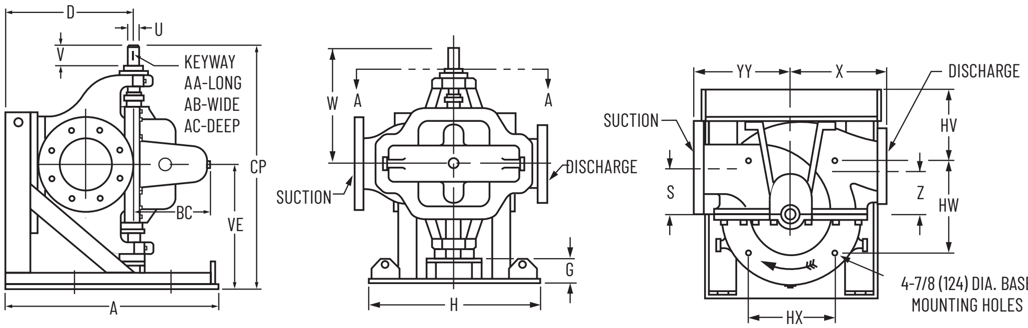
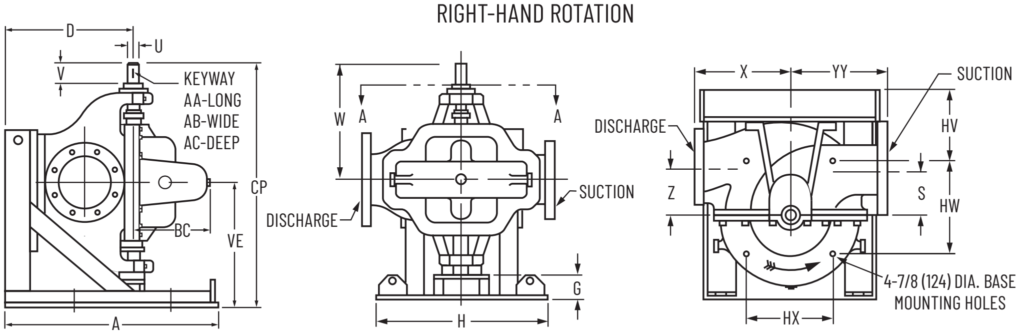
Dimensional Data – 1810 Vertically Mounted Split Case Pumps



RIGHT-HAND ROTATION



LEFT-HAND ROTATION

PUMP SIZE			POWER SERIES	BASE	D	S	U	V	W	X	Z	AA	AB	AC	BC	CP	VE	YY
PUMP	DISCH.	SUCT.																
8" 1815	8	10	6B	4	25-1/4 (641)	9-1/2 (241)	2-1/8 (54)	5-7/16 (138)	21-7/8 (556)	18 (457)	9-1/2 (241)	4-3/4 (121)	1/2 (13)	1/4 (6)	14 (356)	47 (1194)	25-1/8 (638)	21 (533)
10" 1813	10	12	6B	1	31-3/4 (806)	13-1/2 (343)	2-1/8 (54)	5-7/16 (138)	21-7/8 (556)	17 (432)	13-1/2 (343)	4-3/4 (121)	1/2 (13)	1/4 (6)	13-1/2 (343)	47 (1194)	25-1/8 (638)	20 (508)
10" 1814	10	12	6B	1	31-3/4 (806)	13-1/2 (343)	2-1/8 (54)	5-7/16 (138)	21-7/8 (556)	18 (457)	13-1/2 (343)	4-3/4 (121)	1/2 (13)	1/4 (6)	14-1/2 (368)	47 (1194)	25-1/8 (638)	22 (559)
10" 1814D	10	12	7A	5	31-3/4 (806)	12-1/4 (311)	2-1/8 (54)	6-5/16 (160)	24-5/16 (556)	20 (508)	12-1/4 (311)	4-3/4 (121)	1/2 (13)	1/4 (6)	15-1/16 (383)	52 (1321)	27-5/8 (702)	24 (610)
12" 1813	12	14	7	2	33-3/4 (857)	15 (381)	2-1/2 (64)	6-5/8 (168)	25-1/4 (641)	17 (432)	15 (381)	5 (127)	5/8 (16)	5/16 (8)	15 (381)	51-1/4 (1302)	26 (660)	22 (559)
12" 1814	12	14	7	2	33-3/4 (857)	15 (381)	2-1/2 (64)	6-5/8 (168)	25-1/4 (641)	18 (457)	15 (381)	5 (127)	5/8 (16)	5/16 (8)	16-1/8 (410)	51-1/4 (1302)	26 (660)	23 (584)
12" 1814	14	16	7	3	36 (914)	16 (406)	2-1/2 (64)	6-5/8 (168)	25-1/4 (641)	22 (559)	16 (406)	5 (127)	5/8 (16)	5/16 (8)	18-1/4 (464)	51-1/4 (1302)	26 (660)	27 (686)

BASE	1	2	3	4	5
A	38 (965)	46 (1168)	48 (1219)	40 (1016)	50 (1270)
G	9-5/8 (244)	8 (203)	8 (203)	9-5/8 (244)	9-5/8 (245)
H	36-1/2 (927)	35 (889)	35 (889)	36-1/2 (927)	44-1/2 (1130)
HV	8 (203)	8 (203)	8 (203)	8 (203)	8 (203)
HW	26 (660)	34 (864)	36 (914)	28 (711)	34 (864)
HX	22 (559)	19 (483)	19 (483)	22 (559)	22 (559)

STD. 125# FLANGES	OPT. 250# FLANGES

NOTES:

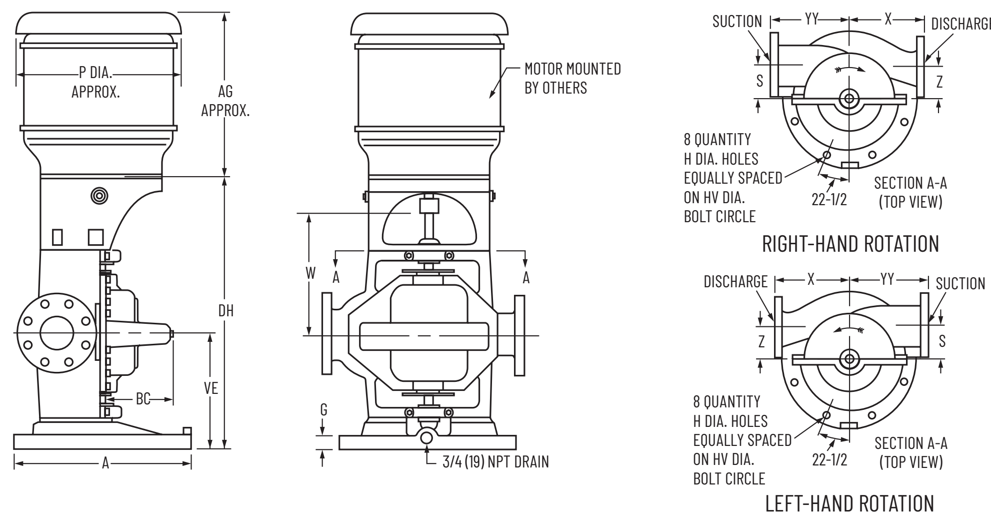
All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

Discharge and suction flanges – ANSI Standard flat face.

Dimensional Data – 1840 Vertical Flex-Coupled Split Case Pumps



PUMP SIZE			POWER SERIES	BASE	S	W	X	Z	BC	VE	YY
PUMP	DISCH.	SUCT.									
2" 1843	2	2-1/2	1	1	3-1/2 (89)	11-5/8 (295)	8-1/2 (216)	3-1/2 (89)	6-3/8 (162)	11-1/8 (283)	9 (228)
2" 1844	2	2-1/2	1	1	3-1/2 (89)	11-5/8 (295)	8-1/2 (216)	3-1/2 (89)	6-3/8 (162)	11-1/8 (283)	9 (228)
2" 1845	2	2-1/2	1	1	4 (102)	11-5/8 (295)	10 (254)	4 (102)	7-7/8 (200)	11-1/8 (283)	10-3/4 (273)
2-1/2" 1843	2-1/2	3	2	1	4 (102)	13-1/2 (343)	9-3/4 (247)	4 (102)	8 (203)	13 (330)	10 (254)
2-1/2" 1844	2-1/2	3	2	1	4-1/2 (114)	13-1/2 (343)	11 (279)	4-1/2 (114)	8-1/4 (210)	13 (330)	11-1/2 (292)
3" 1844	3	4	2	1	4-1/2 (114)	13-1/2 (343)	10 (254)	4-1/2 (114)	7-3/16 (183)	13 (330)	11 (279)
3" 1845	3	4	2	1	5 (127)	13-1/2 (343)	12 (305)	5 (127)	9-3/8 (238)	13 (330)	13 (330)
4" 1842	4	5	2	1	4-5/8 (117)	13-1/2 (343)	10 (254)	4-1/2 (114)	7-3/16 (183)	13 (330)	11-1/4 (286)
4" 1843A&C	4	5	3	2	5 (127)	14-1/2 (368)	11-1/4 (286)	5 (127)	8-5/16 (211)	14 (356)	12-3/4 (324)
4" 1843D	4	5	3	2	5 (127)	14-1/2 (368)	12 (305)	5 (127)	8-5/16 (211)	14 (356)	12-3/4 (324)
4" 1844	4	5	3	2	5-1/2 (140)	14-1/2 (368)	13 (330)	5-1/2 (140)	9 (228)	14 (356)	14 (356)

BASE	1	2	3	4
A	18 (457)	22 (558)	30 (762)	40 (1016)
G	1-3/4 (44)	1-3/4 (44)	2 (51)	2-1/4 (57)
H	3/4 (19)	3/4 (19)	7/8 (22)	7/8 (22)
HV	16-1/4 (413)	20 (508)	28 (711)	38 (965)

STD. 125# FLANGES	OPT. 250# FLANGES

NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

Coupling gap may vary 1/8" (3) to 1" (25).

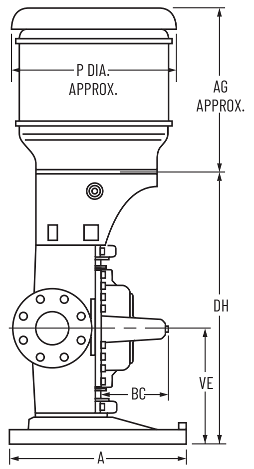
Height (AG) and diameter (P) dimensions of motor will vary based on make and style of motor. Dimensions shown reflect Fairbanks Nijhuis® standard motors. See individual motor supplier dimensional data sheets for your application.

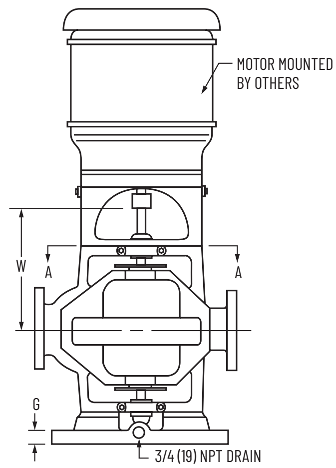
Conduit box is shown in approximate location. Dimensions are not specified as they vary for each motor manufacturer.

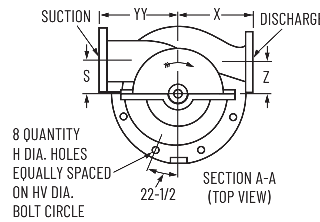
Discharge and suction flanges – ANSI Standard flat face.

