



Submittal ID: 88895

Shop Drawing Submittal

Send To: **MOODY NOLAN, INC.**
300 SPRUCE STREET, SUITE 300
COLUMBUS, OH 43215-

Attention: Mark Kossman

Project Id: 2018-0164 Project Name: CONNOR BUILDING EXPANSION

Discipline: HVAC Spec Description: 232123 HVAC WATER PUMPS

Submittal Description: PRODUCT DATA FOR HVAC WATER PUMPS

Date Recv'd: 1/17/2022 Date Sent: 2022-01-21

Copies Recv'd: 1 E-COPY Copies Sent: 1 E-COPY

Action Taken

- Approved
- Approved As Noted
- Revise and Resubmit
- Reviewed
- Returned without review per "Submittals" Specification

Comments:

Logged In By: MRT Marked/Logged Out By: AMS

Checked By: Klaiss, Alexandria Initials: ARK Date: 01/21/2022

Coordinated By: Lowe, Daniel Initials: RDL Date: 01/22/2022
~~Jones, Rob~~

Coordinated By: _____ Initials: _____ Date: _____

Signature: *Alexandra Klaiss*

To: Moody Nolan Inc
Karen Danko
300 Spruce St
Columbus, OH 43215

From: The Daimler Group Inc
Enrique Terrones
1533 Lake Shore Drive
Columbus, Ohio 43204

Submittal: 232123 Heating & Chilled Pumps-Product Data
Revision: 0
Spec Section: 232123
Date Sent: 01/17/2022
Date Due: 02/01/2022

<p align="center">THE DAIMLER GROUP SHOP DRAWING REVIEW</p> <p>REVIEWED <input checked="" type="checkbox"/></p> <p>SUBMIT CORRECTED COPIES FOR DISTRIBUTION</p> <hr/> <p>Review is for general conformance with the design concept and contract documents. Notations shall not relieve the contractor from compliance with said documents. Contractor is responsible for intended detail and accuracy, confirmation of dimensions quantities, selecting fabrication processes, techniques of assembly performing work in a safe manner coordinating work with other trades.</p>	<p align="center">ARCHITECT STAMP</p>	<p align="center">ENGINEER STAMP</p> <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:50%;">JOB NO.</td> <td style="width:50%;">DATE</td> </tr> <tr> <td align="center">2018-0164</td> <td align="center">2022-01-17</td> </tr> <tr> <td>APPROVED</td> <td align="center"><input type="checkbox"/></td> </tr> <tr> <td>APPROVED AS NOTED</td> <td align="center"><input checked="" type="checkbox"/></td> </tr> <tr> <td>REVISE AND RESUBMIT</td> <td align="center"><input type="checkbox"/></td> </tr> <tr> <td>REVIEWED</td> <td align="center"><input type="checkbox"/></td> </tr> <tr> <td>DATE</td> <td align="center">2022-01-21</td> </tr> <tr> <td>BY</td> <td align="center">ARK</td> </tr> </table> <p><small>SUBMITTALS HAVE BEEN REVIEWED FOR CONFORMANCE WITH THE DESIGN PRINCIPLES AND CONTRACT DOCUMENTS OF THE PROJECT. CONTRACTOR IS NOT RELIEVED FROM HIS SOLE RESPONSIBILITY REGARDING CHECKING OF DIMENSIONS, COORDINATION OF THE WORK OF ALL TRADES, CORRELATION OF DESIGN DOCUMENTS THAT MAY CONTAIN CONTRADICTORY INFORMATION AND FOR INFORMATION THAT PERTAINS TO THE FABRICATION OR CONSTRUCTION PROCESSES, OR TO SAFETY REQUIREMENTS.</small></p> <p><small>DEVIATIONS, IF ANY FROM THE CONTRACT DOCUMENTS NOT CLEARLY NOTED AS SUCH BY THE CONTRACTOR, HAVE NOT BEEN REVIEWED, ARE NOT APPROVED AND CAN BE AUTHORIZED ONLY BY A PROPERLY EXECUTED CHANGE ORDER.</small></p> <p><input type="checkbox"/> SEE WRITTEN COMMENTS DATED _____</p> <p>KORDA/NEMETH ENGINEERING, INC. 1650 WATERMARK DRIVE, SUITE 200, COLUMBUS, OHIO 43215-1094</p>	JOB NO.	DATE	2018-0164	2022-01-17	APPROVED	<input type="checkbox"/>	APPROVED AS NOTED	<input checked="" type="checkbox"/>	REVISE AND RESUBMIT	<input type="checkbox"/>	REVIEWED	<input type="checkbox"/>	DATE	2022-01-21	BY	ARK
JOB NO.	DATE																	
2018-0164	2022-01-17																	
APPROVED	<input type="checkbox"/>																	
APPROVED AS NOTED	<input checked="" type="checkbox"/>																	
REVISE AND RESUBMIT	<input type="checkbox"/>																	
REVIEWED	<input type="checkbox"/>																	
DATE	2022-01-21																	
BY	ARK																	

Comments:

MOODY•NOLAN	
SHOP DRAWING REVIEW	
<small>This review is for general conformance with the design concept and the contractor remains responsible for:</small>	
<small>a. Compliance with the contract documents.</small>	
<small>b. Confirming and correlating quantities and dimensions.</small>	
<small>c. Selecting fabrication process and techniques of construction.</small>	
<small>d. Coordination of the work with the other trades.</small>	
<input type="checkbox"/> REVIEWED WITH NO CORRECTIONS	<input type="checkbox"/> REVISE AND RESUBMIT
<input checked="" type="checkbox"/> REVIEWED WITH CORRECTIONS NOTED	<input type="checkbox"/> NOT REVIEWED
<small>This review neither extends nor alters any contractual obligations of the architect or contractor, and does not authorize changes in the contract sum or contract time.</small>	
by: ja	DATE: 01/21/22



SUBMITTAL DATA

Project: The Connor Group Office
Bid Category : HVAC
Project No.: E1108
TP Tab No.: 224, 225
Construction Manager: The Daimler Group, Inc.
Architect/Engineer: Moody Nolan / Korda
Submittal For: **Heating & Chilled Pumps**
Specification #: 23 21 23
Manufacturer: Bell & Gossett
Supplier:

The attached submittal data has been reviewed by TP Mechanical Contractors for compliance with the Architect/Engineer's specifications and plan schedule for this project.

In order to maintain the project schedule, we request that this submittal be returned to TP Mechanical Contractors **within 7 days**.

NOTE: Material cannot be released without Architect/Engineer's approval of submittal.

(Please place stamp of approval here)

<u> X </u>	PRODUCT DATA
<u> </u>	DRAWINGS
<u> 1/12/22 </u>	DATE SUBMITTED
<u> </u>	DATE RESUBMITTED
T. P. MECHANICAL CONTRACTORS	
BY	<u> Josh Bolton - LW </u>
This drawing or brochure has been checked to quality or proper components only. Approval of this drawing or brochure shall not relieve the supplier of responsibility for accuracy or dimensions of full compliance with plans and specifications and purchase order.	

**The Connor Group Office
Plumbing
TP Job No.: E1000108**

Spec. Section 23 21 23 – Heating & Chilled Water Pumps

<u>Service</u>	<u>Manufacturer</u>	<u>Model #</u>
<u>Base Mounted Pumps</u>		
HWP1 / Base Mounted End Suction Pump	Bell & Gossett	E-1510
HWP2 / Base Mounted End Suction Pump	Bell & Gossett	E-1510
<u>In-Line Pumps</u>		
BP2 / Close Coupled In-line Boiler Pump	Bell & Gossett	E-80
CHWP1 / Chiller In-line Pump	Bell & Gossett	E-80SC
CHWP2 / Chiller In-line Pump	Bell & Gossett	E-80SC
CHWP3 / Secondary Chiller In-line Pump	Bell & Gossett	E-80SC
CHWP4 / Secondary Chiller In-line Pump	Bell & Gossett	E-80SC
HCP1 / Heating Coil Circulation Pump	Bell & Gossett	E-90

JOB: Connor Group - Central Support Office Annex

REPRESENTATIVE: Steffens-Shultz, Inc

UNIT TAG: HWP1;HWP2 (BOD 3600RPM)

ENGINEER: Korda Engineering

CONTRACTOR: TP Mechanical

ORDER NO.

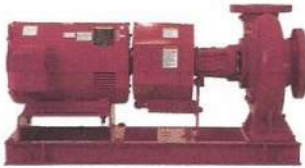
SUBMITTED BY: Jerry Tuckerman

APPROVED BY:

DATE: 1/7/2022

DATE:

DATE:



Series e-1510 2.5AC Base Mounted End Suction Pump

is 1800 rpm available? provide 1800 if available - 3600 acceptable if not

DESCRIPTION:

The Series e-1510 is available in 26 sizes and a variety of configuration options that enable customization and flexibility to fit a broad range of operating conditions. Flows up to 4950 GPM heads to 534 feet.

SPECIFICATIONS

FLOW	330	HEAD	75
HP	10	RPM	3600
VOLTS	230/460		
CYCLE	60	PHASE	3
ENCLOSURE	WEG Motor ODP NEMA Premium w/Shaft Grounding Rings Inverter Duty		
APPROX. WEIGHT	333		
SPECIALS	SEAL: EPR/Carbon/Tungsten Carbide/SS		

Note: Equipped with NEOPRENE coupling

MATERIALS OF CONSTRUCTION

Stainless Steel Fitted

FEATURES

ANSI/OSHA Coupling Guard

Center Drop Out Spacer Coupling

Fabricated Heavy Duty Baseplate

MAXIMUM WORKING PRESSURE

175 psi (12 bar) W.P.

w/ 125# ANSI flange drilling

PUMP VARIABLE SPEED CONTROL

Integrated Technologic[®] Sensorless Control (ITSC)

Integrated Technologic[®] (IT)

External input by others

Pressure Sensor(s)

Differential Pressure Sensor(s)

Flow Sensor(s) By Others

PARALLEL PUMPING SYSTEM

Sensorless Control (ITSC)

Sensored Control (IT)

PARALLEL SENSORLESS CONTROLLER

Pump Mounted

Wall Mounted

_____ Pumps in Parallel

TYPE OF SEAL

Standard Seal

(Buna-Carbon/Ceramic)

-20° to 225° F (-29° to 107° C)

Max Working Pressure 175 psi (12 bar)

-F Standard Seal w/ Flush Line

(Buna-Carbon/Ceramic)

-20° to 225° F (-29° to 107° C)

Max Working Pressure 175 psi (12 bar)

-S Stuffing Box construction w/ Flushed Mechanical Single Seal

(EPR-Tungsten Carbide/Carbon)

