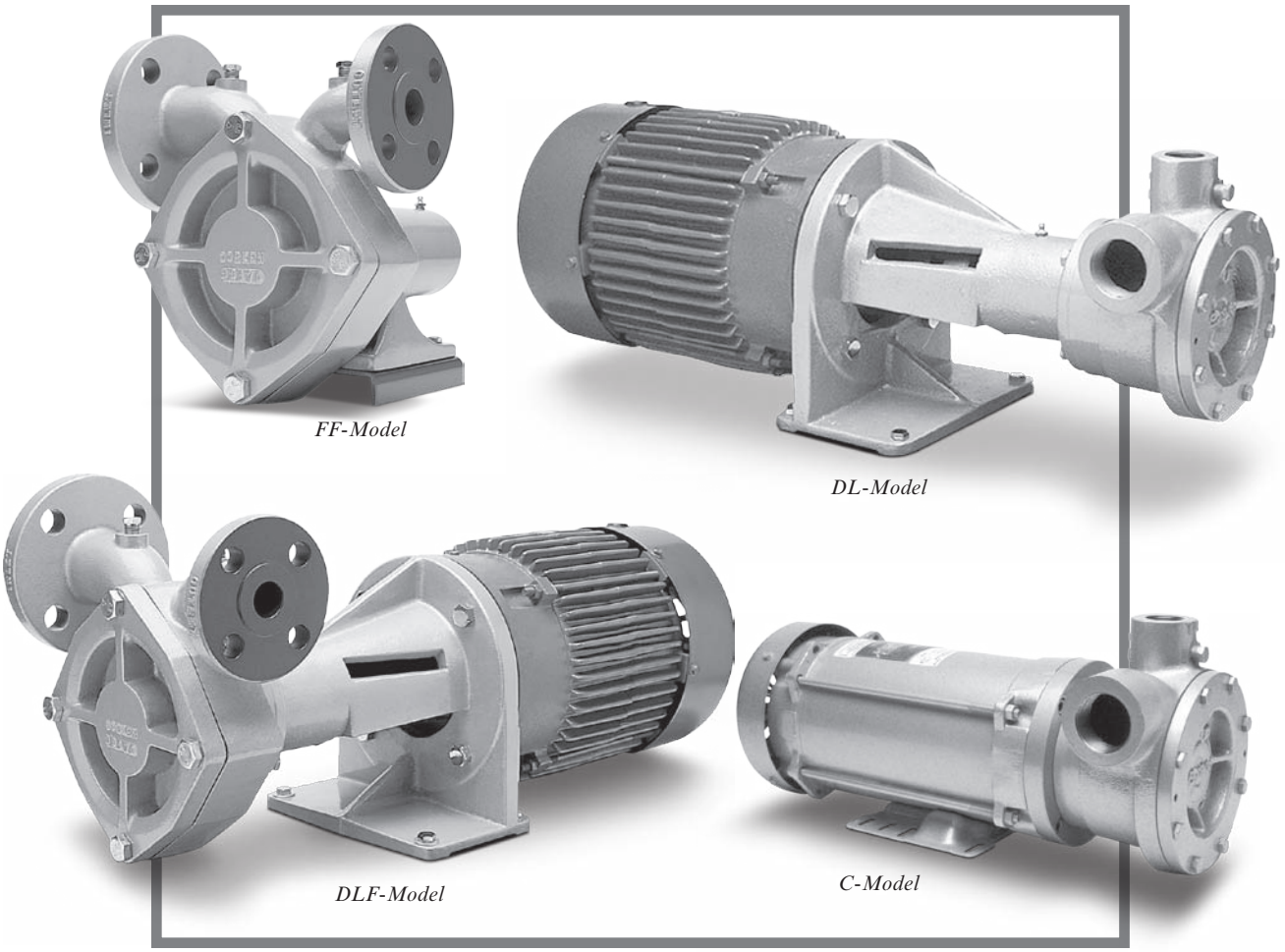
LPGCFP100D

LPG Coro-Flo® Pumps

Sales Catalog



FF-Model

DL-Model

DLF-Model

C-Model

Solutions beyond products...

CORKEN®

IDEX

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What is a Coro-Flo® Pump?

The Corken Coro-Flo® is a regenerative turbine pump, and is a variation of the centrifugal pump, but it can develop several times the pressure obtained from an ordinary centrifugal pump of equivalent size. As fluid enters the Coro-Flo it is picked up by the impeller and begins to make a spiraling motion around the circumference of each side of the impeller—see the figure below. Like a centrifugal pump, the Coro-Flo accelerates the fluid to convert kinetic energy to potential energy. The Coro-Flo differs in that it breaks the acceleration/ pressurization process into dozens of separate steps. The fluid is slightly accelerated and pressurized with each spin between the teeth of the impeller. The fluid makes a nearly complete revolution inside the pump and is diverted out the discharge nozzle at a higher pressure than the suction. This action of gently pulling the fluid in at the suction for the first small revolutions gives this pump a very low pressure drop at the suction and allows it to move some vapor without flashing liquefied gasses.

The horsepower and pressure characteristics of the Coro-Flo® are similar to those of a positive displacement pump. As the differential pressure increases, the horsepower increases and the capacity decreases.

The impeller of a Coro-Flo® is the only moving part. It floats on the shaft and has no metal to metal contact with the casing. With this unique design, the pump has earned a reputation for being highly reliable, low maintenance and long lasting. It has become the standard for bottle filling and cabinet dispensing systems in the LPG and NH_3 markets.

Coro-Flo® Features

Regenerative turbine

Floating impeller

Low maintenance

Flow range:

2–58 gpm (7.6–219.6 L/min)

Maximum differential range:

125–250 psi (8.6–17.2 bar)

Driver range:

3–20 hp (2.2–14.9 kW)

Dual cycle capability:

2880 RPM @ 50 Hz

3450 RPM @ 60 Hz

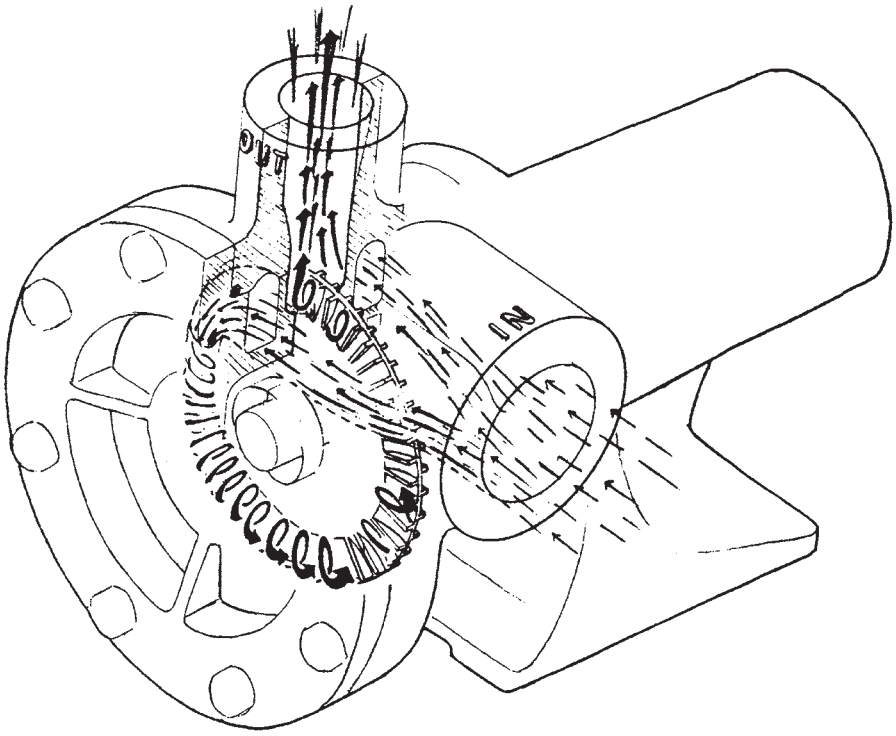


Figure 1

What is a Coro-Flo® Pump?

The first Coro-Flo® pumps sold by Corken were the C-Models, launched in the 1950s. The C-Model pump, our compact, close-coupled cylinder filling pump has had no design changes since then. We did, however, change the motor that this highly reliable pump is built on. The motors have changed in horsepower range, service factor and name brand, but all have been compatible dimensionally and therefore modern motors are compatible with older pumps.

The F-Model came along sometime after the C-Models and has had only one design change in it's long history. In 1976 the shaft was re-designed and an F12B became an F12C. The two models were offered side by side for a time as the standard and heavy-duty F-Model pumps. The "standard" was made obsolete and the heavy-duty version with the re-designed shaft became the standard F-Model of today. The size 13 was added to the line in the 1980s to fill in a performance gap between the sizes 12 and 14.

The F-Model series was expanded in the 1990s to include the option to mount the higher horsepower pump to a C-face motor thereby introducing the DS/DL series. This option combines the higher horsepower and flow of the F-Model pump with the space saving design of the C-Model.

In 2000 Corken introduced the 150 autogas series pump for the overseas propane auto re-fueling markets. Because of the versatile design, the pump has found its way to many industrial markets.

In 2008 Corken introduced the 075 pump, the latest installment of the trusted autogas series. The 075 is the perfect pump for those smaller auto refueling applications.

Overall, the Coro-Flo® is our oldest and perhaps most beloved pump line. The design has proven its self in reliability, robustness and sheer versatility. To see some of the ways this pump is excelling in the moving of other products, take a look at our Industrial Pump Sales Catalog. You might be surprised at what this little pump can do.

Markets Served by the Coro-Flo® Pump

The Coro-Flo® pump was designed as a low flow, medium head, thin liquid and liquefied gas pump. The most common uses for the LPG/NH3 versions of this pump are listed to the side.

Coro-Flo® Time Line

1950s C- & F-Model launched

1976 heavy-duty F-Model introduced

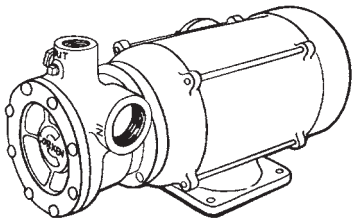
1980s Model 13 introduced

1990s DS-/DL-Models introduced

2000 Model 150 introduced

2008 Model 075 introduced

2011 Model 060 introduced



Primary Markets

Propane cylinder filling

Bottle filling

Propane bulk transfer

Butane transfer

Stand-by systems

Asphalt plants

Carousel cylinder filling

Autogas pumping

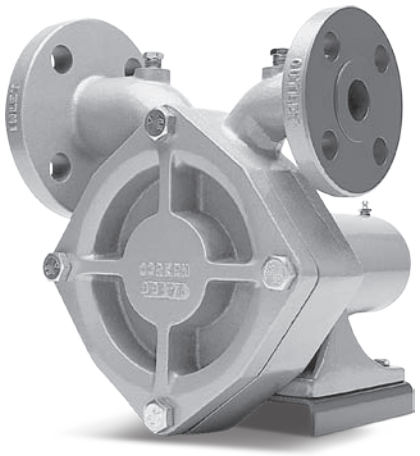
Agricultural ammonia

LP-Gas vaporizer feed

Model Series Selection Guide

The Coro-Flo® pump is available in a variety of configurations. While all are Coro-Flo regenerative turbine pumps, each type will be used differently due to capacity and mounting differences. In most applications, they are interchangeable.

Models 060, 075 and 150



The Model 060, 075 and 150 pumps were designed around high pressure propane auto fueling markets and have features that best meet the needs of that industry. The other Coro-Flo® pumps are also used for propane auto fueling at lower pressures and flows.

Flow range: 7–58 gpm (26.5–219.6 L/min)

Maximum differential pressure: 250 psid (17.2 bar)

Maximum driver size: 20 hp (14.9 kW)

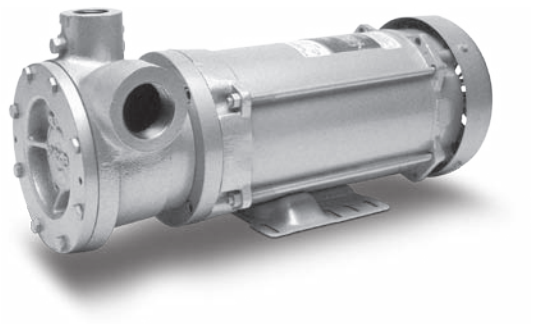
Dual 50/60 Hz capability

ANSI or DIN flanges

Direct couple or use a bracket to couple to a C-face motor

C-Model

The C-Model is most commonly used as a bottle and cylinder filling pump. It is UL (Underwriters' Laboratories) listed for use with LPG. It is a close coupled pump literally built onto the motor shaft. This eliminates the need for alignment and makes for a very compact and economical pump.



Flow range: 2–36 gpm (7.6–136.3 L/min)

Maximum differential pressure: 75–125 psi (4.8–8.6 bar)

Maximum driver size: 3 hp (2.2 kW)

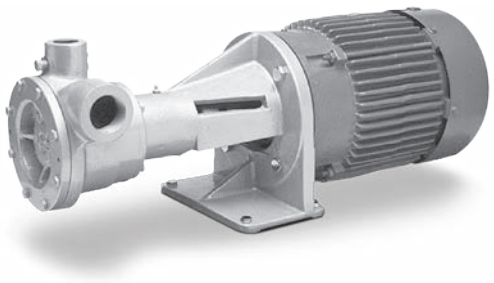
Made for 60 Hz—limited use in 50 Hz

NPT or ANSI flanges

UL listed for use with LPG

F-, DS-, DL-Model

The F-, DS-, and DL-Model pumps are all designed to perform the same and differ only in the shaft and bearings. These differences allow them to be mounted differently. The F-Models, have mounting feet and are made to be directly coupled with a motor or engine driver on a baseplate. The DS-, DL-Models are made to be used with a special bracket and coupled to a C-face motor for space conservation.