<table>
<tr><td></td><td>FRAME</td><td>143</td><td>145</td><td>182</td><td>184</td><td>213</td><td>215</td><td>254</td><td>256</td><td>284</td><td>286</td><td>324</td><td>326</td><td>364</td><td>365</td><td>404</td><td>405</td><td>444</td><td>445</td></tr>
<tr><td></td><td>P</td><td>8 (203)</td><td>8 (203)</td><td>10 (254)</td><td>10 (254)</td><td>11 (279)</td><td>11 (279)</td><td>13 (330)</td><td>13 (330)</td><td>16 (406)</td><td>16 (406)</td><td>18 (457)</td><td>18 (457)</td><td>21 (534)</td><td>21 (534)</td><td>22 (559)</td><td>22 (559)</td><td>24 (610)</td><td>24 (610)</td></tr>
<tr><td></td><td>AG</td><td>11 (279)</td><td>12 (305)</td><td>14 (356)</td><td>15 (381)</td><td>16 (406)</td><td>17 (432)</td><td>20 (508)</td><td>21 (534)</td><td>22 (559)</td><td>23 (584)</td><td>25 (635)</td><td>26 (660)</td><td>25 (635)</td><td>25 (635)</td><td>28 (711)</td><td>28 (711)</td><td>32 (813)</td><td>32 (813)</td></tr>
<tr><td colspan="2">PUMP SIZE</td><td colspan="18">DH</td></tr>
<tr><td colspan="2">2" 1843
2" 1844
2" 1845</td><td colspan="8">26
(660)</td><td colspan="2">28
(711)</td><td colspan="8">NOT
AVAILABLE</td></tr>
<tr><td colspan="2">2-1/2" 1843
2-1/2" 1844
3" 1844
3" 1845
4" 1842</td><td colspan="8">30
(762)</td><td colspan="6">32
(813)</td><td colspan="4">NOT
AVAILABLE</td></tr>
<tr><td colspan="2">4" 1843
4" 1844</td><td colspan="8">33 (838)</td><td colspan="8">35 (889)</td><td colspan="2">NOT
AVAILABLE</td></tr>
</table>

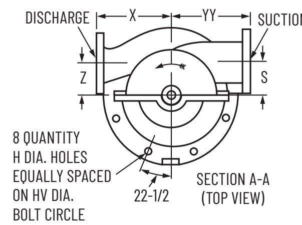
Dimensional Data – 1840 Vertical Flex-Coupled Split Case Pumps







RIGHT-HAND ROTATION



LEFT-HAND ROTATION

PUMP SIZE			POWER SERIES	BASE	S	W	X	Z	BC	VE	YY
PUMP	DISCH.	SUCT.									
4" 1845	4	6	4	2	6-1/4 (159)	16 (406)	14 (356)	6-1/4 (159)	11-3/4 (298)	15 (381)	16 (406)
5" 1842	5	6	4	2	5-1/2 (140)	16 (406)	11-1/4 (286)	5-1/2 (140)	8-3/4 (222)	15 (381)	13-1/4 (337)
5" 1843	5	6	4	2	6-1/4 (159)	16 (406)	13-1/4 (337)	6-1/4 (159)	10-1/16 (256)	15 (381)	15 (381)
5" 1844	5	6	4	2	6-1/4 (159)	16 (406)	14 (356)	6-1/4 (159)	10-1/16 (256)	15 (381)	15 (381)
6" 1842	6	8	4	2	6-1/4 (159)	16 (406)	11-3/4 (298)	6-1/4 (159)	9-1/4 (235)	15 (381)	14-1/2 (368)
6" 1842HH	6	8	4A	2	8-5/8 (219)	18-1/8 (461)	10 (254)	8-5/8 (219)	9-7/16 (240)	17-1/8 (436)	15 (381)
6" 1843HH	6	8	5A	3	7-1/2 (191)	20-7/16 (519)	15 (381)	7-1/2 (191)	10-3/16 (258)	19-7/16 (494)	17 (432)
8" 1841	8	8	4	2	6-1/4 (159)	16 (406)	12 (305)	6-1/4 (159)	9-3/4 (248)	15 (381)	14-1/2 (368)
6" 1843	6	8	5	3	6-3/4 (171)	18 (457)	14-1/4 (362)	6-3/4 (171)	11-5/16 (287)	17 (432)	16-3/4 (425)
6" 1844	6	8	5	3	8 (203)	18 (457)	16 (406)	8 (203)	12-1/2 (318)	17 (432)	18 (457)
6" 1845	6	8	5	3	8 (203)	18 (457)	15-3/4 (400)	8 (203)	2-15/16 (75)	17 (432)	18 (457)
8" 1842	8	10	5	3	8 (203)	18 (457)	17 (432)	9 (228)	11-9/16 (294)	17 (432)	17-3/4 (451)
8" 1843	8	10	5	3	8 (203)	18 (457)	17 (432)	9 (228)	11-13/16 (300)	17 (432)	17-3/4 (451)
8" 1844	8	10	5	3	8 (203)	18 (457)	17 (432)	8 (203)	12-3/8 (314)	17 (432)	17-3/4 (451)
10" 1842	10	12	6B	4	12 (305)	21-7/8 (457)	16 (406)	12 (305)	12-1/2 (318)	19 (483)	19 (483)

BASE	1	2	3	4
A	18 (457)	22 (558)	30 (762)	40 (1016)
G	1-3/4 (44)	1-3/4 (44)	2 (51)	2-1/4 (57)
H	3/4 (19)	3/4 (19)	7/8 (22)	7/8 (22)
HV	16-1/4 (413)	20 (508)	28 (711)	38 (965)

STD. 125# FLANGES	OPT. 250# FLANGES

NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

Coupling gap may vary 1/8" (3) to 1" (25).

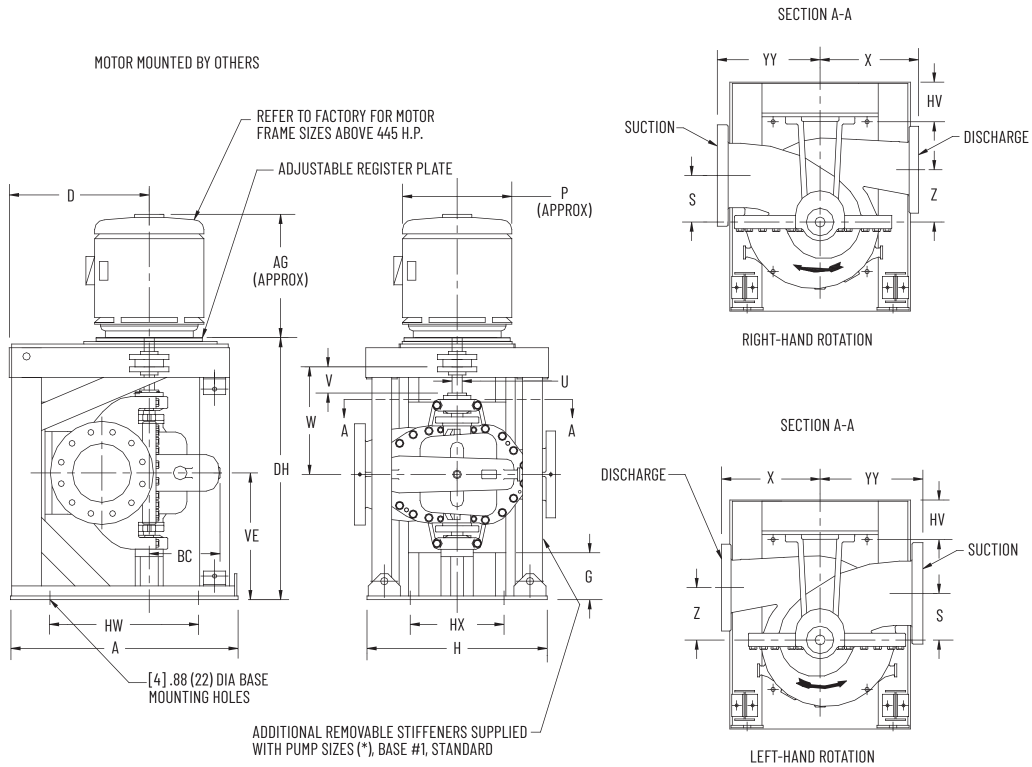
Height (AG) and diameter (P) dimensions of motor will vary based on make and style of motor. Dimensions shown reflect Fairbanks Nijhuis® standard motors. See individual motor supplier dimensional data sheets for your application.

Conduit box is shown in approximate location. Dimensions are not specified as they vary for each motor manufacturer.

Discharge and suction flanges – ANSI Standard flat face.

<table>
<tr><td></td><td>FRAME</td><td>143</td><td>145</td><td>182</td><td>184</td><td>213</td><td>215</td><td>254</td><td>256</td><td>284</td><td>286</td><td>324</td><td>326</td><td>364</td><td>365</td><td>404</td><td>405</td><td>444</td><td>445</td></tr>
<tr><td></td><td>P</td><td>8 (203)</td><td>8 (203)</td><td>10 (254)</td><td>10 (254)</td><td>11 (279)</td><td>11 (279)</td><td>13 (330)</td><td>13 (330)</td><td>16 (406)</td><td>16 (406)</td><td>18 (457)</td><td>18 (457)</td><td>21 (534)</td><td>21 (534)</td><td>22 (559)</td><td>22 (559)</td><td>24 (610)</td><td>24 (610)</td></tr>
<tr><td></td><td>AG</td><td>11 (279)</td><td>12 (305)</td><td>14 (356)</td><td>15 (381)</td><td>16 (406)</td><td>17 (432)</td><td>20 (508)</td><td>21 (534)</td><td>22 (559)</td><td>23 (584)</td><td>25 (635)</td><td>26 (660)</td><td>25 (635)</td><td>25 (635)</td><td>28 (711)</td><td>28 (711)</td><td>32 (813)</td><td>32 (813)</td></tr>
<tr><td colspan="2">PUMP SIZE</td><td colspan="18">DH</td></tr>
<tr><td colspan="2">4" 1845
5" 1842
5" 1843
5" 1844
6" 1842
8" 1841</td><td colspan="8">35
(889)</td><td colspan="8">37
(940)</td><td colspan="2">NOT AVAILABLE</td></tr>
<tr><td colspan="2">6" 1842HH</td><td colspan="8">NOT AVAILABLE</td><td colspan="10">41-1/4 (1049)</td></tr>
<tr><td colspan="2">6" 1843HH</td><td colspan="8">NOT AVAILABLE</td><td colspan="10">45-7/8 (1166)</td></tr>
<tr><td colspan="2">6" 1843
6" 1844
6" 1845
8" 1842
8" 1843
8" 1844</td><td colspan="8">NOT AVAILABLE</td><td colspan="10">41
(1041)</td></tr>
<tr><td colspan="2">10" 1842B</td><td colspan="8">NOT AVAILABLE</td><td colspan="10">46-1/2 (1181)</td></tr>
</table>