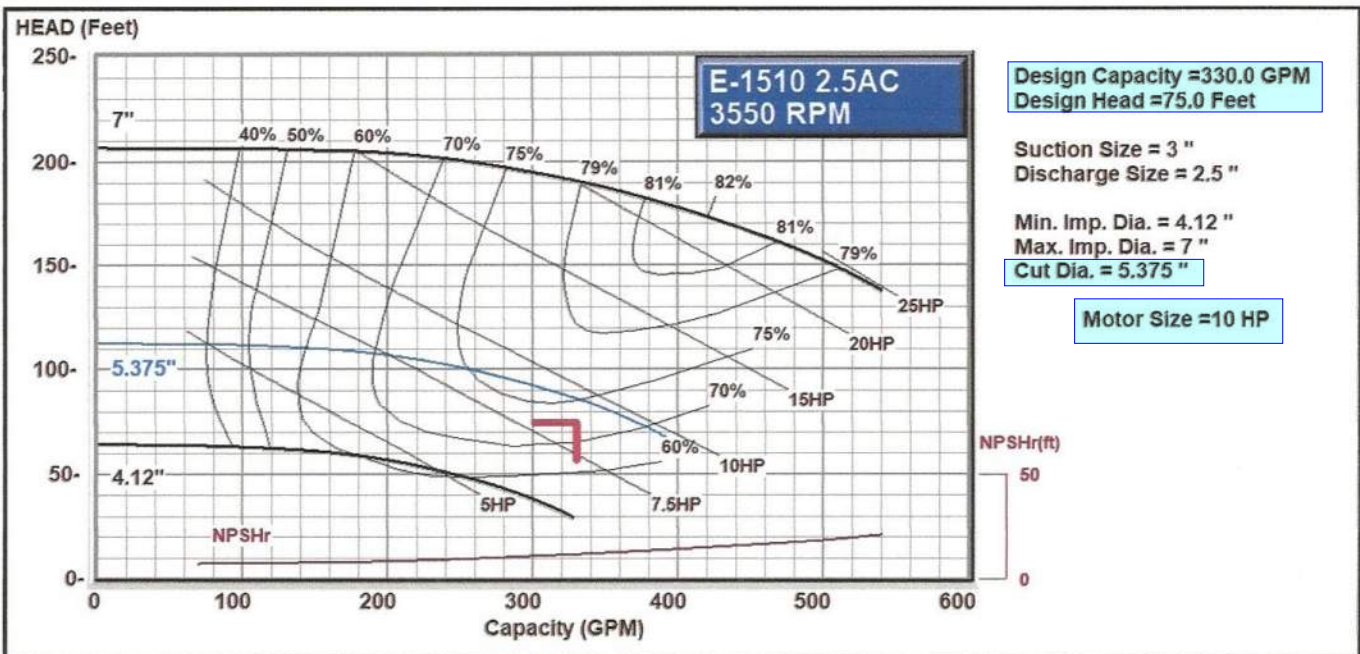
-20° to 250° F (-29° to 121° C)

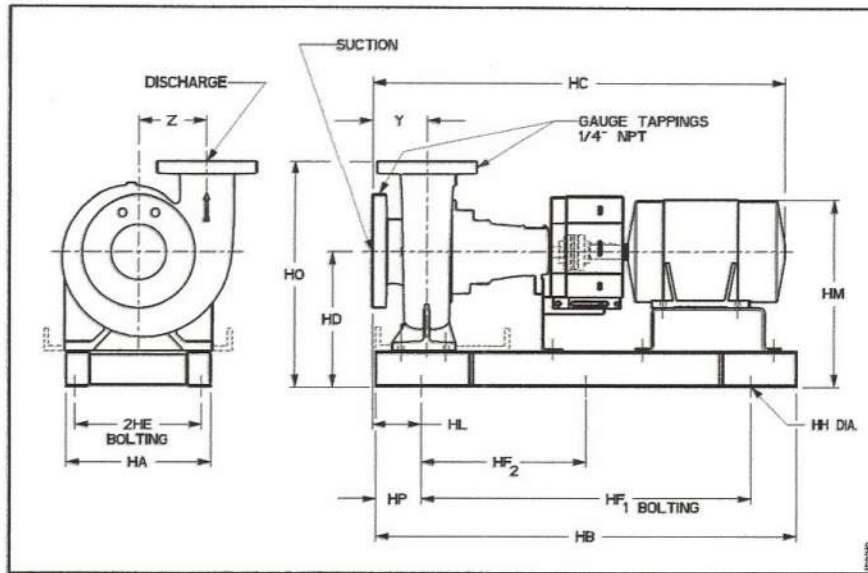
Max Working Pressure 175 psi (12 bar)

-PF Stuffing Box Construction w/ Flushed Packing (Graphite Impregnated Teflon)

0° to 250° F (-17° to 121° C)

Max Working Pressure 175 psi (12 bar)





FLANGE DIMENSIONS IN INCHES (MM)			
	SIZE	THICKNESS	O.D.
Discharge	2.5 (64)	.69 (17)	7 (178)
Suction	3" (76)	.75 (19)	7.5 (191)

FLANGES ARE 125# ANSI - STANDARD

DIMENSIONS - Inches (mm)

STANDARD SEAL

MOTOR FRAME	HA	HB	HC MAX	HD	2HE	HF ₁	HF ₂	HH	HL	HM MAX	HO	HP	Y	Z
"S" FRAME														
56	12 (305)	28.75 (730)	29.63 (752)	9.75 (248)	10.25 (260)	22.5 (572)	-	.75 (19)	4.38 (111)	13.38 (340)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
143T	12 (305)	28.75 (730)	29.75 (756)	9.75 (248)	10.25 (260)	22.5 (572)	-	.75 (19)	4.38 (111)	13.5 (343)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
145T	12 (305)	28.75 (730)	30.75 (781)	9.75 (248)	10.25 (260)	22.5 (572)	-	.75 (19)	4.38 (111)	13.5 (343)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
182T	14.63 (305)	31 (787)	33.5 (851)	9.75 (248)	12.88 (327)	25 (635)	-	.75 (19)	3 (77)	15 (381)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
184T	14.63 (305)	31 (787)	34.25 (870)	9.75 (248)	12.88 (327)	25 (635)	-	.75 (19)	3 (77)	15 (381)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
213T	14.63 (305)	34.63 (879)	36.75 (933)	9.75 (248)	12.88 (327)	28.63 (727)	-	.75 (19)	3 (77)	15.63 (397)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
215T	14.63 (305)	34.63 (879)	38.25 (972)	9.75 (248)	12.88 (327)	28.63 (727)	-	.75 (19)	3 (77)	15.63 (397)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
254T	14.63 (305)	39.38 (1000)	42 (1067)	10.75 (273)	12.88 (327)	33.38 (848)	-	.75 (19)	3 (77)	17.63 (448)	16.75 (425)	3 (77)	4.25 (108)	4.69 (119)
256T	14.63 (305)	39.38 (1000)	43.75 (1111)	10.75 (273)	12.88 (327)	33.38 (848)	-	.75 (19)	3 (77)	17.63 (448)	16.75 (425)	3 (77)	4.25 (108)	4.69 (119)
284TS	16 (406)	46.5 (1181)	44.25 (1124)	13 (330)	14 (356)	36.5 (927)	18.25 (464)	.88 (22)	4.13 (105)	21 (533)	19 (483)	5 (127)	4.25 (108)	4.69 (119)

STUFFING BOX

MOTOR FRAME	HA	HB	HC MAX	HD	2HE	HF ₁	HF ₂	HH	HL	HM MAX	HO	HP	Y	Z
"S" FRAME														
56	14.63 (305)	34.63 (879)	33.25 (845)	9.75 (248)	12.88 (327)	28.63 (727)	-	.75 (19)	3 (77)	13.38 (340)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
143T	14.63 (371)	34.63 (879)	33.38 (848)	9.75 (248)	12.88 (327)	28.63 (727)	-	.75 (19)	3 (77)	13.38 (340)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
145T	14.63 (371)	34.63 (879)	34.38 (873)	9.75 (248)	12.88 (327)	28.63 (727)	-	.75 (19)	3 (77)	13.5 (343)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
182T	14.63 (371)	34.63 (879)	37.13 (943)	9.75 (248)	12.88 (327)	28.63 (727)	-	.75 (19)	3 (77)	13.5 (343)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
184T	14.63 (371)	34.63 (879)	37.13 (943)	9.75 (248)	12.88 (327)	28.63 (727)	-	.75 (19)	3 (77)	15 (381)	15.75 (400)	3 (77)	4.25 (108)	4.69 (119)
"L" FRAME														
213T	16 (406)	46.5 (1181)	43.75 (1105)	11 (279)	14 (356)	36.5 (927)	18.25 (464)	.88 (22)	4.13 (105)	16.88 (429)	17 (432)	5 (127)	4.25 (108)	4.69 (119)
215T	16 (406)	46.5 (1181)	45 (1143)	11 (279)	14 (356)	36.5 (927)	18.25 (464)	.88 (22)	4.13 (105)	16.88 (429)	17 (432)	5 (127)	4.25 (108)	4.69 (119)
254T	16 (406)	51.75 (1314)	48.75 (1238)	12 (305)	14 (356)	41.75 (1060)	20.88 (530)	.88 (22)	4.13 (105)	18.88 (479)	18 (457)	5 (127)	4.25 (108)	4.69 (119)
256T	16 (406)	51.75 (1314)	50.5 (1283)	12 (305)	14 (356)	41.75 (1060)	20.88 (530)	.88 (22)	4.13 (105)	18.88 (479)	18 (457)	5 (127)	4.25 (108)	4.69 (119)

Dimensions are subject to change. Not to be used for construction purposes unless certified.



Xylem Inc.
 8200 N. Austin Avenue, Morton Grove, IL 60053
 Phone: (847)966-3700 Fax: (847)965-8379
 www.xylem.com/bellgossett
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JOB: Connor Group - Central Support Office Annex

REPRESENTATIVE: Steffens-Shultz, Inc

UNIT TAG: BP2 (BOD - Close Coupled)
ENGINEER: Korda Engineering
CONTRACTOR: TP Mechanical

ORDER NO.
SUBMITTED BY: Jerry Tuckerman
APPROVED BY:

DATE: 1/7/2022
DATE:
DATE:



Series e-80
4x4x11B

Close Coupled In-Line Centrifugal Pump

BP2

DESCRIPTION:

The Series e-80 is a highly efficient, heavy duty, close coupled pump designed for horizontal or vertical in-line mounting. The e-80 is available in stainless steel fitted construction, with flows up to 2500 GPM, heads to 380 feet.

