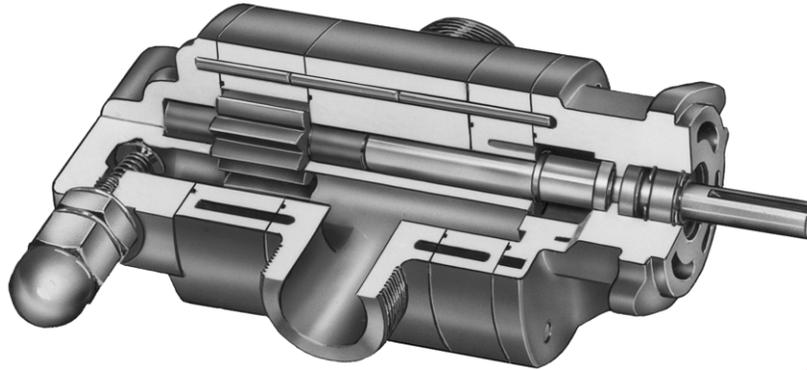


VIKING® VI-CORR PUMPS

SERIES RP-07, RP-407 AND RP-807
COMPOSITE CONSTRUCTION
EXTERNAL GEAR

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FEATURES



SERIES RP-07 Pumps
Cutaway View

SERIES RP DESCRIPTION

VI-CORR® Composite Pumps offer broad chemical compatibility for metering or low-volume fluid transfer. Because composite materials are used, these lightweight spur gear pumps are an excellent choice for low-shear metering of polymers or pumping corrosive liquids. Low thermal expansion assures exceptional dimensional stability.

The spur gear composite pump has received wide acceptance by industry for low-capacity, high-speed, high-pressure metering and transfer applications. This series of pumps provides versatility and dependability in a compact pumping unit delivering quiet, low-ripple flow to satisfy a wide variety of industrial needs.

Nominal Capacity	8 to 32 GPM	30 to 121 LPM
Maximum Differential Pressure	to 200 PSI	to 14 Bar
Viscosity Range	to 25,000 SSU	to 5,500 cSt
Temperature Range	-40° to 200° F	-40° to 93° C

Viton® – Registered trademark of DuPont Performance Elastomers.
VI-CORR® is a registered trade name of Viking Pump, Inc.

STANDARD SERIES RP FEATURES

VITON® O-RING (Standard Equipment)

All Series RP pumps incorporate as standard equipment a Viton® O-Ring between sections for positive sealing.

CARBON GRAPHITE BUSHINGS (Standard Equipment)

Carbon graphite bushings are standard equipment for all Series RP pumps.

PPS® GEARS & COATED STAINLESS STEEL SHAFTS (Standard Equipment)

VI-CORR Spur Gear Pumps offer you versatility, dependability, and compatibility in a compact pumping unit. The proven accuracy of our spur gear principle makes it an excellent choice. Consult factory for other optional shaft materials.

OVER-PRESSURE RELIEF VALVE (Standard Equipment)

Stainless steel valve permits bypassing of liquids and prevents excessive pressure in the discharge line. If over-pressure relief valve is not used, some form of pressure protection must be provided. Over-pressure relief valves are not intended for flow or pressure regulation.

① Values shown represent minimums or maximums. Some special construction or consideration may be required before a cataloged pump can be applied to an application involving maximum pressure or minimum or maximum temperature and/or viscosities. See specifications, page 343.2, and performance curves, pages 343.21 through 343.44.

② Nominal capacities based on handling thin liquids at low pressures at 1750 RPM.

Metric conversions are based on US measurements and rounded to the nearest whole number.

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VIKING® VI-CORR PUMPS

SERIES RP-07, RP-407 AND RP-807
COMPOSITE CONSTRUCTION
EXTERNAL GEAR

UNMOUNTED PUMPS



SERIES RP-07 Pumps

Dimensions for Unmounted Pumps—See Pages 343.6

Performance Data for Unmounted Pumps—See Pages 343.21 through 343.44.

CONSTRUCTION

① Pump Construction	Bracket And Casing	Gears	Shafts	Bushings	③ Shaft Seal	O-Ring	Internal Pressure Relief Valve
Standard	② PPS	② PPS	Coated Stainless Steel	Carbon Graphite	④ Viton®	⑤ Viton®	Stainless Steel

SPECIFICATIONS — SERIES RP-07, RP-407 AND RP-807 *

Model Numbers Unmounted Pumps			Port Size (NPT)	Nominal Capacity At 1750 RPM (100 SSU)		Nominal Capacity At 1150 RPM (100 SSU)		Displacement		⑥ ⑧ Maximum Operating Conditions				Approximate Pump Weight		
Lip Seal	Mech. Seal	Mag Drive		GPM	L/MIN	GPM	L/MIN	IN ³ /REV	CM ³ /REV	Pressure	Temperature		Speed	LBS.	KG.	
			Inches		(metric)		(metric)		(metric)	PSI	⑦ BAR	Degrees F.	Degrees C.	RPM	(metric)	
RP-0782	RP-40782	RP-80782	2	8.0	30.3	6.6	25.1	1.096	17.96	200	14	200	95	1750	12.2	5.53
RP-0716	RP-40716	RP-80716	2	16.0	60.6	13.3	50.2	2.192	35.92	200	14	200	95	1750	13.4	6.08
RP-0724	RP-40724	RP-80724	2	24.0	90.8	19.9	75.3	3.288	53.88	200	14	200	95	1750	14.7	6.67
RP-0732	RP-40732	RP-80732	2	32.0	121.1	26.5	100.4	4.384	71.84	200	14	200	95	1750	15.9	7.21

① Consult factory for pump construction other than listed.

② Reinforced polyphenylene sulfide (Ryton®).

③ Shaft seal options include lip seal, mechanical seal, or Viking Mag Drive®.

④ Lip seal and mechanical seal also available in Buna-N and PTFE.

⑤ O-Rings also available in Buna-N and PTFE.

⑥ Consult factory on applications exceeding maximum operating conditions.