Dimensional Data – 1840 Vertical Flex-Coupled Split Case Pumps



PUMP SIZE			POWER SERIES	BASE	D	S	U	V	W	X	Z	BC	DH	VE	YY
PUMP	DISCH.	SUCT.													
8" 1844B	8	10	5	5	25 (635)	8 (203)	1.75 (45)	4 (102)	18 (457)	17 (432)	8 (203)	12.38 (314)	47 (1194)	22.88 (581)	17.75 (451)
8" 1845	8	10	6B	4	25.25 (641)	9.5 (241)	2.13 (54)	5.44 (138)	21.88 (556)	18 (457)	9.5 (241)	14 (356)	51.75 (1314)	25.13 (638)	21.0 (533)
10" 1843	10	12	6B	1	31.75 (806)	13.5 (343)	2.13 (54)	5.44 (138)	21.88 (556)	17 (432)	13.5 (343)	13.5 (343)	51.75 (1314)	25.13 (638)	20 (508)
10" 1844	10	12	6B	1	31.75 (806)	13.5 (343)	2.13 (54)	5.44 (138)	21.88 (556)	18 (457)	13.5 (343)	14.5 (368)	51.75 (1314)	25.13 (638)	22.0 (559)
10" 1844D	10	12	7A	6	31-3/4 (806)	12-1/4 (311)	2-1/8 (54)	6-5/16 (160)	24-5/16 (556)	20 (508)	12-1/4 (311)	15-1/16 (383)	57-1/4 (1454)	27-5/8 (702)	24 (610)
12" 1843	12	14	7	2	33.75 (857)	15 (381)	2.5 (64)	6.63 (168)	25.25 (641)	17 (432)	15 (381)	15 (381)	56 (1422)	26 (660)	22.0 (559)
12" 1844	12	14	7	2	33.75 (857)	15 (381)	2.5 (64)	6.63 (168)	25.25 (641)	18 (457)	15 (381)	16.13 (410)	56 (1422)	26 (660)	23 (584)
14" 1844	14	16	7	3	36 (914)	16 (406)	2.5 (64)	6.63 (168)	25.25 (641)	22.0 (559)	16 (406)	18.25 (464)	56 (1422)	26 (660)	27 (686)

	FRAME	364	365	404	405	444	445
	P	21.0 (533)	21.0 (533)	22.0 (559)	22.0 (559)	24.0 (610)	24.0 (610)
	AG	25.0 (635)	25.0 (635)	28.0 (711)	28.0 (711)	32.0 (813)	32.0 (813)
PUMP SIZE		MOTOR SIZING					
8" 1844B							
8" 1845		X	X	X	X	X	X
10" 1843		X	X	X	X	X	X
10" 1844					X	X	X
10" 1844D		X	X	X	X	X	X
12" 1843				X	X	X	X
12" 1844							X
14" 1844							X

BASE	1	2	3	4	5	6
A	50 (1270)	46 (1168)	48 (1219)	40 (1016)	40 (1016)	50 (1270)
G	9.63 (245)	8 (203)	8 (203)	9.63 (245)	9.63 (245)	9-5/8 (245)
H	36.5 (927)	35 (889)	35 (889)	36.5 (927)	36.5 (927)	44-1/2 (1130)
HV	8 (203)	8 (203)	8 (203)	8 (203)	8 (203)	8 (203)
HW	34 (864)	34 (864)	36 (914)	28 (711)	28 (711)	34 (864)
HX	19 (483)	19 (483)	19 (483)	22.0 (559)	22.0 (559)	22 (559)

STD. 125# FLANGES	OPT. 250# FLANGES

NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

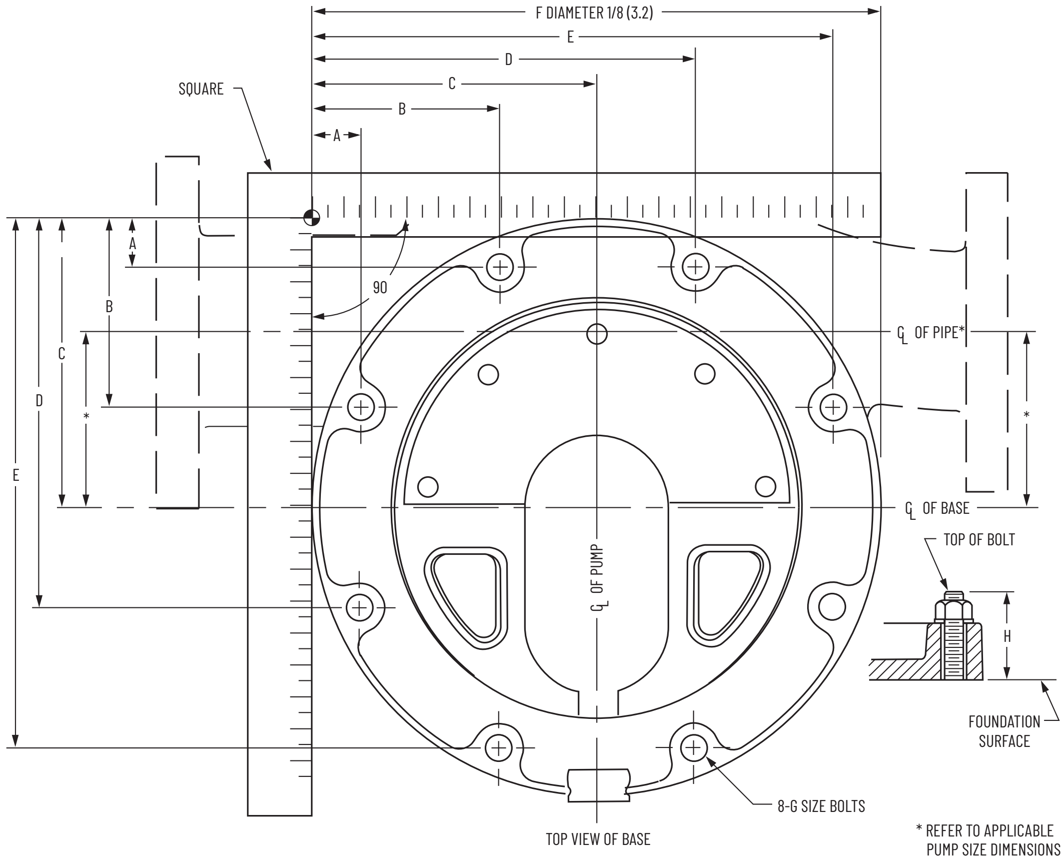
Discharge and suction flanges – ANSI Standard flat face.

Coupling gap may vary 1/8" (3) to 1" (25).

Height (AG) and diameter (P) dimensions of motor will vary based on make and style of motor. Dimensions shown reflect Fairbanks Nijhuis® motors. See individual motor supplier dimensional data sheets for your application.

Conduit box is shown in approximate location. Dimensions are not specified as they vary for each motor manufacturer.

(X) denotes standard frame sizes based on horsepower.



BASE	A	B	C	D	E	F	G	H	FULL SCALE TEMPLATE
1	1-1/2 (38)	5-29/32 (150)	9 (229)	12-1/8 (308)	16-1/2 (419)	18 (457)	5/8 (16)	2-3/4 (70)	294-0579-000
2	1-25/32 (45)	7-3/16 (183)	11 (279)	14-27/32 (377)	20-1/4 (514)	22 (559)	5/8 (16)	2-3/4 (70)	294-0580-000
3	2-1/16 (52)	9-21/32 (245)	15 (381)	20-3/8 (518)	27-15/16 (710)	30 (762)	3/4 (19)	3-1/4 (83)	294-0581-000
4	2-7/16 (62)	12-23/32 (323)	20 (508)	27-9/32 (693)	37-9/16 (954)	40 (1016)	3/4 (19)	3-1/2 (89)	294-0613-000

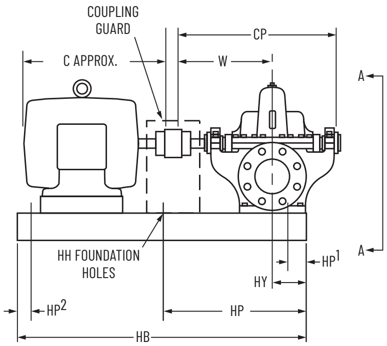
NOTES:

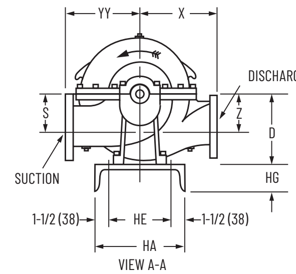
All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

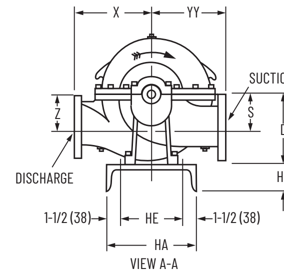
Not for construction purposes unless certified.

Discharge and suction flanges – ANSI Standard flat face.





RIGHT-HAND ROTATION



LEFT-HAND ROTATION

STANDARD STEEL BASE

BASE	SIZE	HA	HB	HE	HG	HH QTY	HH SIZE	HP	HP1	HP2
2	10 x 28	10 (254)	28 (711)	7 (178)	2-5/8 (67)	2	5/8 (16)	14 (356)	–	–
3	12 x 30	12 (305)	30 (762)	9 (229)	3 (76)	2	5/8 (16)	15 (381)	–	–
4	12 x 34	12 (305)	34 (864)	9 (229)	3 (76)	4	5/8 (16)	20 (508)	–	1 (25)
5	12 x 38	12 (305)	38 (965)	9 (229)	3 (76)	4	5/8 (16)	20 (508)	–	1 (25)
6	13 x 38	13 (330)	38 (965)	10 (254)	4 (102)	4	3/4 (19)	–	1 (25)	1 (25)
7	13 x 42	13 (330)	42 (1067)	10 (254)	4 (102)	4	3/4 (19)	24 (610)	–	1 (25)
8	15 x 40	15 (381)	40 (1016)	12 (305)	3-3/8 (86)	4	3/4 (19)	–	1 (25)	1 (25)
9	15 x 44	15 (381)	44 (1118)	12 (305)	3-3/8 (86)	4	3/4 (19)	24 (610)	–	1 (25)
10	18 x 44	18 (457)	44 (1118)	15 (381)	4 (102)	4	3/4 (19)	–	1 (25)	1 (25)
11	18 x 48	18 (457)	48 (1219)	15 (381)	4 (102)	4	3/4 (19)	–	1 (25)	1 (25)
12	18 x 54	18 (457)	54 (1372)	15 (381)	4 (102)	4	3/4 (19)	–	1 (25)	1 (25)
15	22 x 60	22 (559)	60 (1524)	19 (483)	4 (102)	4	3/4 (19)	–	1 (25)	1 (25)