Flow range: 2–36 gpm (7.6–136.3 L/min)

Maximum differential pressure: 75–125 psi (4.8–8.6 bar)

Maximum driver size: 10 hp (7.5 kW)

Made for 60 Hz—limited use in 50 Hz

NPT or ANSI flanges

Models 060, 075 and 150—Features & Specifications

Equipment Type & Options

Regenerative turbine liquid pump
Foot mounted (FF060, FF075, FF150, FD060, FD075, or FD150)
Direct mounted (DLF060, DLF075, DLF150, DLD060, DLD075, or DLD150)
All have either 300# ANSI or DIN flanges

Applications

Under & aboveground autogas dispensing
Multiple cylinder filling stations
Vaporizer feed—high pressure
Direct, high pressure asphalt burner feed

Features & Benefits

Regenerative turbine type:	Able to handle liquefied gases without flashing
High flows and differential pressures:	Ideal for dual hose dispensers and multiple dispensers
Heavy duty bearings:	Long bearing life
Single mechanical seal:	Very easy seal replacement and maintenance
Floating impeller:	Long impeller life, lower maintenance
ANSI or Din, metric fasteners optional:	Usability for US or overseas applications
Runs at 50 or 60 cycle (Hz):	Usability for US or overseas applications
Two mounting options:	Versatility for your installation

Operating Specifications

Inlet: 1-1/2" ANSI 300# RF (DIN opt.)	Max. diff. press. for Model 060: 150 psig (10.3 bar) @ 60 Hz[1]
Outlet: 1" ANSI 300# RF (DIN opt.)	Max. diff. press. for Model 075: 200 psig (13.8 bar) @ 60 Hz[1]
RPM: 3450 @ 60 Hz, 2880 @ 50 Hz	Max. diff. press. for Model 150: 250 psig (17.2 bar) @ 60 Hz[1]
Max. wrk. press.: 400 psig (27.6 bar)	Flow range for Model 060: 7–22 gpm (26.5 to 83.3 L/min)
Maximum driver: 20 hp (15 kW)	Flow range for Model 075: 10–40 gpm (37.9 to 151.4 L/min)
Temperature range: -25° to 225°F (-32° to 107°C)	Flow range for Model 150: 12–58 gpm (45.4 to 219.6 L/min)

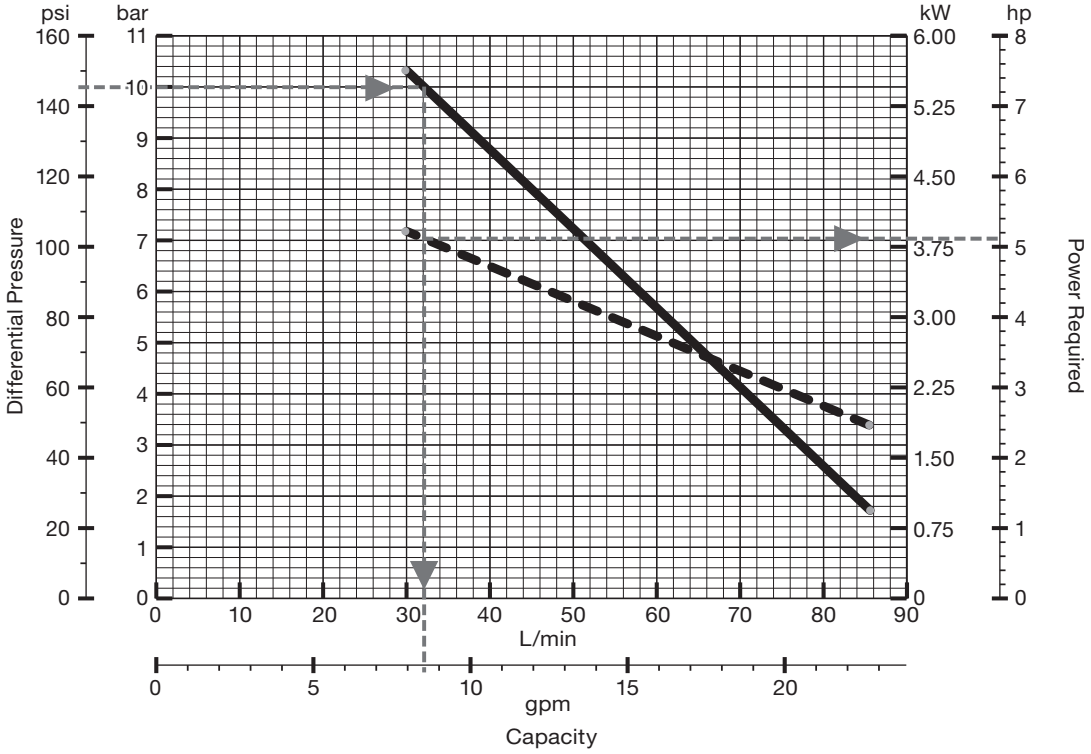
[1] *Maximum discharge pressure should be limited to the maximum system pressure rating.*

Material Specifications

Part	Model	Standard Material	Optional Material
Case, cover	All	Ductile iron ASTM A536	
Impeller	All	Copper alloy ASTM B584, UNS C92300 (also known as Navy Bronze)	Steel Stainless steel
Impeller key	All	Steel, zinc plated	
Seal seat	All	Silicon Carbide	
Seal rotor	All	Carbon	
Seal metal parts	All	Stainless steel	
Seal sleeve	All	Stainless steel	
Seal housing	All	Stainless steel	
Shaft	All	Steel	Stainless steel
Frame	FF/FD	Gray iron ASTM A48, Class 30	
	DLF/DLD	Ductile iron ASTM A536	
Bearing cap	All	Ductile iron	
O-rings	All	Buna-N	Neoprene®, Viton®, Buna-N, Kalrez®[1]
Retainer Rings	All	Steel	
Bearings	All	Ball	

[1] *Registered trademark of the DuPont company.*

Model 060—Performance



3450 RPM @ 60 Hz

Differential pressure:

10.0 bar

145.0 psi

Flow:

32.2 L/min

8.5 gpm

Power required:

3.8 kW

5.15 hp

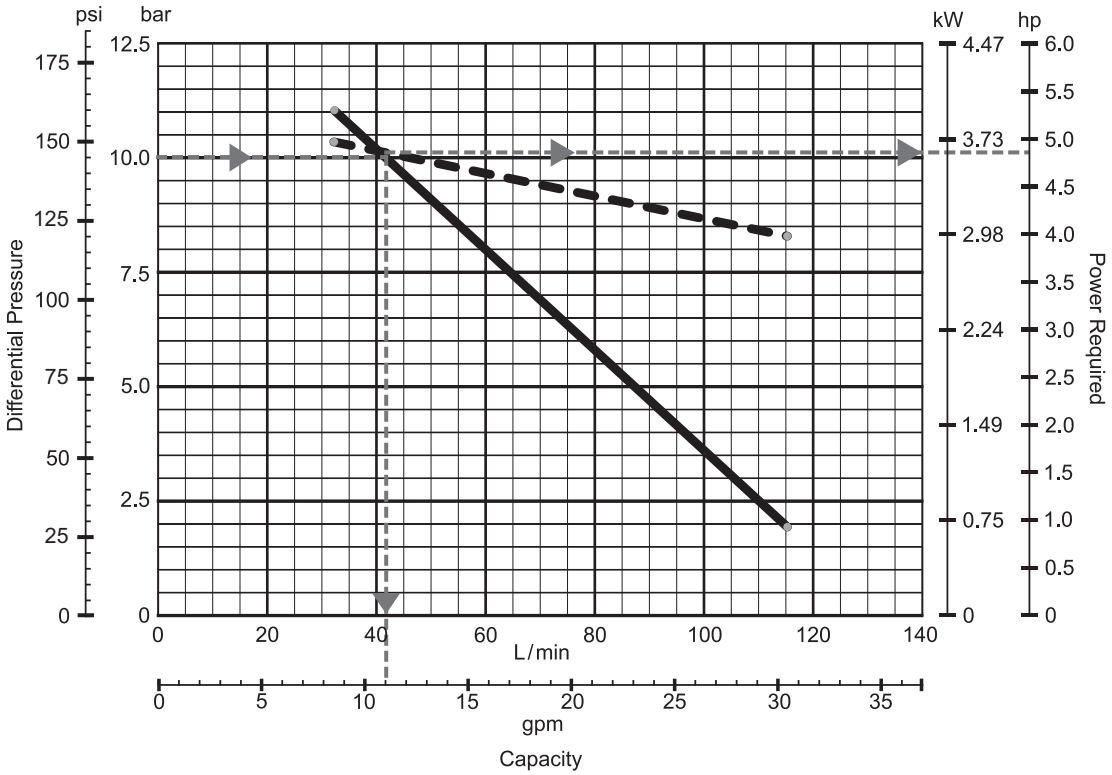
Curves based on LPG[1]

Capacity

Power required

[1] *The performance curves are based on aboveground LPG installations. Performance curves for underground LPG tanks will vary based on the specific installation. Consult factory.*

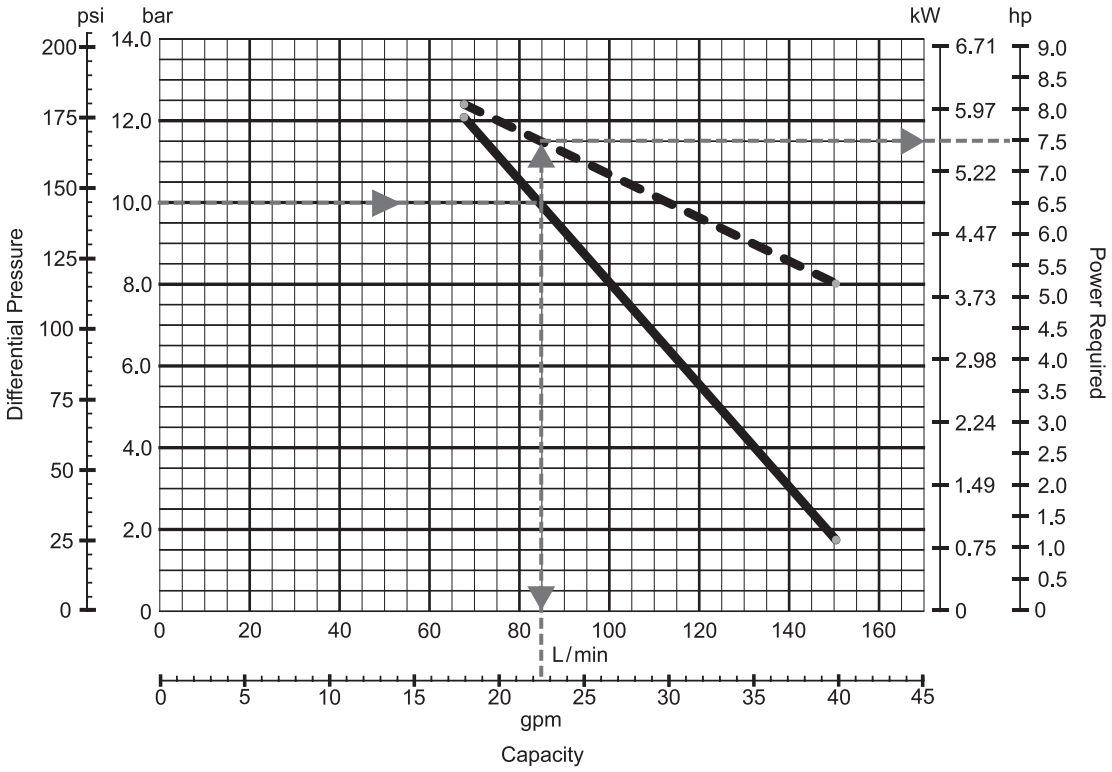
Model 075—Performance



2880 RPM @ 50 Hz

Differential pressure:
10.0 bar
145.0 psi
Flow:
42 L/min
11 gpm
Power required:
3.65 kW
4.9 hp

Curves based on LPG[1]
Capacity
Power required



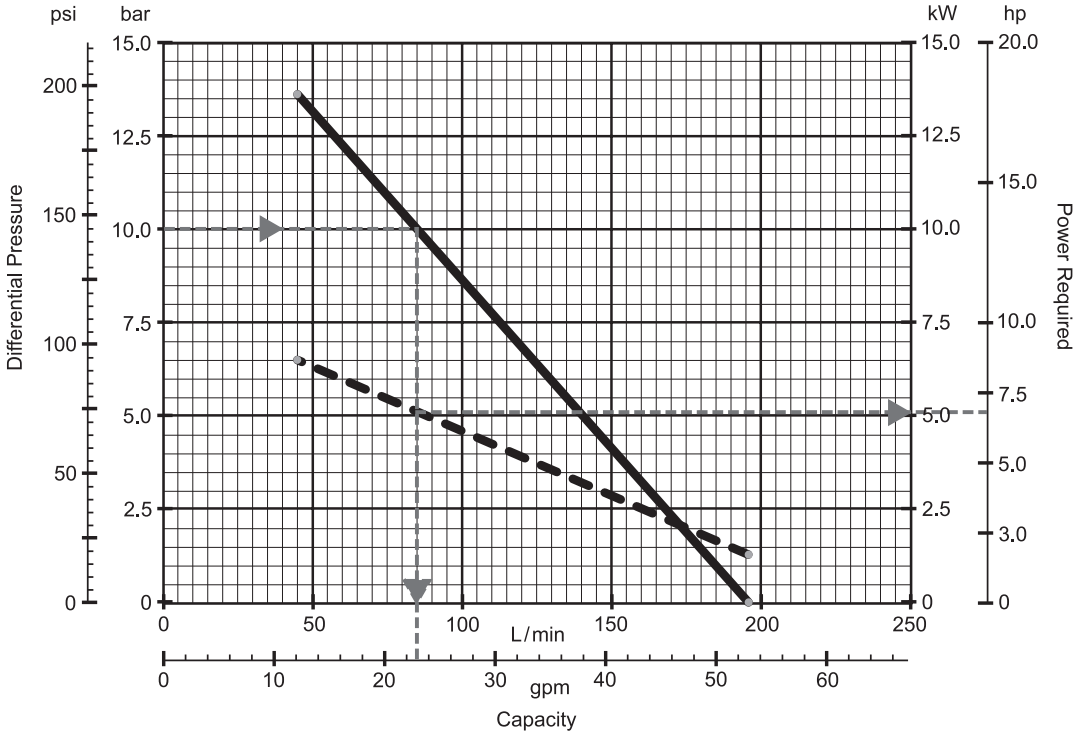
3450 RPM @ 60 Hz

Differential pressure:
10.0 bar
145.0 psi
Flow:
85 L/min
22.5 gpm
Power required:
5.59 kW
7.5 hp

Curves based on LPG[1]
Capacity
Power required

[1] *The performance curves are based on aboveground LPG installations. Performance curves for underground LPG tanks will vary based on the specific installation. Consult factory.*

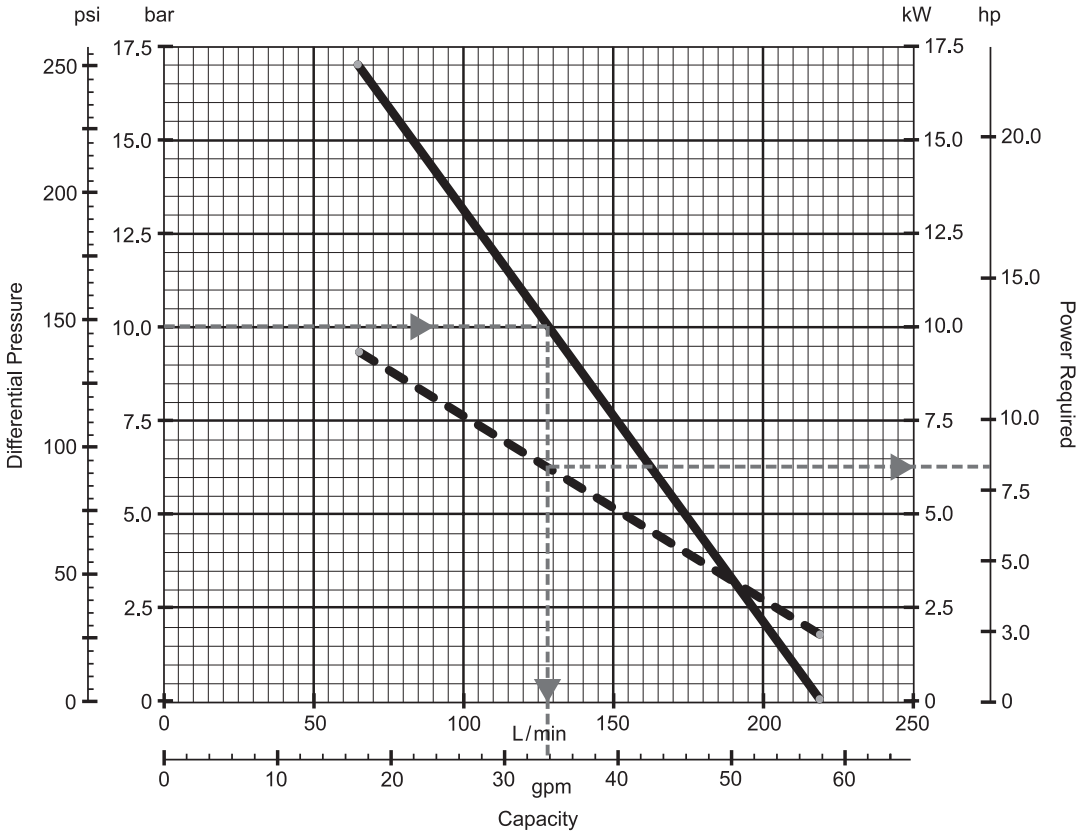
Model 150—Performance



2880 RPM @ 50 Hz

Differential pressure:
10.0 bar
145.0 psi
Flow:
85 L/min
22.5 gpm
Power required:
5.1 kW
6.8 hp

Curves based on LPG[1]
Capacity
Power required



3450 RPM @ 60 Hz

Differential pressure:
10.0 bar
145.0 psi
Flow:
128 L/min
33.8 gpm
Power required:
6.3 kW
8.4 hp

Curves based on LPG[1]
Capacity
Power required

[1] *The performance curves are based on aboveground LPG installations. Performance curves for underground LPG tanks will vary based on the specific installation. Consult factory.*

Model 060—Model Number Identification and Available Options

BASE MODEL NUMBER	FF060	FD060	DLF060	DLD060
Inlet*	1½" ANSI	40mm PN40 DIN 2635	1½" ANSI	40mm PN40 DIN 2635
Outlet*	1" ANSI	25mm PN40 DIN 2635	1" ANSI	25mm PN40 DIN 2635
Ship weight, bare pump kg (lbs.)	28.6 kg (63 lbs.)	28.6 kg (63 lbs.)	34 kg (75 lbs.)	34 kg (75 lbs.)
Description	Frame mounted ANSI flange	Frame mounted DIN flange	Direct mount pump with C-face frame ANSI flange**	Direct mount pump with C-face frame DIN flange**

*All standard ANSI port sizes are 300 lb.