⑦ 1 BAR = 0.1 MPa = 100 kPa = 10⁵ Pa.

⑧ To provide reasonable pump life, maximum pressure on liquids below 38 SSU (4 cSt) should be reduced. Recommended pressure rating is 75 PSI (5 BAR).

* Production of the RP05, 405, and 805 was discontinued as of August 2007. Refer to Catalog section 344 - CMD Series for possible capacity alternatives.

Viton® — Registered trademark of DuPont Performance Elastomers.
Viking Mag Drive® is a registered trade name of Viking Pump, Inc.

Metric conversions are based on US measurements.

VIKING® VI-CORR PUMPS

SERIES RP-807
COMPOSITE CONSTRUCTION
EXTERNAL GEAR

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VIKING MAG-DRIVE®



SERIES RP-807 Pumps
MD-B15 "B" Drive Coupling.
(Pump and Foot-Mounted Mag Drive Bearing Carrier)

OBSOLETE PRODUCT
1Q15

MAG DRIVE VI-CORR PUMP FOR SPECIAL SEALING NEEDS

If you are pumping expensive, EPA-regulated, or other liquids where you can't afford leakage, the Mag Drive VI-CORR Pump offers peace of mind. VI-CORR Pumps with a Mag Drive unit virtually eliminate the potential for leaks.

- Eliminates mechanical seals assuring zero shaft leakage of hazardous or toxic liquids.
- Eliminates the high cost of mechanical seal maintenance and repair.
- Rare-earth magnetic material reduces magnet size.
- Static sealed pump gives peace of mind for toxic applications.

HERE'S HOW IT WORKS

The Mag Drive VI-CORR Pump is magnetically coupled to the driver. A magnetic force passes through a stainless steel canister to drive the inner coupling eliminating the need for shaft seals. Liquid is totally contained within the pump with no seals to wear out or replace.



Dimensions for Mag Drive Composite Pumps—See Pages 343.9 through 343.12.

Performance Data for Mag Drive Composite Pumps—See Pages 343.21 through 343.44.

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VIKING® VI-CORR PUMPS

SERIES RP-07 AND, RP-407
COMPOSITE CONSTRUCTION
EXTERNAL GEAR

DRIVE OPTIONS

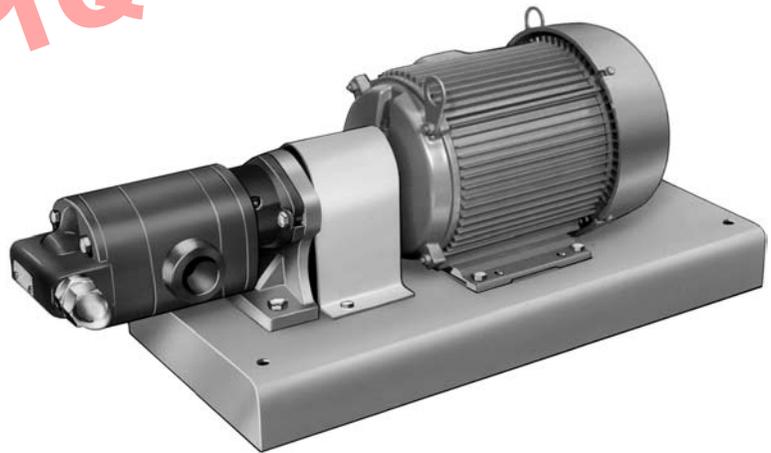


C-FLANGE MOTOR MOUNTED UNITS (“M” DRIVE)

Spur gear composite pumps, in combination with a NEMA C-flange adaptor bracket and flexible coupling, provide an easily assembled compact pump/motor unit. This coupling arrangement eliminates the need for on-site alignment that is normally required with a base-mounted unit.

Dimensions for C-Flange Motor Mounted Units (“M” Drive) — See Page 343.7.

Performance Data for C-Flange Motor Mounted Units (“M” Drive) — See Pages 343.21 through 343.44.



FOOT-BRACKET MOUNTED PUMPS (“B” DRIVE)

Spur gear composite pumps are available mounted to a foot bracket that is machined for an accurate fit with the pump.

Dimensions for Foot-Bracket Mounted Pumps (“B” Drive) — See Pages 343.7.

Performance Data for Foot-Bracket Mounted Pumps (“B” Drive) — See Pages 343.21 through 343.44.

BASE MOUNTED UNITS (“D” DRIVE)

The spur gear composite pump can be mounted to a rectangular formed steel base utilizing the foot-bracket mounted pump. This arrangement provides solid mounting for drive equipment (electric motor, gear reducer, etc.).

NOTE: This mounting arrangement requires on-site coupling alignment after installation.

Dimensions for Base-Mounted Units (“D” Drive) — See Page 343.8.

Performance Data for Base-Mounted Units (“D” Drive) — See Pages 343.21 through 343.44.