<table>
<tr><th colspan="13">NOTE: WHEN 2 "D" DIMENSIONS ARE INDICATED ALWAYS USE THE LARGER FIGURE.</th></tr>
<tr><th colspan="3">PUMP SIZE</th><th rowspan="2">POWER SERIES</th><th rowspan="2">D</th><th rowspan="2">S</th><th rowspan="2">W</th><th rowspan="2">X</th><th rowspan="2">Z</th><th rowspan="2">CP</th><th rowspan="2">HY</th><th rowspan="2">YY</th></tr>
<tr><th>DISCH.</th><th>SUCT.</th><th>CASE BORE</th></tr>
<tr><td>2</td><td>2-1/2</td><td>9</td><td rowspan="3">1</td><td>7 (178)</td><td>3-1/2 (89)</td><td rowspan="3">11-5/8 (295)</td><td>8-1/2 (216)</td><td>3-1/2 (89)</td><td rowspan="3">20-1/2 (521)</td><td rowspan="3">4 (102)</td><td>9 (229)</td></tr>
<tr><td>2</td><td>2-1/2</td><td>10</td><td>7 (178)</td><td>3-1/2 (89)</td><td>8-1/2 (216)</td><td>3-1/2 (89)</td><td>9 (229)</td></tr>
<tr><td>2</td><td>2-1/2</td><td>12</td><td>8 (203)</td><td>4 (102)</td><td>10 (254)</td><td>4 (102)</td><td>10-3/4 (273)</td></tr>
<tr><td>2-1/2</td><td>3</td><td>10B</td><td rowspan="5">2</td><td>8 (203)</td><td>4 (102)</td><td rowspan="5">13-1/2 (343)</td><td>9-3/4 (248)</td><td>4 (102)</td><td rowspan="5">24 (610)</td><td rowspan="5">5 (127)</td><td>10 (254)</td></tr>
<tr><td>2-1/2</td><td>3</td><td>12</td><td>9** (229**)</td><td>4-1/2 (114)</td><td>11 (279)</td><td>4-1/2 (114)</td><td>11-1/2 (292)</td></tr>
<tr><td>3</td><td>4</td><td>10B & C</td><td>9** (229**)</td><td>4-1/2 (114)</td><td>10 (254)</td><td>4-1/2 (114)</td><td>11 (279)</td></tr>
<tr><td>3</td><td>4</td><td>14</td><td>10 (254)</td><td>5 (127)</td><td>12 (305)</td><td>5 (127)</td><td>13 (330)</td></tr>
<tr><td>4</td><td>5</td><td>10B</td><td>9** (229**)</td><td>4-5/8 (118)</td><td>10 (254)</td><td>4-1/2 (114)</td><td>11-1/4 (286)</td></tr>
<tr><td>4</td><td>5</td><td>11A & C</td><td rowspan="3">3</td><td>10‡ (254‡)</td><td>5 (127)</td><td rowspan="3">14-1/2 (368)</td><td>11-1/4 (286)</td><td>5 (127)</td><td rowspan="3">26 (660)</td><td rowspan="3">6 (152)</td><td>12-3/4 (324)</td></tr>
<tr><td>4</td><td>4</td><td>11D</td><td>10‡ (254‡)</td><td>5 (127)</td><td>12 (286)</td><td>5 (127)</td><td>12-3/4 (324)</td></tr>
<tr><td>4</td><td>5</td><td>15</td><td>11 (279)</td><td>5-1/2 (140)</td><td>13 (330)</td><td>5-1/2 (140)</td><td>14 (356)</td></tr>
</table>

<table>
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<tr><td>C</td><td>13 (330)</td><td>13 (330)</td><td>13 (330)</td><td>14 (356)</td><td>16 (406)</td><td>18 (457)</td><td>21 (533)</td><td>23 (584)</td><td>22 (559)</td><td>24 (610)</td><td>24 (610)</td><td>25 (635)</td><td>25 (635)</td><td>26 (660)</td><td>26 (660)</td><td>28 (711)</td><td>27 (686)</td><td>29 (711)</td><td>28 (711)</td><td>30 (762)</td><td>30 (762)</td><td>31 (787)</td><td>34 (864)</td></tr>
<tr><td>D</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>–</td><td>8 (203)</td><td>8 (203)</td><td>8 (203)</td><td>9 (229)</td><td>9 (229)</td><td>9 (229)</td><td>9 (229)</td><td>9 (229)</td><td>10 (254)</td><td>10 (254)</td><td>11 (279)</td></tr>
<tr><td>2" 1823</td><td>BASE</td><td colspan="2" rowspan="3">2</td><td colspan="2" rowspan="3">3</td><td colspan="2" rowspan="3">4</td><td colspan="2" rowspan="3">6</td><td colspan="3" rowspan="3">8</td><td rowspan="3">9</td><td colspan="2" rowspan="3">10</td><td colspan="9" rowspan="3">–</td></tr>
<tr><td>2" 1824</td><td>BASE</td></tr>
<tr><td>2" 1825</td><td>BASE</td></tr>
<tr><td>2-1/2" 1823B</td><td>BASE</td><td colspan="2" rowspan="6">3</td><td colspan="2" rowspan="6">4</td><td colspan="2" rowspan="6">5</td><td colspan="2" rowspan="6">7</td><td colspan="4" rowspan="6">9</td><td rowspan="6">10</td><td rowspan="6">11</td><td rowspan="6">10</td><td colspan="4" rowspan="6">11</td><td rowspan="6">12</td><td colspan="3" rowspan="6"></td></tr>
<tr><td>2-1/2" 1824</td><td>BASE</td></tr>
<tr><td>3" 1824B</td><td>BASE</td></tr>
<tr><td>3" 1825</td><td>BASE</td></tr>
<tr><td>4" 1822B</td><td>BASE</td></tr>
<tr><td>4" 1823A&C</td><td>BASE</td><td colspan="3" rowspan="3">–</td><td rowspan="3">5</td><td colspan="3" rowspan="3">7</td><td rowspan="3">9</td><td colspan="9" rowspan="3">11</td><td colspan="2" rowspan="3">12</td><td colspan="3" rowspan="3">15</td></tr>
<tr><td>4" 1823D</td><td>BASE</td></tr>
<tr><td>4" 1824</td><td>BASE</td></tr>
</table>

NOTES:

All dimensions in inches (mm).
Dimensions may vary ± 3/8" (10).
Not for construction purposes unless certified.
Coupling gap may vary 1/8" (3) to 2-1/16" (52).
Conduit box is shown in approximate location.

Dimensions are not specified as they vary for each motor manufacturer.

Discharge and suction flanges – ANSI Standard flat face.

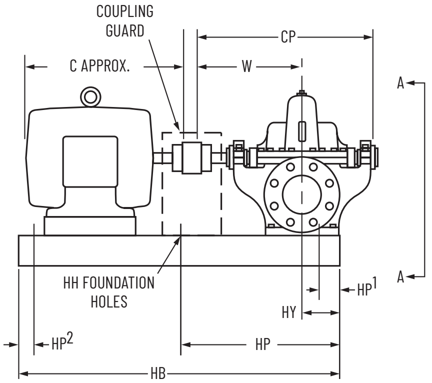
**Dimension "D" is 10-1/2" (267) when using frames 324TS through 365T.

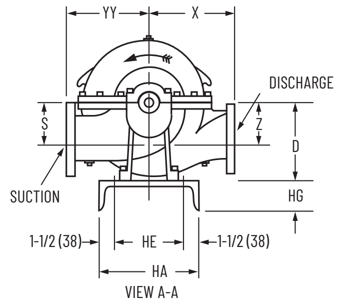
‡ Dimension "D" is 10-1/2" (267) when using frames 404TS through 405TS.

‡Dimension "D" is 11" (279) when using frames 444TS.

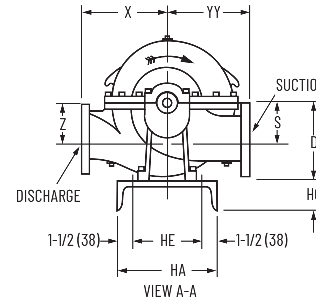
STD. 125# FLANGES	OPT. 250# FLANGES

Dimensional Data – 1800 Horizontal Split Case Pumps / Setting Plans





RIGHT-HAND ROTATION



LEFT-HAND ROTATION

STANDARD STEEL BASE

<table>
<tr><th colspan="3">PUMP SIZE</th><th rowspan="2">POWER SERIES</th><th rowspan="2">D</th><th rowspan="2">S</th><th rowspan="2">W</th><th rowspan="2">X</th><th rowspan="2">Z</th><th rowspan="2">CP</th><th rowspan="2">HY</th><th rowspan="2">YY</th></tr>
<tr><th>DISCH.</th><th>SUCT.</th><th>CASE BORE</th></tr>
<tr><td>4</td><td>6</td><td>18B</td><td rowspan="6">4</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td rowspan="6">16 (406)</td><td>14 (356)</td><td>6-1/4 (159)</td><td rowspan="6">28-1/2 (724)</td><td rowspan="6">6 (152)</td><td>16 (406)</td></tr>
<tr><td>5</td><td>6</td><td>11A & C</td><td>11** (279**)</td><td>5-1/2 (140)</td><td>11-1/4 (286)</td><td>5-1/2 (140)</td><td>13-1/4 (337)</td></tr>
<tr><td>5</td><td>6</td><td>15</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td>13-1/4 (337)</td><td>6-1/4 (159)</td><td>15 (381)</td></tr>
<tr><td>5</td><td>6</td><td>17</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td>14 (356)</td><td>6-1/4 (159)</td><td>15 (381)</td></tr>
<tr><td>6</td><td>8</td><td>11</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td>11-3/4 (286)</td><td>6-1/4 (159)</td><td>14-1/2 (368)</td></tr>
<tr><td>8</td><td>8</td><td>11B</td><td>12-1/2‡ (318‡)</td><td>6-1/4 (159)</td><td>12 (305)</td><td>6-1/4 (159)</td><td>14-1/2 (368)</td></tr>
<tr><td>6</td><td>8</td><td>11HH</td><td>4A</td><td>16-1/2 (419)</td><td>8-5/8 (219)</td><td>18-1/8 (461)</td><td>10 (254)</td><td>8-5/8 (219)</td><td>32-3/4 (832)</td><td>7 (178)</td><td>17 (432)</td></tr>
<tr><td>6</td><td>8</td><td>14HH</td><td>5A</td><td>16-1/2 (419)</td><td>7-1/2 (191)</td><td>20-7/16 (519)</td><td>15 (381)</td><td>7-1/2 (191)</td><td>36-3/4 (933)</td><td>7 (178)</td><td>17 (432)</td></tr>
<tr><td>6</td><td>8</td><td>15</td><td rowspan="6">5</td><td>13-1/2 (343)</td><td>6-3/4 (171)</td><td rowspan="6">18 (457)</td><td>14-1/4 (362)</td><td>6-3/4 (171)</td><td rowspan="6">32 (813)</td><td rowspan="6">7 (178)</td><td>16-3/4 (425)</td></tr>
<tr><td>6</td><td>8</td><td>18A,B & C</td><td>14-3/4 (375)</td><td>8 (203)</td><td>16 (406)</td><td>8 (203)</td><td>18 (457)</td></tr>
<tr><td>6</td><td>8</td><td>20</td><td>14-3/4 (375)</td><td>8 (203)</td><td>15-3/4 (400)</td><td>8 (203)</td><td>18 (457)</td></tr>
<tr><td>8</td><td>10</td><td>12 & 12A</td><td>14-3/4 (375)</td><td>8 (203)</td><td>17 (432)</td><td>9 (229)</td><td>17-3/4 (451)</td></tr>
<tr><td>8</td><td>10</td><td>15A & B</td><td>14-3/4 (375)</td><td>8 (203)</td><td>17 (432)</td><td>9 (229)</td><td>17-3/4 (451)</td></tr>
<tr><td>8</td><td>10</td><td>17B</td><td>14-3/4 (375)</td><td>8 (203)</td><td>17 (432)</td><td>8 (203)</td><td>17-3/4 (451)</td></tr>
</table>