**Frame adapter listed in the PART OPTIONS table at the bottom of this page is required for NEMA motors over 10 hp (215 TC frame size). Special frame or adapter required for IEC motors over 7.5 kW. Consult factory for assistance.

MODEL NUMBER

BASE X X X X

SPECIFICATION FIELDS

Motor	No integral motor	Standard NA	NEMA C-face frame (3 - 10 hp) E90L flanged motor frame / 132C C-face frame (2.2 - 7.5 kW)	C* M*

* Motor is not included

Material Selection:	Bronze impeller Stainless steel sleeve Stainless steel seal housing Steel shaft	Standard	D
	Same as spec D listed above but includes a steel impeller	Charge option	F
Seal Seat Material	Silicon carbide	Standard	6
O-ring Material	Buna-N	Standard	A
	Neoprene®	No charge option	B

MOUNTING OPTIONS

Description	Model Reference	Part Number	Maximum Motor Frame Size	Ship Wt. kg (lbs.)
Mounting Set-Up for **Direct Drive.** Includes steel baseplate, flexible coupling, and coupling guard. PUMP AND MOTOR NOT INCLUDED (b) (c)	FF060/FD060	101-14 (a)	184T 215T 256T	58 kg. (128 lbs.)

(a) Specify motor frame when ordering.

(b) Pricing based upon motor of current frame size, 3450 RPM, 60 cycle as shown on page A190, latest issue. Drivers of non-standard sizes may require additional mounting charges.

(c) There is an additional charge for mounting customer supplied motor. See page A180 for details.

HIGH DIFFERENTIAL PRESSURE (HDP) PACKAGES

Description		
Three Phase Applications	**Model Reference**	**Part Number**
Pump, 101 mounting, B166B-1CAU and a 5 hp, explosion proof, 60 Hz., three phase motor.	FF060CD6A	HDPFF060-3P53
Pump, coupling, B166B-1CAU and a 5 hp, explosion proof, 60 Hz., three phase, C-face motor.	DLF060CD6A	HDPDLF060-3P53
Single Phase Applications	**Model Reference**	**Part Number**
Same components listed in three phase applications plus a Variable Frequency Drive (VFD - part number 4204-1)	FF060CD6A	HDPFF060-1P53
	DLF060CD6A	HDPDLF060-1P53
Pump, 101 mounting, B166B-1CAU and a 5 hp explosion proof, 60 Hz., single phase motor.	FF060CD6A	HDPFF060-1P51
Pump, coupling, B166B-1CAU and a 5 hp explosion proof, 60 Hz., single phase, C-face motor.	DLF060CD6A	HDPDLF060-1P51

ACCESSORY OPTION

Description	Model Reference	Part Number
10 hp Variable Frequency Drive for use with 5 hp motor	10 HP VFD	4204-1

PART OPTIONS

Description	Part Number
Coupling for DLF060 (182/184 TC NEMA frame size)	1345-2
Coupling for DLF060 (213/215 TC NEMA frame size)	1345-1
Special bore coupling for DLF/DLD060 (all other NEMA and IEC size C-face motors). MUST SPECIFY MOTOR SHAFT DIAMETER!	1345

Refer to the Installation, Operation & Maintenance (IOM) Manual (IF102) for details on other part numbers.

Neoprene® is a registered trademark of DuPont. NA = Not available CF = Consult factory

Model 075—Model Number Identification and Available Options

MODEL NUMBER

BASE X X X X

BASE MODEL NUMBER	FF075	FD075	DLF075	DLD075
Inlet*	1½" ANSI	40 mm PN40 DIN 2635	1½" ANSI	40 mm PN40 DIN 2635
Outlet*	1" ANSI	25 mm PN40 DIN 2635	1" ANSI	25 mm PN40 DIN 2635
Ship weight, bare pump kg (lbs.)	28.6 kg (63 lbs.)	28.6 kg (63 lbs.)	34 kg (75 lbs.)	34 kg (75 lbs.)
Description	Frame mounted ANSI flange	Frame mounted DIN flange	Direct mount pump with C-face frame ANSI flange**	Direct mount pump with C-face frame DIN flange**

*All standard ANSI port sizes are 300 lb.

**Frame adapter listed in the PART OPTIONS table at the bottom of this page is required for NEMA motors over 10 hp (215 TC frame size). Special frame or adapter required for IEC motors over 7.5 kW. Consult factory for assistance.

SPECIFICATION FIELDS

Motor	No integral motor	Standard NA	NEMA C-face frame (3 - 10 hp) E90L flanged motor frame / 132C C-face frame (2.2 - 7.5 kW)	C* M*

* Motor is not included

Material Selection:	Bronze impeller Stainless steel sleeve Stainless steel seal housing Steel shaft	Standard	D
	Same as spec D listed above but includes a steel impeller	Charge option	F

Seal Seat Material	Silicon carbide	Standard	6

O-ring Material	Buna-N	Standard	A
	Neoprene®	No charge option	B

MOUNTING OPTIONS

Description	Model Reference	Part Number	Maximum Motor Frame Size	Ship Wt. kg. (lbs.)
Mounting Set-Up for **Direct Drive.** Includes steel baseplate, flexible coupling, and coupling guard. PUMP AND MOTOR NOT INCLUDED (b)(c)	FF075/FD075	101-14 (a)	184T 215T 256T	58 kg. (128 lbs.)

(a) Specify motor frame when ordering.

(b) Pricing based upon motor of current frame size, 3450 RPM, 60 cycle as shown on page A190, latest issue. Drivers of non-standard sizes may require additional mounting charges.

(c) There is an additional charge for mounting customer supplied motor. See page A180 for details.

HIGH DIFFERENTIAL PRESSURE (HDP) PACKAGES

Description		
Three Phase Applications	**Model Reference**	**Part Number**
Pump, 101 mounting, B166B-1CAU and a 7.5 hp, explosion proof, 60 Hz., motor	FF075CD6A	HDPFF075-3P75
Pump, coupling, B166B-1CAU and a 7.5 hp, explosion proof, 60 Hz., C-face motor	DLF075CD6A	HDPDLF075-3P75
Single Phase Applications	**Model Reference**	**Part Number**
Same components listed in three phase applications plus a Variable Frequency Drive (VFD #4204)	FF075CD6A DLF075CD6A	HDPFF075-1P75 HDPDLF075-1P75

ACCESSORY OPTION

Description	Model Reference	Part Number
15 hp Variable Frequency Drive for use with 7.5 hp motor	15HP VFD	4204

PART OPTIONS

Description	Part Number
Coupling for DLF075 (182/184 TC NEMA frame size)	1345-2
Coupling for DLF075 (213/215 TC NEMA frame size)	1345-1
Special bore coupling for DLF/DLD075 (all other NEMA and IEC size C-face motors). MUST SPECIFY MOTOR SHAFT DIAMETER!	1345

Refer to the Installation, Operation & Maintenance (IOM) Manual (IF102) for details on other part numbers.

Neoprene® is a registered trademark of DuPont.

NA = Not available

Model 150—Model Number Identification and Available Options

MODEL NUMBER

BASE X X X X

BASE MODEL NUMBER	FF150	FD150	DLF150	DLD150
Inlet*	1½" ANSI	40mm PN40 DIN 2635	1½" ANSI	40mm PN40 DIN 2635
Outlet*	1" ANSI	25mm PN40 DIN 2635	1" ANSI	25mm PN40 DIN 2635
Ship weight, bare pump kg (lbs.)	28.6 kg (63 lbs.)	28.6 kg (63 lbs.)	34 kg (75 lbs.)	34 kg (75 lbs.)
Description	Frame mounted ANSI flange	Frame mounted DIN flange	Direct mount pump with C-face frame ANSI flange**	Direct mount pump with C-face frame DIN flange**

*All standard ANSI port sizes are 300 lb.

**Frame adapter listed in the PART OPTIONS table at the bottom of this page is required for NEMA motors over 10 hp (215 TC frame size). Special frame or adapter required for IEC motors over 7.5 kW. Consult factory for assistance.

SPECIFICATION FIELDS

Motor	No integral motor	Standard NA	NEMA C-face frame (3 - 10 hp) E90L flanged motor frame / 132C C-face frame (2.2 - 7.5 kW)	C* M*

* Motor is not included

Material Selection:	Bronze impeller Stainless steel sleeve Stainless steel seal housing Steel shaft	Standard	D
	Same as spec D listed above but includes a steel impeller	Charge option	F
Seal Seat Material	Silicon carbide	Standard	6
O-ring Material	Buna-N	Standard	A
	Neoprene®	No charge option	B

MOUNTING OPTIONS

Description	Model Reference	Part Number	Maximum Motor Frame Size	Ship Wt. kg (lbs.)
Mounting Set-Up for **Direct Drive.** Includes steel baseplate, flexible coupling, and coupling guard. PUMP AND MOTOR NOT INCLUDED (b) (c)	FF150/FD150	101-14 (a)	184T 215T 256T	58 kg. (128 lbs.)

(a) Specify motor frame when ordering.

(b) Pricing based upon motor of current frame size, 3450 RPM, 60 cycle as shown on page A190, latest issue. Drivers of non-standard sizes may require additional mounting charges.

(c) There is an additional charge for mounting customer supplied motor. See page A180 for details.

HIGH DIFFERENTIAL PRESSURE (HDP) PACKAGES

Description		
Three Phase Applications	**Model Reference**	**Part Number**
Pump, 101 mounting, B166B-1CAU and 10 hp, explosion proof, 60 Hz., motor	FF150CD6A	HDPFF150-3P10
Pump, coupling, B166B-1CAU and 10 hp, explosion proof, 60 Hz., C-face motor	DLF150CD6A	HDPDLF150-3P10
Single Phase Applications	**Model Reference**	**Part Number**
Same components listed in three phase applications plus a Variable Frequency Drive (VFD #4204-2)	FF150CD6A	HDPFF150-1P10
	DLF150CD6A	HDPDLF150-1P10

ACCESSORY OPTION

Description	Part Number	Part Number
20 hp Variable Frequency Drive for use with 10 hp motor	20HP VFD	4204-2

PART OPTIONS

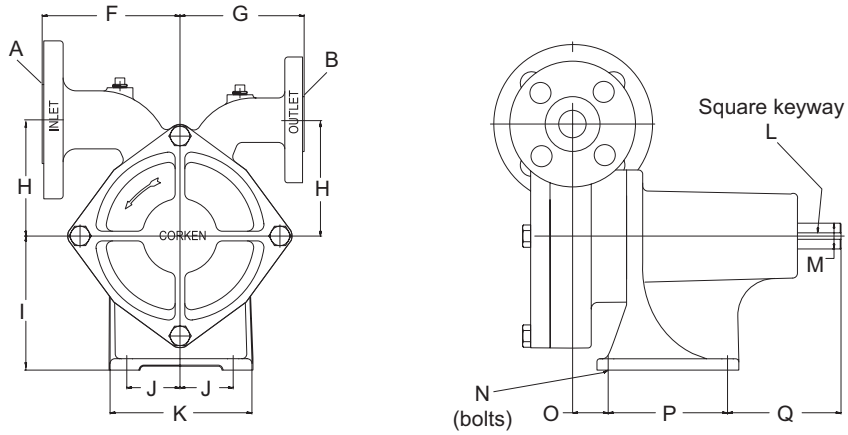
Description	Part Number
Coupling for DLF150 (182/184 TC NEMA frame size)	1345-2
Coupling for DLF150 (213/215 TC NEMA frame size)	1345-1
Coupling for FF/FD150 (254/256 TC NEMA frame size)	CF
Special bore coupling for DLF/DLD150 (all other NEMA and IEC size C-face motors). MUST SPECIFY MOTOR SHAFT DIAMETER!	1345

Refer to the Installation, Operation & Maintenance (IOM) Manual (IF102) for details on other part numbers.