VIKING® VI-CORR PUMPS

SERIES RP-07, RP-407 AND RP-807
COMPOSITE CONSTRUCTION
EXTERNAL GEAR

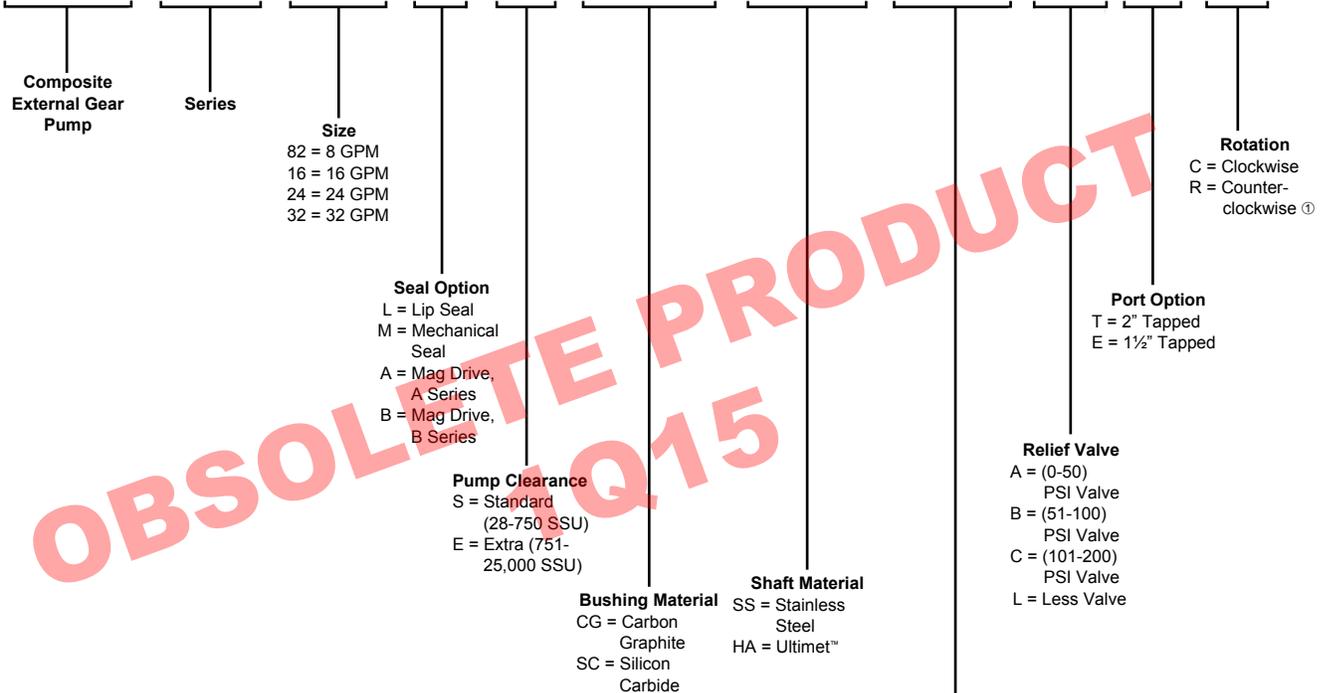
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MODEL DESCRIPTION CODES

Breakdowns of the model description codes for composite external gear single pumps are provided to aid you in ordering exactly the pump you want and to avoid delays in processing your order. Please note that the pump

options, e.g. shaft sealing arrangements, seal materials, etc. These additions must be specified in your order. See price pages.

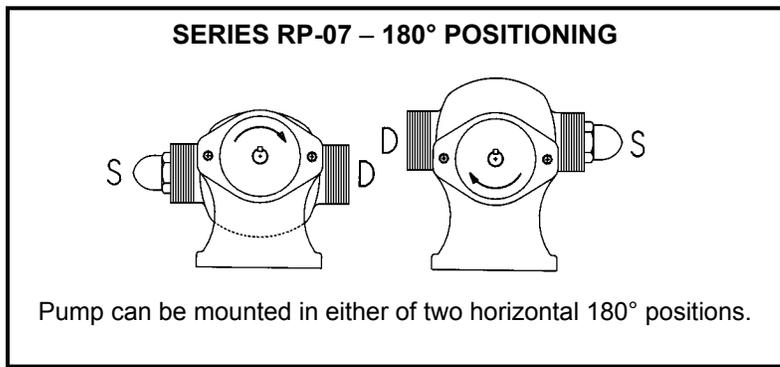
RP-07 82 L-S CG-SS SV-A T C



OBSOLETE PRODUCT Q15

① Counterclockwise rotation, see price page for addition.
Ultimet™ is a registered trademark of Haynes International, Inc.
Viton® — Registered trademark of DuPont Performance Elastomers.

- Lip Seal:**
SV = Stainless Steel/Viton®
ST = Stainless Steel/PTFE
TV = PTFE/Viton®
TB = PTFE/Buna-N
TE = PTFE/EPR
- Mechanical Seal:**
VC = Viton®, Carbon vs. Ceramic
BC = Buna-N, Carbon vs. Ceramic
EC = EPR, Carbon vs. Ceramic
TC = PTFE, Stainless Steel Carbon vs. Ceramic
- Mag Drive O-Ring:**
TE = PTFE
VN = Viton®
BN = Buna-N



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VIKING® VI-CORR PUMPS

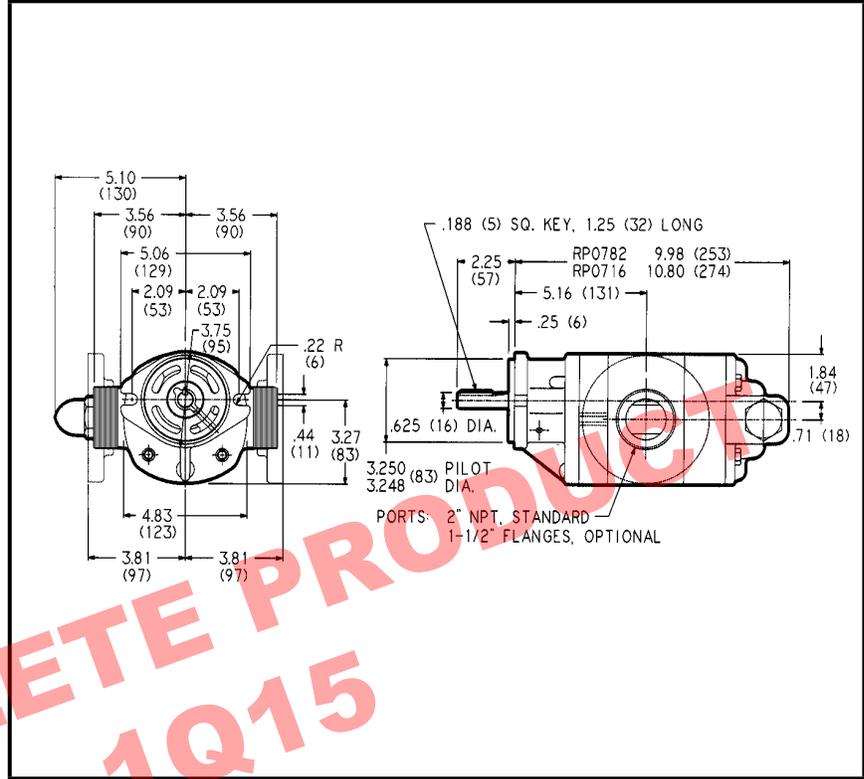
SERIES RP-07 AND RP-407

DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For specifications, see page 343.2.