<table>
<tr><th rowspan="2">BASE</th><th rowspan="2">SIZE</th><th rowspan="2">HA</th><th rowspan="2">HB</th><th rowspan="2">HE</th><th rowspan="2">HG</th><th colspan="2">HH</th><th rowspan="2">HP</th><th rowspan="2">HP1</th><th rowspan="2">HP2</th></tr>
<tr><th>QTY</th><th>SIZE</th></tr>
<tr><td>5</td><td>12 x 38</td><td>12 (305)</td><td>38 (965)</td><td>9 (229)</td><td>3 (76)</td><td rowspan="11">4</td><td>5/8 (16)</td><td>20 (508)</td><td>–</td><td rowspan="11">1 (25)</td></tr>
<tr><td>7</td><td>13 x 42</td><td>13 (330)</td><td>42 (1067)</td><td>10 (254)</td><td>4 (102)</td><td rowspan="10">3/4 (19)</td><td>24 (610)</td><td>–</td></tr>
<tr><td>9</td><td>15 x 44</td><td>15 (381)</td><td>44 (1118)</td><td>12 (305)</td><td>3-3/8 (86)</td><td>24 (610)</td><td>–</td></tr>
<tr><td>10</td><td>18 x 44</td><td>18 (457)</td><td>44 (1219)</td><td>15 (381)</td><td>4 (102)</td><td>–</td><td rowspan="3">1 (25)</td></tr>
<tr><td>11</td><td>18 x 48</td><td>18 (457)</td><td>48 (1219)</td><td>15 (381)</td><td>4 (102)</td><td>–</td></tr>
<tr><td>12</td><td>18 x 54</td><td>18 (457)</td><td>54 (1372)</td><td>15 (381)</td><td>4 (102)</td><td>–</td></tr>
<tr><td>13</td><td>18 x 60</td><td>18 (457)</td><td>60 (1524)</td><td>15 (381)</td><td>4 (102)</td><td>24 (610)</td><td>–</td></tr>
<tr><td>14</td><td>18 x 65</td><td>18 (457)</td><td>65 (1651)</td><td>15 (381)</td><td>4 (102)</td><td>24 (610)</td><td>–</td></tr>
<tr><td>15</td><td>22 x 60</td><td>22 (559)</td><td>60 (1524)</td><td>19 (483)</td><td>4 (102)</td><td>–</td><td rowspan="3">1 (25)</td></tr>
<tr><td>16</td><td>22 x 72</td><td>22 (559)</td><td>72 (1829)</td><td>19 (483)</td><td>4 (102)</td><td>–</td></tr>
<tr><td>17</td><td>22 x 84</td><td>22 (559)</td><td>84 (2134)</td><td>19 (483)</td><td>4 (102)</td><td>–</td></tr>
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<table>
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<tr><th>C</th><th>16 (406)</th><th>18 (457)</th><th>21 (533)</th><th>23 (584)</th><th>22 (559)</th><th>24 (610)</th><th>24 (610)</th><th>25 (635)</th><th>25 (635)</th><th>26 (660)</th><th>26 (660)</th><th>28 (711)</th><th>27 (686)</th><th>29 (737)</th><th>28 (711)</th><th>30 (762)</th><th>30 (762)</th><th>33 (838)</th><th>31 (787)</th><th>35 (889)</th><th>34 (864)</th><th>38 (965)</th><th>36 (1016)</th><th>40 (914)</th><th>40 (914)</th><th>44 (1118)</th><th>45 (1143)</th><th>49 (1245)</th></tr>
<tr><td>4" 1825B</td><td>BASE</td><td rowspan="6">5</td><td rowspan="6">7</td><td rowspan="6">9</td><td rowspan="6">10</td><td colspan="4" rowspan="6">11</td><td colspan="8" rowspan="6">12</td><td colspan="5" rowspan="6">15</td><td rowspan="6">16</td><td rowspan="6">15</td><td colspan="5" rowspan="6">16</td></tr>
<tr><td>5" 1822A&C</td><td>BASE</td></tr>
<tr><td>5" 1823</td><td>BASE</td></tr>
<tr><td>5" 1824</td><td>BASE</td></tr>
<tr><td>6" 1822</td><td>BASE</td></tr>
<tr><td>8" 1821B</td><td>BASE</td></tr>
<tr><td>6" 1822HH</td><td>BASE</td><td colspan="13" rowspan="2"></td><td colspan="2">13</td><td colspan="3" rowspan="2">15</td><td>15</td><td colspan="6" rowspan="2">16</td><td colspan="3" rowspan="2">17</td></tr>
<tr><td>6" 1823HH</td><td>BASE</td><td colspan="2"></td><td>16</td></tr>
<tr><td>6" 1823</td><td>BASE</td><td>–</td><td>–</td><td rowspan="6">10</td><td rowspan="6">11</td><td colspan="10" rowspan="6">12</td><td colspan="2" rowspan="6">13</td><td colspan="4" rowspan="6">15</td><td colspan="7" rowspan="6">16</td><td rowspan="6">17</td></tr>
<tr><td>6" 1824ABC</td><td>BASE</td><td>–</td><td>–</td></tr>
<tr><td>6" 1825</td><td>BASE</td><td>–</td><td>–</td></tr>
<tr><td>8" 1822 & 8" 1822A</td><td>BASE</td><td>–</td><td>–</td></tr>
<tr><td>8" 1823A&B</td><td>BASE</td><td>–</td><td>–</td></tr>
<tr><td>8" 1824B</td><td>BASE</td><td>–</td><td>–</td></tr>
</table>

STD. 125# FLANGES	OPT. 250# FLANGES

NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

Coupling gap may vary 1/8" (3) to 2-1/16" (52).

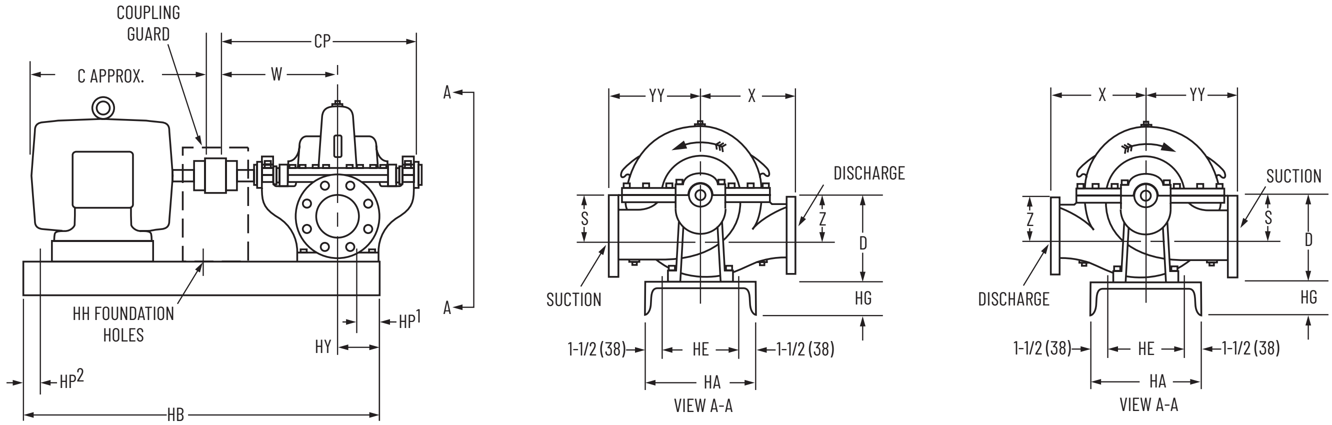
Conduit box is shown in approximate location. Dimensions are not specified as they vary with each motor manufacturer.

Discharge and suction flanges – ANSI Standard flat face.

** Dimension "D" is 12" (305) when using frames 404TS through 449T.

‡ Dimension "D" is 14-1/2" (368) when using frames 404TS through 449T.

Dimensional Data – 1800 Horizontal Split Case Pumps / Setting Plans



RIGHT-HAND ROTATION

LEFT-HAND ROTATION

STANDARD STEEL BASE

PUMP SIZE			POWER SERIES	D	S	W	X	Z	CP	HY	YY
DISCH.	SUCT.	CASE BORE									
8	10	21 & 21A	6B	18-1/2 (470)	9-1/2 (241)	21-7/8 (556)	18 (457)	9-1/2 (241)	38 (965)	11 (279)	21 (533)
10	12	12B		23 (584)	12 (305)	21-7/8 (556)	16 (406)	12 (305)	38 (965)	11 (279)	19 (483)
10	12	15B & C		25 (635)	13-1/2 (343)	21-7/8 (708)	17 (432)	13-1/2 (343)	38 (965)	11 (279)	20 (508)
10	12	18		25 (635)	13-1/2 (343)	21-7/8 (708)	18 (457)	13-1/2 (343)	38 (965)	11 (279)	22 (559)
10	12	18D	7A	25 (635)	12-1/4 (311)	24-5/16 (556)	20 (508)	12-1/4 (311)	42-15/16 (1091)	11 (279)	24 (610)
8	12	24	7	26 (660)	15 (381)	25-1/4 (641)	20 (508)	15 (381)	43-7/8 (1114)	11 (279)	25 (635)
12	14	15B		24 (610)	15 (381)	25-1/4 (641)	17 (432)	15 (381)	43-7/8 (1114)	11 (279)	22 (559)
12	14	18A		24 (610)	15 (381)	25-1/4 (641)	18 (457)	15 (381)	43-7/8 (1114)	11 (279)	23 (584)
14	16	18		29-1/4 (743)	16 (406)	25-1/4 (641)	22 (559)	16 (406)	43-7/8 (1114)	11 (279)	27 (686)

BASE	SIZE	HA	HB	HE	HG	HH		HP1	HP2
						QTY	SIZE		
13	18 x 60	18 (457)	60 (1524)	15 (381)	4 (102)	4	3/4 (19)	24 (610)	1 (25)
14	18 x 65	18 (457)	65 (1651)	15 (381)	4 (102)	4	3/4 (19)	24 (610)	1 (25)
15	22 x 60	22 (559)	60 (1524)	19 (483)	4 (102)	4	3/4 (19)	1 (25)	1 (25)
16	22 x 72	22 (559)	72 (1829)	19 (483)	4 (102)	4	3/4 (19)	1 (25)	1 (25)
17	22 x 84	22 (559)	84 (2134)	19 (483)	4 (102)	4	3/4 (19)	1 (25)	1 (25)

<table>
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<tr><th>C</th><th>24 (610)</th><th>25 (635)</th><th>25 (635)</th><th>26 (660)</th><th>26 (660)</th><th>28 (711)</th><th>27 (686)</th><th>29 (737)</th><th>28 (711)</th><th>30 (762)</th><th>30 (762)</th><th>33 (838)</th><th>31 (787)</th><th>35 (889)</th><th>34 (864)</th><th>38 (965)</th><th>36 (1016)</th><th>40 (914)</th><th>40 (914)</th><th>44 (1118)</th><th>45 (1143)</th><th>49 (1245)</th></tr>
<tr><td>8" 1825 & 8" 1825A</td><td>BASE</td><td colspan="4" rowspan="4">13</td><td colspan="6" rowspan="5">14</td><td colspan="7" rowspan="5">16</td><td colspan="5" rowspan="5">17</td></tr>
<tr><td>10" 1822B</td><td>BASE</td></tr>
<tr><td>10" 1823B&C</td><td>BASE</td></tr>
<tr><td>10" 1824</td><td>BASE</td></tr>
<tr><td>10" 1824D</td><td>BASE</td><td colspan="4">-</td></tr>
<tr><td>8" 1826</td><td>BASE</td><td colspan="18"></td><td colspan="4">18</td></tr>
<tr><td>12" 1823B</td><td>BASE</td><td colspan="11" rowspan="3">-</td><td colspan="4" rowspan="3">16</td><td colspan="7" rowspan="3">17</td></tr>
<tr><td>12" 1824A</td><td>BASE</td></tr>
<tr><td>14" 1824</td><td>BASE</td></tr>
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NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

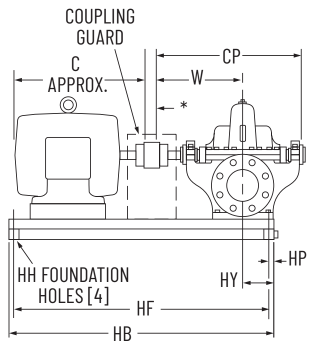
Not for construction purposes unless certified.