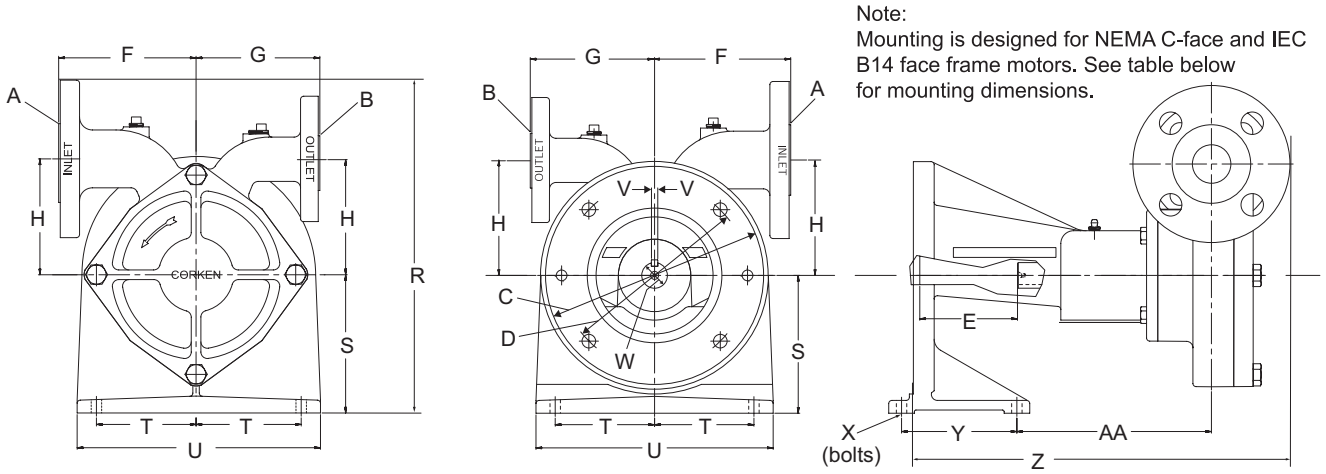
Neoprene® is a registered trademark of DuPont. NA = Not available CF = Consult factory

Models 060, 075 and 150—Outline Dimensions

Frame Mount ANSI Flange (FF) and DIN Flange (FD)



Direct Mount ANSI Flange (DLF) and DIN Flange (DLD)



Flange Dimensions		
Model	A (inlet)	B (outlet)
All models FF and DLF	1-1/2" ANSI 300#	1" ANSI 300#
All models FD and DLD	DIN 2635, 40 PN, 40 mm	DIN 2635, 40 PN, 25 mm

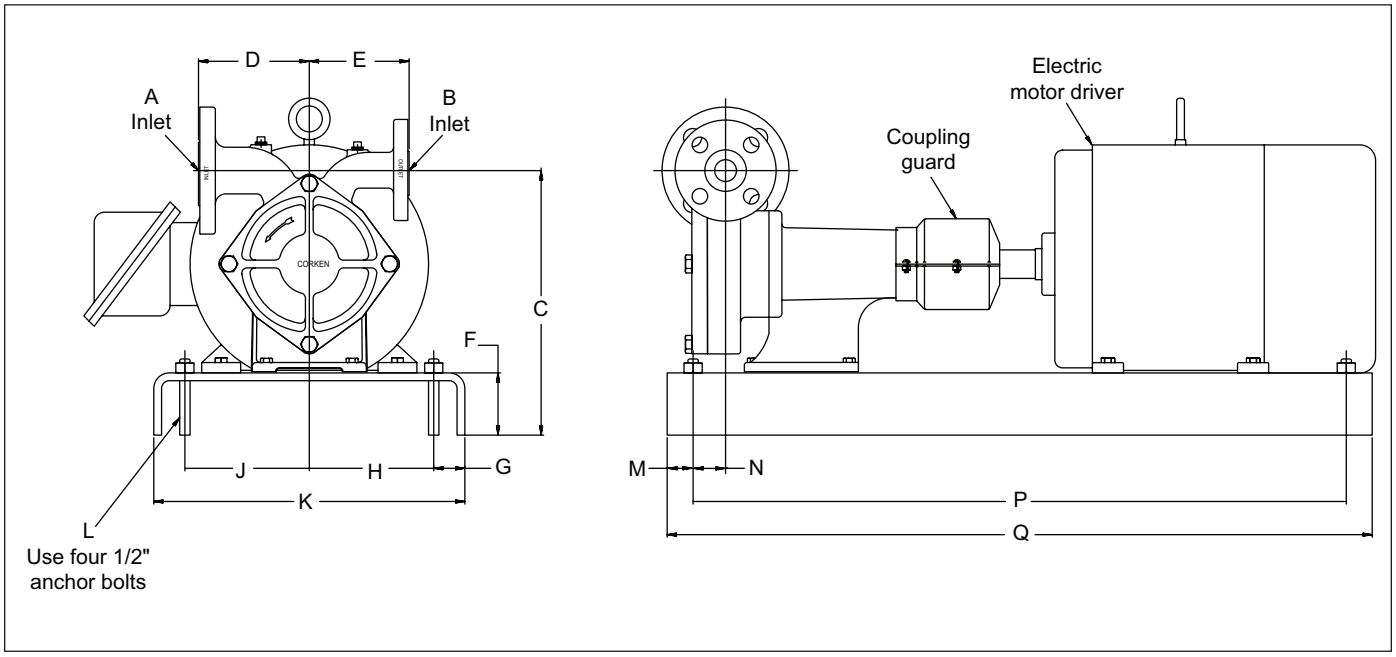
Motor Mounting Dimensions			
Type	C	D	E
NEMA	8-1/2"	7-1/4"	3-13/16"
IEC	165 mm	130 mm	90.75 mm

Outline Dimensions – Inches (Centimeters)										
F	G	H	I	J	K	L	M	N	O	P
5-5/16 (13.57)	4-13/16 (12.23)	4-1/2 (11.43)	5-13/64 (13.20)	2-1/16 (5.24)	5-1/2 (13.97)	1/4 (0.63)	1 diameter (2.54)	5/16 bolts (0.79)	1-3/8 (3.50)	4-5/8 (11.75)

Outline Dimensions – Inches (Centimeters)										
Q	R	S	T	U	V	W	X	Y	Z	AA
4-3/8 (11.18)	12-15/16 (32.86)	5-3/8 (13.65)	3-7/8 (9.84)	9-1/4 (23.50)	1/4 (0.63)	1 (25.4)	5/16 bolts (0.79)	4-1/2 (11.42)	14-3/8 (36.51)	7-19/32 (19.27)

Models 060-101, 075-101 and 150-101—Outline Dimensions

Frame Mount ANSI Flange (FF) and DIN Flange (FD) with –101 Mounting



Flange Dimensions		
Model	A (inlet)	B (outlet)
FF060, FF075 and FF150	1-1/2" ANSI 300#	1" ANSI 300#
FD060, FD075 and FD150	DIN 2635, 40 PN, 40 mm	DIN 2635, 40 PN, 25 mm

C Dimensions All Models	
182T–215T Frame	12-3/4" (32.40)
254T–256T Frame	13-3/4" (34.94)

Outline Dimensions For 182T–256T Frame—Inches (centimeters)											
D	E	F	G	H	J	K	L	M	N	P	Q
5-11/32 (13.57)	4-13/16 (12.23)	3 (7.62)	1-1/2 (3.81)	6 (15.24)	6 (15.24)	15 (38.10)	1/2 Bolts (1.27)	1-1/4 (3.17)	1-9/16 (3.97)	31-1/2 (80.01)	34 (86.36)

C-Model—Features & Specifications

Equipment Type & Options

Regenerative turbine liquid pump with NPT or 300# ANSI flange connections

Applications

Cylinder filling, bottle filling, dispenser cabinets

Features & Benefits

Regenerative turbine type:	Able to handle liquefied gasses without flashing
Heavy duty bearings:	Long bearing life
Single mechanical seal:	Very easy seal replacement and maintenance
Floating impeller:	Long impeller life, lower maintenance
Compact design:	Space saving, ideal for cabinet dispensers
NPT or 300# ANSI flanges:	Optimal versatility for your installation

Operating Specifications

Inlet:	C10: 1-1/4" NPT, C12 through C14: 1-1/2" NPT, 300# ANSI optional
Outlet:	1" NPT, 300# ANSI optional
RPM:	3450 @ 60 Hz, limited use in 50 Hz @ 2880 RPM
Maximum working pressure:[1]	400 psig (27.6 bar)
Maximum differential pressure:	C10: 75 psig (5.2 bar), C12: 100 psig (6.9 bar), C13,C14: 125 psig (8.6 bar)
Driver range:	1 to 3 hp (0.75 to 2.2 kW)
Temperature range:	-25° to 225°F (-32° to 107°C)
Flow range:	3 to 8 gpm (7.6 to 136.3 L/min)

[1] *Maximum discharge pressure should be limited to the maximum system pressure rating.*

Material Specifications

Part	Model	Standard Material	Optional Material
Case, cover	All	Ductile iron ASTM A536	
Impeller	All	Bronze	Ductile iron, 416 stainless steel
Impeller key	All	Steel	Stainless steel
Seal seat	All	Cast iron	304 Stainless steel, Ni-Resist cast iron, ceramic, tungsten carbide
Seal rotor	All	Carbon	
Seal metal parts	All	Steel	
Seal sleeve	All	Aluminum	416 stainless steel
Seal follower	All	Aluminum	416 stainless steel
Seal housing	All	Steel, cadmium plated	416 stainless steel
O-rings	All	Buna-N	Neoprene®[2]
Ball bearings	All	Steel	

[2] *Registered trademark of the DuPont company.*

Performance

C10 (60 Hz only)

Service: Fill 20# cylinders in 30 seconds to 1 minute, 100# cylinders in 2-1/2 to 3-1/2 minutes, motor fueling through a meter at 7 gpm (26.5 L/min)[1]	
1 hp[2] (0.75 kW) Continuous Duty Motor	gpm (L/min)
Capacity at 20 psid (1.4 bar d)	12 (45.4)
Capacity at 50 psid (3.4 bar d)	7 (26.5)
Capacity at 75 psid (5.2 bar d)	3 (11.4)

C12 (60 Hz only)

Service: Fill 20# cylinders in 15 to 30 seconds, 100# I.C.C cylinders in 2 to 3 minutes, motor fueling through a meter at 15 gpm (56.8 L/min)[1]	
1 hp[2] (0.75 kW) Continuous Duty Motor	gpm (L/min)
Capacity at 20 psid (1.4 bar d)	19 (71.9)
Capacity at 70 psid (4.8 bar d)	12.5 (47.3)
Capacity at 85 psid (5.9 bar d)	10 (37.9)

C13

Service: Fill 20# cylinders in 10 to 20 seconds, 100# cylinders in 1-1/2 minutes, motor fueling through a meter at 23 gpm (87.1 L/min)[1]	
2 hp (1.5 kW) Continuous Duty Motor	gpm (L/min)
Capacity at 20 psid (1.4 bar d)	28 (106.0)
Capacity at 75 psid (5.2 bar d)	16 (60.6)
Capacity at 100 psid (6.9 bar d)	11.5 (43.5)

C14

Service: Fill 100# cylinders in less than one minute, motor fueling through a meter at 30 gpm (113.6 L/min)[1]	
3 hp (2.2 kW) Continuous Duty Motor gp	(L/min)
Capacity at 20 psid (1.4 bar d)	38 (143.8)
Capacity at 70 psid (4.8 bar d)	26 (98.4)
Capacity at 100 psid (6.9 bar d)	20 (75.7)

[1] Times are estimates and will be affected by conditions at the site, cylinder and OPD design. Psid is pounds per square inch differential pressure.

[2] This is a special motor with a 1.5 service factor.

C-Model—Model Number Identification and Available Options

Base Model	C10	C12	C13	C14	CF10	CF12	CF13	CF14
Inlet	1-1/4" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" 300# ANSI	1-1/2" 300# ANSI	1-1/2" 300# ANSI	1-1/2" 300# ANSI
Outlet	1" NPT	1" NPT	1" NPT	1" NPT	1" 300# ANSI	1" 300# ANSI	1" 300# ANSI	1" 300# ANSI
Weight bare pump lb (kg)[1]	76 (35)	86 (39)	126 (57)	150 (68)	82 (37)	92 (42)	132 (60)	156 (71)

Model Number
Base X X X X

Motor Options[2]	1 hp[3] single phase 115/208/230 volt, 60 Hz	Opt.	Std.			Opt.	Std.			E
	2 hp single phase 115/208/230 volt, 50/60 Hz	Opt.	Opt.	Std.		Opt.	Opt.	Std.		F
	3 hp three phase 230/460 volt, 50/60 Hz	Opt.	Opt.	Opt.	Std.	Opt.	Opt.	Opt.	Std.	G

Material Selection		
Bronze impeller Aluminum seal sleeve & follower Steel shaft	Standard	D

Seal seat	Cast iron	Standard	2

O-rings	Buna-N	Standard	A

Options	Part Number
Hydrostatic test	3000-X4
3/4" By-pass valve purchased with C-Model pump	B166B-.75BAU-Y
1" By-pass valve purchased with C-Model pump	B166B-1BAU-Y
Repair kit—seal assembly	113-CXA
1 hp, 60 Hz Coro-Flo® motor	2556
2 hp, 50/60 Hz Coro-Flo® motor	4261

Options	Part Number
3 hp, 50/60 Hz Coro-Flo® motor	2557
Motor mounted starter for 1 hp motor[4]	SM-20
Remote wall mounted starter for 1 hp motor[4]	S-20
Motor mounted starter for 2 hp motor[4]	SM-30
Remote wall mounted starter for 2 hp motor[4]	S-30

[1] *Weight corresponds to standard motor.*

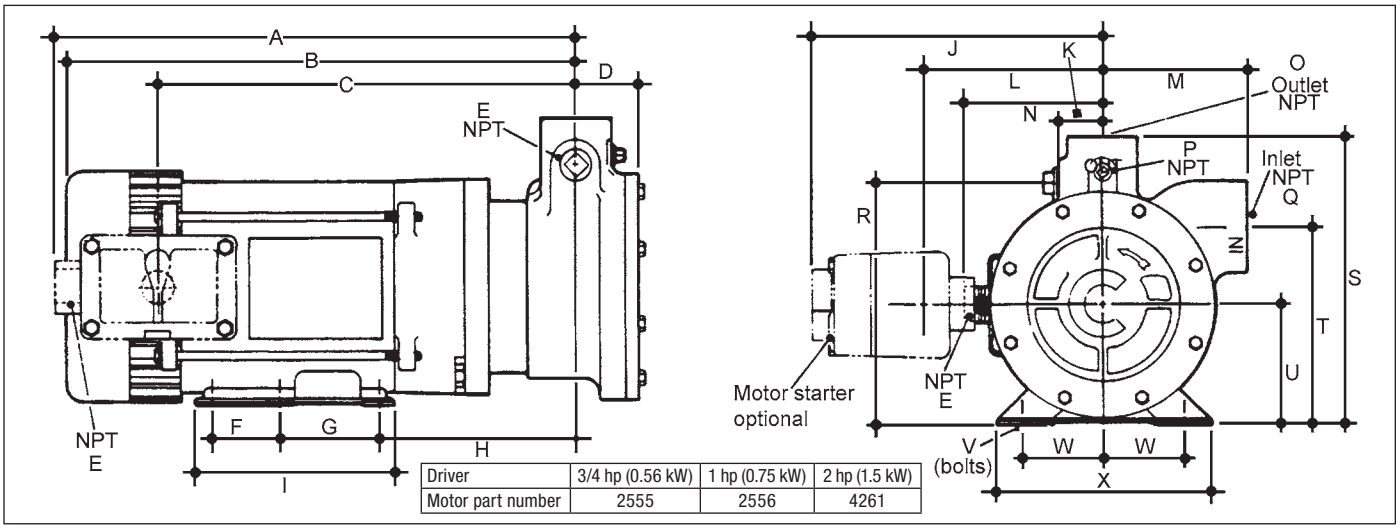
[2] *These motors are listed by Underwriters Laboratories, Inc. and CSA for Class 1, Group D, explosion proof service. These motors do not have internal overload protection.*

[3] *This is a special motor with a 1.5 service factor.*

[4] *Starters provide thermal overload protection, manual reset and heater.*

C-Model—Outline Dimensions

1 to 2 Hp Motors

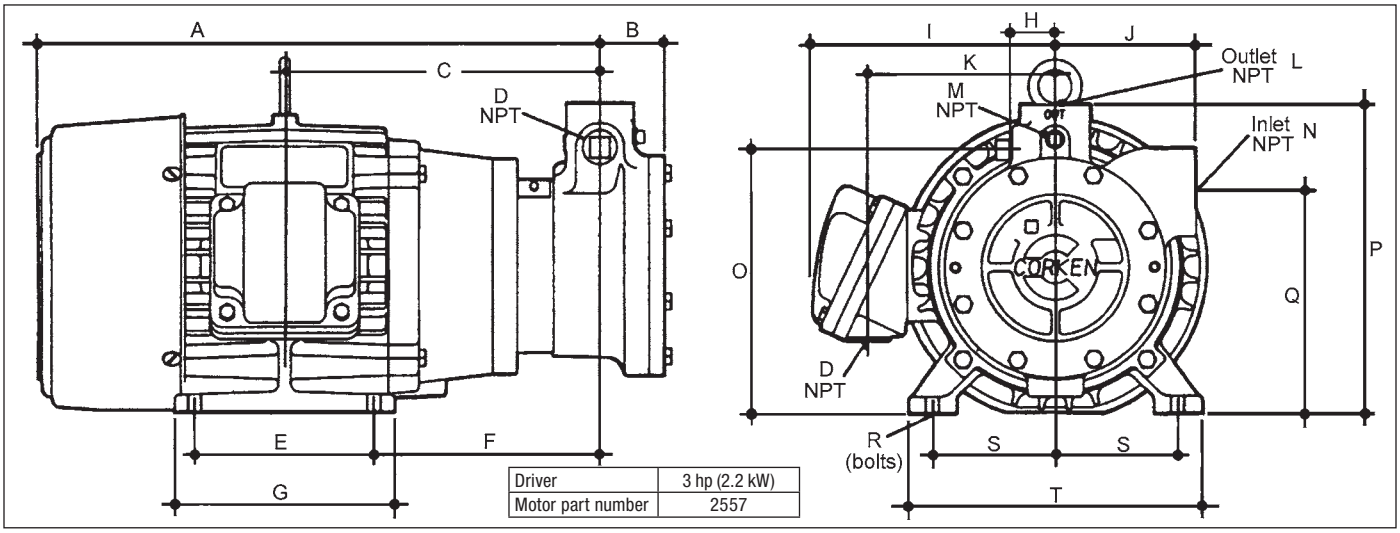


Driver	3/4 hp (0.56 kW)	1 hp (0.75 kW)	2 hp (1.5 kW)
Motor part number	2555	2556	4261