DIMENSIONS— SERIES RP-07 AND RP-407 UNMOUNTED PUMPS (Models RP-0782 and RP-0716)



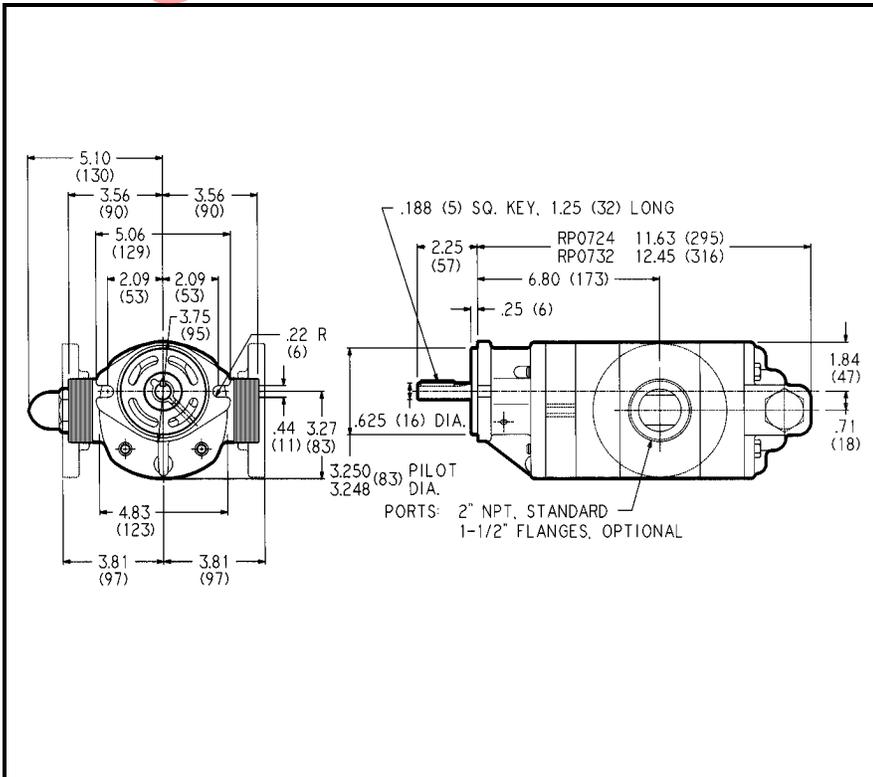
Approximate weight: RP-0782, 12.2 lbs. (5.53 kg.) and RP-0716, 13.4 lbs. (6.08 kg.).

NOTE: Dimensions shown in parentheses are millimeters; others are inches.

OBSOLETE PRODUCT 1Q15

For specifications, see page 343.2.

DIMENSIONS— SERIES RP-07 AND RP-407 UNMOUNTED PUMPS (Models RP-0724 and RP-0732)



Approximate weight: RP-0724, 14.7 lbs. (6.67 kg.) and RP-0732, 15.9 lbs. (7.21 kg.).

NOTE: Dimensions shown in parentheses are millimeters; others are inches.

VIKING® VI-CORR PUMPS

SERIES RP-07 AND RP-407

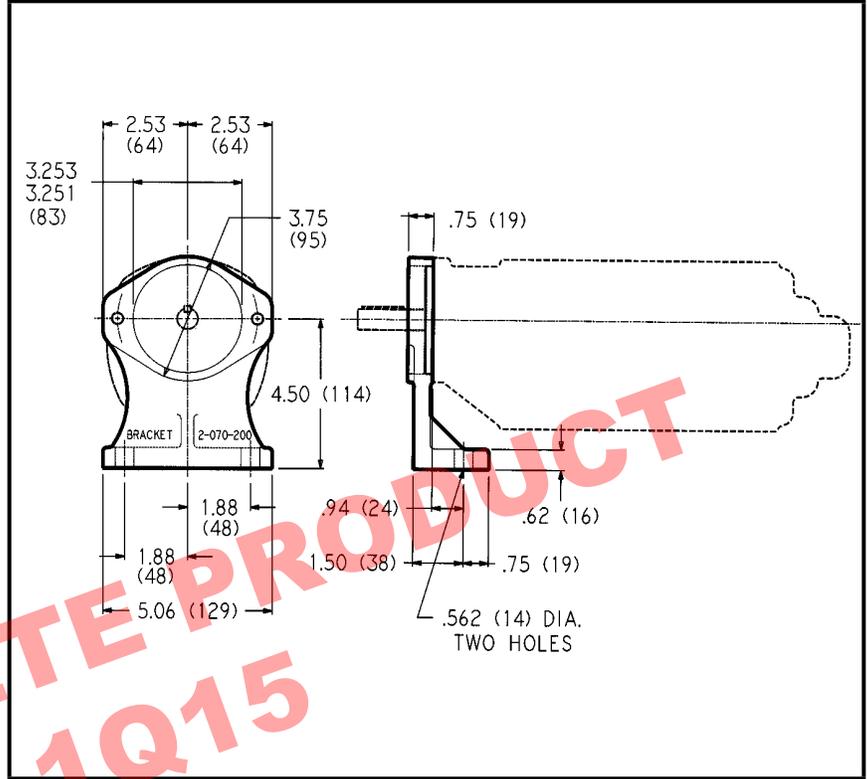
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DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For description, see page 343.4.