SPECIFICATIONS

FLOW	175	HEAD	40
HP	5	RPM	1200
VOLTS	230/460		
CYCLE	60	INPUT PHASE	3
ENCLOSURE	ODP Nema Premium Efficient		
APPROX. WEIGHT	425		
SPECIALS			

MATERIALS OF CONSTRUCTION

- Stainless Steel Fitted
- MAXIMUM WORKING PRESSURE**
- 175 psi (12 bar) with 125# ANSI flange drilling
- 250 psi (17 bar) with 250# ANSI flange drilling (requires e-80-S)
- 300 psi (21 bar) W.P. with 250# ANSI flange drilling (Requires -S and EPR-Silicon Carbide-Silicon Carbide Seal)

MOUNTING

- In-Line Piping
- Flange Supports

PARALLEL SENSORLESS CONTROLLER

- Pump Mounted
- Wall Mounted
- ___ Pumps in Parallel

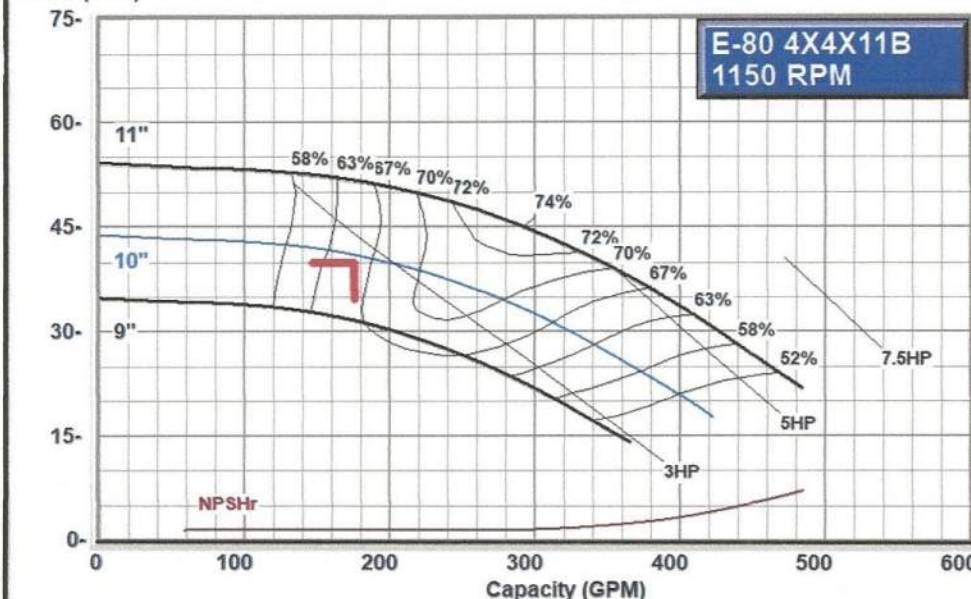
PUMP VARIABLE SPEED CONTROL

- Integrated Technologic® Sensorless Control (ITSC)
- Integrated Technologic® (IT)
- External input by others
- Pressure Sensor(s)
- Differential Pressure Sensor(s)
- Flow Sensor(s)
- By Others

TYPE OF SEAL

- F Standard Seal w/ Flush Line (Buna-Carbon/Ceramic) -20° to 225°F (-29° to 107°C) Max working pressure 175 psi (12 bar)
- S Stuffing Box construction w/ Flushed Mechanical Single Seal (EPR-Tungsten Carbide/Carbon) -20° to 225°F (-29° to 107°C) Max working pressure 175 psi (12 bar)
- PF Stuffing Box Construction w/ Flushed Packing (Graphite Impregnated PTFE) -20° to 300°F (-29° to 149°C) Max working press. 175 psi (12 bar) or 300 psi (21 bar)

HEAD (Feet)



Design Capacity = 175.0 GPM
Design Head = 40.0 Feet

Suction Size = 4 "
Suct. Velocity = 4.4 fps
Discharge Size = 4 "
Disc. Velocity = 4.4 fps

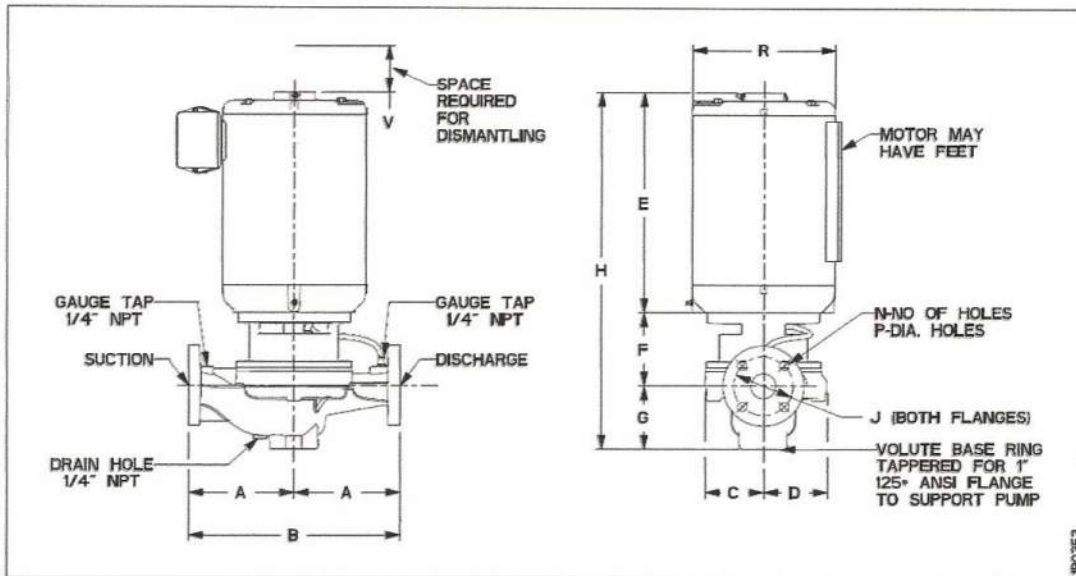
Min. Imp. Dia. = 7.5 "
Max. Imp. Dia. = 11 "
Cut Dia. = 10 "

Max. Flow = 422 GPM
B.E.P. Flow = 259 GPM

Eff. @ Duty-Point = 66.02 %
Motor Size = 5 HP

B.H.P. @
Duty-Point = 2.73 BHP
Max. B.H.P. for
Imp. Cut = 4.07 BHP

BP2



In-Line Piping

DIMENSIONS - Inches (mm)

STANDARD SEAL

MOTOR FRAME	A	B	C	D	E (max)	F	G	H (max)	125# ANSI			250# ANSI			R	S (Max)*	V (min)	Suct/Disch Gauge Taps (NPT)	Drain Tap (NPT)
									J	N	P	J	N	P					
184JM	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	15.31 (389)	4.38 (111)	7.50 (191)	27.19 (691)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	11.38 (289)	1.00 (25)	5.25 (133)	0.25	0.25
213JM	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	19.25 (489)	4.38 (111)	7.50 (191)	31.13 (791)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	14.00 (356)	0.00	5.25 (133)	0.25	0.25
⇒ 215JM	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	19.25 (489)	4.38 (111)	7.50 (191)	31.13 (791)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	14.00 (356)	0.00	5.25 (133)	0.25	0.25
254JM	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	24.13 (613)	4.86 (123)	7.50 (191)	36.48 (927)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	17.00 (432)	0.00	5.25 (133)	0.25	0.25
256JM	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	24.13 (613)	4.86 (123)	7.50 (191)	36.48 (927)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	17.00 (432)	0.00	5.25 (133)	0.25	0.25

STUFFING BOX

MOTOR FRAME	A	B	C	D	E (max)	F	G	H (max)	125# ANSI			250# ANSI			R	S (Max)*	V (min)	Suct/Disch Gauge Taps (NPT)	Drain Tap (NPT)
									J	N	P	J	N	P					
184JP	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	15.31 (389)	7.38 (187)	7.50 (191)	30.19 (767)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	11.38 (289)	1.00 (25)	5.25 (133)	0.25	0.25
213JP	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	19.25 (489)	7.38 (187)	7.50 (191)	34.13 (867)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	14.00 (356)	0.00	5.25 (133)	0.25	0.25
215JP	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	19.25 (489)	7.38 (187)	7.50 (191)	34.13 (867)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	14.00 (356)	0.00	5.25 (133)	0.25	0.25
254JP	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	24.13 (613)	7.69 (195)	7.50 (191)	39.31 (999)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	17.00 (432)	0.00	5.25 (133)	0.25	0.25
256JP	13.00 (330)	26.00 (660)	7.01 (178)	8.22 (209)	24.13 (613)	7.69 (195)	7.50 (191)	39.31 (999)	7.50 (191)	8 (19)	0.75 (19)	7.88 (200)	8 (22)	0.88 (22)	17.00 (432)	0.00	5.25 (133)	0.25	0.25

Dimensions are subject to change. Not to be used for construction purposes unless certified.

NOTE: For Single phase Motors add 1" to dimensions E & H.

*Dimensions are for ODP Motors. For TEFC add S dimension to dimensions E & H.



Xylem Inc.
 8200 N. Austin Avenue, Morton Grove, IL 60053
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JOB: Connor Group - Central Support Office Annex

REPRESENTATIVE: Steffens-Shultz, Inc

UNIT TAG: CHWP1
ENGINEER: Korda Engineering
CONTRACTOR: TP Mechanical

ORDER NO.
SUBMITTED BY: Jerry Tuckerman
APPROVED BY:

DATE: 1/7/2022
DATE:
DATE:



Series e-80SC 5x5x7B Split-Coupled In-Line Centrifugal Pumps

CHWP1

DESCRIPTION:

The Series e-80SC is a highly efficient, heavy duty, split coupled pump designed for vertical in-line mounting.

SPECIFICATIONS

FLOW	360	HEAD	35
HP	7.5	RPM	1800
VOLTS	208-230/460		
CYCLE	60	INPUT PHASE	3
ENCLOSURE	ODP Nema Premium Efficient		
APPROX. WEIGHT	375		
SPECIALS			

MATERIALS OF CONSTRUCTION

- Stainless Steel Fitted
- MAXIMUM WORKING PRESSURE**
- 175 psi (12 bar) with 125# ANSI Flange
- 250 psi (17 bar) with 250# ANSI Flange drilling (requires e-80-S)

MOUNTING

- In-Line Piping
- Flange Supports

PUMP VARIABLE SPEED CONTROL

- Integrated Technologic® Sensorless Control (ITSC)
- Integrated Technologic® (IT)
- External input by others
- Pressure Sensor(s)
- Differential Pressure Sensor(s)
- Flow Sensor(s) By Others

PARALLEL PUMPING SYSTEM

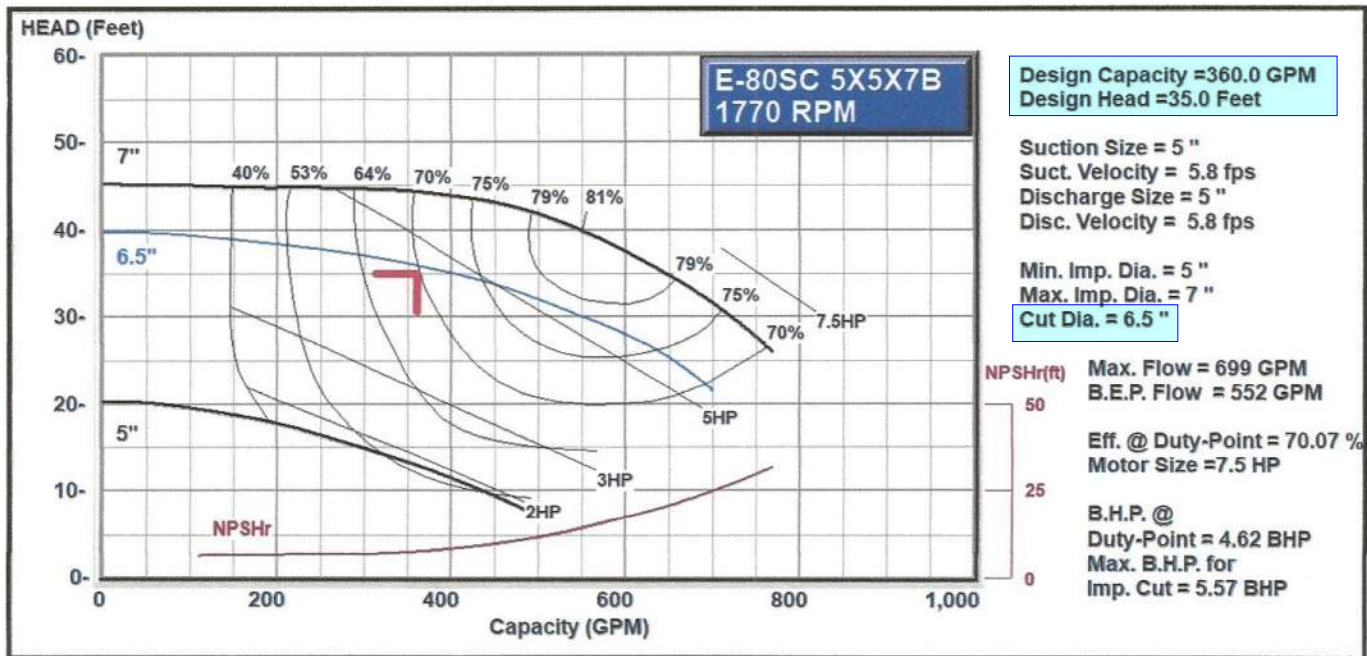
- Sensorless Control (ITSC)
- Sensored Control (IT)