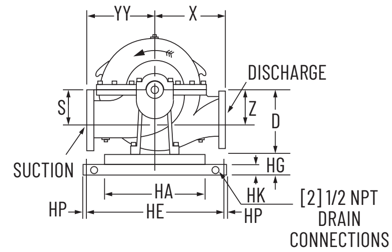
Coupling gap may vary 1/8" (3) to 2-1/16" (52).

Conduit box is shown in approximate location. Dimensions are not specified as they vary with each motor manufacturer.

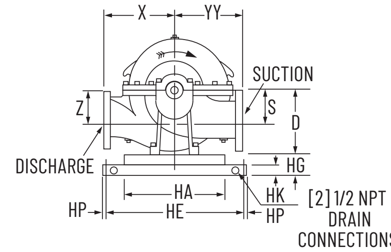
Discharge and suction flanges – ANSI Standard flat face.

STD. 125# FLANGES	OPT. 250# FLANGES





RIGHT-HAND ROTATION



LEFT-HAND ROTATION

DRIP RIM BASE

NOTE: WHEN 2 "D" DIMENSIONS ARE INDICATED ALWAYS USE THE LARGER FIGURE.

PUMP SIZE DISCH.	SUCT.	CASE BORE	POWER SERIES	D	S	W	X	Z	CP	HY	YY
2	2-1/2	9		7 (178)	3-1/2 (89)		8-1/2 (216)	3-1/2 (89)			9 (229)
2	2-1/2	10	1	7 (178)	3-1/2 (89)	11-5/8 (295)	8-1/2 (216)	3-1/2 (89)	20-1/2 (521)	4-1/2 (114)	9 (229)
2	2-1/2	12		8 (203)	4 (102)		10 (254)	4 (102)			10-3/4 (273)
2-1/2	3	10B		8 (203)	4 (102)		9-3/4 (248)	4 (102)			10 (254)
2-1/2	3	12		9** (229**)	4-1/2 (114)		11 (279)	4-1/2 (114)			11-1/2 (292)
3	4	10B & C	2	9** (229**)	4-1/2 (114)	13-1/2 (343)	10 (254)	4-1/2 (114)	24 (610)	5-1/2 (140)	11 (279)
3	4	14		10 (254)	5 (127)		12 (305)	5 (127)			13 (330)
4	5	10B		9** (229**)	4-5/8 (118)		10 (254)	4-1/2 (114)			11-1/4 (286)
4	5	11A & C		10‡ (254‡)	5 (127)		11-1/4 (286)	5 (127)			12-3/4 (324)
4	5	11D	3	10‡ (254‡)	5 (127)	14-1/2 (368)	12 (305)	5 (127)	26 (660)	6-1/2 (165)	12-3/4 (324)
4	5	15		11 (279)	5-1/2 (140)		13 (330)	5-1/2 (140)			14 (356)

BASE	SIZE	HA	HB	HE	HF	HG	HH	HK	HP
3	9 x 33	9 (229)	33-1/2 (851)	13-3/4 (349)	32-1/4 (819)	3 (76)	3/4 (19)	1-1/2 (38)	5/8 (16)
5	11 x 36	11 (279)	36-1/2 (927)	15-7/8 (403)	35-1/8 (892)	3 (76)	7/8 (22)	1-1/2 (38)	11/16 (18)
6	11 x 42	11 (279)	42-1/2 (1080)	15-7/8 (403)	41-1/8 (1045)	3 (76)	7/8 (22)	1-1/2 (38)	11/16 (18)
8	14 x 42	14 (356)	42-1/2 (1080)	19 (483)	41 (1041)	3 (76)	1 (25)	1-1/2 (38)	3/4 (19)
9	14 x 48	14 (356)	48-1/2 (1232)	19 (483)	47 (1194)	3 (76)	1 (25)	1-1/2 (38)	3/4 (19)
11	18 x 46	18 (457)	46-1/2 (1181)	25-1/8 (638)	44-7/8 (1140)	4 (102)	1-1/8 (29)	2 (51)	13/16 (21)
12	18 x 54	18 (457)	54-1/2 (1384)	25-1/8 (638)	52-7/8 (1343)	4 (102)	1-1/8 (29)	2 (51)	13/16 (21)
15	22 x 54	22 (559)	54-1/2 (1384)	29-1/8 (740)	52-7/8 (1343)	4-1/2 (114)	1-1/8 (29)	2 (51)	13/16 (21)

<table>
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<tr><th rowspan="2">PUMP</th><th rowspan="2">DISCH.</th><th rowspan="2">SUCT.</th><th>C</th><td>13 (330)</td><td>13 (330)</td><td>13 (330)</td><td>14 (356)</td><td>16 (406)</td><td>18 (457)</td><td>21 (533)</td><td>23 (584)</td><td>22 (559)</td><td>24 (610)</td><td>24 (610)</td><td>25 (635)</td><td>25 (635)</td><td>26 (660)</td><td>26 (660)</td><td>28 (711)</td><td>27 (686)</td><td>29 (711)</td><td>28 (711)</td><td>30 (762)</td><td>30 (762)</td><td>31 (787)</td><td>34 (864)</td></tr>
<tr><th>D</th><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>-</td><td>8 (203)</td><td>8 (203)</td><td>8 (203)</td><td>8 (203)</td><td>9 (229)</td><td>9 (229)</td><td>9 (229)</td><td>9 (229)</td><td>10 (254)</td><td>10 (254)</td><td>11 (279)</td></tr>
<tr><td>2" 1823</td><td>2</td><td>2-1/2</td><td rowspan="3">1</td><td>BASE</td><td colspan="4" rowspan="3">3</td><td colspan="2" rowspan="3">5</td><td colspan="6" rowspan="3">8</td><td colspan="2" rowspan="3">11</td><td colspan="9" rowspan="3">-</td></tr>
<tr><td>2" 1824</td><td>2</td><td>2-1/2</td><td>BASE</td></tr>
<tr><td>2" 1825</td><td>2</td><td>2-1/2</td><td>BASE</td></tr>
<tr><td>2-1/2" 1823B</td><td>2-1/2</td><td>3</td><td rowspan="5">2</td><td>BASE</td><td colspan="4" rowspan="5">3</td><td colspan="2" rowspan="5">5</td><td colspan="2" rowspan="5">8</td><td colspan="4" rowspan="5">9</td><td rowspan="5">11</td><td rowspan="5">12</td><td rowspan="5">11</td><td colspan="8" rowspan="5">12</td></tr>
<tr><td>2-1/2" 1824</td><td>2-1/2</td><td>3</td><td>BASE</td></tr>
<tr><td>3" 1824A&C</td><td>3</td><td>4</td><td>BASE</td></tr>
<tr><td>3" 1825</td><td>3</td><td>4</td><td>BASE</td></tr>
<tr><td>4" 1822B</td><td>4</td><td>5</td><td>BASE</td></tr>
<tr><td>4" 1823A&C</td><td>4</td><td>5</td><td rowspan="3">3</td><td>BASE</td><td colspan="3" rowspan="3">-</td><td rowspan="3">5</td><td colspan="2" rowspan="3">6</td><td rowspan="3">8</td><td colspan="3" rowspan="3">9</td><td colspan="2" rowspan="3">11</td><td colspan="8" rowspan="3">12</td><td colspan="2" rowspan="3">15</td><td rowspan="3">-</td></tr>
<tr><td>4" 1823D</td><td>4</td><td>5</td><td>BASE</td></tr>
<tr><td>4" 1824</td><td>4</td><td>5</td><td>BASE</td></tr>
</table>

STD. 125# FLANGES | OPT. 250# FLANGES

NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

Coupling gap may vary 1/8" (3) to 2-1/16" (52).

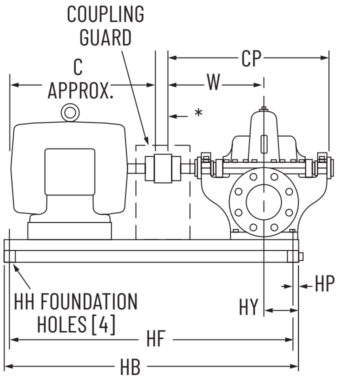
Conduit box is shown in approximate location.

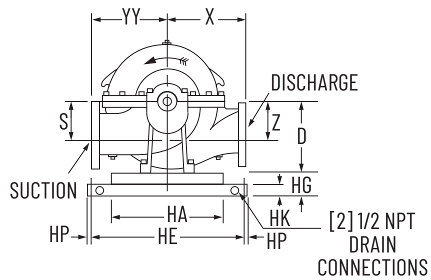
Dimensions are not specified as they vary with each motor manufacturer.

Discharge and suction flanges – ANSI Standard flat face.

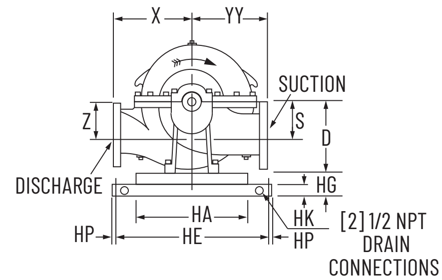
**Dimension "D" is 10-1/2" (267) when using frames 324TS through 365T.

‡ Dimension "D" is 10-1/2" (267) when using frames 404TS through 405TS.





RIGHT-HAND ROTATION



LEFT-HAND ROTATION

DRIP RIM BASE

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<tr><th>DISCH.</th><th>SUCT.</th><th>CASE BORE</th></tr>
<tr><td>4</td><td>6</td><td>18B</td><td rowspan="6">4</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td rowspan="6">16 (408)</td><td>14 (356)</td><td>6-1/4 (159)</td><td rowspan="6">28-1/2 (724)</td><td rowspan="6">6 (152)</td><td>16 (406)</td></tr>
<tr><td>5</td><td>6</td><td>11A & C</td><td>11** (279**)</td><td>5-1/2 (140)</td><td>11-1/4 (286)</td><td>5-1/2 (140)</td><td>13-1/4 (337)</td></tr>
<tr><td>5</td><td>6</td><td>15</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td>13-1/4 (337)</td><td>6-1/4 (159)</td><td>15 (381)</td></tr>
<tr><td>5</td><td>6</td><td>17</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td>14 (356)</td><td>6-1/4 (159)</td><td>15 (381)</td></tr>
<tr><td>6</td><td>8</td><td>11</td><td>12-1/2 (318)</td><td>6-1/4 (159)</td><td>11-3/4 (286)</td><td>6-1/4 (159)</td><td>14-1/2 (368)</td></tr>
<tr><td>8</td><td>8</td><td>11B</td><td>12-1/2‡ (318‡)</td><td>6-1/4 (159)</td><td>12 (305)</td><td>6-1/4 (159)</td><td>14-1/2 (368)</td></tr>
<tr><td>6</td><td>8</td><td>11HH</td><td>4A</td><td>16-1/2 (419)</td><td>8-5/8 (219)</td><td>18-1/8 (461)</td><td>10 (254)</td><td>8-5/8 (219)</td><td>32-3/4 (832)</td><td>7 (178)</td><td>17 (432)</td></tr>
<tr><td>6</td><td>8</td><td>14HH</td><td>5A</td><td>16-1/2 (419)</td><td>7-1/2 (191)</td><td>20-7/16 (519)</td><td>15 (381)</td><td>7-1/2 (191)</td><td>36-3/4 (933)</td><td>7 (178)</td><td>17 (432)</td></tr>
<tr><td>6</td><td>8</td><td>15</td><td rowspan="7">5</td><td>13-1/2 (343)</td><td>6-3/4 (171)</td><td rowspan="7">18 (457)</td><td>14-1/4 (362)</td><td>6-3/4 (171)</td><td rowspan="7">32 (813)</td><td rowspan="7">7 (178)</td><td>16-3/4 (425)</td></tr>
<tr><td>6</td><td>8</td><td>18A,B & C</td><td>14-3/4 (375)</td><td>8 (203)</td><td>16 (406)</td><td>8 (203)</td><td>18 (457)</td></tr>
<tr><td>6</td><td>8</td><td>20</td><td>14-3/4 (375)</td><td>8 (203)</td><td>15-3/4 (400)</td><td>8 (203)</td><td>18 (457)</td></tr>
<tr><td>8</td><td>10</td><td>12 & 12A</td><td>14-3/4 (375)</td><td>8 (203)</td><td>17 (432)</td><td>9 (229)</td><td>17-3/4 (451)</td></tr>
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<tr><td>8</td><td>10</td><td>17B</td><td>14-3/4 (375)</td><td>8 (203)</td><td>17 (432)</td><td>8 (203)</td><td>17-3/4 (451)</td></tr>
</table>