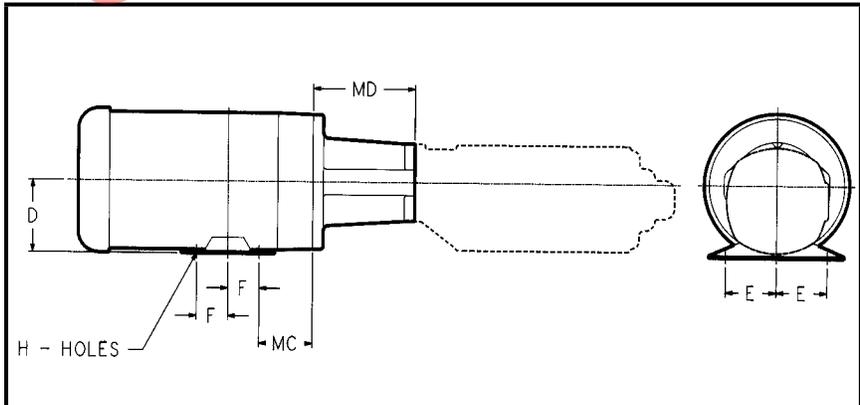
DIMENSIONS— SERIES RP-07 AND RP-407 FOOT-BRACKET MOUNT ("B" MOUNT)



Foot-bracket approximate weight: 4.25 lbs. (1.93 kg.).

For total unit weight, add foot-bracket weight to pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.



For description, see page 343.4.

DIMENSIONS— SERIES RP-07 AND RP-407 C-FLANGE MOTOR MOUNT ("M" DRIVE)

MOTOR FRAME SIZE		D	E	F	H	MC	MD	APPROX. MOTOR WEIGHT POUNDS	APPROX. DRIVE EQUIP. WEIGHT POUNDS / (kg)
56C	in	3.50	2.44	1.50	.34 SLOT	2.56	4.88	30	41 (18.6)
	mm	89	62	38	9	65	124		
143TC	in	3.50	2.75	2.00	.34	2.88	4.88	35	60 (27.2)
	mm	89	70	51	9	73	124		
145TC	in	3.50	2.75	2.50	.34	2.88	4.88	35	70 (31.8)
	mm	89	70	64	9	73	124		
182TC	in	4.50	3.75	2.25	.41	3.62	5.37	60	108 (49.0)
	mm	114	95	57	10	92	136		
184TC	in	4.50	3.75	2.75	.41	3.62	5.37	70	123 (55.8)
	mm	114	95	70	10	92	136		
213TC	in	5.25	4.25	2.75	.41	4.50	6.26	110	161 (73.0)
	mm	133	108	70	10	114	159		
215TC	in	5.25	4.25	3.50	.41	4.50	6.26	120	195 (88.5)
	mm	133	108	89	10	114	159		

Drive equipment includes motor, pump/motor adaptor, and coupling. For total unit weight, add motor and drive equipment weight shown in the table to the pump weight shown on pump specification chart.

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VIKING® VI-CORR PUMPS

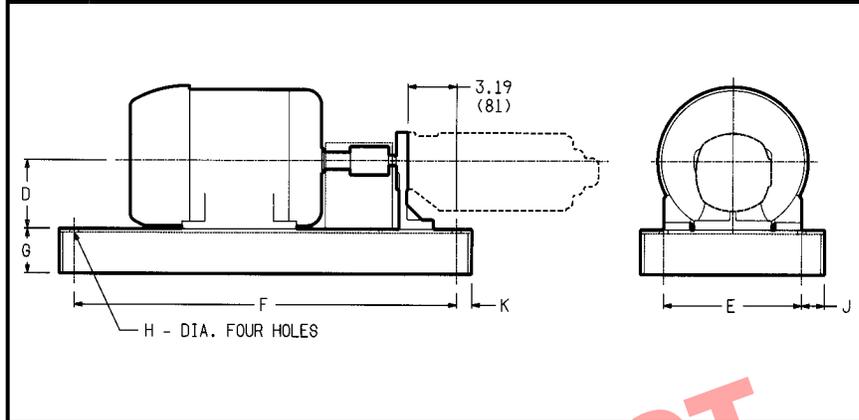
SERIES RP-07 AND RP-407

DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For description, see page 343.4.

DIMENSIONS— SERIES RP-07 AND RP-407 BASE-MOUNTED UNIT ("D" DRIVE)



MOTOR FRAME SIZE		D	E	F	G	H	J	K	APPROX. MOTOR WEIGHT POUNDS	APPROX. DRIVE EQUIP. WEIGHT POUNDS / (kg)
56	in	4.50	8.50	20.50	1.50	.50	.75	.75	31	38 (17.2)
143T									50	
145T	mm	114	216	521	38	13	19	19	60	
182T	in	4.50	9.00	25.00	2.94	.56	1.50	1.00	95	49 (22.2)
184T	mm	114	229	635	75	14	38	25	110	
213T	in	5.25	9.00	25.00	2.94	.56	1.50	1.00	145	56 (25.4)
215T	mm	133	229	635	75	14	38	25	179	

Drive equipment includes base, foot-bracket, coupling, and coupling guard. For total unit weight, add motor and drive equipment weight shown in table to the pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.