Outline Dimensions—Inches (Centimeters)													
Model	hp	A	B	C	D	E	F	G	H	I	J	K	L
C9, C10, C12	1	16-1/8 (40.96)	15-3/4 (40.01)	13 (33.02)	2 (5.08)	3/4 (1.91)	1 (2.54)	4 (10.16)	5-7/8 (14.90)	5-7/8 (14.90)	8-11/16 (22.06)	1-5/16 (3.33)	5-3/8 (13.65)
C12, C13	2	18-17/32 (47.07)	8-1/16 (45.88)	14-15/16 (39.94)	2 (5.08)	3/4 (1.91)	1 (2.54)	4 (10.16)	5-7/8 (14.90)	6-1/2 (16.51)	9-5/16 (23.65)	1-5/16 (3.33)	6 (15.24)

Outline Dimensions—Inches (Centimeters)													
Model	hp	M	N	O	P	Q	R	S	T	U	V	W	X
C9, C10, C12	1	4-5/16 (10.95)	4-3/16 (10.63)	1 (2.54)	1/4 (0.64)	1-1/2 (3.81)	6-1/8 (15.56)	8-1/2 (21.59)	5-3/4 (14.61)	3-1/2 (8.89)	1/4 bolt (0.64)	2-7/16 (6.19)	6-1/2 (16.51)
C12, C13	2	4-5/16 (10.95)	4-13/16 (12.22)	1 (2.54)	1/4 (0.64)	1-1/2 (3.81)	7-1/8 (18.10)	9-1/2 (24.13)	6-13/16 (17.30)	3-1/2 (8.89)	3/8 bolt (0.95)	2-7/16 (6.19)	6-1/2 (16.51)

3 Hp Motors



Driver	3 hp (2.2 kW)
Motor part number	2557

Outline Dimensions–Inches (Centimeters)																					
Model	Hp	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T
C13, C14	3	17-1/4 (43.80)	2 (5.08)	9-11/16 (24.60)	3/4 (1.91)	4-1/2 (11.43)	6-15/16 (17.62)	5-1/2 (13.97)	1-5/16 (3.33)	7-5/8 (24.60)	4-5/16 (10.95)	5-3/4 (14.60)	1 (2.54)	1/4 (0.64)	1-1/2 (3.81)	8-1/8 (20.64)	9-1/2 (24.13)	6-13/16 (17.30)	5/16 bolt (0.79)	3-3/4 (9.52)	8-3/4 (22.23)

F-/DS-/DL-Model—Features & Specifications

Equipment Type & Options

Regenerative turbine liquid pump
Foot mounted (F-Models)
Direct mounted (DS- or DL- Models)
All have either 300# ANSI flanges or NPT

Applications

Under & aboveground autogas dispensing
Multiple cylinder filling stations
Vaporizer feed—high pressure
Direct, high pressure asphalt burner feed

Features & Benefits

Regenerative turbine type:	Able to handle liquefied gases without flashing
High flows and differential pressures:	Ideal for dual hose dispensers and multiple dispensers
Heavy duty bearings:	Long bearing life
Single mechanical seal:	Very easy seal replacement and maintenance
Floating impeller:	Long impeller life, lower maintenance
Two mounting options:	Optimal versatility for your installation

Operating Specifications

Inlet:	F/DS/DL 9 through 10, 1-1/4" NPT	Maximum working pressure:	400 psig (27.6 bar)
	F/DS/DL 12 through 14, 1-1/2" NPT	Maximum differential pressure:	150 psig (10.3 bar)[1]
Optional:	1" NPT, 1" or 1-1/2" 300# ANSI	Optional driver range:	1 to 10 hp (0.75 to 7.5 kW)
Outlet:	1" NPT, 300# ANSI optional	Temperature range:	-25° to 225°F (-32° to 107°C)
RPM:	3450 @ 60 Hz, 2880 @ 50 Hz	Flow range:	2 to 36 gpm (7.6 to 136.3 L/min)
Rotation:	Clockwise only	Maximum viscosity:	400 SSU (88 cSt)

Material Specifications

Part	Model	Standard Material	Optional Material
Case, cover	All	Ductile iron ASTM A536	
Impeller	All	Bronze	Ductile iron, Stainless steel
Impeller key	All	Steel	Stainless steel
Seal seat	All	Cast iron	304 SS, N-Resist, Ceramic, Tungsten carbide
Seal rotor	All	Carbon	
Seal metal parts	All	Steel	
Seal sleeve	All	Aluminum	Stainless steel
Seal follower	All	Aluminum	Stainless steel
Seal housing	All	Steel, cadmium plated	Stainless steel
Shaft	F-Models	Stressproof steel	Stainless steel
Frame	F-Models	Gray iron ASTM A48 Class 30	
Bearing cap	F-Models	Aluminum	
O-rings	All	Buna-N	Neoprene®[2]
Retainer rings	F-Models	Steel	
Ball bearings	All	Steel	

[1] *On LPG installations a maximum system differential of 125 psi (8.62 bar) is allowed by Underwriters Laboratories and NFPA #58. Maximum discharge pressure should be limited to the maximum system pressure rating.*

[2] *Registered trademark of the DuPont company.*

Cylinder Filling Performance

Model 9 (usable at 60 Hz only)

Fill small cylinders, fork lift cylinders and 20# cylinders in 30 to 45 seconds[1]	
1 hp (0.75 kW) continuos duty motor	gpm (L/min)
Capacity @ 20 psid (1.4 bar d)	7 (26.5)
Capacity @ 60 psid (4.1 bar d)	3.5 (13.2)
Capacity @ 85 psid (5.9 bar d)	1.5 (5.7)

Model 10

Fill 20# cylinders in 30 seconds to 1 minute, 100# cylinders in 2.5 to 3.5 minutes. Motor fueling through a meter at 7 gpm (26.5 L/min)[1]	
1 hp (0.75 kW) continuos duty motor	gpm (L/min)
Capacity @ 20 psid (1.4 bar d)	12 (45.4)
Capacity @ 50 psid (3.4 bar d)	7 (26.5)
Capacity @ 75 psid (5.2 bar d)	3 (11.4)
Capacity @ 80 psid (5.5 bar d)	2 (7.6)

Model 12

Fill 20# cylinders in 15 to 30 seconds, 100 # cylinders in 2 to 3 minutes. Motor fueling through a meter at 15 gpm (56.8 L/min)[1]	
1 to 2 hp (0.75 to 1.5 kW) continuos duty motor	gpm (L/min)
Capacity @ 20 psid (1.4 bar d)	19 (71.9)
Capacity @ 70 psid (4.8 bar d)	12.5 (47.3)
Capacity @ 85 psid (5.9 bar d)	10 (37.9)
Capacity @ 100 psid (6.9 bar d)	7.5 (28.4)

Model 14

Fill 100# cylinders in less than one minute. Motor fueling through a meter at 30 gpm (113.6 L/min)[1]	
3 to 5 hp (2.2 to 3.7 kW) continuos duty motor	gpm (L/min)
Capacity @ 20 psid (1.4 bar d)	38 (143.8)
Capacity @ 70 psid (4.8 bar d)	26 (98.4)
Capacity @ 100 psid (6.9 bar d)	20 (75.7)
Capacity @ 125 psid (8.6 bar d)	14 (53.0)

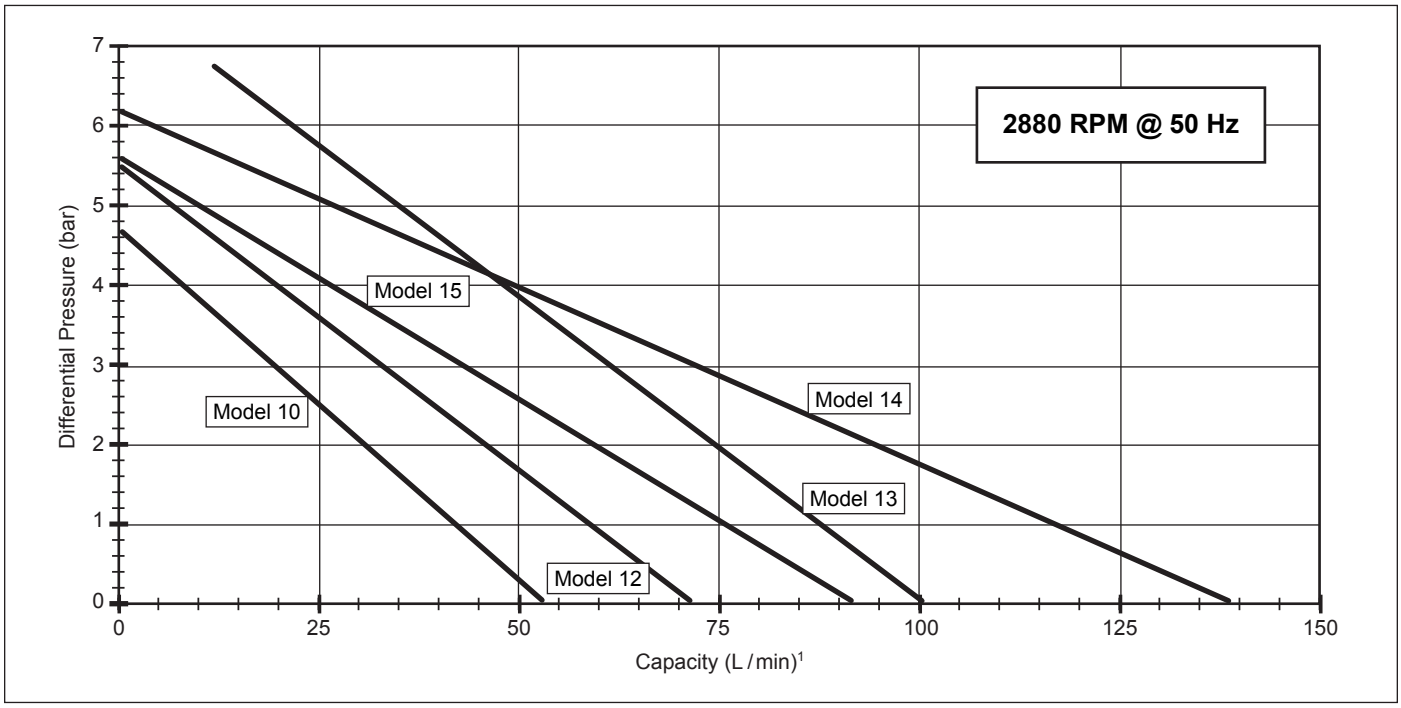
[1] *Times are estimates and will be affected by conditions at the site, cylinder and OPD design. Psid is pounds per square inch differential pressure.*

Driver Range

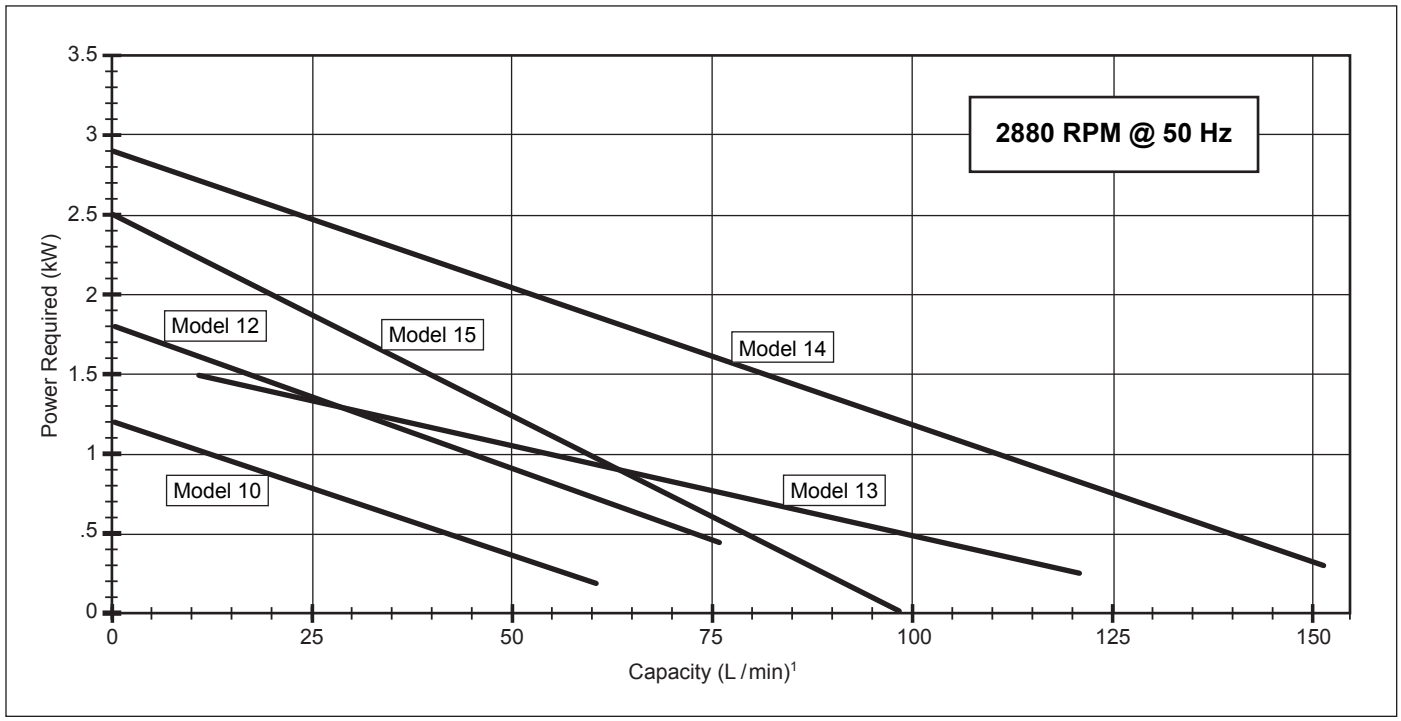
F-Models	56–256T	DS-Models	56C–145TC	DL-Models	182TC–215TC