BASE	SIZE	HA	HB	HE	HF	HG	HH	HK	HP
6	11 x 42	11 (279)	42-1/2 (1080)	15-7/8 (403)	41-1/8 (1045)	3 (76)	7/8 (22)	1-1/2 (38)	11/16 (18)
9	14 x 48	14 (356)	48-1/2 (1232)	19 (483)	47 (1194)	3 (76)	1 (25)	1-1/2 (38)	3/4 (19)
11	18 x 46	18 (457)	46-1/2 (1181)	25-1/8 (638)	44-7/8 (1140)	4 (102)	1-1/8 (29)	2 (51)	13/16 (21)
12	18 x 54	18 (457)	54-1/2 (1384)	25-1/8 (638)	52-7/8 (1343)	4 (102)	1-1/8 (29)	2 (51)	13/16 (21)
13	18 x 64	18 (457)	64-1/2 (1638)	25-1/8 (638)	62-7/8 (1597)	4 (102)	1-1/8 (29)	2 (51)	13/16 (21)
15	22 x 54	22 (559)	54-1/2 (1384)	29-1/8 (740)	52-7/8 (1343)	4-1/2 (114)	1-1/8 (29)	2 (51)	13/16 (21)
16	22 x 64	22 (559)	64-1/2 (1638)	29-1/8 (740)	62-7/8 (1597)	4-1/2 (114)	1-1/8 (29)	2 (51)	13/16 (21)
17	22 x 74	22 (559)	74-1/2 (1892)	29-1/8 (740)	72-7/8 (1851)	4-1/2 (114)	1-1/8 (29)	2 (51)	13/16 (21)
18	22 x 82	22 (559)	82-1/2 (2096)	29-1/8 (740)	80-7/8 (2054)	4-1/2 (114)	1-1/8 (29)	2 (51)	13/16 (21)

NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

*Coupling gap may vary 1/8" (3) to 2-1/16" (52).

Conduit box is shown in approximate location. Dimensions are not specified as they vary with each motor manufacturer.

Discharge and suction flanges – ANSI Standard flat face.

**Dimension "D" is 12" (305) when using frames 404TS through 449T.

‡ Dimension "D" is 14-1/2" (368) when using frames 404TS through 449T.

<table>
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<tr><th>PUMP</th><th>DISCH.</th><th>SUCT.</th><th>C</th><th>16 (406)</th><th>18 (457)</th><th>21 (533)</th><th>23 (584)</th><th>22 (559)</th><th>24 (610)</th><th>24 (610)</th><th>25 (635)</th><th>25 (635)</th><th>26 (660)</th><th>26 (660)</th><th>28 (711)</th><th>27 (686)</th><th>29 (737)</th><th>28 (711)</th><th>30 (762)</th><th>30 (762)</th><th>33 (838)</th><th>31 (787)</th><th>35 (889)</th><th>34 (864)</th><th>38 (965)</th><th>36 (1016)</th><th>40 (914)</th><th>40 (914)</th><th>44 (1118)</th><th>45 (1143)</th><th>49 (1245)</th></tr>
<tr><td>4" 1825</td><td>4</td><td>6</td><td>BASE</td><td colspan="2" rowspan="6">6</td><td colspan="2" rowspan="6">9</td><td colspan="4" rowspan="6">11</td><td colspan="8" rowspan="6">12</td><td colspan="3" rowspan="6">15</td><td colspan="5" rowspan="6">16</td><td colspan="4" rowspan="6">17</td></tr>
<tr><td>5" 1822A&C</td><td>5</td><td>6</td><td>BASE</td></tr>
<tr><td>5" 1823</td><td>5</td><td>6</td><td>BASE</td></tr>
<tr><td>5" 1824</td><td>5</td><td>6</td><td>BASE</td></tr>
<tr><td>6" 1822</td><td>6</td><td>8</td><td>BASE</td></tr>
<tr><td>8" 1822B</td><td>8</td><td>8</td><td>BASE</td></tr>
<tr><td>6" 1822HH</td><td>6</td><td>8</td><td>BASE</td><td colspan="13" rowspan="2">-</td><td colspan="2">15</td><td colspan="8" rowspan="2">16</td><td colspan="2" rowspan="2">17</td><td colspan="3" rowspan="2">18</td></tr>
<tr><td>6" 1823HH</td><td>6</td><td>8</td><td>BASE</td><td colspan="2">16</td></tr>
<tr><td>6" 1823</td><td>6</td><td>8</td><td>BASE</td><td colspan="2" rowspan="6">-</td><td colspan="2" rowspan="6">9</td><td colspan="10" rowspan="6">12</td><td colspan="2" rowspan="6">13</td><td colspan="7" rowspan="6">16</td><td colspan="4" rowspan="6">17</td><td rowspan="6">18</td></tr>
<tr><td>6" 1824ABC</td><td>6</td><td>8</td><td>BASE</td></tr>
<tr><td>6" 1825</td><td>6</td><td>8</td><td>BASE</td></tr>
<tr><td>8" 1822 & 8" 1822A</td><td>8</td><td>10</td><td>BASE</td></tr>
<tr><td>8" 1823A&C</td><td>8</td><td>10</td><td>BASE</td></tr>
<tr><td>8" 1824B</td><td>8</td><td>10</td><td>BASE</td></tr>
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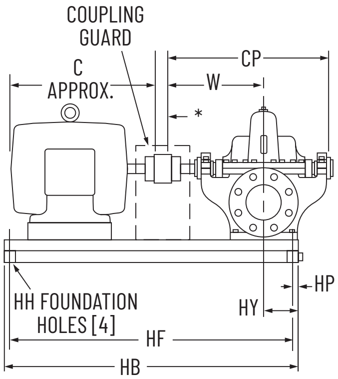
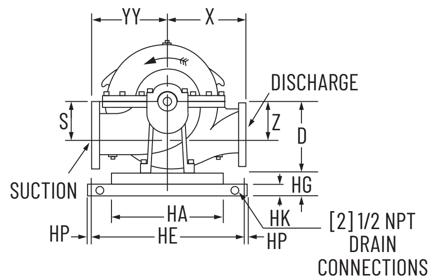
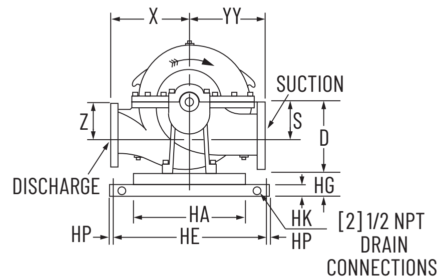
STD. 125# FLANGES	OPT. 250# FLANGES





RIGHT-HAND ROTATION



LEFT-HAND ROTATION

DRIP RIM BASE

<table>
<tr><th colspan="3">PUMP SIZE</th><th rowspan="2">POWER SERIES</th><th rowspan="2">D</th><th rowspan="2">S</th><th rowspan="2">W</th><th rowspan="2">X</th><th rowspan="2">Z</th><th rowspan="2">CP</th><th rowspan="2">HY</th><th rowspan="2">YY</th></tr>
<tr><th>DISCH.</th><th>SUCT.</th><th>CASE BORE</th></tr>
<tr><td>8</td><td>10</td><td>21 & 21A</td><td rowspan="4">6B</td><td>18-1/2 (470)</td><td>9-1/2 (241)</td><td rowspan="4">21-7/8 (556)</td><td>18 (457)</td><td>9-1/2 (241)</td><td rowspan="4">38 (965)</td><td rowspan="4">11-1/2 (279)</td><td>21 (533)</td></tr>
<tr><td>10</td><td>12</td><td>12B</td><td>23 (584)</td><td>12 (305)</td><td>16 (406)</td><td>12 (305)</td><td>19 (483)</td></tr>
<tr><td>10</td><td>12</td><td>15B & C</td><td>25 (635)</td><td>13-1/2 (343)</td><td>17 (432)</td><td>13-1/2 (343)</td><td>20 (508)</td></tr>
<tr><td>10</td><td>12</td><td>18</td><td>25 (635)</td><td>13-1/2 (343)</td><td>18 (457)</td><td>13-1/2 (343)</td><td>22 (559)</td></tr>
<tr><td>10</td><td>12</td><td>18D</td><td>7A</td><td>25 (635)</td><td>12-1/4 (311)</td><td>24-5/16 (556)</td><td>20 (508)</td><td>12-1/4 (311)</td><td>42-15/16 (1091)</td><td>11 (279)</td><td>24 (610)</td></tr>
<tr><td>12</td><td>14</td><td>15B</td><td rowspan="3">7</td><td>24 (610)</td><td>15 (381)</td><td rowspan="3">25-1/4 (641)</td><td>17 (432)</td><td>15 (381)</td><td rowspan="3">43-7/8 (1114)</td><td rowspan="3">11-1/2 (292)</td><td>22 (559)</td></tr>
<tr><td>12</td><td>14</td><td>18A</td><td>24 (610)</td><td>15 (381)</td><td>18 (457)</td><td>15 (381)</td><td>23 (584)</td></tr>
<tr><td>14</td><td>16</td><td>18</td><td>29-1/4 (743)</td><td>16 (406)</td><td>22 (559)</td><td>16 (406)</td><td>27 (686)</td></tr>
</table>

BASE	SIZE	HA	HB	HE	HF	HG	HH	HK	HP
13	18 x 64	18 (457)	64-1/2 (1638)	25-1/8 (638)	62-7/8 (1597)	4 (102)	1-1/8 (29)	2 (51)	13/16 (21)
17	22 x 74	22 (559)	74-1/2 (1892)	29-1/8 (740)	72-7/8 (1851)	4-1/2 (114)	1-1/8 (29)	2 (51)	13/16 (21)
18	22 x 82	22 (559)	82-1/2 (2096)	29-1/8 (740)	80-7/8 (2054)	4-1/2 (114)	1-1/8 (29)	2 (51)	13/16 (21)

<table>
<tr><th colspan="3">PUMP SIZE</th><th>FRAME</th><th>286TS</th><th>286T</th><th>324TS</th><th>324T</th><th>326TS</th><th>326T</th><th>364TS</th><th>364T</th><th>365TS</th><th>365T</th><th>404TS</th><th>404T</th><th>405TS</th><th>405T</th><th>444TS</th><th>444T</th><th>445TS</th><th>445T</th><th>447TS</th><th>447T</th><th>449TS</th><th>449T</th></tr>
<tr><th>PUMP</th><th>DISCH.</th><th>SUCT.</th><th>C</th><td>24 (610)</td><td>25 (635)</td><td>25 (635)</td><td>26 (660)</td><td>26 (660)</td><td>28 (711)</td><td>27 (686)</td><td>29 (737)</td><td>28 (711)</td><td>30 (762)</td><td>30 (762)</td><td>33 (838)</td><td>31 (787)</td><td>35 (889)</td><td>34 (864)</td><td>38 (965)</td><td>36 (914)</td><td>40 (1016)</td><td>40 (1016)</td><td>44 (1118)</td><td>45 (1143)</td><td>49 (1245)</td></tr>
<tr><td>8" 1825 & 8" 1825A</td><td>8</td><td>10</td><td>BASE</td><td colspan="10" rowspan="5">13</td><td colspan="7" rowspan="5">17</td><td colspan="5" rowspan="5">18</td></tr>
<tr><td>10" 1822B</td><td>10</td><td>12</td><td>BASE</td></tr>
<tr><td>10" 1823B&C</td><td>10</td><td>12</td><td>BASE</td></tr>
<tr><td>10" 1824</td><td>10</td><td>12</td><td>BASE</td></tr>
<tr><td>10" 1824D</td><td>10</td><td>12</td><td>BASE</td></tr>
<tr><td>8" 1826</td><td>8</td><td>12</td><td>BASE</td><td colspan="18"></td><td colspan="4">18</td></tr>
<tr><td>12" 1823B</td><td>12</td><td>14</td><td>BASE</td><td colspan="11" rowspan="3">-</td><td colspan="4" rowspan="3">17</td><td colspan="7" rowspan="3">18</td></tr>
<tr><td>12" 1824A</td><td>12</td><td>14</td><td>BASE</td></tr>
<tr><td>14" 1824</td><td>14</td><td>16</td><td>BASE</td></tr>
</table>

NOTES:

All dimensions in inches (mm).