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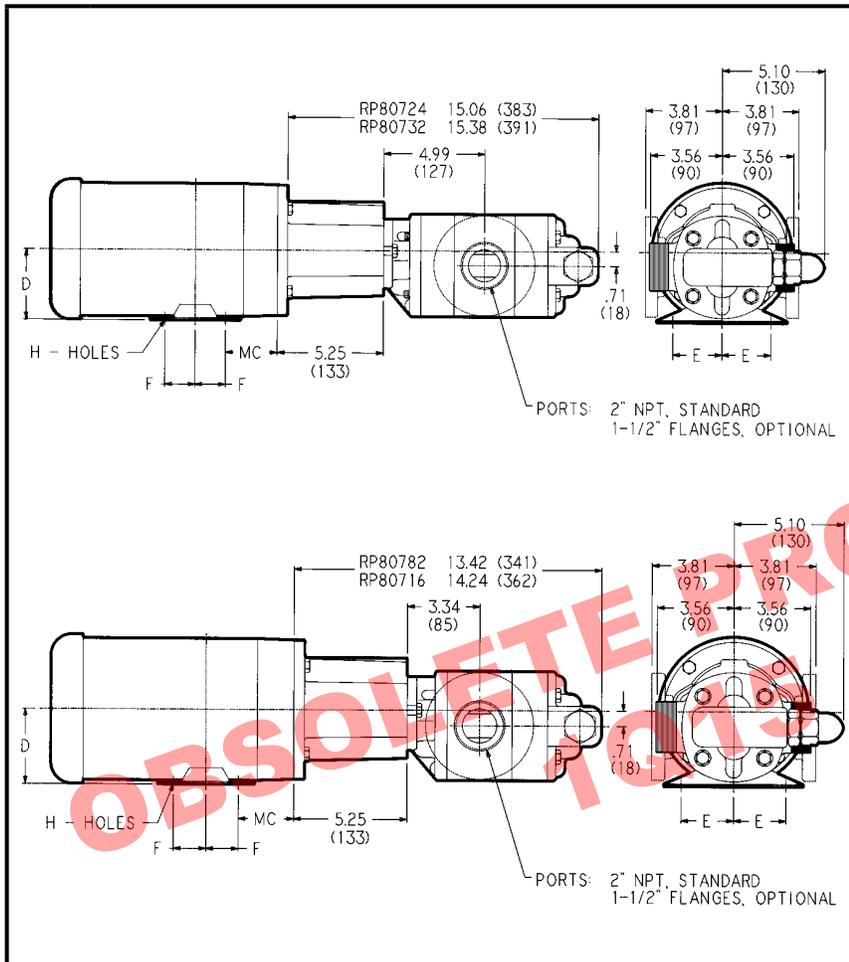
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DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For description, see pages 343.3 and 343.4.

**DIMENSIONS—
 SERIES RP-807
 MAG DRIVE MOTOR MOUNT
 (MD-A “M” DRIVE)**



MOTOR FRAME SIZE		D	E	F	H	MC	APPROX. MOTOR WEIGHT POUNDS	APPROX. DRIVE EQUIP. WEIGHT POUNDS / (kg)
56C	in	3.50	2.44	1.50	.34	2.56	30	18 (8.16)
	mm	89	62	38	9	65		
143TC	in	3.50	2.75	2.00	.34	2.88	35	
	mm	89	70	51	9	73		
145TC	in	3.50	2.75	2.50	.34	2.88	35	
	mm	89	70	64	9	73		
182TC	in	4.50	3.75	2.25	.41	3.62	60	
	mm	114	95	57	10	92		
184TC	in	4.50	3.75	2.75	.41	3.62	70	
	mm	114	95	70	10	92		

Drive equipment includes bearing carrier bracket and coupling. For total unit weight, add motor and drive equipment weight to the pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.

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VIKING® VI-CORR PUMPS

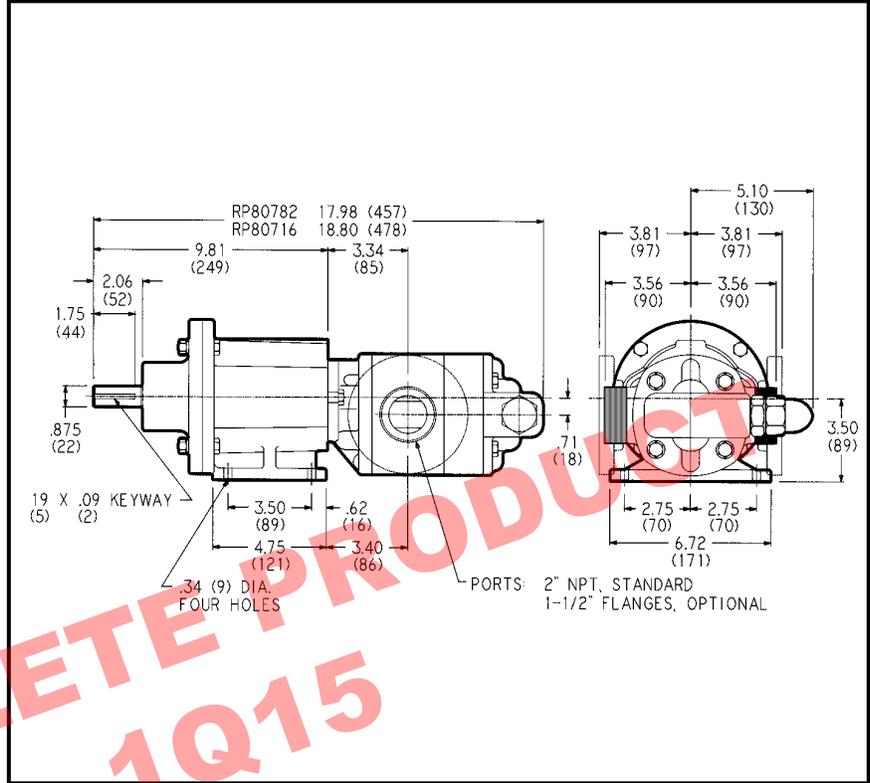
SERIES RP-807

DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For description, see pages 343.3 and 343.4.