All F-, DS-, DL-Models

Flow vs. Differential Pressure



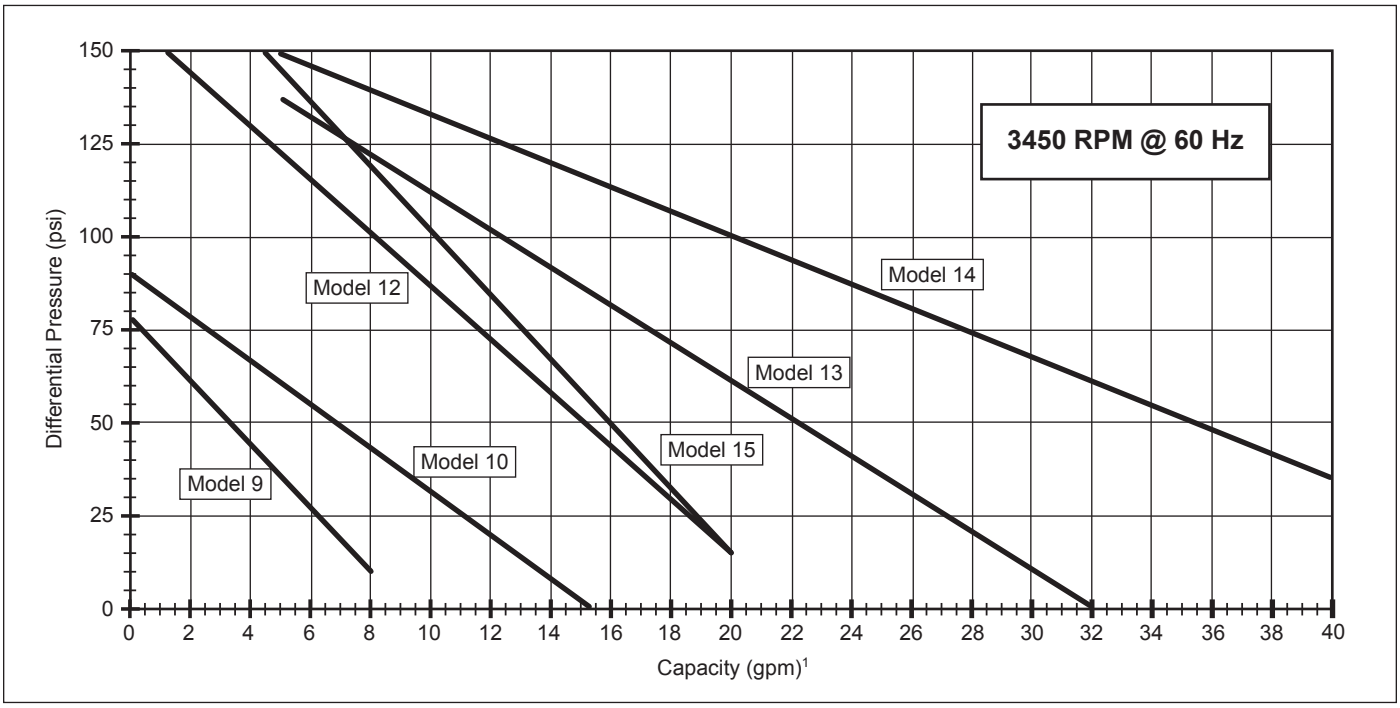
Flow vs. Power Required



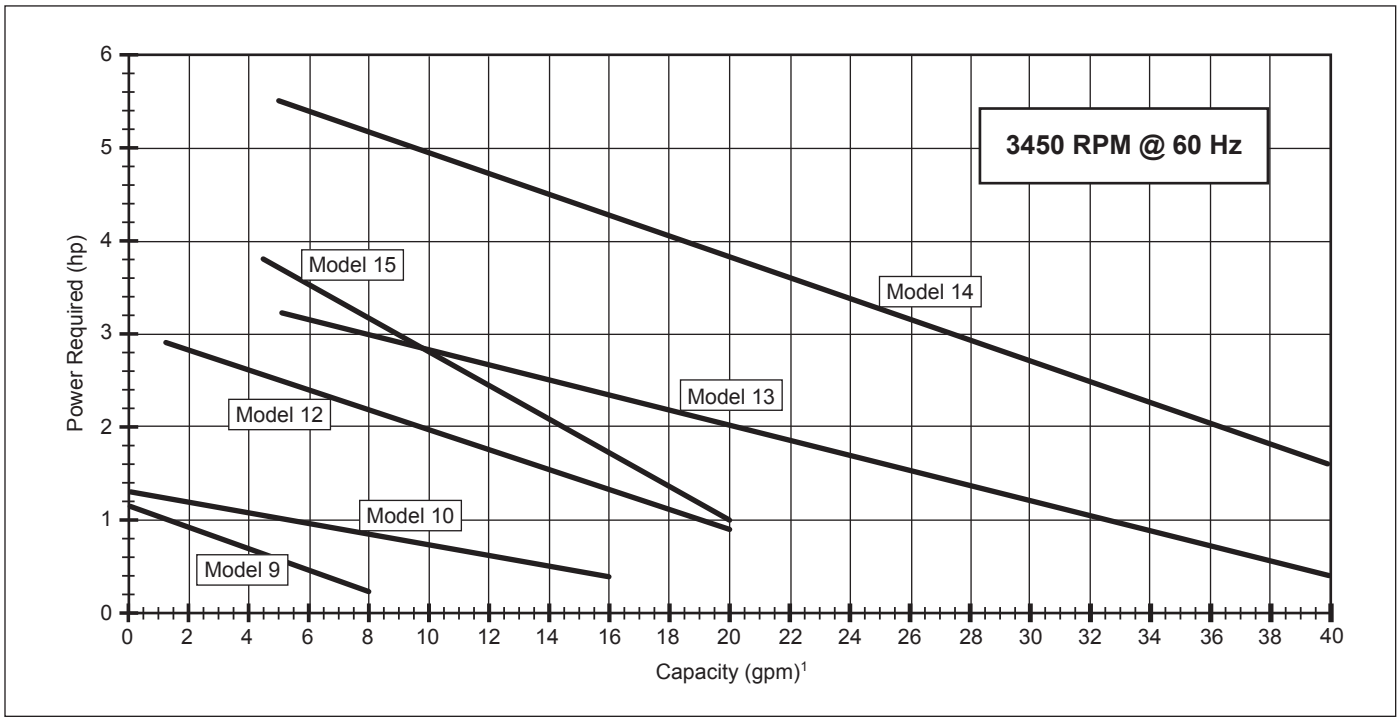
[1] *The performance curves are based on aboveground LPG installations. Performance curves for underground LPG tanks will vary based on the specific installation. Consult factory.*

All F-, DS-, DL-Models

Flow vs. Differential Pressure



Flow vs. Power Required



[1] *The performance curves are based on aboveground LPG installations. Performance curves for underground LPG tanks will vary based on the specific installation. Consult factory.*

F-/DS-/DL-Model—Model Number Identification & Available Options

Base Model	F9	F10	F12	F13	F14	F15
Inlet	1-1/4" NPT	1-1/4" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT
Outlet	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Pump weight lb (kg)	48 (22)	48 (22)	48 (22)	48 (22)	48 (22)	48 (22)

Base Model	FF9	FF10	FF12	FF13	FF14	FF15
Inlet	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI
Outlet	1" ANSI	1" ANSI	1" ANSI	1" ANSI	1" ANSI	1" ANSI
Pump weight lb (kg)	52 (24)	52 (24)	52 (24)	52 (24)	52 (24)	52 (24)

Base Model	DS9	DS10	DS12	DS13	DS14	DS15
Inlet	1-1/4" NPT	1-1/4" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT
Outlet	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Pump weight lb (kg)	52 (24)	52 (24)	52 (24)	52 (24)	52 (24)	52 (24)

Base Model	DSF9	DSF10	DSF12	DSF13	DSF14	DSF15
Inlet	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI
Outlet	1" ANSI	1" ANSI	1" ANSI	1" ANSI	1" ANSI	1" ANSI
Pump weight lb (kg)	58 (26)	58 (26)	58 (26)	58 (26)	58 (26)	58 (26)

Base Model	DL9	DL10	DL12	DL13	DL14	DL15
Inlet	1-1/4" NPT	1-1/4" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT	1-1/2" NPT
Outlet	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT	1" NPT
Pump weight lb (kg)	62 (28)	62 (28)	62 (28)	62 (28)	62 (28)	62 (28)

Base Model	DLF9	DLF10	DLF12	DLF13	DLF14	DLF15
Inlet	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI	1-1/2" ANSI
Outlet	1" ANSI	1" ANSI	1" ANSI	1" ANSI	1" ANSI	1" ANSI
Pump weight lb (kg)	68 (31)	68 (31)	68 (31)	68 (31)	68 (31)	68 (31)

Model Number
Base X X X X X

Motor	No integral motor	Standard	C

Material Selection		
Bronze impeller Aluminum seal sleeve & follower Steel shaft	Standard	D
Ductile iron impeller Aluminum seal sleeve & follower Steel shaft	Optional	F

Seal seat	Cast iron	Standard	2

O-rings	Buna-N	Standard	A
	Neoprene®[1]	Optional	B

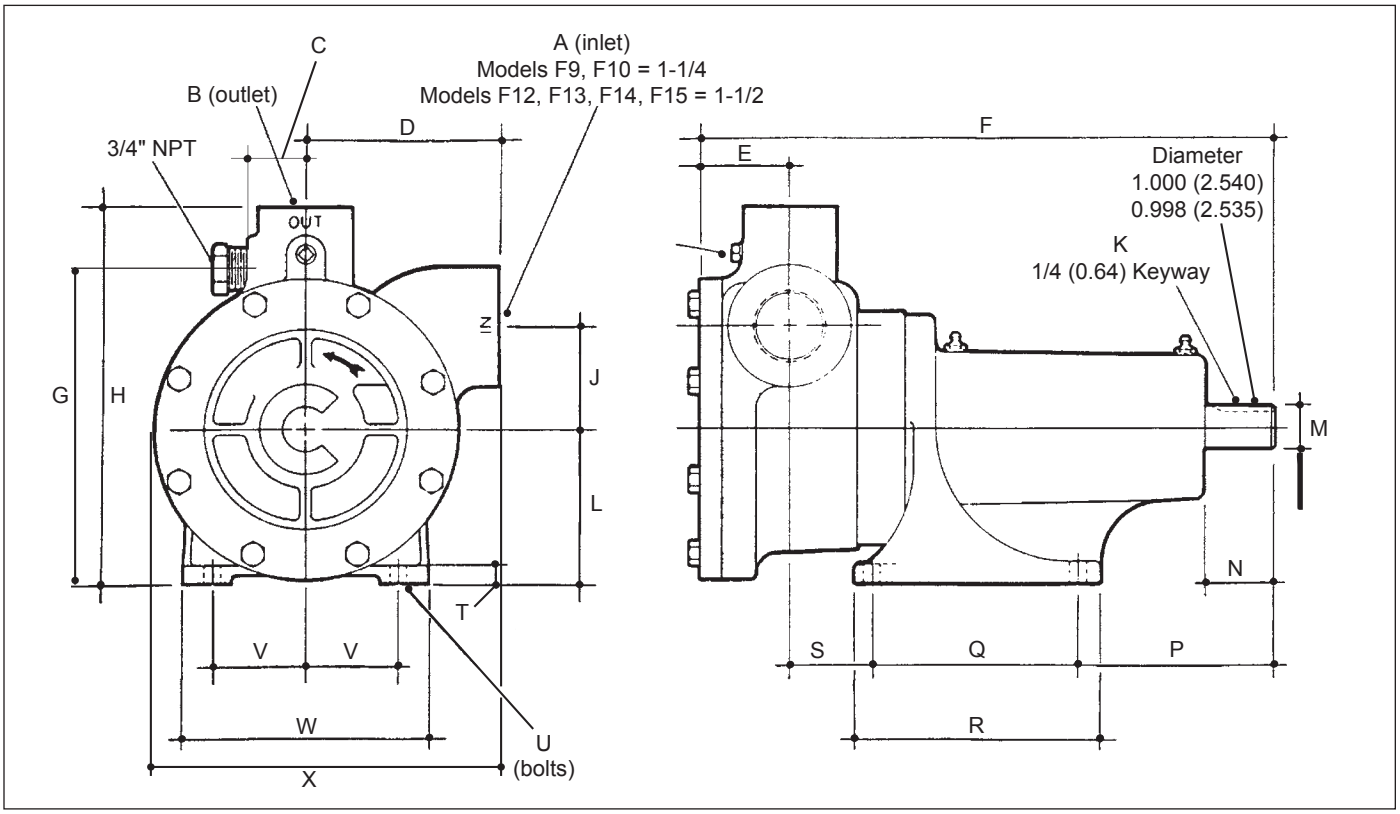
Mounting Options	Model Reference	Part Number	Motor Frame Size Range	Ship Weight lbs (kg) Mounting Only
Mounting set-up for Direct Drive includes steel baseplate, flexible coupling and coupling guard	F-Model and FF-Model pumps only	101-8	145T–215T	128 (58)
Mounting set-up for V-Belt Drive includes steel baseplate, adjustable driver slide base, V-belt drive and enclosed belt guard	F-Model and FF-Model pumps only	103-12	184T–256T	175 (79)
Coupling for DS (specify motor shaft size)	DS-Model pumps only	1344	56C–145TC	
Coupling for DL (specify motor shaft size)	DL-Model pumps only	1345	182TC–215TC	

Options	Part Number
Hydrostatic test	3000-X4
Seal assembly (Buna-N)	113-CXA
Seal assembly (Neoprene®[1])	113-CXB
Conversion kit (3/4" input shaft to 1" input shaft)	1010-2X

[1] *Registered trademark of the DuPont company.*

F9 through F15 Model Pumps—Outline Dimensions

All F-Model Pumps



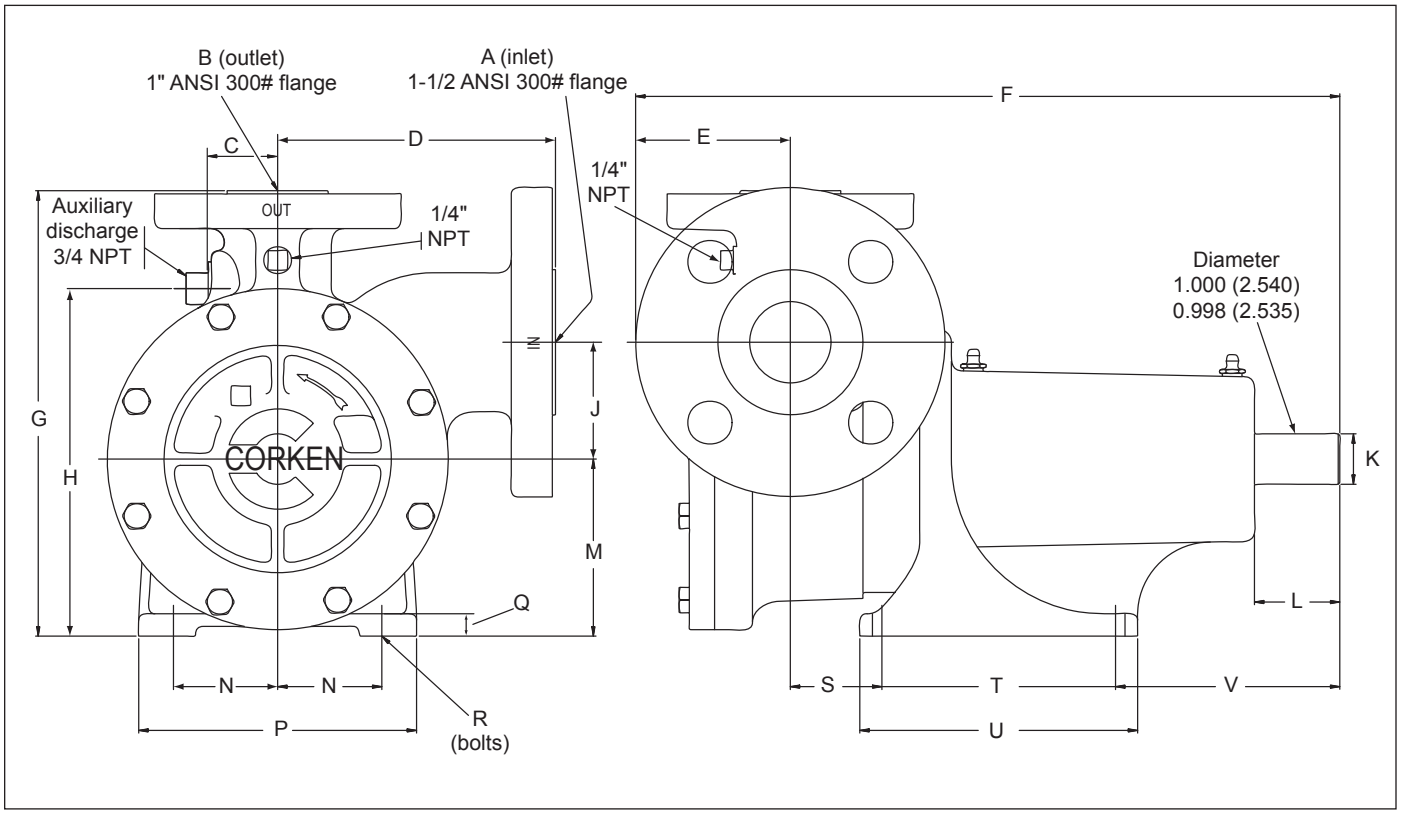
Flange Dimensions		
Model	A (inlet)	B (outlet)
F9–F10	1-1/4" NPT	1" NPT
F12–F15	1-1/2" NPT	1" NPT