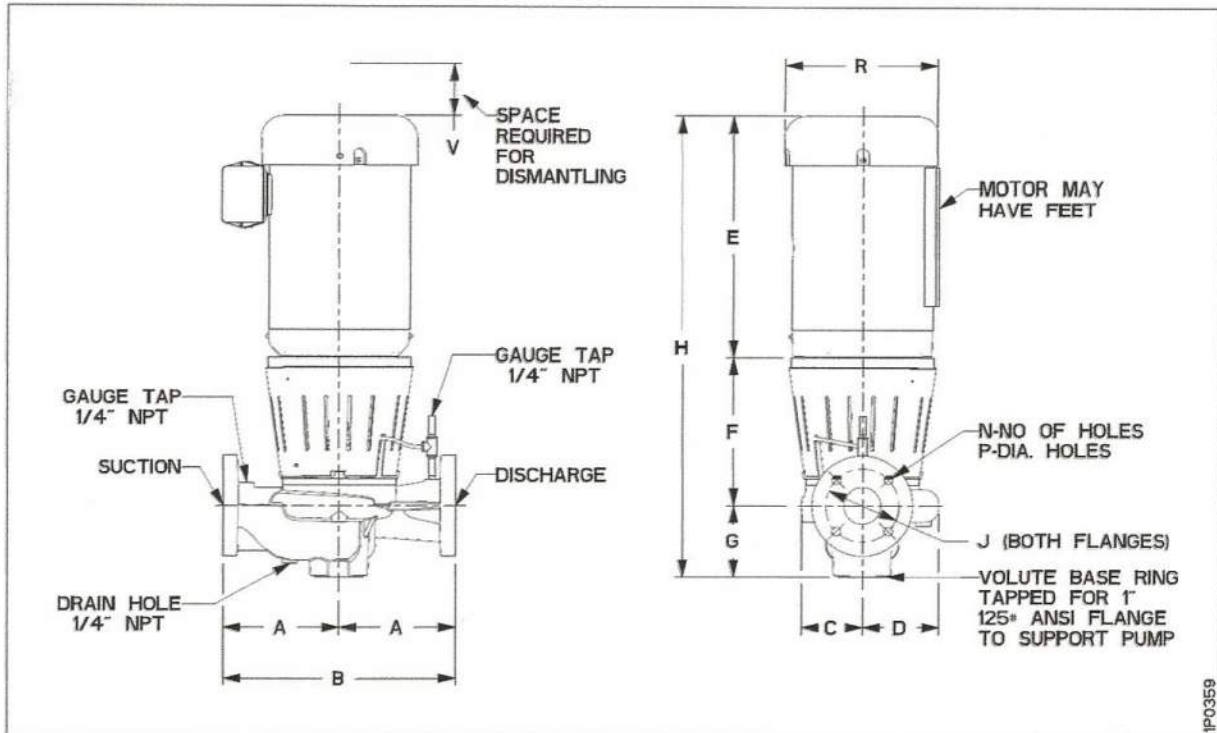
PARALLEL SENSORLESS CONTROLLER

- Pump Mounted
- Wall Mounted
- _____ Pumps in Parallel

TYPE OF FLUSHED SEAL

- Standard Inside Unitized-175# (EPR/Carbon-Ceramic) -20° to 250°F (-29° to 121°C) Max working pressure 175 psi (12 bar)
- Inside Unitized (EPR/Carbon-Tungsten Carbide)-250# -20° to 250°F (-29° to 121°C) Max working pressure 250 psi (17 bar)
- Inside Unitized (FKM/Carbon-Ceramic) -10° to 225°F (-23° to 107°C) Max working pressure 250 psi (17 bar)
- Outside (EPR/Carbon-Ceramic)-250# -20° to 250°F (-29° to 121°C) Max working pressure 250 psi (17 bar)
- Outside (FKM/Carbon-Ceramic)-250# -10° to 225°F (-23° to 107°C)





In-Line Piping

MOTOR FRAME	DIMENSIONS - Inches (mm)								TC SHAFT MOTORS						R	V (min)	Suct/Disch Gauge Taps (NPT)	Drain Tap (NPT)
	A	B	C	D	E (max)	F	G	H (max)	125# ANSI			250# ANSI						
									J	N	P	J	N	P				
143TC	12.00 (305)	24.00 (610)	5.69 (145)	8.31 (211)	12.05 (306)	12.37 (314)	7.28 (185)	31.70 (805)	8.50 (216)	8	0.88 (22)	9.25 (235)	8	0.88 (22)	7.19 (183)	5.00 (127)	0.25	0.25
145TC	12.00 (305)	24.00 (610)	5.69 (145)	8.31 (211)	12.05 (306)	12.37 (314)	7.28 (185)	31.70 (805)	8.50 (216)	8	0.88 (22)	9.25 (235)	8	0.88 (22)	7.19 (183)	5.00 (127)	0.25	0.25
182TC	12.00 (305)	24.00 (610)	5.69 (145)	8.31 (211)	12.25 (311)	12.63 (321)	7.28 (185)	32.16 (817)	8.50 (216)	8	0.88 (22)	9.25 (235)	8	0.88 (22)	8.75 (222)	5.00 (127)	0.25	0.25
184TC	12.00 (305)	24.00 (610)	5.69 (145)	8.31 (211)	13.25 (337)	12.63 (321)	7.28 (185)	33.16 (842)	8.50 (216)	8	0.88 (22)	9.25 (235)	8	0.88 (22)	8.75 (222)	5.00 (127)	0.25	0.25
➔ 213TC	12.00 (305)	24.00 (610)	5.69 (145)	8.31 (211)	14.88 (378)	12.63 (321)	7.28 (185)	34.78 (883)	8.50 (216)	8	0.88 (22)	9.25 (235)	8	0.88 (22)	10.63 (270)	5.00 (127)	0.25	0.25
215TC	12.00 (305)	24.00 (610)	5.69 (145)	8.31 (211)	14.88 (378)	12.63 (321)	7.28 (185)	34.78 (883)	8.50 (216)	8	0.88 (22)	9.25 (235)	8	0.88 (22)	10.63 (270)	5.00 (127)	0.25	0.25

Dimensions are subject to change. Not to be used for construction purposes unless certified.

NOTE: For TEFC add 1-1/2" to dimensions E & H.



Xylem Inc.
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JOB: Connor Group - Central Support Office Annex

REPRESENTATIVE: Steffens-Shultz, Inc

UNIT TAG: CHWP2
ENGINEER: Korda Engineering
CONTRACTOR: TP Mechanical

ORDER NO.
SUBMITTED BY: Jerry Tuckerman
APPROVED BY:

DATE: 1/7/2022
DATE:
DATE:

CHWP2



Series e-80SC 3x3x7C Split-Coupled In-Line Centrifugal Pumps

DESCRIPTION:

The Series e-80SC is a highly efficient, heavy duty, split coupled pump designed for vertical in-line mounting.

SPECIFICATIONS

FLOW	140	HEAD	35
HP	3	RPM	1800
VOLTS	208-230/460		
CYCLE	60	INPUT PHASE	3

ENCLOSURE ODP Nema Premium Efficient
APPROX. WEIGHT 220
SPECIALS _____

MATERIALS OF CONSTRUCTION

- Stainless Steel Fitted
- MAXIMUM WORKING PRESSURE**
- 175 psi (12 bar) with 125# ANSI Flange
- 250 psi (17 bar) with 250# ANSI Flange drilling (requires e-80-S)

MOUNTING

- In-Line Piping
- Flange Supports

PUMP VARIABLE SPEED CONTROL

- Integrated Technologic® Sensorless Control (ITSC)
- Integrated Technologic® (IT)
- External input by others
- Pressure Sensor(s)
- Differential Pressure Sensor(s)
- Flow Sensor(s) By Others

PARALLEL PUMPING SYSTEM

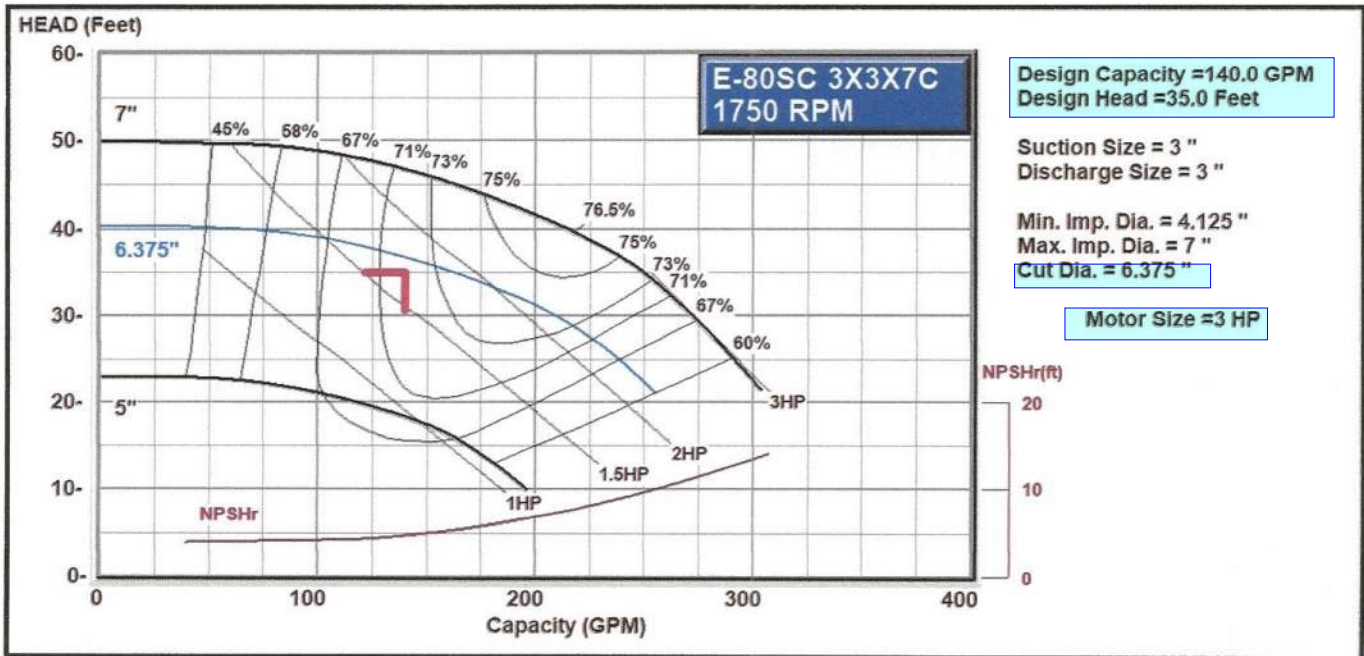
- Sensorless Control (ITSC)
- Sensored Control (IT)

