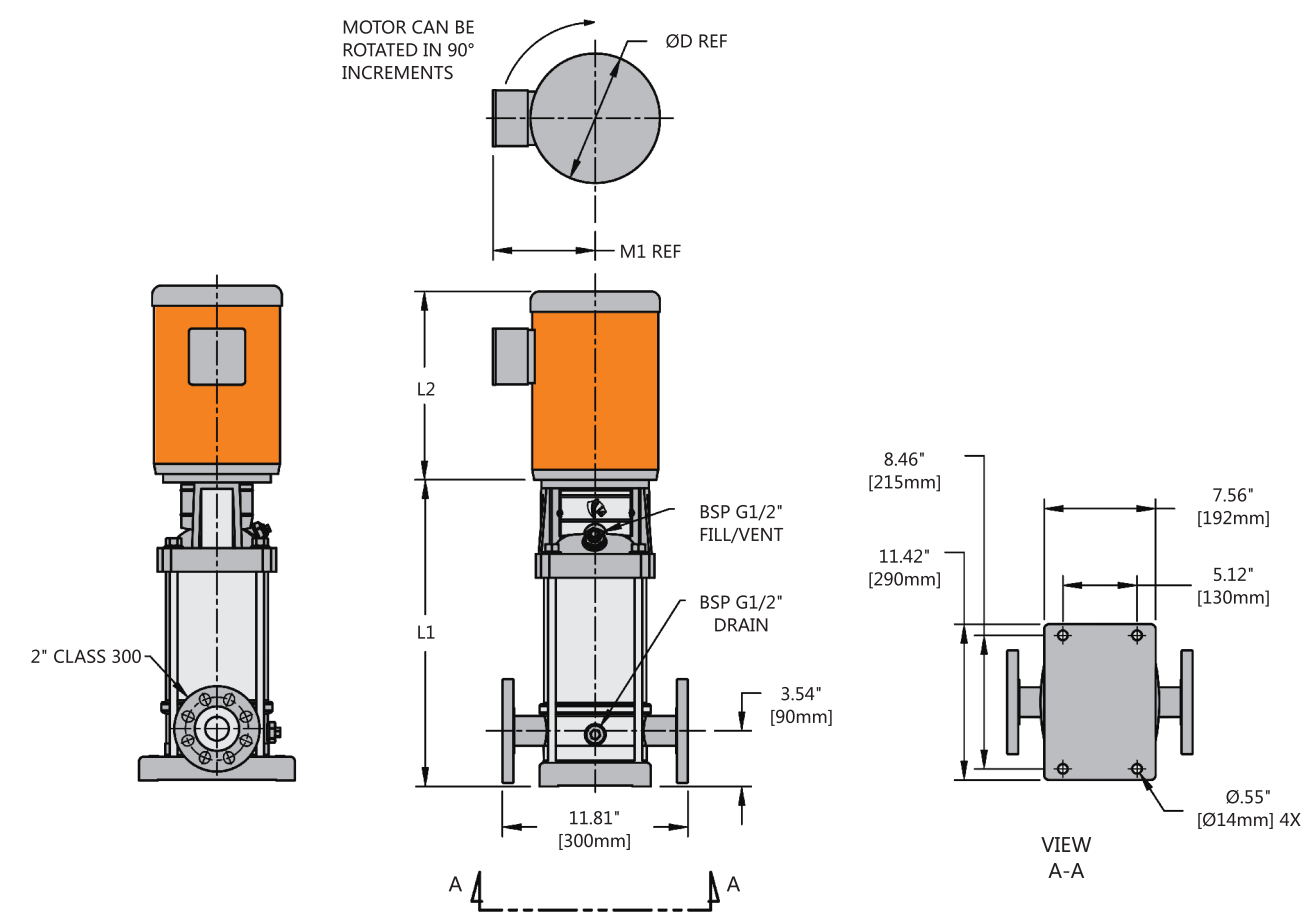
TECHNICAL DATA
CD15.60Hz

● Performance Curve



TECHNICAL DATA
CD20.60Hz

● Installation Sketch

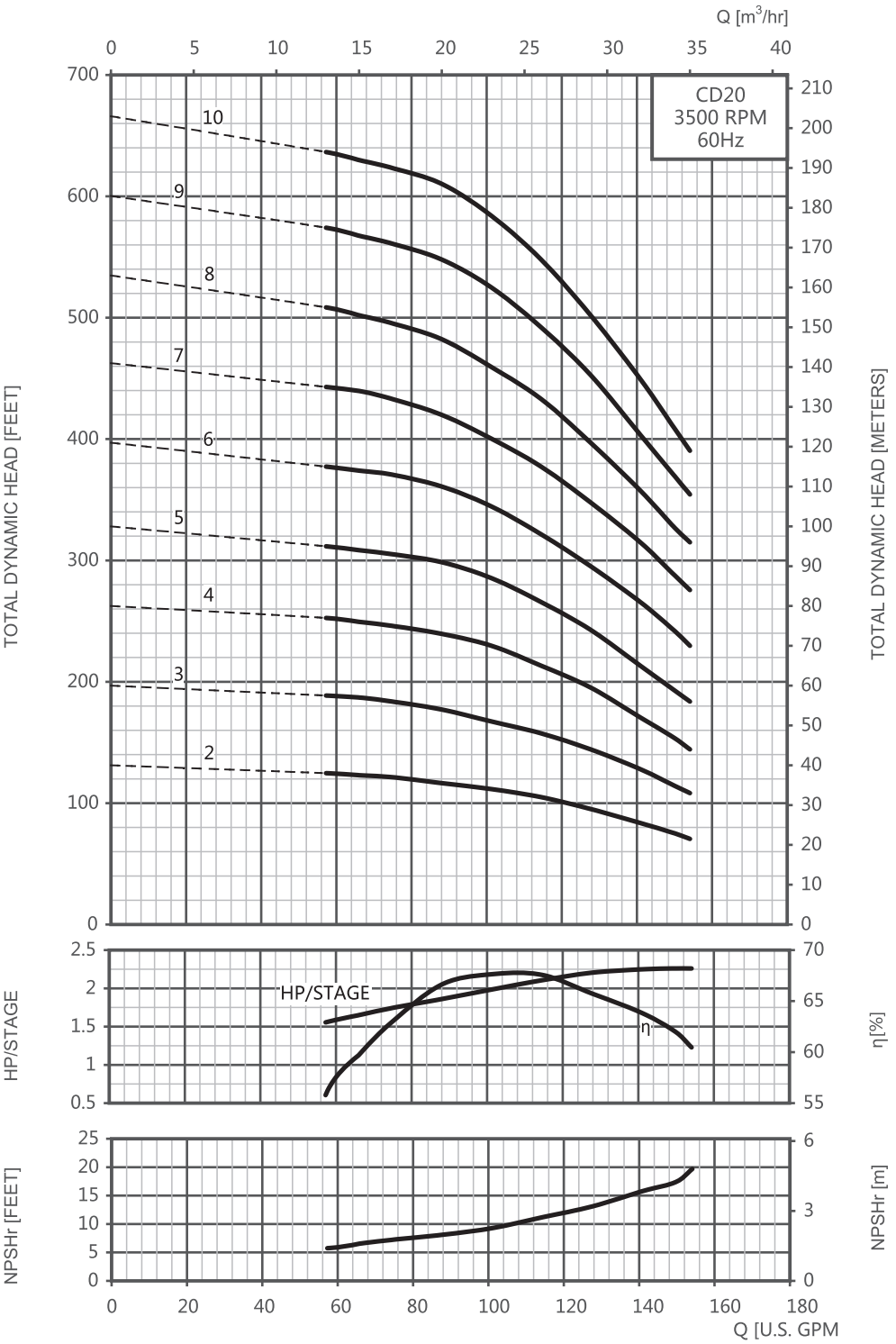


● Size and Weight

Model	HP	FRAME	DIMENSIONS (in)				WEIGHT (lbs)	
			L1	L2	D	M1	PUMP & MOTOR	WET-END ONLY
CD20-2	5	184TC	16.02	13.22	9.2	7	132.37	50.27
CD20-3	7.5	213TC	20.87	17.32	10.6	8.5	184.33	64.33
CD20-4	10	215TC	22.64	17.32	10.6	8.5	206.43	56.43
CD20-5	15	254TC	25.59	19.9	12.56	11	330.42	75.42
CD20-6	15	254TC	27.36	19.9	12.56	11	333.54	78.54
CD20-7	15	254TC	29.13	19.9	12.56	11	336.67	81.67
CD20-7	20	256TC	29.13	21.6	12.56	11	389.67	81.67
CD20-8	20	256TC	30.91	21.6	12.56	11	392.79	84.79
CD20-9	20	256TC	32.68	21.6	12.56	11	395.91	87.91
CD20-9	25	284TSC	32.68	22.95	14.6	11	502.91	87.91
CD20-10	25	284TSC	34.45	22.95	14.6	11	506.03	91.03