DIMENSIONS— SERIES RP-807 MAG DRIVE BRACKET (MD-A “B” DRIVE) Pump and foot-mounted Mag Drive bearing carrier (Models RP-80782 and RP-80716)



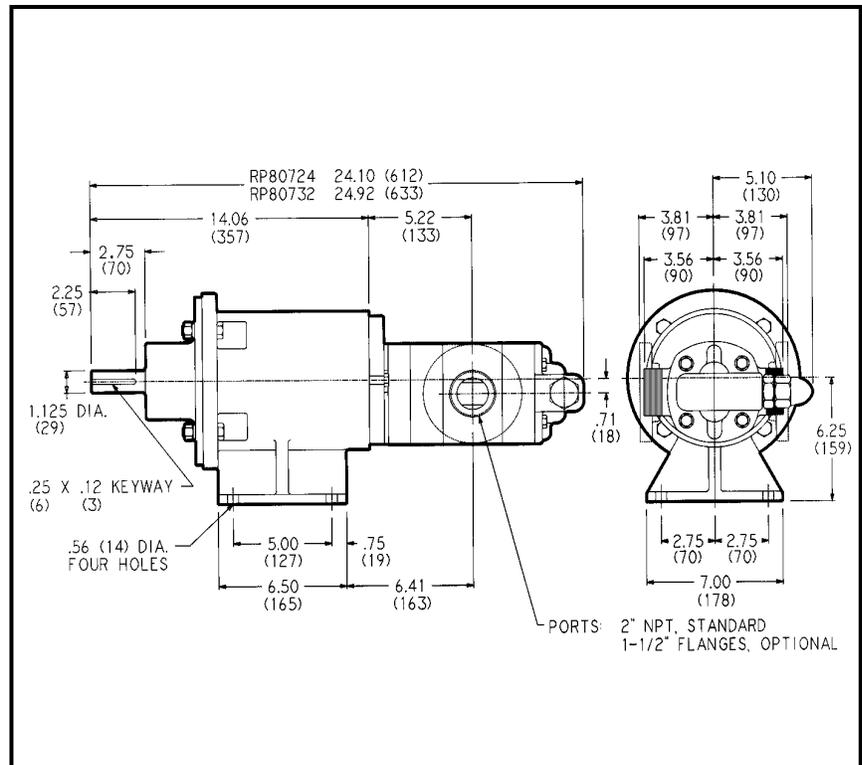
Drive equipment approximate weight: 31 lbs. (14.06 kg.).

Drive equipment includes bearing carrier bracket and coupling. For total unit weight, add motor and drive equipment weight to the pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.

For description, see pages 343.3 and 343.4.

DIMENSIONS— SERIES RP-807 MAG DRIVE BRACKET (MD-A “B” DRIVE) Pump and foot-mounted Mag Drive bearing carrier (Models RP-80724 and RP-80732)



Drive equipment approximate weight: 31 lbs. (14.06 kg.).

Drive equipment includes bearing carrier bracket and coupling. For total unit weight, add motor and drive equipment weight to the pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.

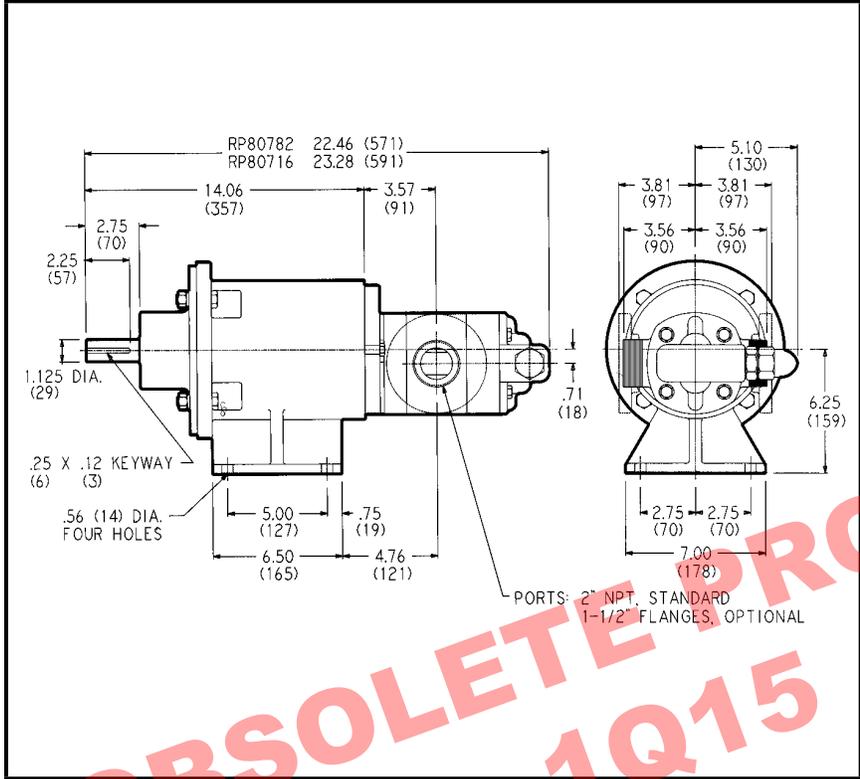
VIKING® VI-CORR PUMPS

SERIES RP-807

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DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.



For description, see pages 343.3 and 343.4.

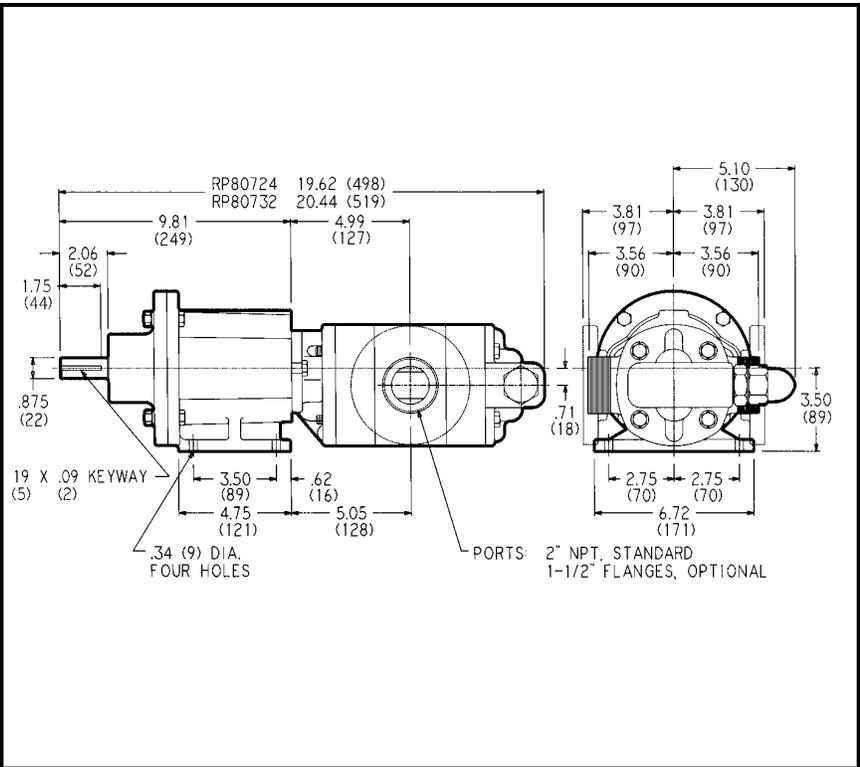
DIMENSIONS— SERIES RP-807 MAG DRIVE BRACKET (MD-B(*) "B" DRIVE) Pump and foot-mounted Mag Drive bearing carrier (Models RP-80782 and RP-80716)