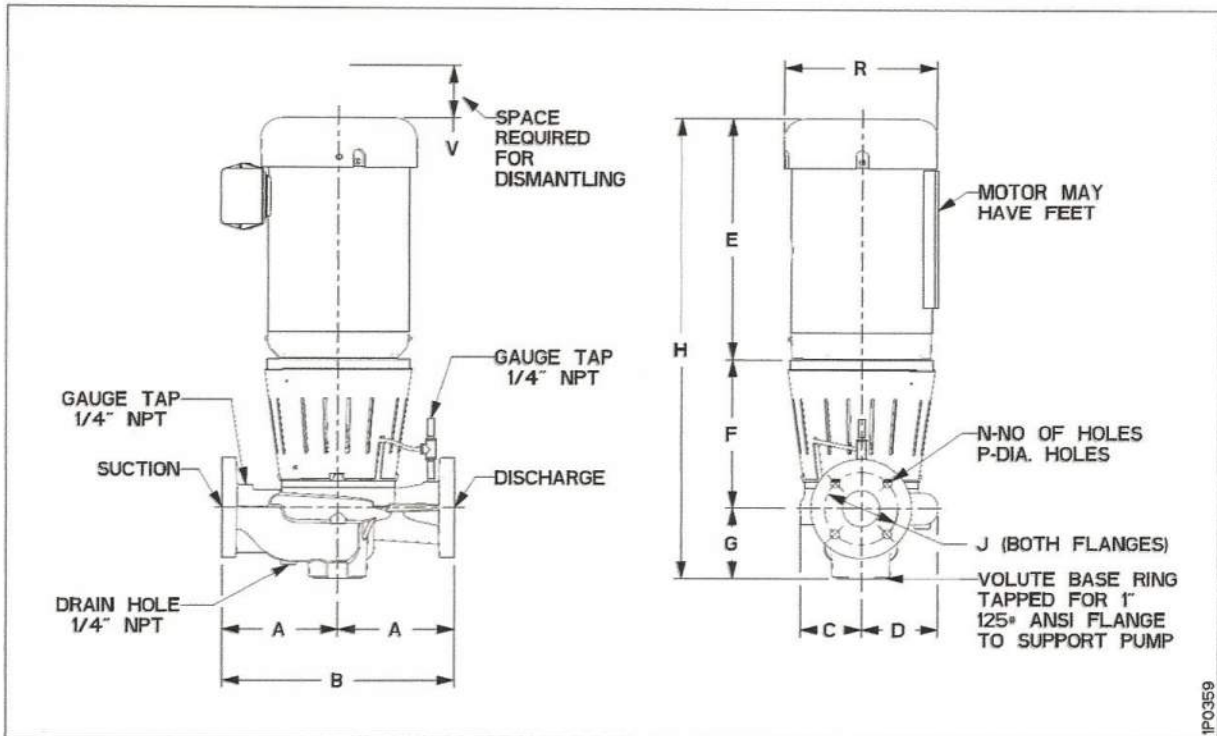
PARALLEL SENSORLESS CONTROLLER

- Pump Mounted
- Wall Mounted
- _____ Pumps in Parallel

TYPE OF FLUSHED SEAL

- Standard Inside Unitized-175# (EPR/Carbon-Ceramic) -20° to 250°F (-29° to 121°C) Max working pressure 175 psi (12 bar)
- Inside Unitized (EPR/Carbon-Tungsten Carbide)-250# -20° to 250°F (-29° to 121°C) Max working pressure 250 psi (17 bar)
- Inside Unitized (FKM/Carbon-Ceramic) -10° to 225°F (-23° to 107°C) Max working pressure 250 psi (17 bar)
- Outside (EPR/Carbon-Ceramic)-250# -20° to 250°F (-29° to 121°C) Max working pressure 250 psi (17 bar)
- Outside (FKM/Carbon-Ceramic)-250# -10° to 225°F (-23° to 107°C)





In-Line Piping

DIMENSIONS - Inches (mm)

TC SHAFT MOTORS

MOTOR FRAME	A	B	C	D	E (max)	F	G	H (max)	125# ANSI			250# ANSI			R	V (min)	Suct/Disch Gauge Taps (NPT)	Drain Tap (NPT)
									J	N	P	J	N	P				
143TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	12.05 (306)	11.75 (298)	5.85 (149)	29.65 (753)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	7.19 (183)	4.50 (114)	0.25	0.25
145TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	12.05 (306)	11.75 (298)	5.85 (149)	29.65 (753)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	7.19 (183)	4.50 (114)	0.25	0.25
➔ 182TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	12.25 (311)	12.00 (305)	5.85 (149)	30.10 (765)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	8.75 (222)	4.50 (114)	0.25	0.25
184TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	13.25 (337)	12.00 (305)	5.85 (149)	31.10 (790)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	8.75 (222)	4.50 (114)	0.25	0.25
213TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	14.88 (378)	12.00 (305)	5.85 (149)	32.73 (831)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	10.63 (270)	4.50 (114)	0.25	0.25
215TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	14.88 (378)	12.00 (305)	5.85 (149)	32.73 (831)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	10.63 (270)	4.50 (114)	0.25	0.25
254TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	19.44 (494)	12.00 (305)	5.85 (149)	37.29 (947)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	12.31 (313)	4.50 (114)	0.25	0.25
256TC	9.50 (241)	19.00 (483)	4.98 (126)	6.25 (159)	21.19 (538)	12.00 (305)	5.85 (149)	39.04 (992)	6.00 (152)	4 (19)	0.75 (19)	6.63 (168)	8 (22)	0.88 (22)	12.31 (313)	4.50 (114)	0.25	0.25

Dimensions are subject to change. Not to be used for construction purposes unless certified.

NOTE: For TEFC add 1-1/2" to dimensions E & H.



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1P0359

JOB: Connor Group - Central Support Office Annex

REPRESENTATIVE: Steffens-Shultz, Inc

UNIT TAG: CHWP3;CHWP4
ENGINEER: Korda Engineering
CONTRACTOR: TP Mechanical

ORDER NO.
SUBMITTED BY: Jerry Tuckerman
APPROVED BY:

DATE: 1/7/2022
DATE:
DATE:



Series e-80SC

5x5x13.5

Split-Coupled In-Line Centrifugal Pumps

CHWP3 & CHWP4

DESCRIPTION:
The Series e-80SC is a highly efficient, heavy duty, split coupled pump designed for vertical in-line mounting.

SPECIFICATIONS

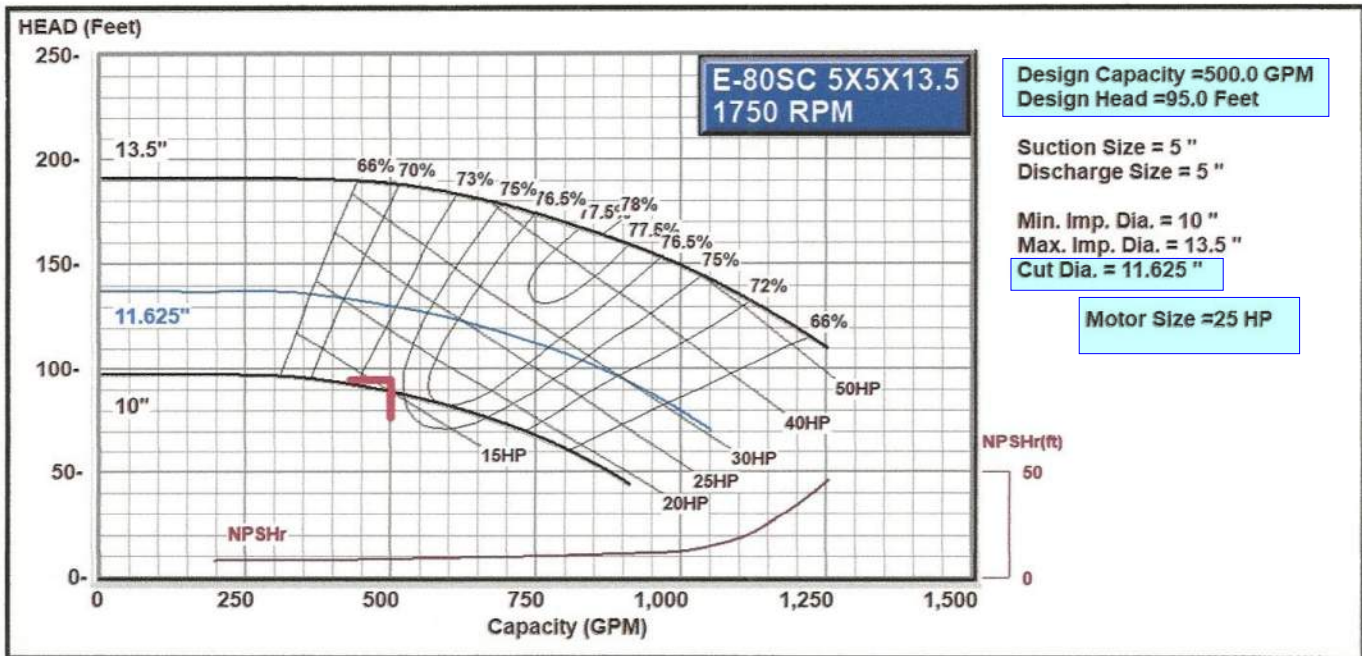
FLOW	500	HEAD	95
HP	25	RPM	1800
VOLTS	230/460		
CYCLE	60	INPUT PHASE	3
ENCLOSURE Baldor ODP NEMA Premium w/Shaft Grounding Rings Inverter Duty			
APPROX. WEIGHT	710		
SPECIALS			