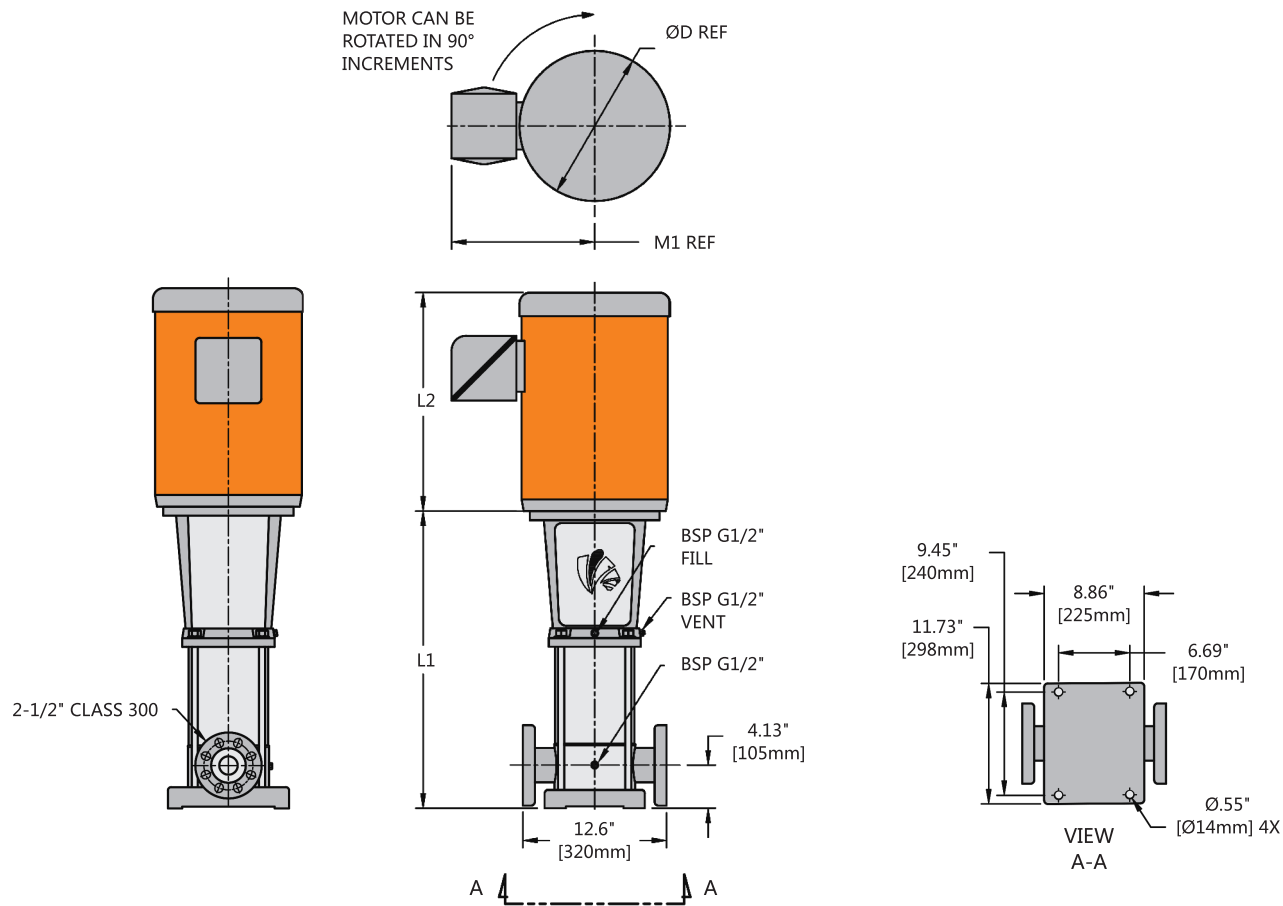
TECHNICAL DATA
CD20.60Hz

● Performance Curve



TECHNICAL DATA
CD32.60Hz

● Installation Sketch

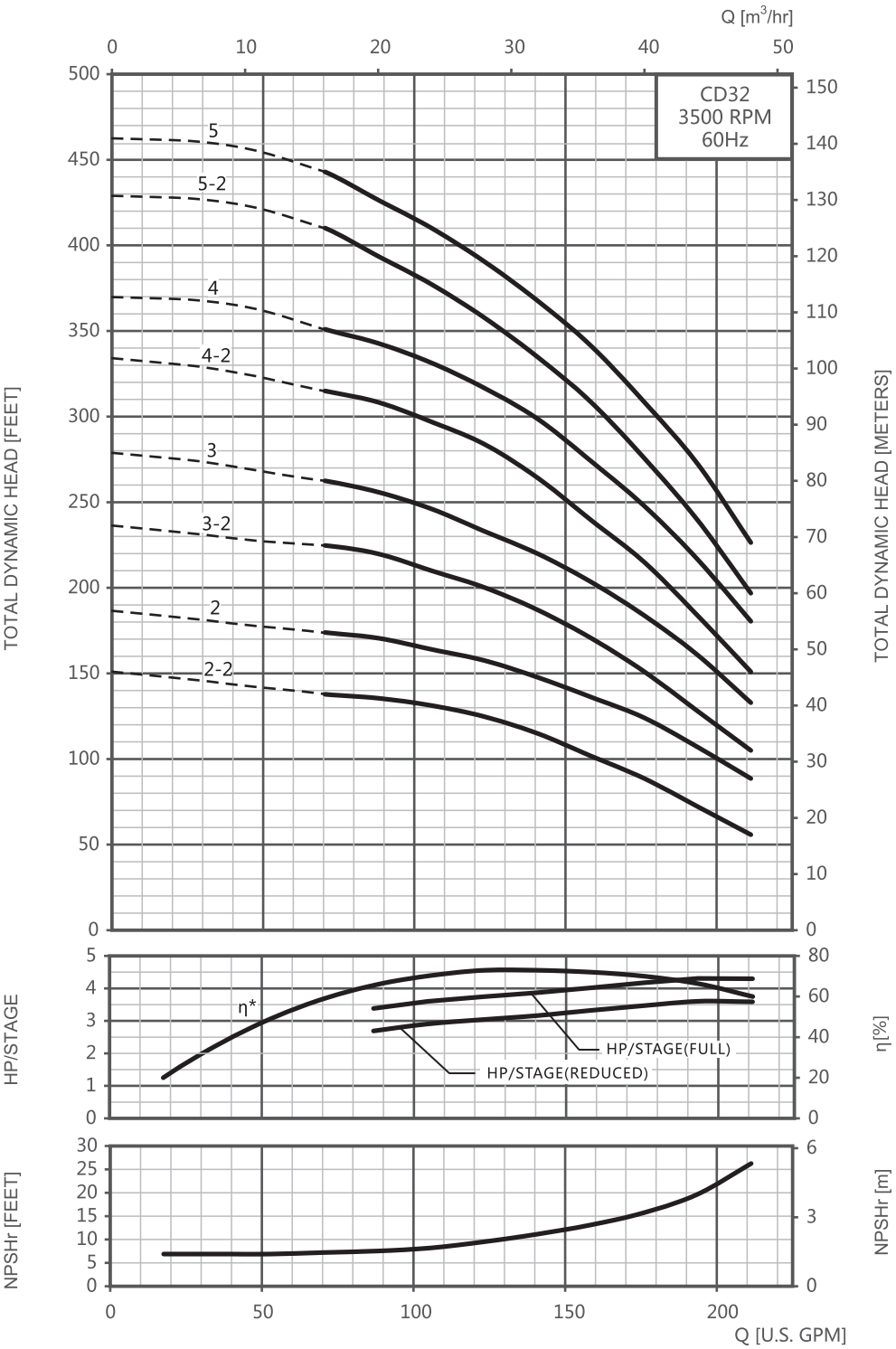


● Size and Weight

Model	HP	FRAME	DIMENSIONS (in)				WEIGHT (lbs)	
			L1	L2	D	M1	PUMP & MOTOR	WET-END ONLY
CD32-2-2	7.5	213TC	22.64	17.32	10.6	8.5	218.10	98.10
CD32-2	7.5	213TC	22.64	17.32	10.6	8.5	213.70	93.70
CD32-2	10	215TC	22.64	17.32	10.6	8.5	243.70	93.70
CD32-3-2	10	215TC	25.39	17.32	10.6	8.5	250.31	100.31
CD32-3	10	215TC	29.53	17.32	10.6	8.5	271.25	121.25
CD32-3	15	254TC	29.53	19.9	12.56	11	376.25	121.25
CD32-4-2	15	254TC	32.28	19.9	12.56	11	385.07	130.07
CD32-4	15	254TC	32.28	19.9	12.56	11	374.05	119.05
CD32-4	20	256TC	32.28	21.6	12.56	11	427.05	119.05
CD32-5-2	20	256TC	35.04	21.6	12.56	11	438.07	130.07
CD32-5	20	256TC	35.04	21.6	12.56	11	460.12	152.12