*Required torque rating of magnetic coupling to be inserted in this position.

Drive equipment approximate weight: 71 lbs. (32.2 kg.).

Drive equipment includes bearing carrier bracket and coupling. For total unit weight, add motor and drive equipment weight to the pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.



For description, see pages 343.3 and 343.4.

DIMENSIONS— SERIES RP-807 MAG DRIVE BRACKET (MD-B(*) "B" DRIVE) Pump and foot-mounted Mag Drive bearing carrier (Models RP-80724 and RP-80732)

*Required torque rating of magnetic coupling to be inserted in this position.

Drive equipment approximate weight: 71 lbs. (32.2 kg.).

Drive equipment includes bearing carrier bracket and coupling. For total unit weight, add motor and drive equipment weight to the pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.

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VIKING® VI-CORR PUMPS

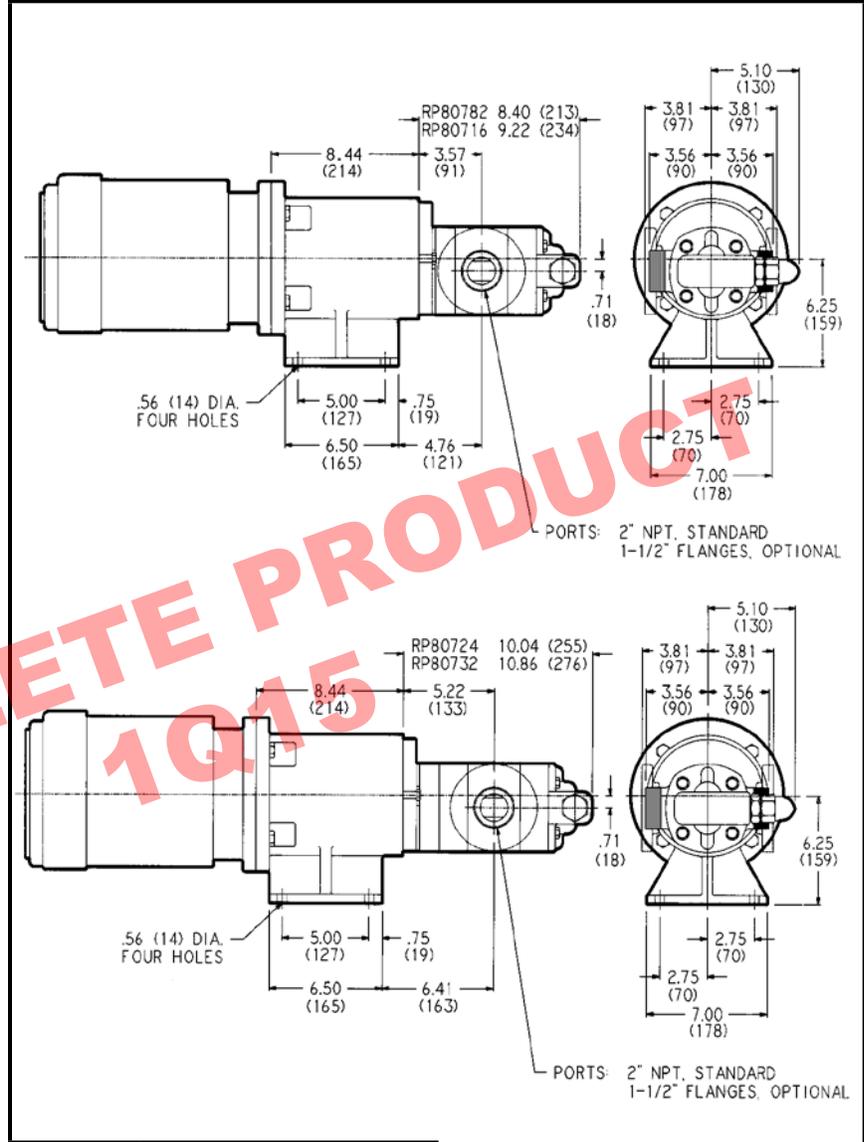
SERIES RP-807

DIMENSIONS

These dimensions are average and not for construction purposes. Certified prints on request.

For description, see pages 343.3 and 343.4.

DIMENSIONS— SERIES RP-807 MAG DRIVE FOOTED MOTOR MOUNTED BEARING CARRIER BRACKET (MD-B(*) “M” DRIVE)



MOTOR FRAME SIZE	APPROX. MOTOR WEIGHT POUNDS	APPROX. DRIVE EQUIP. WEIGHT POUNDS / (kg)
182TC	60	71 (32.2)
184TC	70	
213TC	110	
215TC	120	
254TC	220	
256TC	250	

*Required torque rating of magnetic coupling to be inserted in this position.

Drive equipment includes bearing carrier bracket and coupling. For total unit weight, add motor and drive equipment weight to the pump weight shown on pump specification chart.

NOTE: Dimensions shown in parentheses are millimeters; others are inches.