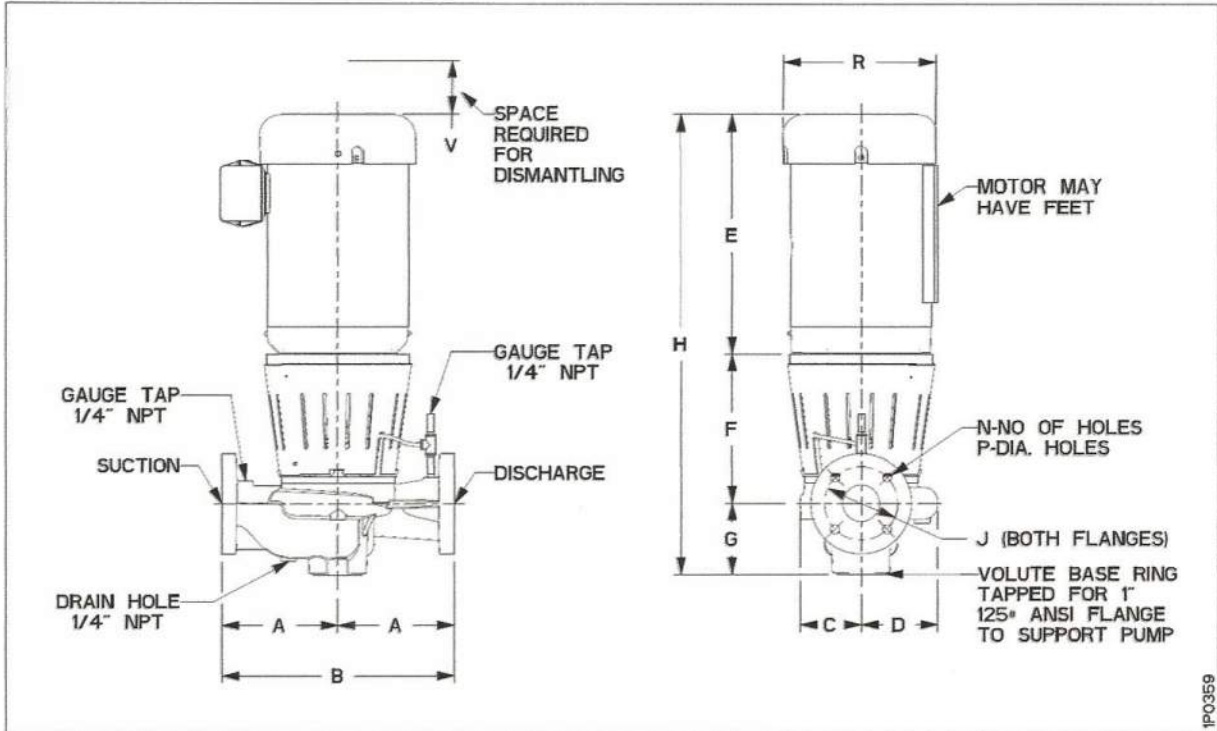
MATERIALS OF CONSTRUCTION

- Stainless Steel Fitted
- MAXIMUM WORKING PRESSURE**
- 175 psi (12 bar) with 125# ANSI Flange
- 250 psi (17 bar) with 250# ANSI Flange drilling (requires e-80-S)
- MOUNTING**
- In-Line Piping Flange Supports
- PUMP VARIABLE SPEED CONTROL**
- Integrated Technologic® Sensorless Control (ITSC)
- Integrated Technologic® (IT)
- External input by others
- Pressure Sensor(s)
- Differential Pressure Sensor(s)
- Flow Sensor(s) By Others
- PARALLEL PUMPING SYSTEM**
- Sensorless Control (ITSC)
- Sensored Control (IT)
- PARALLEL SENSORLESS CONTROLLER**
- Pump Mounted
- Wall Mounted
- Pumps in Parallel

TYPE OF FLUSHED SEAL

- Standard Inside Unitized-175# (EPR/Carbon-Ceramic) -20° to 250°F (-29° to 121°C) Max working pressure 175 psi (12 bar)
- Inside Unitized (EPR/Carbon-Tungsten Carbide)-250# -20° to 250°F (-29° to 121°C) Max working pressure 250 psi (17 bar)
- Inside Unitized (FKM/Carbon-Ceramic) -10° to 225°F (-23° to 107°C) Max working pressure 250 psi (17 bar)
- Outside (EPR/Carbon-Ceramic)-250# -20° to 250°F (-29° to 121°C) Max working pressure 250 psi (17 bar)
- Outside (FKM/Carbon-Ceramic)-250# -10° to 225°F (-23° to 107°C)





In-Line Piping

DIMENSIONS - Inches (mm)

TC SHAFT MOTORS

MOTOR FRAME	A	B	C	D	E (max)	F	G	H (max)	125# ANSI			250# ANSI			R	V (min)	Suct/Disch Gauge Taps (NPT)	Drain Tap (NPT)
									J	N	P	J	N	P				
254TC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	19.44 (494)	13.81 (351)	8.50 (216)	41.75 (1060)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	12.31 (313)	7.50 (191)	0.25	0.25
256TC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	21.19 (538)	13.81 (351)	8.50 (216)	43.50 (1105)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	12.31 (313)	7.50 (191)	0.25	0.25
➔ 284TC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	22.06 (560)	13.81 (351)	8.50 (216)	44.38 (1127)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	14.13 (359)	7.50 (191)	0.25	0.25
286TC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	23.56 (598)	13.81 (351)	8.50 (216)	45.88 (1165)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	14.13 (359)	7.50 (191)	0.25	0.25
324TSC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	24.63 (625)	13.81 (351)	8.50 (216)	46.94 (1192)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	15.63 (397)	7.50 (191)	0.25	0.25
326TSC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	26.13 (664)	13.81 (351)	8.50 (216)	48.44 (1230)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	15.63 (397)	7.50 (191)	0.25	0.25
364TSC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	28.25 (718)	13.81 (351)	8.50 (216)	50.56 (1284)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	19.13 (486)	7.50 (191)	0.25	0.25
365TSC	16.50 (419)	33.00 (838)	8.78 (223)	10.29 (261)	28.62 (727)	13.81 (351)	8.50 (216)	50.93 (1294)	8.50 (216)	8 (22)	0.88 (22)	9.25 (235)	8 (22)	0.88 (22)	19.13 (486)	7.50 (191)	0.25	0.25

Dimensions are subject to change. Not to be used for construction purposes unless certified.

NOTE: For TEFC add 1-1/2" to dimensions E & H.



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1P0359

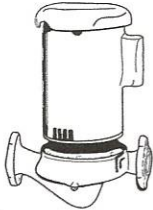
JOB: Connor Group - Central Support Office Annex

REPRESENTATIVE: Steffens-Shultz, Inc

UNIT TAG: Alternate HCP-1
ENGINEER: Korda Engineering
CONTRACTOR: TP Mechanical

ORDER NO.
SUBMITTED BY: Jerry Tuckerman
APPROVED BY:

DATE: 1/27/2022
DATE:
DATE:



**1.25AAB
Series e-90**

Centrifugal Pumps
In-Line Mounted - Close Coupled

SPECIFICATIONS

FLOW	45	HEAD	20
HP	.5	RPM	1800
VOLTS	115/208-230		
CYCLE	60	PHASE	1

ENCLOSURE U.S. Motors ODP Standard Efficient
APPROX. WEIGHT 55
SPECIALS _____

MATERIALS OF CONSTRUCTION

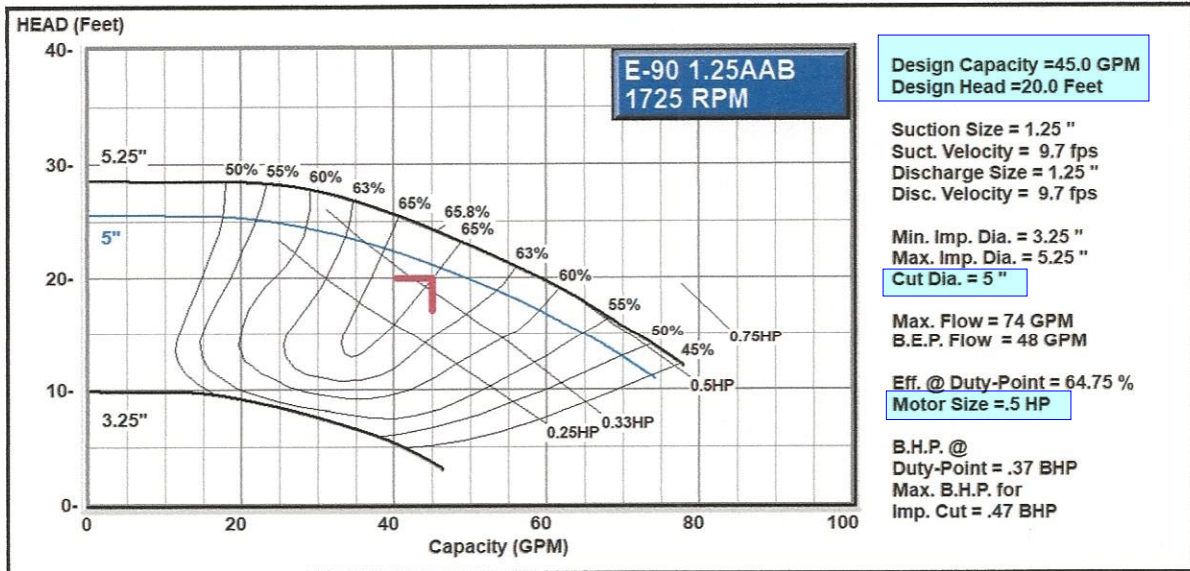
BRONZE FITTED ALL BRONZE

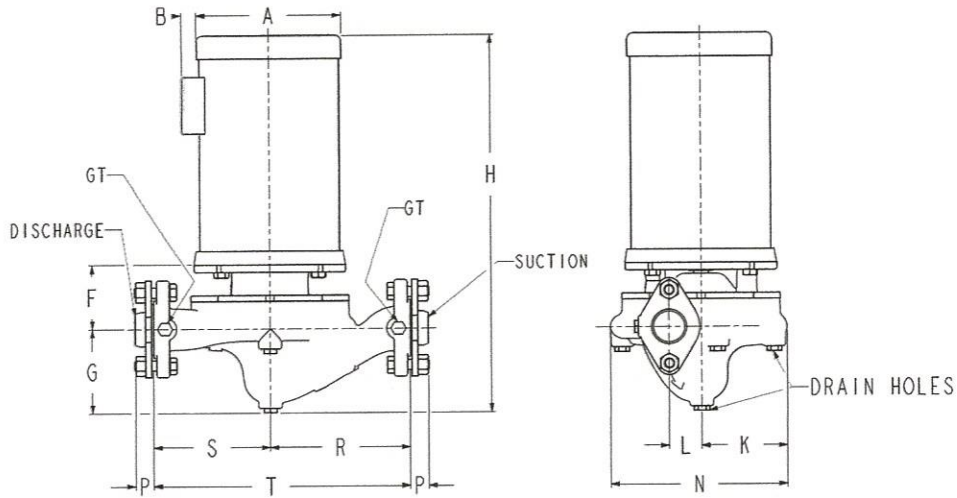
MAXIMUM WORKING PRESSURE

175 psi (12 bar) W.P.