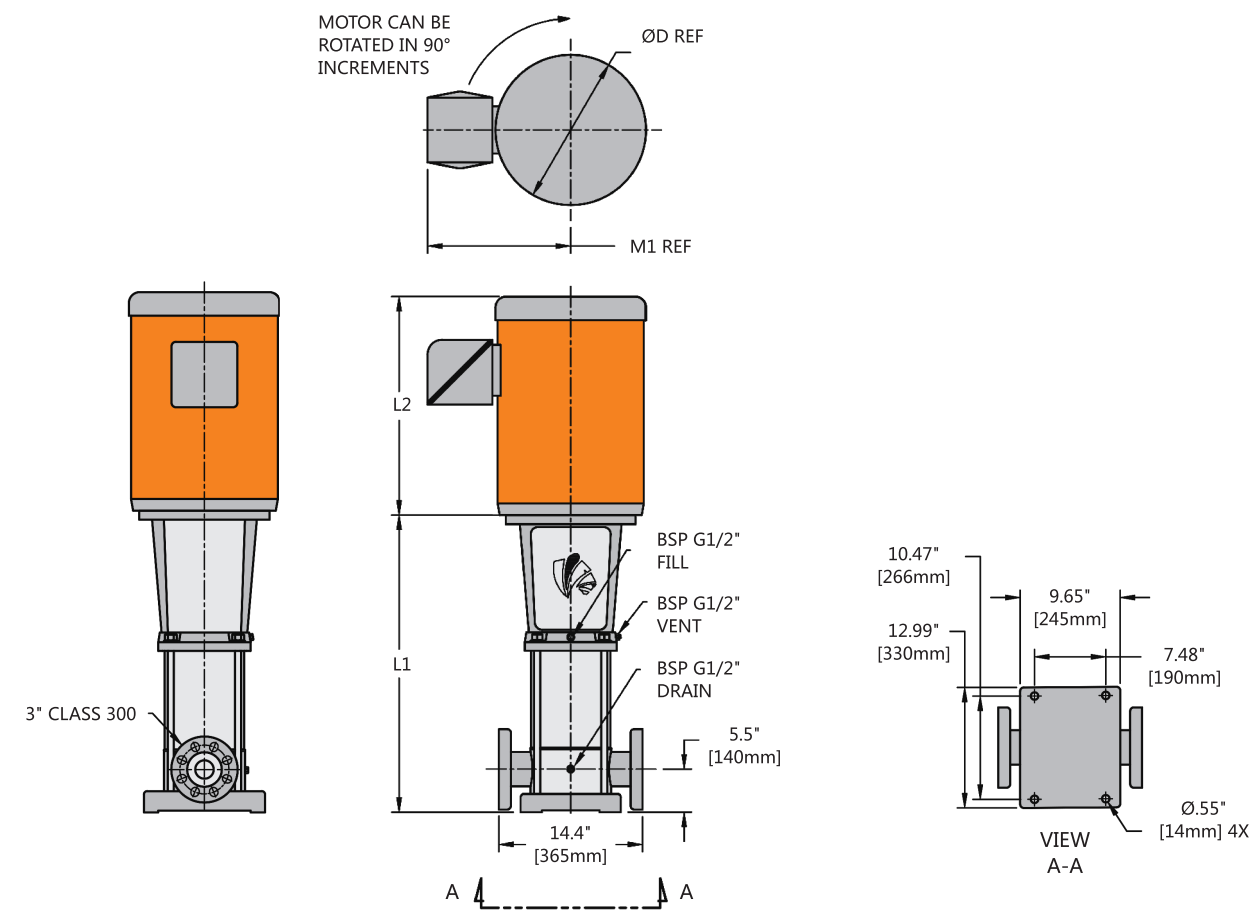
TECHNICAL DATA
CD32.60Hz

● Performance Curve



TECHNICAL DATA
CD42.60Hz

● Installation Sketch

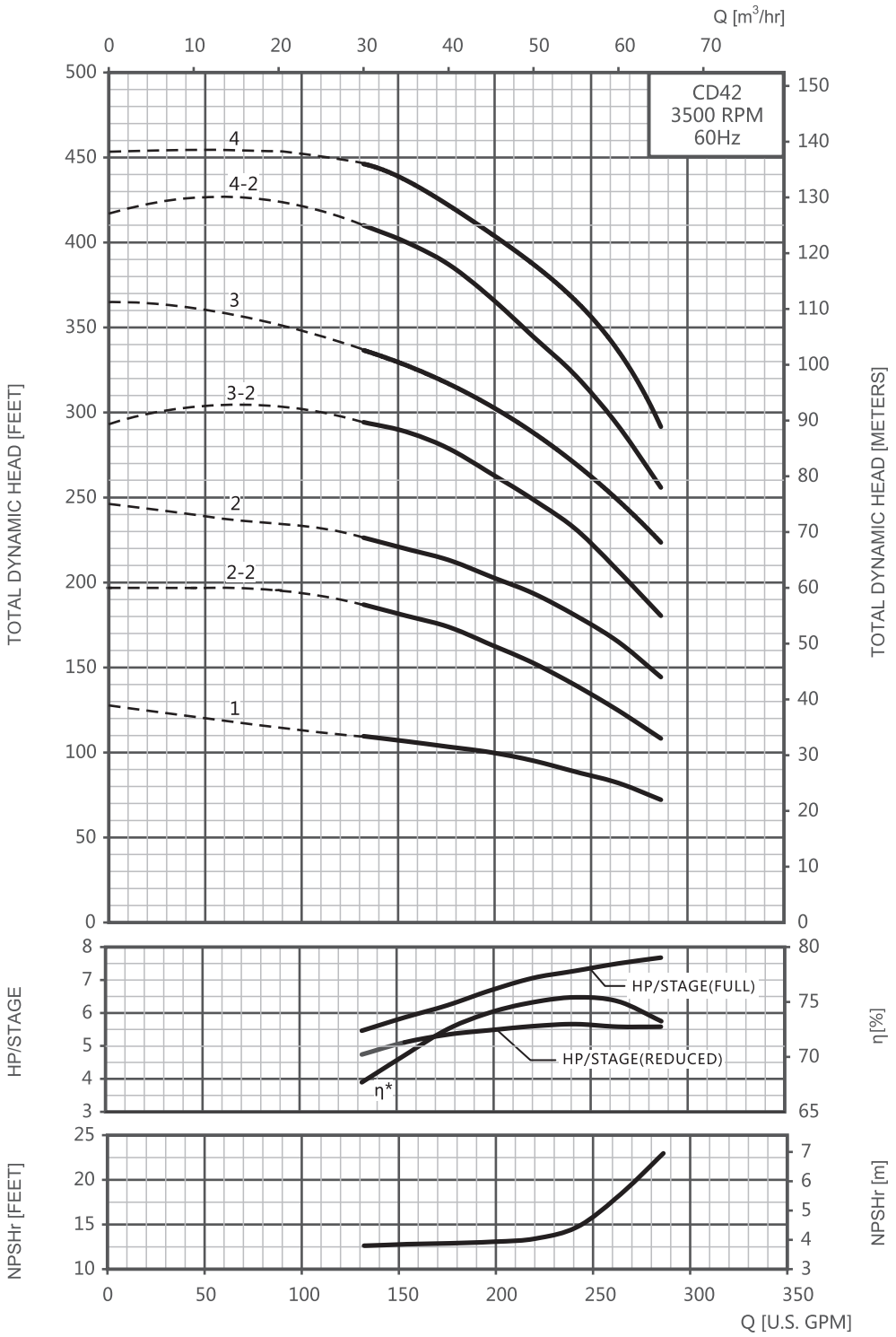


● Size and Weight

Model	HP	FRAME	DIMENSIONS (in)				WEIGHT (lbs)	
			L1	L2	D	M1	PUMP & MOTOR	WET-END ONLY
CD42-1	7.5	213TC	22.09	17.32	10.6	8.5	224.72	104.72
CD42-2-2	15	254TC	29.45	19.9	12.56	11	389.48	134.48
CD42-2	15	254TC	29.45	19.9	12.56	11	378.46	123.46
CD42-3-2	20	256TC	32.60	21.6	12.56	11	435.87	127.87
CD42-3	25	284TSC	32.60	22.9	14.6	11	542.87	127.87
CD42-4-2	25	284TSC	35.75	22.9	14.6	11	547.28	132.28
CD42-4-2	30	286TSC	35.75	24.45	14.6	11	562.28	132.28
CD42-4	30	286TSC	35.75	24.45	14.6	11	562.28	132.28
CD42-4	40	324TSC	35.75	28.25	17.1	13.5	685.28	132.28