F9–F15 NPT Outline Dimensions—Inches (Centimeters)									
C	D	E	F	G	H	J	K	L	M
1-5/16 (3.33)	4-5/16 (10.95)	2 (5.08)	12-13/16 (32.54)	7-1/8 (18.10)	8-1/2 (21.59)	2-5/16 (5.87)	1/4 (0.64)	3-1/2 (8.90)	1" diameter (2.54)

F9–F15 NPT Outline Dimensions—Inches (Centimeters)									
N	P	Q	R	S	T	U	V	W	X
1-11/16 (4.29)	4-7/16 (11.27)	4-5/8 (11.75)	5-1/2 (13.97)	1-3/4 (4.45)	1/2 (1.27)	5/16 bolt (0.79)	2-1/16 (5.24)	5-1/2 (13.97)	7-3/4 (19.69)

FF9 through FF15 Model Pumps—Outline Dimensions

All FF-Model Pumps



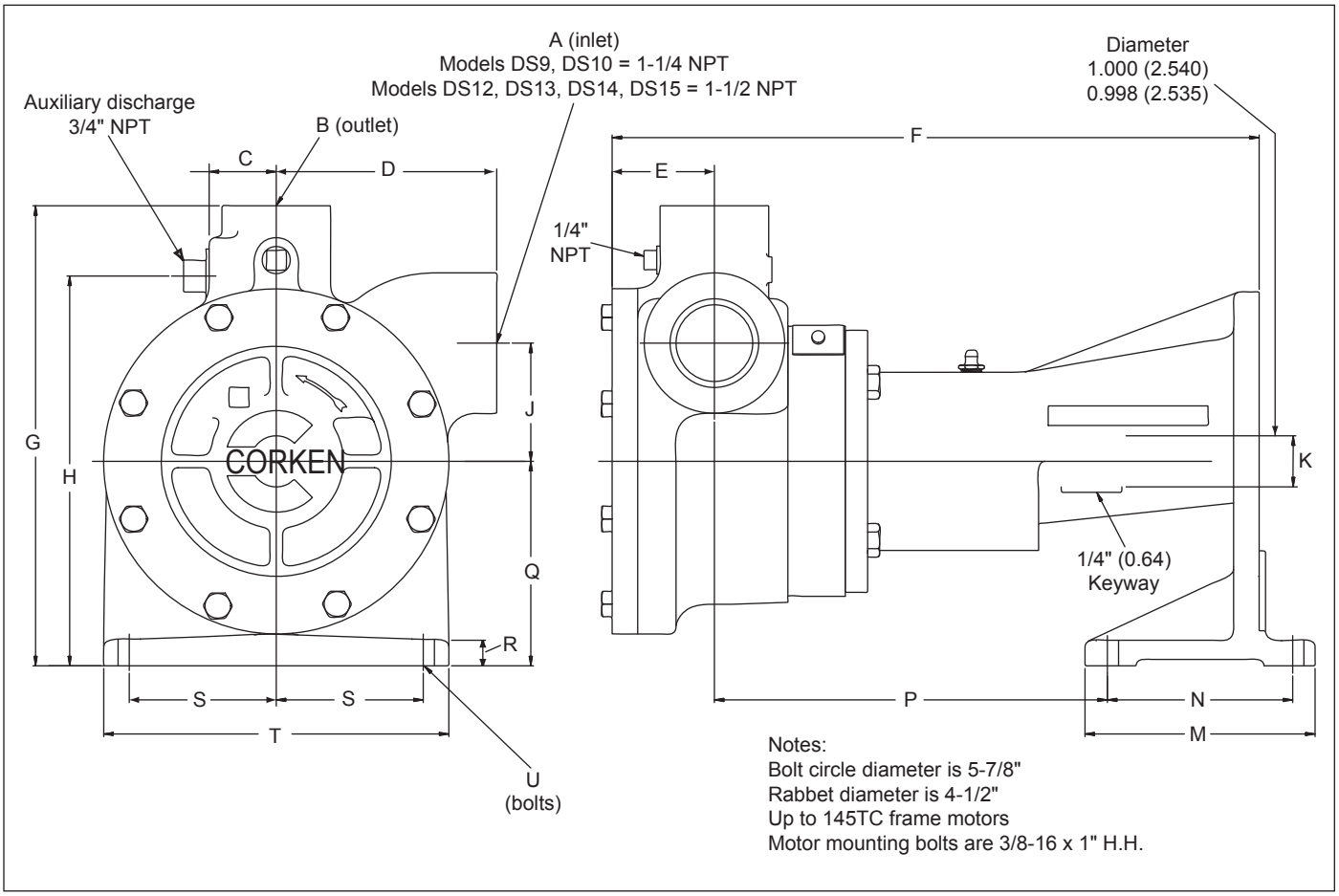
Flange Dimensions		
Model	A (inlet)	B (outlet)
FF9–FF15	1-1/2" 300# ANSI	1" 300# ANSI

FF9–FF15 300# ANSI Outline Dimensions—Inches (Centimeters)								
C	D	E	F	G	H	J	K	L
1-5/16 (3.33)	5-1/2 (13.97)	3-1/16 (7.78)	13-15/16 (35.41)	8-13/16 (22.40)	6-7/8 (17.48)	2-5/16 (5.87)	1" diameter (2.54)	1-11/16 (4.29)

FF9–FF15 300# ANSI Outline Dimensions—Inches (Centimeters)									
M	N	P	Q	R	S	T	U	V	W
3-1/2 (8.90)	2-1/16 (5.24)	5-1/2 (13.97)	1/2 (1.27)	5/16 bolt (0.79)	1-13/16 (4.61)	4-5/8 (11.75)	5-1/2 (13.97)	4-7/16 (11.27)	8-7/8 (22.54)

DS9 through DS15 Model Pumps—Outline Dimensions

All DS-Model Pumps



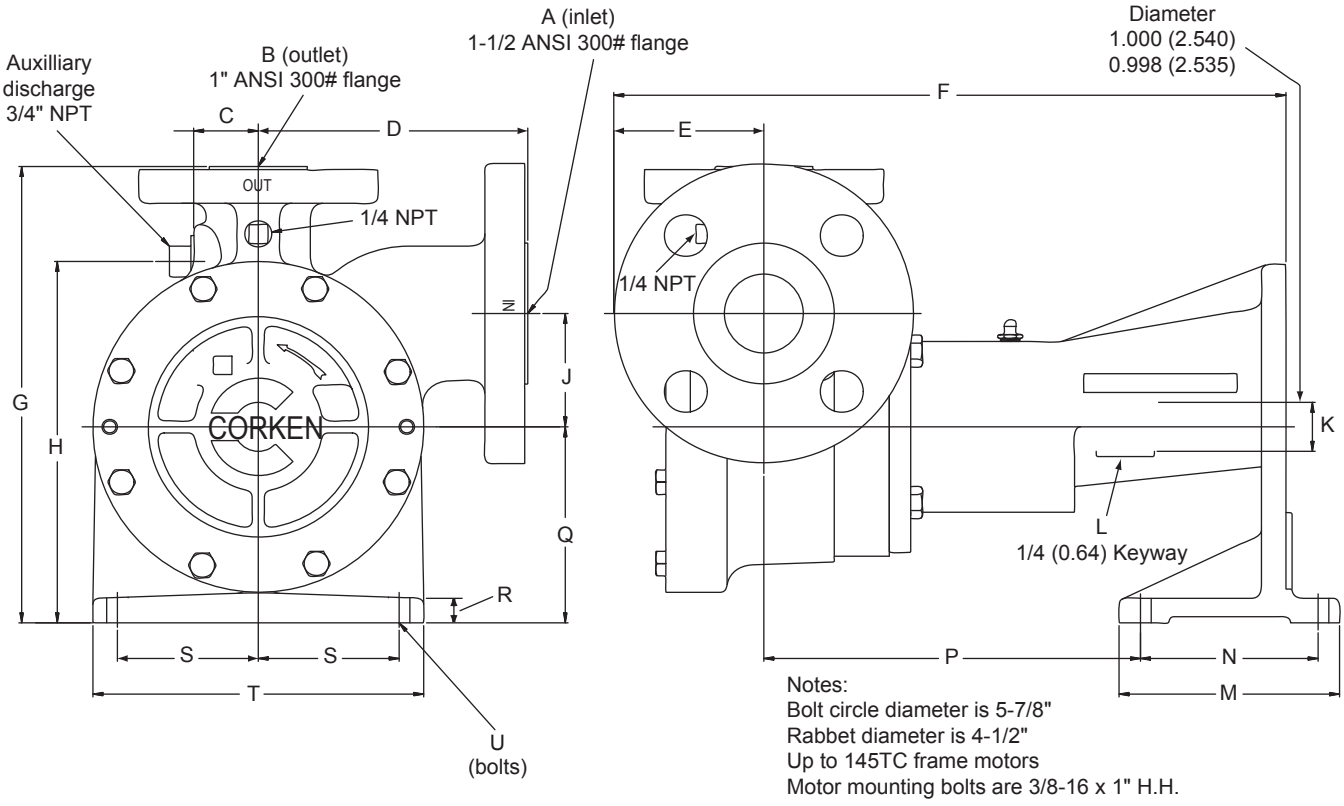
Flange Dimensions		
Model	A (inlet)	B (outlet)
DS9–DS10	1-1/4" NPT	1" NPT
DS12–DS15	1-1/2" NPT	1" NPT

DS9–DS15 NPT Outline Dimensions—Inches (Centimeters)							
C	D	E	F	G	H	J	K
1-5/16 (3.33)	4-5/16 (10.95)	2 (5.08)	12-21/32 (32.15)	9 (22.86)	7-5/8 (19.37)	2-5/16 (5.87)	1" diameter (2.54)

DS9–DS15 NPT Outline Dimensions—Inches (Centimeters)								
L	M	N	P	Q	R	S	T	U
1/4 (0.64)	4-1/2 (11.43)	3-5/8 (9.21)	7-11/16 (19.52)	4 (10.16)	1/2 (1.27)	2-7/8 (7.30)	6-3/4 (17.15)	5/16 bolt (0.79)

DSF9 through DSF15 Model Pumps—Outline Dimensions

All DSF-Model Pumps



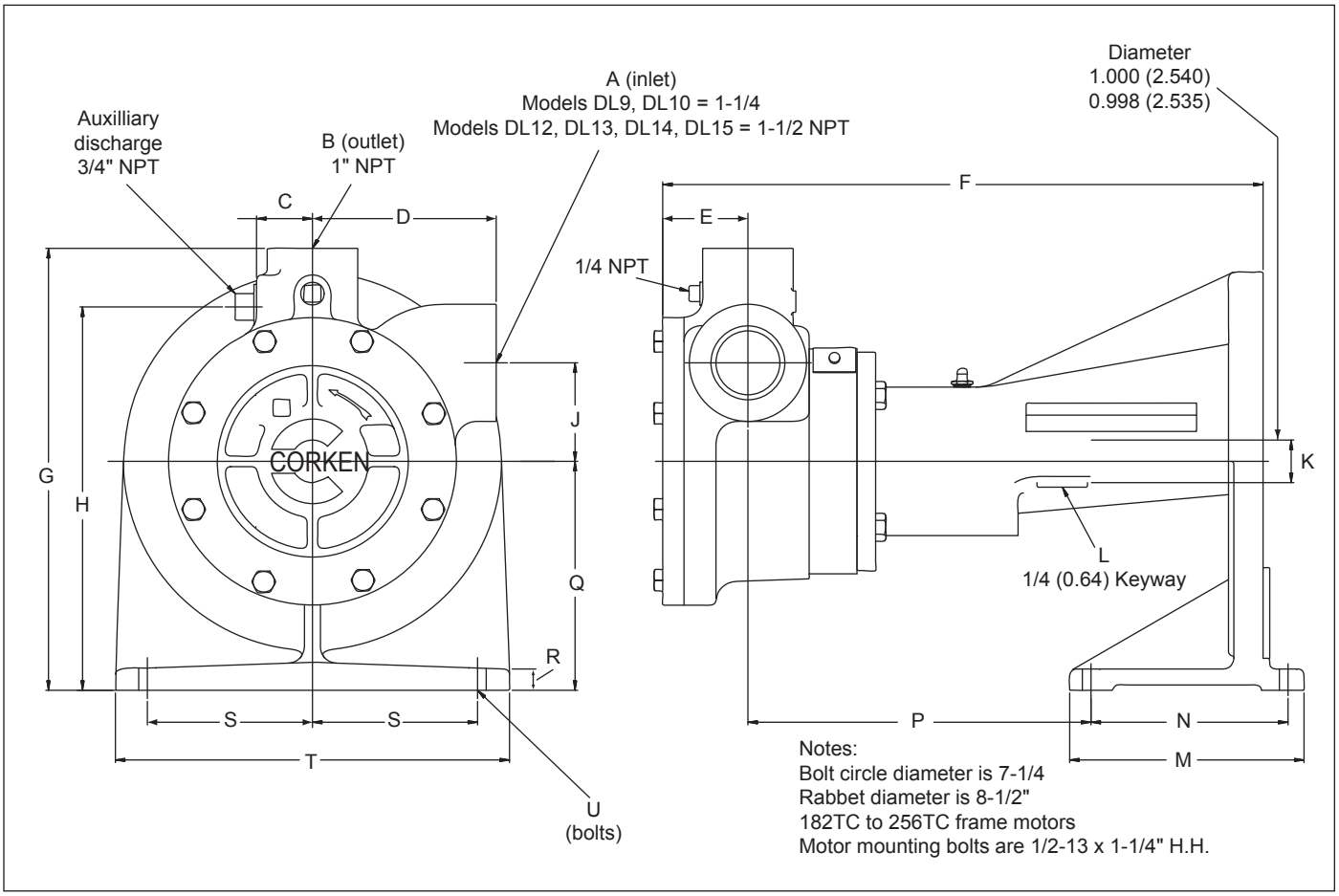
Flange Dimensions		
Model	A (inlet)	B (outlet)
DSF9–DSF15	1-1/2" 300# ANSI	1" 300# ANSI

DSF9–DSF15 300# ANSI Outline Dimensions—Inches (Centimeters)							
C	D	E	F	G	H	J	K
1-5/16 (3.33)	5-1/2 (13.97)	3-1/16 (7.78)	13-23/32 (34.84)	9-5/16 (23.65)	7-3/8 (18.73)	2-5/16 (5.87)	1" diameter (2.54)