TYPE OF SEAL

- Standard Seal
EPR/Carbon/Silicon Carbide
-10 to 250°F (-23 to 121°C)
- Optional Seal
Viton/Carbon/Silicon Carbide
-10 to 225°F (-23 to 107°C)
- Optional Seal
EPR/Graphite loaded Silicon Carbide on
Graphite loaded Silicon Carbide
-10 to 250°F (-23 to 121°C)





PUMP SIZE	SUCTION AND DISCHARGE SIZE - INCHES NPT	PUMP DIMENSIONS IN INCHES (MM)								
		F	G	K	L	N	P	R	S	T
1-1/4AAB	1-1/4	2-3/4 (70)	4 (102)	3-5/8 (92)	1-3/8 (35)	7-1/2 (190)	3/4 (19)	5 (127)	6 (152)	11 (279)

Maximum working pressure 175psi (12bar)
GT=Gauge Tap 1/8" NPT

DIMENSIONS - Inches (mm)

MOTOR HP			PHASE	A MAX.	B	H MAX.
1725	3450					
1/4			1	7-1/2 (190)	1-1/2 (38)	15-1/2 (394)
1/3			1	7-1/2 (190)	1-1/2 (38)	16 (406)
1/2			1	7-1/2 (190)	1-1/2 (38)	16 (406)
1/2			3	7-1/2 (190)		15-5/8 (397)
3/4			1	7-1/2 (190)	1-1/2 (38)	16-1/2 (419)
3/4			3	7-1/2 (190)		16-1/4 (413)
	1		1	7-1/2 (190)	1-1/2 (38)	16-1/2 (419)
	1		3	7-1/2 (190)		17-3/4 (451)
	1-1/2		1	7-1/2 (190)	1-1/2 (38)	17-3/4 (451)
	1-1/2		3	7-1/2 (190)		17-1/4 (438)
	2		1	7-1/2 (190)	1-1/2 (38)	18 (457)
	2		3	7-1/2 (190)		17-1/4 (438)
	3		1	7-1/2 (190)	1-1/2 (38)	18-1/2 (470)
	3		3	7-1/2 (190)		18 (457)
	5		3	7-1/2 (190)		21 (533)

Dimensions are subject to change. Not to be used for construction purposes unless certified.
Companion Flanges furnished for Suction and Discharge.

Xylem Inc.
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Morton Grove, IL 60053
Phone: (847)966-3700 Fax: (847)965-8379
www.bellgossett.com

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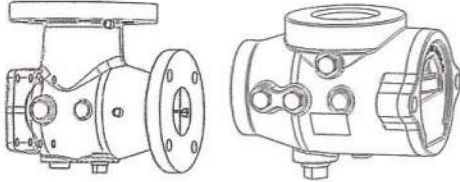
JOB: Connor Group - Central Support Office Annex

REPRESENTATIVE: Steffens-Shultz, Inc

UNIT TAG:
ENGINEER: Korda Engineering
CONTRACTOR: TP Mechanical

ORDER NO.
SUBMITTED BY: Jerry Tuckerman
APPROVED BY:

DATE: 1/7/2022
DATE:
DATE:



B&G Suction Diffuser Plus

Centrifugal Pump Accessories

DESCRIPTION

The Bell & Gossett Suction Diffuser Plus is designed for direct application to the pump suction and provides ideal flow conditions for the pump, providing NPSH requirements are met. Its integrated Flow Cone directs flow through the unit and into the pump suction while working with the full length straightening vanes to create a more uniform flow profile. The orifice cylinder has a free area equal to five times the cross section of the pump suction opening and serves as a coarse strainer to protect the pump from large sediment. The disposable start-up strainer helps to clean the system during the first 24-48 hours of operation before it is removed. Its optional pressure temperature ports allow you to verify that the start-up strainer has been removed without the need to take the unit apart.

OPERATING DATA

Operating Temperature: 250°F (121°C)
Working Pressure: 175 psi (1,207 kPa)

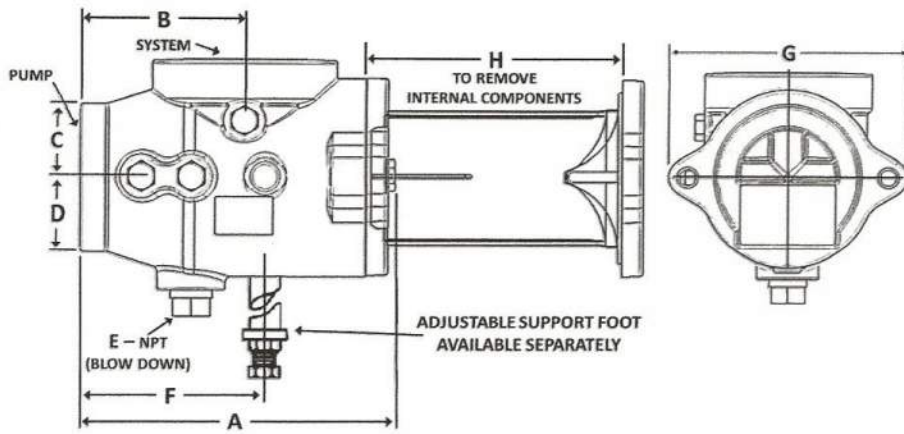
SCHEDULE

MODEL NUMBER	DIMENSIONS INCHES (mm)				TAGGING INFORMATION	X QUANTITY	Z QUANTITY
	SYSTEM SIDE		PUMP SIDE				
BA-3X/BA-3Z	2 (50.8)	FPT	1-1/2 (38.1)	FPT			
BB-3X/BB-3Z	2 (50.8)	FPT	2 (50.8)	FPT			
CB-3X/CB-3Z	2-1/2 (63.5)	FPT	2 (50.8)	FPT			
CC-3X/CC-3Z	2-1/2 (63.5)	FLG	2-1/2 (63.5)	FLG			
DA-3X/DA-3Z	3 (76.2)	FPT	1-1/2 (38.1)	FPT			
DB-3X/DB-3Z	3 (76.2)	FPT	2 (50.8)	FPT			
DC-3X/DC-3Z	3 (76.2)	FLG	2-1/2 (63.5)	FLG			
DD-3X/DD-3Z	3 (76.2)	FLG	3 (76.2)	FLG			
EC-3X/EC-3Z	4 (101.6)	FLG	2-1/2 (63.5)	FLG			
➡ ED-3X/ED-3Z	4 (101.6)	FLG	3 (76.2)	FLG	HWP1;HWP2 , CHWP2		3
EE-3X/EE-3Z	4 (101.6)	FLG	4 (101.6)	FLG			
FE-3X/FE-3Z	5 (127)	FLG	4 (101.6)	FLG			
FF-3X/FF-3Z	5 (127)	FLG	5 (127)	FLG			
GE-3X/GE-3Z	6 (152.4)	FLG	4 (101.6)	FLG			
➡ GF-3X/GF-3Z	6 (152.4)	FLG	5 (127)	FLG	CHWP1 , CHWP3;CHWP4		3
GG-3X/GG-3Z	6 (152.4)	FLG	6 (152.4)	FLG			
HG-3X/HG-3Z	8 (203.2)	FLG	6 (152.4)	FLG			
HH-3X/HH-3Z	8 (203.2)	FLG	8 (203.2)	FLG			
JH-3X/JH-3Z	10 (254)	FLG	8 (203.2)	FLG			
JJ-3X/JJ-3Z	10 (254)	FLG	10 (254)	FLG			

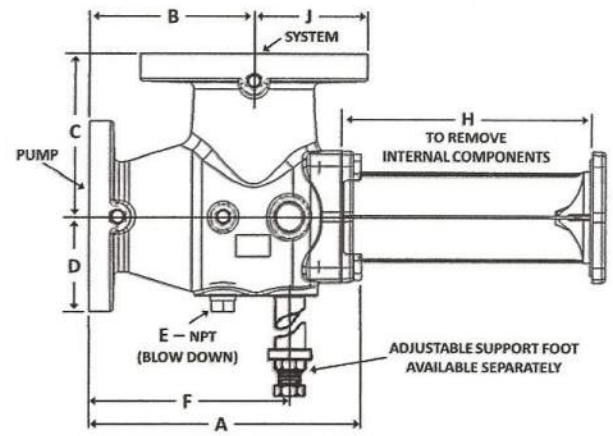
MATERIALS OF CONSTRUCTION

Type	Body	Inlet Vanes	Orifice Cylinder	Start-Up Strainer
X	Cast Iron	Steel		16 Mesh Bronze
➡ Z	Cast Iron	Stainless Steel		16 Mesh Bronze

NOTES: Type X-For Closed Systems.
Type Z-For Domestic Water and Tower Systems.



Threaded x Threaded Models



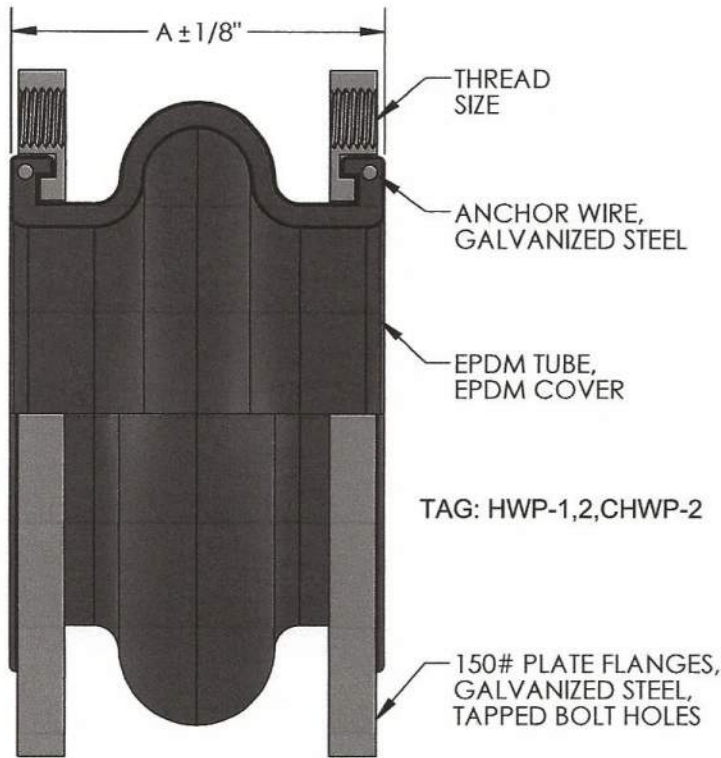
Flange x Flange Models

DIMENSIONS - INCHES (mm)