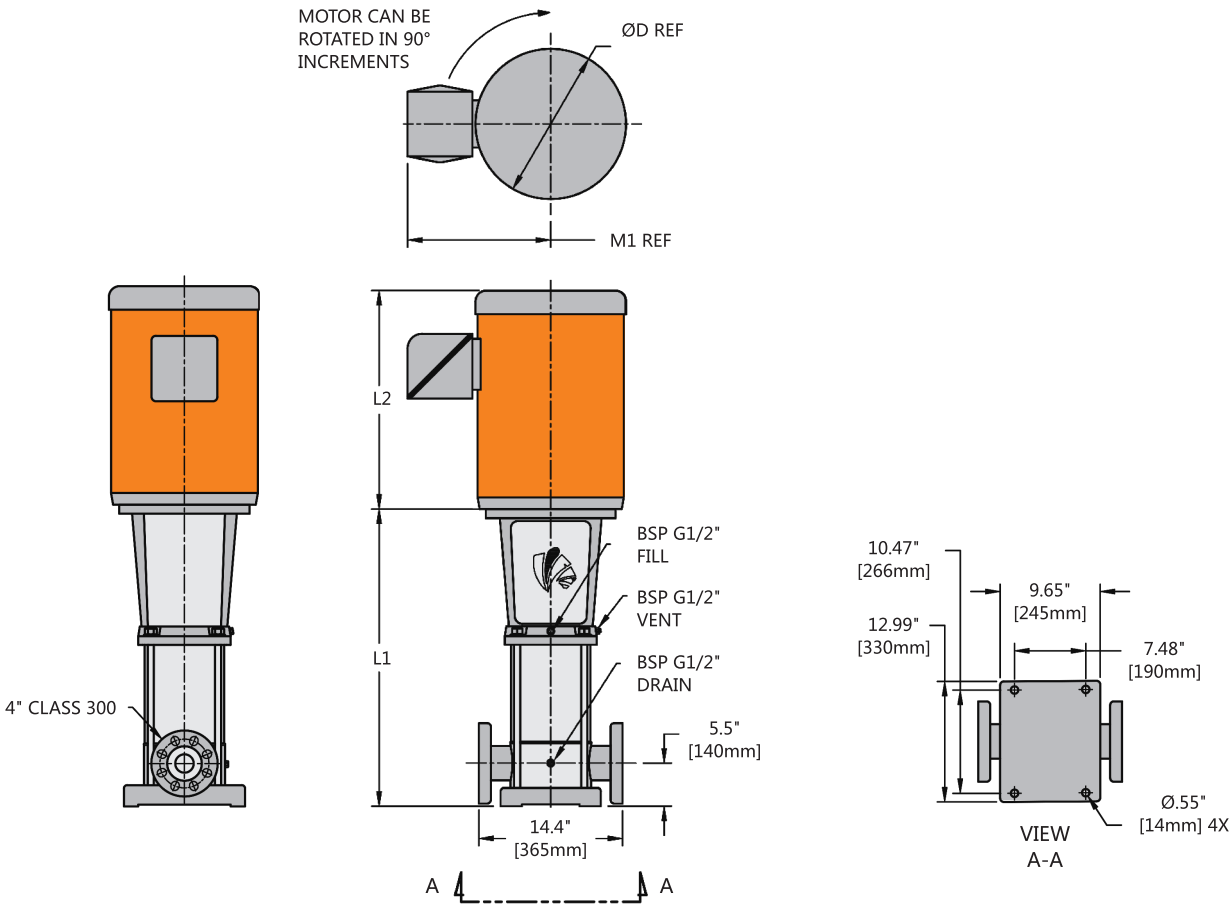
TECHNICAL DATA
CD42.60Hz

● Performance Curve



TECHNICAL DATA
CD65.60Hz

● Installation Sketch

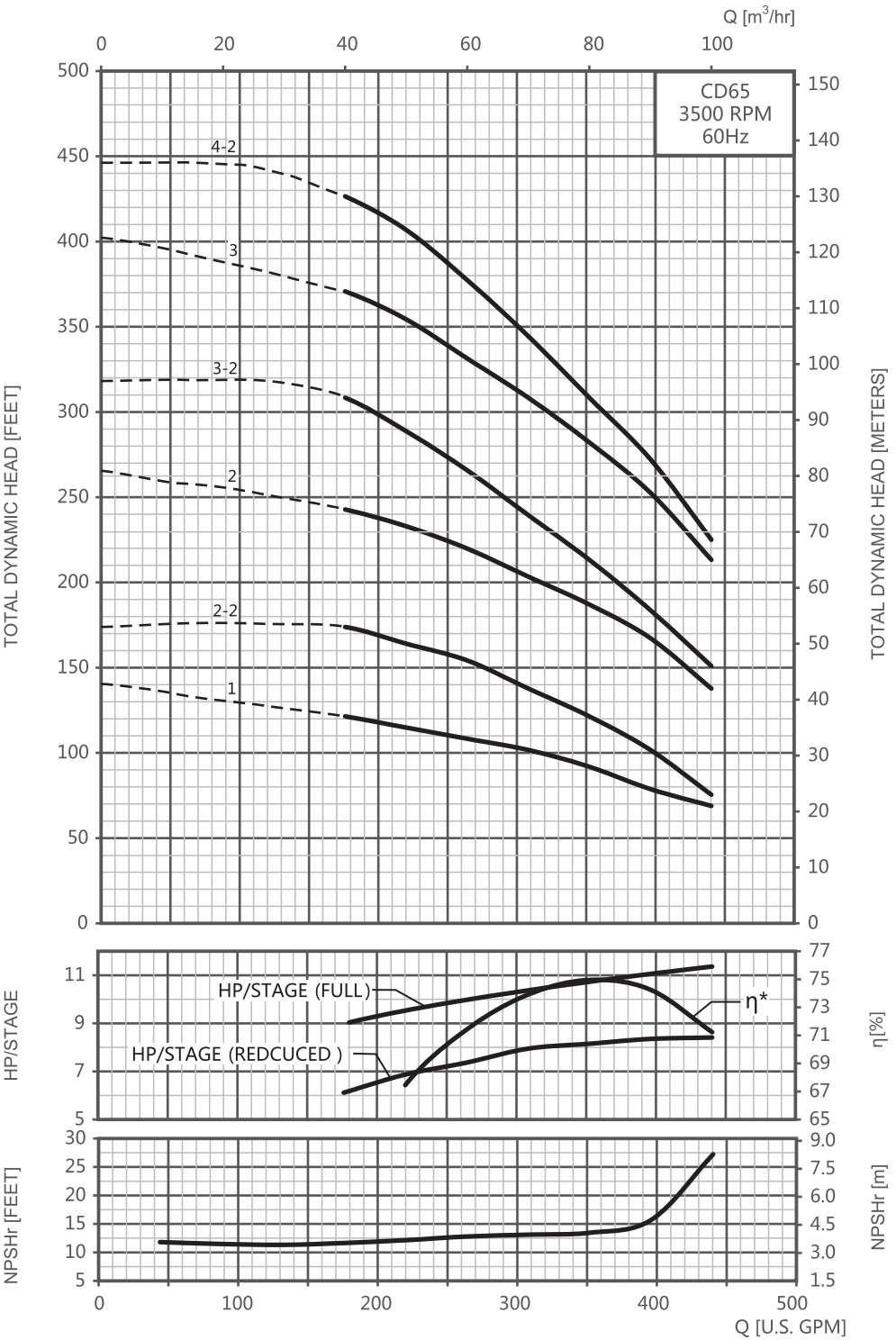


● Size and Weight

Model	HP	FRAME	DIMENSIONS (in)				WEIGHT (lbs)	
			L1	L2	D	M1	PUMP & MOTOR	WET-END ONLY
CD65-1	15	254TC	26.42	19.9	12.56	11	387.28	132.28
CD65-2-2	15	254TC	29.69	19.9	12.56	11	376.25	121.25
CD65-2	25	284TSC	29.69	22.9	14.6	11	536.25	121.25
CD65-3-2	25	284TSC	32.91	22.9	14.6	11	545.07	130.07
CD65-3	40	324TSC	32.91	28.25	17.1	13.5	683.07	130.07
CD65-4-2	40	324TSC	36.18	28.25	17.1	13.5	680.87	127.87