DSF9–DSF15 300# ANSI Outline Dimensions—Inches (Centimeters)								
L	M	N	P	Q	R	S	T	U
1/4 (0.64)	4-1/2 (11.43)	3-5/8 (9.21)	7-11/16 (19.52)	4 (10.16)	1/2 (1.27)	2-7/8 (7.30)	6-3/4 (17.15)	5/16 bolt (0.79)

DL9 through DL15 Model Pumps—Outline Dimensions

All DL-Model Pumps



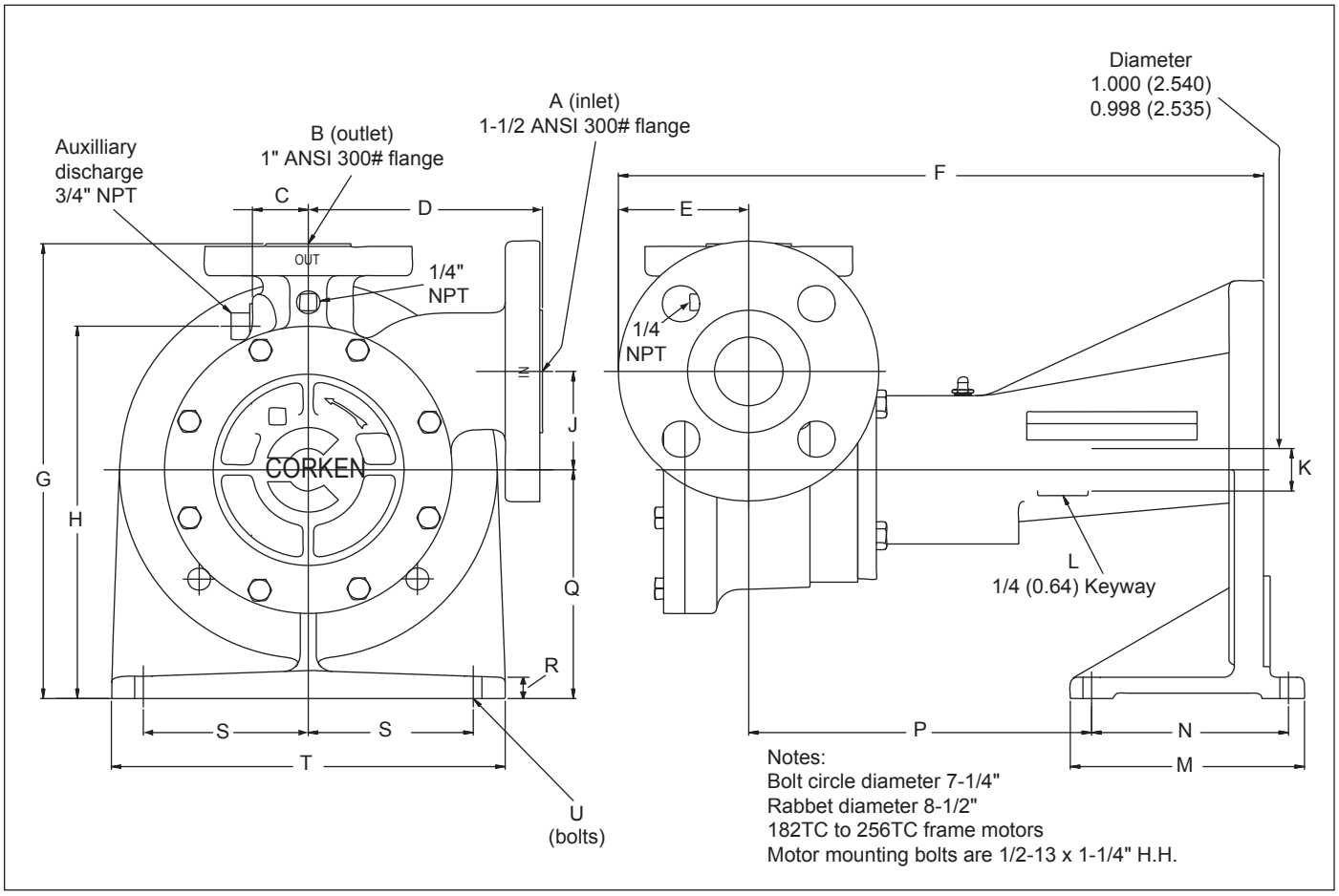
Flange Dimensions		
Model	A (inlet)	B (outlet)
DL9–DL10	1-1/4" NPT	1" NPT
DL12–DL15	1-1/2" NPT	1" NPT

DL9–DL15 NPT Outline Dimensions—Inches (Centimeters)								
C	D	E	F	G	H	J	K	L
1-5/16 (3.33)	4-5/16 (10.95)	2 (5.08)	14-3/32 (35.79)	10-3/8 (26.35)	9 (22.86)	2-5/16 (5.87)	1" diameter (2.54)	1/4 (0.64)

DL9–DL15 NPT Outline Dimensions—Inches (Centimeters)							
M	N	P	Q	R	S	T	U
5-1/2	4-5/8	8-3/64	5-3/8	1/2	3-7/8	9-1/4	5/16 bolt
(13.97)	(11.75)	(20.45)	(13.65)	(1.27)	(9.84)	(23.49)	(0.79)

DLF9 through DLF15 Model Pumps—Outline Dimensions

All DLF-Model Pumps



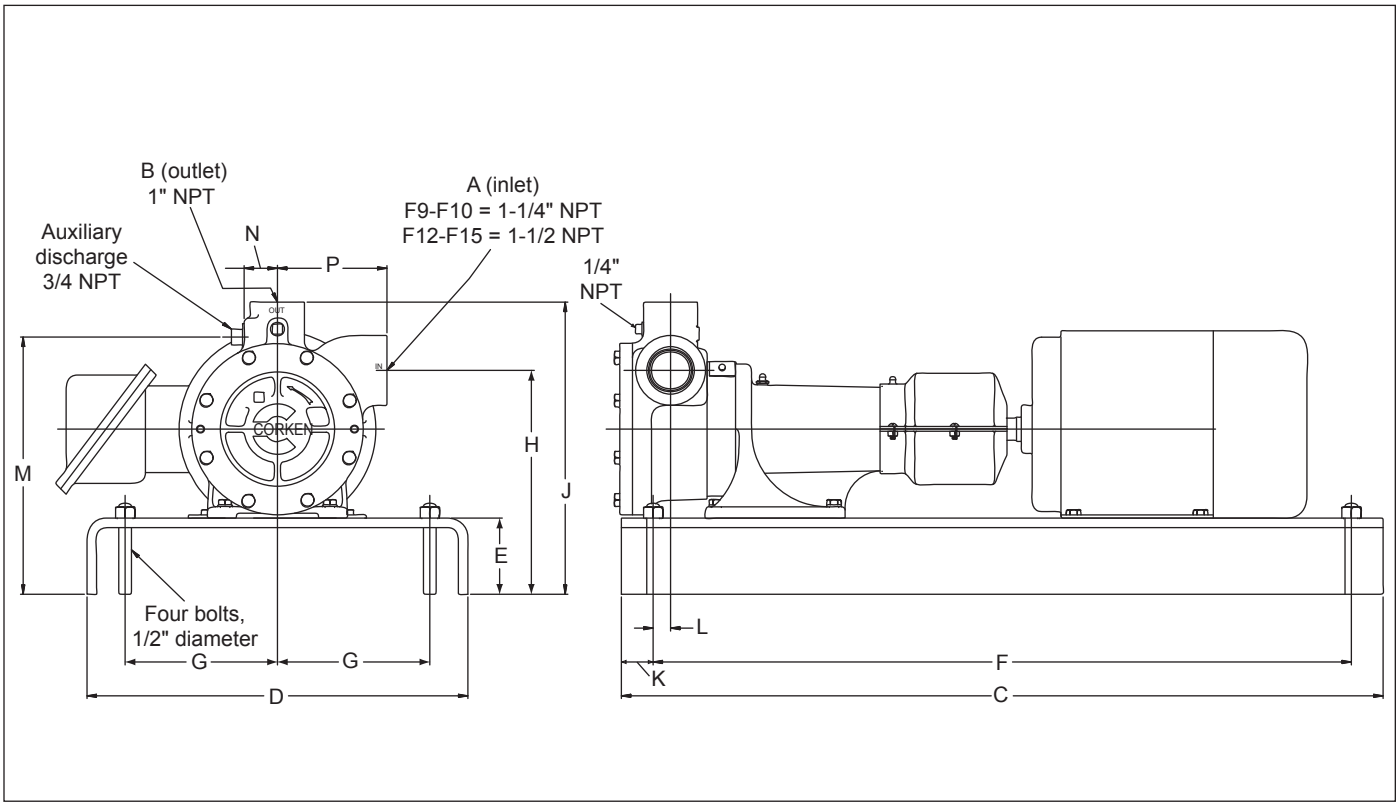
Flange Dimensions		
Model	A (inlet)	B (outlet)
DLF9–DLF15	1-1/2" 300# ANSI	1" 300# ANSI

DLF9–DLF15 300# ANSI Outline Dimensions—Inches (Centimeters)								
C	D	E	F	G	H	J	K	L
1-5/16 (3.33)	5-1/2 (13.97)	3-1/16 (7.78)	15-5/32 (38.49)	10-11/16 (27.15)	8-3/4 (22.23)	2-5/16 (5.87)	1" diameter (2.54)	1/4 (0.64)

DLF9–DLF15 300# ANSI Outline Dimensions—Inches (Centimeters)							
M	N	P	Q	R	S	T	U
5-1/2 (13.97)	4-5/8 (11.75)	8-3/64 (20.45)	5-3/8 (13.65)	1/2 (1.27)	3-7/8 (9.84)	9-1/4 (23.49)	5/16 bolt (0.79)

F9-101 through F15-101 Model Pumps—Outline Dimensions

All F-Model Pumps with –101 Mounting

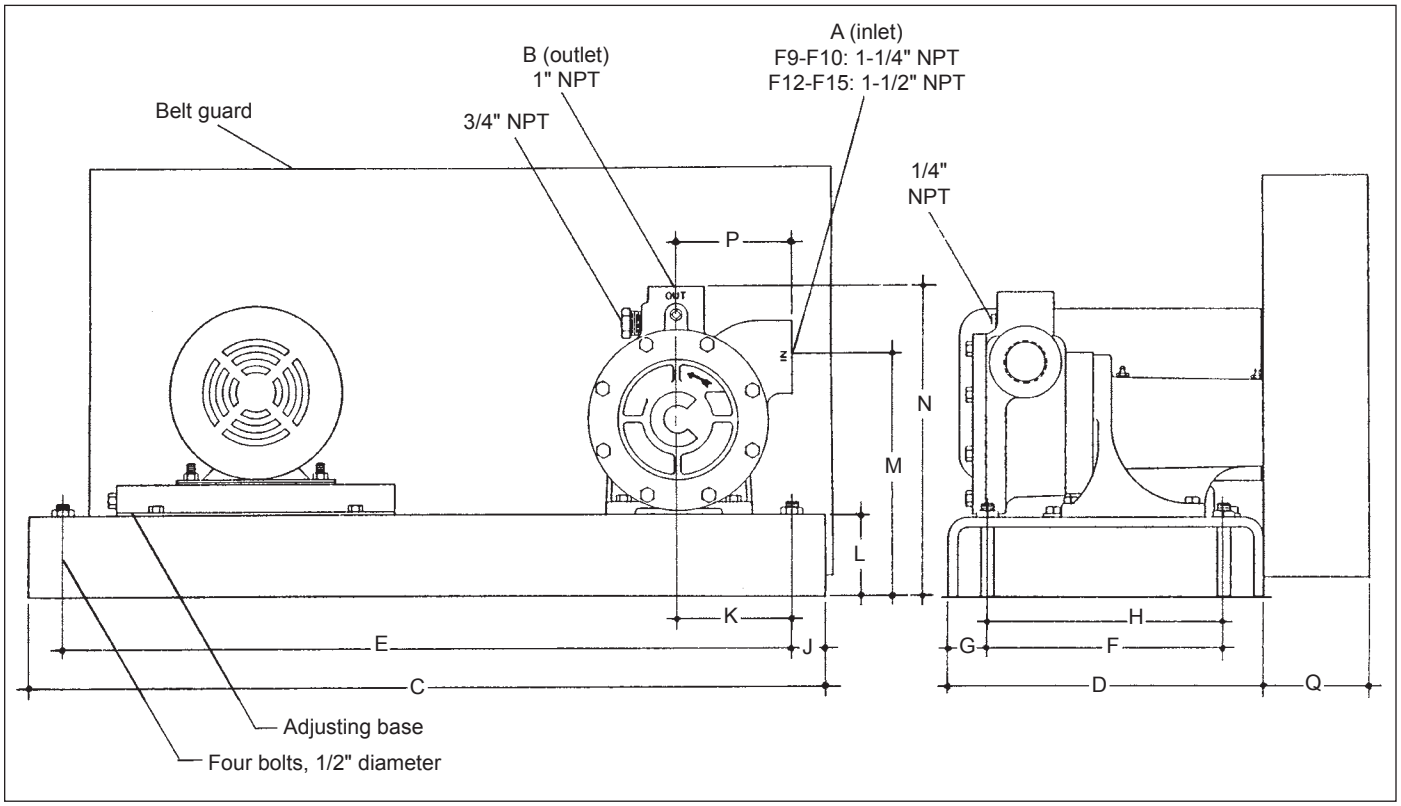


Flange Dimensions		
Model	A (inlet)	B (outlet)
F9–F10	1-1/4" NPT	1" NPT
F12–F15	1-1/2" NPT	1" NPT

F9–101 through F15–101 Mounting Dimensions—Inches (Centimeters)												
Motor Frame	C	D	E	F	G	H	J	K	L	M	N	P
56	22 (56.0)	10 (25.0)	2-1/2 (6.3)	20 (51.0)	4 (10.2)	8-1/4 (21.0)	11 (28.0)	1 (2.50)	11/16 (1.7)	10-1/8 (25.7)	1-5/16 (3.33)	4-5/16 (10.95)
66	30 (76.2)	15 (38.1)	3 (7.6)	27-1/2 (69.8)	6 (15.2)	9-3/8 (23.8)	12-1/8 (30.8)	1-1/4 (3.2)				
143T, 145T						8-13/16 (22.4)	11-1/2 (29.2)					
182T, 184T						9-3/4 (24.8)	12-1/2 (31.7)					
213T, 215T						10-1/2 (26.7)	13-1/4 (33.7)					
254U	34 (86.4)			31-1/2 (80.0)		11-1/2 (29.2)	14-1/4 (36.2)					

F9-103 through F15-103 Model Pumps—Outline Dimensions

All F-Model Pumps with –103 Mounting



Flange Dimensions		
Model	A (inlet)	B (outlet)
F9–F10	1-1/4" NPT	1" NPT
F12–F15	1-1/2" NPT	1" NPT

F9–103 through F15–103 Mounting Dimensions—Inches (Centimeters)													
Motor Frame	C	D	E	F	G	H	J	K	L	M	N	P	Q
56, 66, 143T, 145T, 182T, 184T, 213T, 215T	30 (76.2)	12 (30.5)	27-1/2 (69.8)	9 (22.9)	1-1/2 (3.8)	7-9/16 (19.2)	1-1/4 (3.2)	4-1/4 (10.8)	3 (7.6)	8-3/4 (22.2)	11-1/2 (29.2)	4-5/16 (10.9)	5 (12.7)
254U		15 (38.1)		12 (30.5)									
256U	34 (86.4)		31-1/2 (80.0)										

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