Model No.	System Side		Pump Side		A	B	C	D	E	F	G	H	J	Orifice Cylinder Free Area in ² (cm ²)	Approx. Shpg. Wt. Lbs. (Kg)
BA-3	2 (50.8)	T	1-1/2 (38.1)	T	5.96 (151)	3 (76)	2.25 (57)	2.37 (60)	3/4 (19)	3.81 (97)	5.25 (133)	5.15 (130.8)	N/A	11 (71)	13 (6)
BB-3	2 (50.8)	T	2 (50.8)	T	7.56 (192)	3.87 (98)	2.75 (70)	2.75 (70)	3/4 (19)	4.38 (111)	5.75 (146)	6.75 (171.5)	N/A	20-1/2 (132)	14 (6)
CB-3	2-1/2 (63.5)	T	2 (63.5)	T	7.56 (192)	3.87 (98)	2.75 (70)	2.75 (70)	3/4 (19)	4.38 (111)	5.75 (146)	6.75 (171.5)	N/A	20-1/2 (132)	16 (7)
CC-3	2-1/2 (63.5)	F	2-1/2 (63.5)	F	8.44 (214)	4.75 (121)	4.75 (121)	3.5 (89)	3/4 (19)	5.77 (147)	N/A	7.63 (193.7)	3.5 (89)	26 (168)	36 (16)
DA-3	3 (76.2)	T	1-1/2 (38.1)	T	7.44 (189)	3.87 (98)	2.75 (70)	2.75 (70)	3/4 (19)	4.38 (111)	5.75 (146)	6.63 (168.3)	N/A	20-1/2 (132)	17 (8)
DB-3	3 (76.2)	T	2 (50.8)	T	7.56 (192)	3.87 (98)	2.75 (70)	2.75 (70)	3/4 (19)	4.38 (111)	5.75 (146)	6.75 (171.5)	N/A	20-1/2 (132)	17 (8)
DC-3	3 (76.2)	F	2-1/2 (63.5)	F	8.75 (222)	5 (127)	5 (127)	3.50 (89)	3/4 (19)	5.77 (147)	N/A	7.63 (193.7)	3.75 (95)	26 (168)	44 (20)
DD-3	3 (76.2)	F	3 (76.2)	F	9.56 (243)	5.50 (140)	5.50 (140)	3.75 (95)	3/4 (19)	7.0 (178)	N/A	8.75 (222.3)	3.75 (95)	37-1/2 (242)	48 (22)
EC-3	4 (101.6)	F	2-1/2 (63.5)	F	11 (279)	6.50 (165)	6.50 (165)	3.50 (95)	3/4 (19)	5.77 (147)	N/A	7.63 (193.7)	4.50 (114)	26 (168)	42 (19)
ED-3	4 (101.6)	F	3 (76.2)	F	11 (279.4)	6.50 (165)	6.50 (165)	3.75 (95)	3/4 (19)	7.93 (201)	N/A	10 (254)	4.5 (114)	37-1/2 (242)	55 (25)
EE-3	4 (101.6)	F	4 (101.6)	F	11.5 (292)	6.50 (165)	6.50 (165)	4.50 (114)	3/4 (19)	7.87 (200)	N/A	10.69 (271.5)	4.50 (114)	65 (419)	72 (33)
FE-3	5 (127)	F	4 (101.6)	F	12.5 (318)	7.50 (191)	7.50 (191)	4.50 (114)	3/4 (19)	7.87 (200)	N/A	10.69 (271.5)	5 (127)	65 (419)	84 (38)
FF-3	5 (127)	F	5 (127)	F	13.67 (347)	7.50 (191)	7.50 (191)	5 (127)	3/4 (19)	10.44 (265)	N/A	12.84 (326.1)	5 (127)	90 (581)	100 (45)
GE-3	6 (152.4)	F	4 (101.6)	F	13.5 (343)	8 (203)	8 (203)	4.50 (114)	3/4 (19)	7.87 (200)	N/A	10.69 (271.5)	5.50 (140)	65 (419)	90 (41)
GF-3	6 (152.4)	F	5 (127)	F	15.67 (398)	8 (203)	8 (203)	5 (127)	3/4 (19)	10.46 (266)	N/A	13.84 (351.5)	5.50 (140)	90 (581)	105 (48)
GG-3	6 (152.4)	F	6 (152.4)	F	15.82 (402)	8 (203)	8 (203)	5.50 (140)	3/4 (19)	11 (279)	N/A	14.75 (374.7)	5.50 (140)	127 (819)	134 (61)
HG-3	8 (203.2)	F	6 (152.4)	F	15.82 (402)	9 (229)	9 (229)	5.50 (140)	3/4 (19)	11 (279)	N/A	14.75 (374.7)	6.75 (171)	127 (819)	150 (68)
HH-3	8 (203.2)	F	8 (203.2)	F	19.55 (497)	9 (229)	9 (229)	6.75 (171)	3/4 (19)	12.62 (321)	N/A	18.25 (463.6)	6.75 (171)	218 (1406)	250 (113)
JH-3	10 (254)	F	8 (203.2)	F	19.55 (497)	10 (254)	11 (279)	6.75 (171)	3/4 (19)	12.62 (321)	N/A	18.25 (463.6)	8 (203)	218 (1406)	290 (132)
JJ-3	10 (254)	F	10 (254)	F	22.80 (579)	11 (279)	11 (279)	8 (203)	3/4 (19)	15.68 (398)	N/A	21.50 (546.1)	8 (203)	338 (2180)	415 (188)

(T) Threaded - (F) Flanged *Dimensions include orifice cylinder + 2-1/2 (64) inch clearance.
 Dimensions are subject to change. Not to be used for construction purposes unless certified.

**MODEL MSREE, STYLE "R" METRASPHERE
EPDM EXPANSION JOINT, TAPPED BOLT HOLES**



TAG: HWP-1,2,CHWP-2

MAXIMUM OPERATING CONDITIONS

TEMPERATURE	PRESSURE (PSI)	
	1" - 12"	14" AND UP
170°	225	125
180°	200	115
190°	175	105
200°	150	95
210°	125	40
220°	100	35
230°	75	25

MAXIMUM WORKING TEMPERATURE 230°F

NOTES:
WWW.METRAFLEX.COM FOR INSTALLATION INSTRUCTIONS.
JOINT MUST BE INSTALLED AT ITS NEUTRAL LENGTH.
BOLTS MUST BE PROPERLY TORQUED.
NOT SUITABLE FOR STEAM OR VACUUM APPLICATIONS.
IF CONNECTING PIPE IS NOT ANCHORED AND GUIDED,
CONTROL UNITS MUST BE USED.

TO BE FURNISHED WITH CONTROL UNITS:

YES NO

QTY	PART NUMBER	PIPE SIZE		A	AXIAL COMP.	FORCE (LBS)	AXIAL EXT.	FORCE (LBS)	LATERAL OFFSET	FORCE (LBS)	ANGULAR	WEIGHT (LBS)	THREAD SIZE (UNC)
		INCH	MM										
	MSREE0100	1"	25	6"	1/2"	N/A	3/8"	N/A	1/2"	N/A	15°	5	1/2"
	MSREE0125	1-1/4"	32	6"	1/2"	N/A	3/8"	N/A	1/2"	N/A	15°	6	1/2"
	MSREE0150	1-1/2"	38	6"	1/2"	N/A	3/8"	N/A	1/2"	N/A	15°	7	1/2"
	MSREE0200	2"	50	6"	1/2"	55	3/8"	73	1/2"	55	15°	8	5/8"
	MSREE0250	2-1/2"	65	6"	1/2"	102	3/8"	68	1/2"	97	15°	13	5/8"
	MSREE0300	3"	80	6"	1/2"	136	3/8"	115	1/2"	108	15°	14	5/8"
6	MSREE0400	4"	100	6"	5/8"	145	3/8"	242	1/2"	275	15°	18	5/8"
	MSREE0500	5"	125	6"	5/8"	172	3/8"	196	1/2"	308	15°	23	3/4"
	MSREE0600	6"	150	6"	5/8"	293	3/8"	563	1/2"	484	15°	28	3/4"
	MSREE0800	8"	200	6"	5/8"	372	1/2"	587	1/2"	688	15°	40	3/4"
	MSREE1000	10"	250	8"	3/4"	398	1/2"	455	3/4"	781	15°	68	7/8"
	MSREE1200	12"	300	8"	3/4"	390	1/2"	356	3/4"	842	15°	94	7/8"
	MSREE1400	14"	350	8"	3/4"	N/A	1/2"	N/A	3/4"	N/A	15°	105	1"
	MSREE1600	16"	400	8"	3/4"	N/A	1/2"	N/A	3/4"	N/A	15°	120	1"
	MSREE1800	18"	450	8"	3/4"	N/A	1/2"	N/A	3/4"	N/A	15°	125	1-1/8"
	MSREE2000	20"	500	8"	3/4"	N/A	1/2"	N/A	3/4"	N/A	15°	145	1-1/8"
	MSREE2400	24"	600	10"	3/4"	N/A	1/2"	N/A	3/4"	N/A	15°	265	1-1/4"

NSF 372 - LEAD FREE

The wetted surface of this product contacted by consumable water contains less than one quarter of one percent (0.25%) of lead by weight. Material complies with state codes and standards, where applicable, requiring reduced lead content.

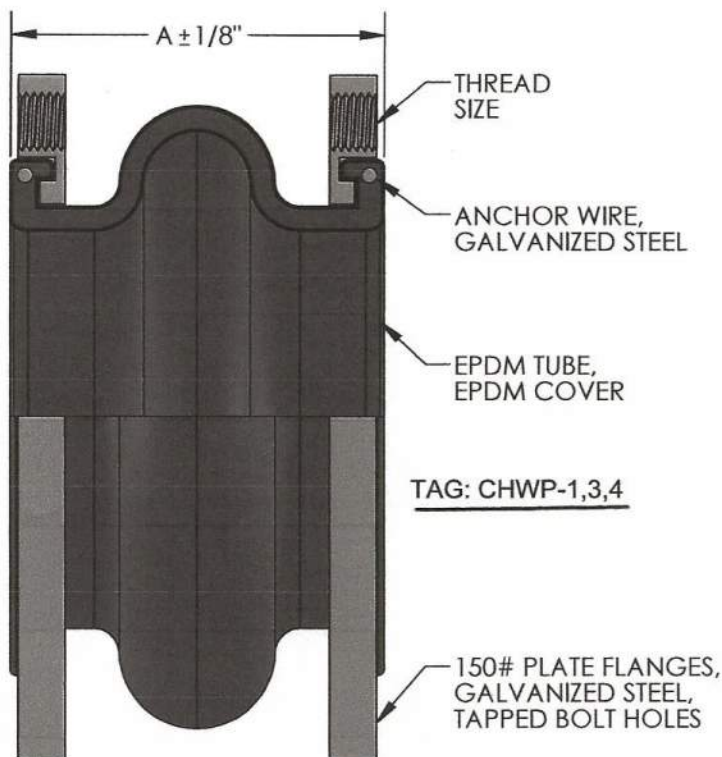
CUSTOMER: TP Mechanical

PROJECT: Connor Group Central Support Office

ENGINEER: Korda Engineering

REV.	DATE
	
2323 W. HUBBARD ST. CHICAGO, IL 60612 TEL: 312-738-3800 FAX: 312-738-0415 WWW.METRAFLEX.COM	
METRASPHERE MODEL MSREE EPDM EXPANSION JOINT, TAPPED BOLT HOLES	
DRAWN BY: DKISH	DATE: 1/19/2017
APPROVED: JC	DATE: 1/23/2017
SCALE: N/A	DRAWING NUMBER: MSREE-1

**MODEL MSREE, STYLE "R" METRASPHERE
EPDM EXPANSION JOINT, TAPPED BOLT HOLES**



TAG: CHWP-1,3,4

MAXIMUM OPERATING CONDITIONS

TEMPERATURE	PRESSURE (PSI)	
	1" - 12"	14" AND UP
170°	225	125
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MAXIMUM WORKING TEMPERATURE 230 °F

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CUSTOMER: TP Mechanical

PROJECT: Conner Group-Central Support Office

ENGINEER: Korda engineering

REV.	DATE
	
2323 W. HUBBARD ST. CHICAGO, IL 60612 TEL: 312-738-3800 FAX: 312-738-0415 WWW.METRAFLEX.COM	
METRASPHERE MODEL MSREE EPDM EXPANSION JOINT, TAPPED BOLT HOLES	
DRAWN BY: DKISH	DATE: 1/19/2017
APPROVED: JC	DATE: 1/23/2017
SCALE: N/A	DRAWING NUMBER: MSREE-1