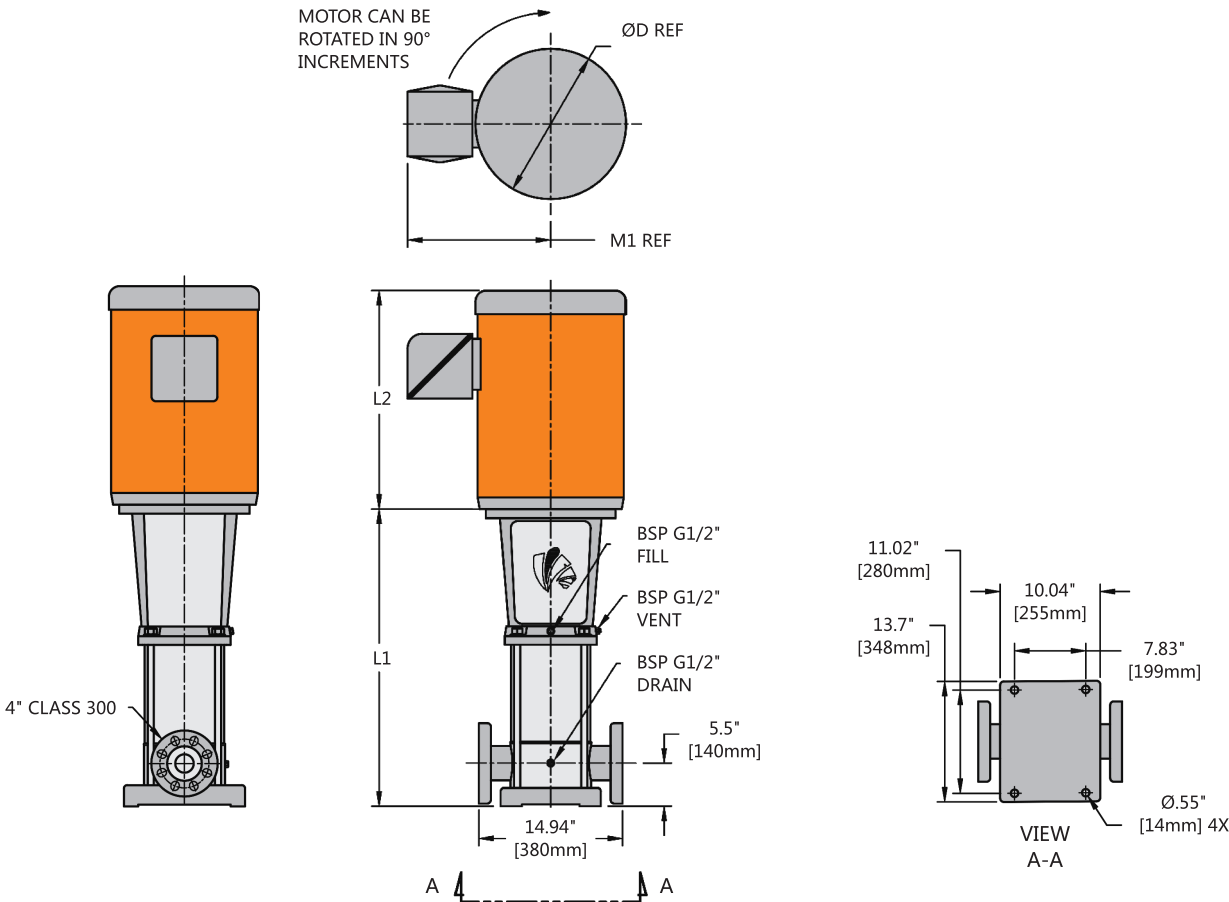
TECHNICAL DATA
CD65.60Hz

● Performance Curve



TECHNICAL DATA
CD85.60Hz

● Installation Sketch

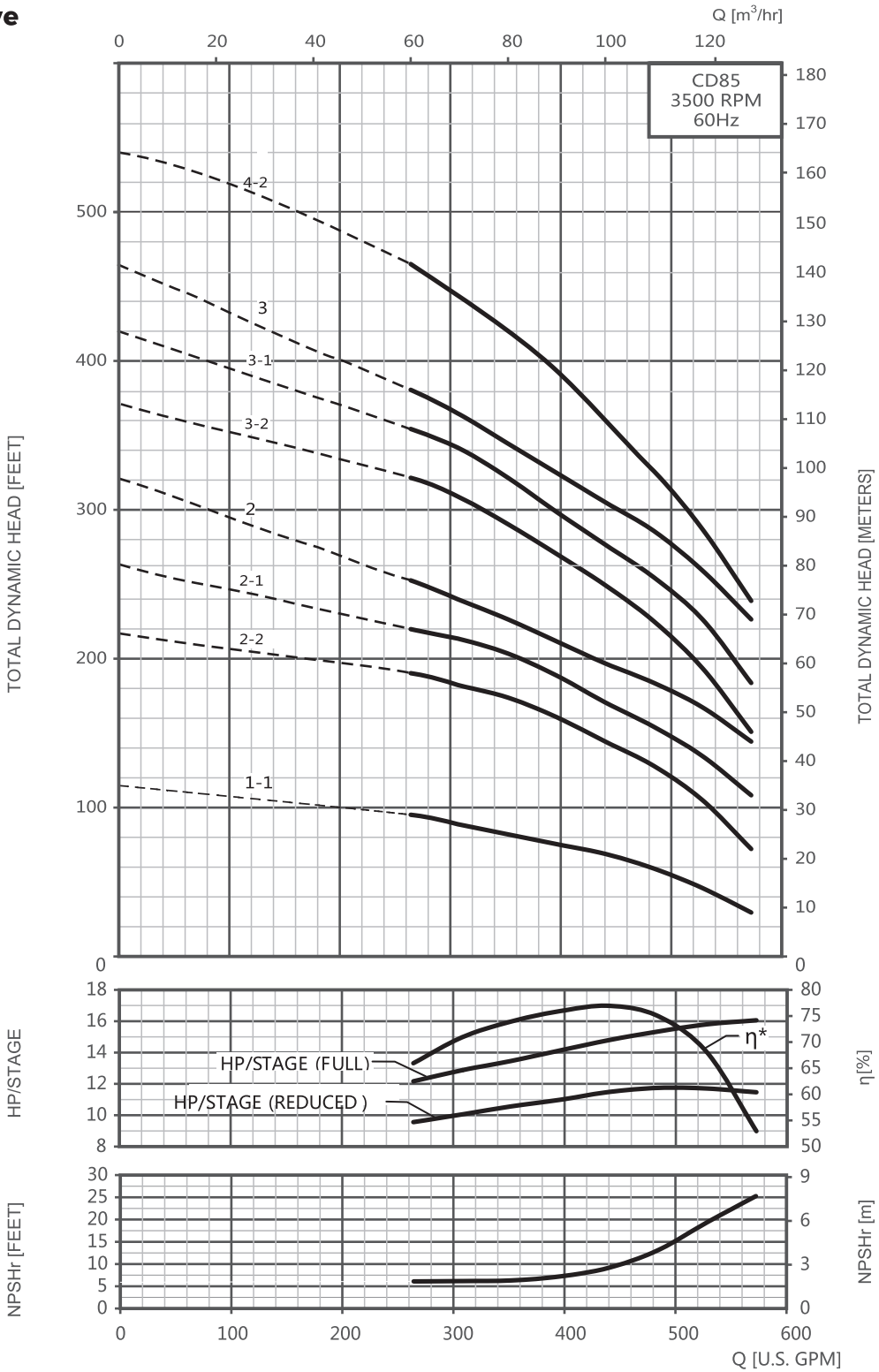


● Size and Weight

PN	HP	FRAME	DIMENSIONS (in)				WEIGHT (lbs)	
			L1	L2	D	M1	PUMP & MOTOR	WET-END ONLY
85-1-1	15	254TC	22.48	19.9	12.56	11	354.21	123.46
85-2-2	20	256TC	30.43	21.6	12.56	11	460.12	152.12
85-2-2	25	284TSC	30.43	22.9	14.6	11	567.12	152.12
85-2-1	25	284TSC	30.43	22.9	14.6	11	536.25	121.25
85-2-1	30	286TSC	30.43	24.45	14.6	11	551.25	121.25
85-2	30	286TSC	30.43	24.45	14.6	11	546.84	116.84
85-2	40	324TSC	30.43	28.25	17.1	13.5	669.84	116.84
85-3-2	40	324TSC	34.06	28.25	17.1	13.5	667.64	114.64
85-3-1	40	324TSC	34.06	28.25	17.1	13.5	667.64	114.64
85-3-1	50	326TSC	34.06	28.25	17.1	13.5	689.64	114.64
85-4-2	50	326TSC	34.06	28.25	17.1	13.5	689.64	114.64

TECHNICAL DATA
CD85.60Hz

● Performance Curve



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WE HAVE PRIDE IN EVERYTHING WE DO!