Dimensions may vary ± 3/8" (10).

Not for construction purposes unless certified.

*Coupling gap may vary 1/8" (3) to 2-1/16" (52).

Conduit box is shown in approximate location. Dimensions are not specified as they vary with each motor manufacturer.

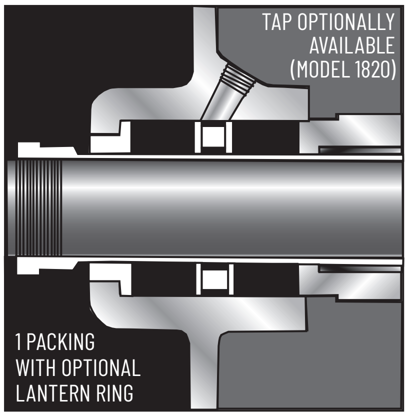
Discharge and suction flanges – ANSI Standard flat face.

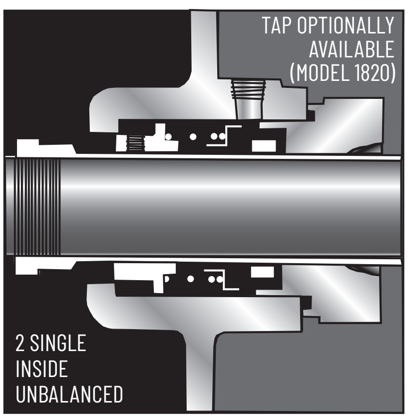
STD. 125# FLANGES	OPT. 250# FLANGES

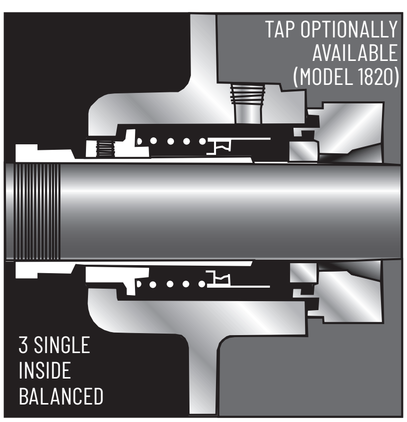
PENTAIR FAIRBANKS NIJHUIS®

MECHANICAL SEALS AND PACKING

Standard packing on horizontal pumps and the standard mechanical seals on vertical pumps are suitable for most applications. Special sealing arrangements may, however, be required due to higher pressure or temperature requirements and the nature of the liquid to be pumped. Factory option seals are of high quality and supplied by leading mechanical seal manufacturers. Various seal arrangements and types that better suit our specific needs are available. Seal faces are carbon vs. ceramic on standard seals and carbon vs. tungsten carbide on high temperature seals. Corrosion resistant alloy metal parts and Buna-N secondary sealing elements are provided. Various other metals are also available. Gland plates are cast iron and can be supplied in alternative materials. Recommendations and limitations are general. Specific selections can be offered only after rotating speeds, pressures, temperatures, type of equipment and liquid nature are known. The following illustrations describe the basic seal and packing options available. For options not shown, refer to the factory. For quick reference for the type of seal best suited to your application, refer to the condensed information that heads each option.







The following comments govern these recommendations:

1. PACKING Standard on Model 1820. Not available on 1810 & 1840.
   PRESSURES (suction): Below atmospheric up to 250*psig (maximum pump limitation). Lantern rings are required on suction lift applications.
   TEMPERATURES: From minus 100˚F up to 275˚F* with high temperature packing, or 225˚F with standard packing.
   LIQUIDS: All liquids that are compatible with braided fiber packing. Other packings available for special applications.

2. SINGLE – UNBALANCED Standard on Models 1810 and 1840. Optional Model 1820.
   PRESSURES (suction): Below atmospheric up to 100 psig.
   TEMPERATURES: From minus 100˚F up to 275˚F with high temperature seals, or 225˚F with standard seals.
   LIQUIDS: All liquids that are compatible with the seal materials of construction and with a specific gravity higher than .6.

3. SINGLE – BALANCED Optional on all models.
   PRESSURES (suction): Up to 250 psig (max. pump limit)
   TEMPERATURES: Minus 100˚F up to 275˚F with high temperature seals, or 225˚F with standard seals.
   LIQUIDS: All liquids that are compatible with the seal materials of construction. Required on liquids with a specific gravity of .6 or lower.

PRESSURES – The pressures referred to are those found at the pump suction. Most seal manufacturers recommend a flushing arrangement from the discharge to the stuffing box where “below atmospheric pressure” is encountered. The 1800 Series stuffing boxes incorporate internal bypass arrangements which permit flushing to the mechanical seals. External bypasses are available to both seal faces. An external bypass is standard on vertical pumps to the upper seal face.

TEMPERATURES – The temperature limitation of a mechanical seal is frequently determined by the shaft sealing material. The various elastomer O-ring materials have varying temperature limits, depending upon the chemical and/or physical properties of the process fluid. Filled PTFE Coating†, shaft seal rings are available.

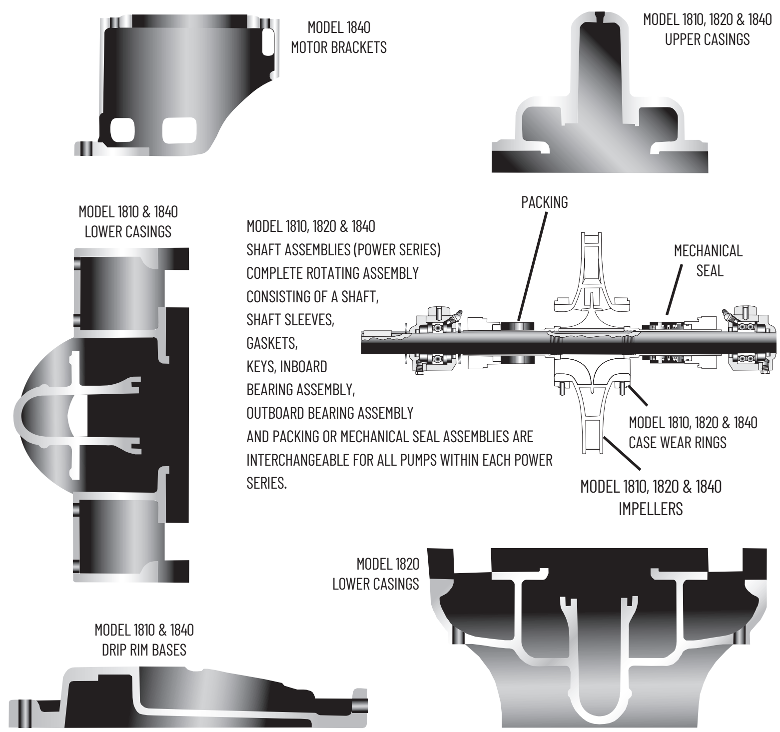
LIQUIDS – Due to varying degrees of resistance of various sealing compounds in different pumped liquids, the following mechanical seal sealing rings are available: BUNA-N, NEOPRENE, VITON†, PTFE Coating† and other synthetic elastomers.

†DUPONT registered trademark.

*NOTE: Hardened stainless steel (450 minimum Brinell) shaft sleeves are available with this option and are required when the suction pressure is over 100 psig or when the temperature exceeds 225˚F.

Technical Data – 1800 Series Split Case Pumps / Engineering Data
INTERCHANGEABILITY AND POWER SERIES

Fairbanks Nijhuis® Models 1810, 1820 and 1840 were designed for maximum interchangeability. Each model is available in 34 different sizes, offering a model and size precisely fitted to the installation requirements. The different pump sizes are divided into 10 power series. Within each power series, all parts are completely interchangeable except for the impeller, casing and case wearing rings for the right-hand or left-hand rotation. See the illustrations below for all details.



MODEL 1820 POWER SERIES

1	2	3	4		4A	5		5A	6B	7	7A
2" 1823	2-1/2" 1823B	4" 1823A	–	5" 1824	6" 1822HH	6" 1823	8" 1822	6" 1823HH	10" 1822B	8" 1826	10" 1824D
2" 1824	2-1/2" 1824	4" 1823C	4" 1825B	6" 1822		6" 1824A	–		10" 1823B	12" 1823B	
2" 1825	3" 1824B	4" 1823D	5" 1822A	8" 1821B		6" 1824B	8" 1823A		10" 1823C	12" 1824A	
	3" 1825	4" 1824	5" 1822C			6" 1824C	8" 1823B		10" 1824	14" 1824	
	4" 1822B		5" 1823			6" 1825	8" 1824B				

MODEL 1810 POWER SERIES

1	2	3	4		4A	5		5A	6B	7	7A
2" 1813	2-1/2" 1813B	4" 1813A	–	5" 1814	6” 1812HH	6" 1813	8" 1812	6" 1813HH	10" 1812B	–	10” 1814D
2" 1814	2-1/2" 1814	4" 1813C	4" 1815B	6" 1812		6" 1814A	–		10" 1813B	12" 1813B	
2" 1815	3" 1814B	4" 1813D	5" 1812A	8" 1811B		6" 1814B	8" 1813A		10" 1813C	12" 1814A	
	3" 1815	4" 1814	5" 1812C			6" 1814C	8" 1813B		10" 1814	14" 1814	
	4" 1812B		5" 1813			6" 1815	8" 1814B				

MODEL 1840 POWER SERIES

1	2	3	4		4A	5		5A	6B	7	7A
2" 1843	2-1/2" 1843B	4" 1843A	–	5" 1844	6” 1842HH	6" 1843	8" 1842	6" 1843HH	10" 1842B	–	10” 1844D
2" 1844	2-1/2" 1844	4" 1843C	4" 1845B	6" 1842		6" 1844A	–		10" 1843B	12" 1843B	
2" 1845	3" 1844B	4" 1843D	5" 1842A	8" 1841B		6" 1844B	8" 1843A		10" 1843C	12" 1844A	
	3" 1845	4" 1844	5" 1842C			6" 1844C	8" 1843B		10" 1844	14" 1844	
	4" 1842B		5" 1843			6" 1845	8" 1844B				

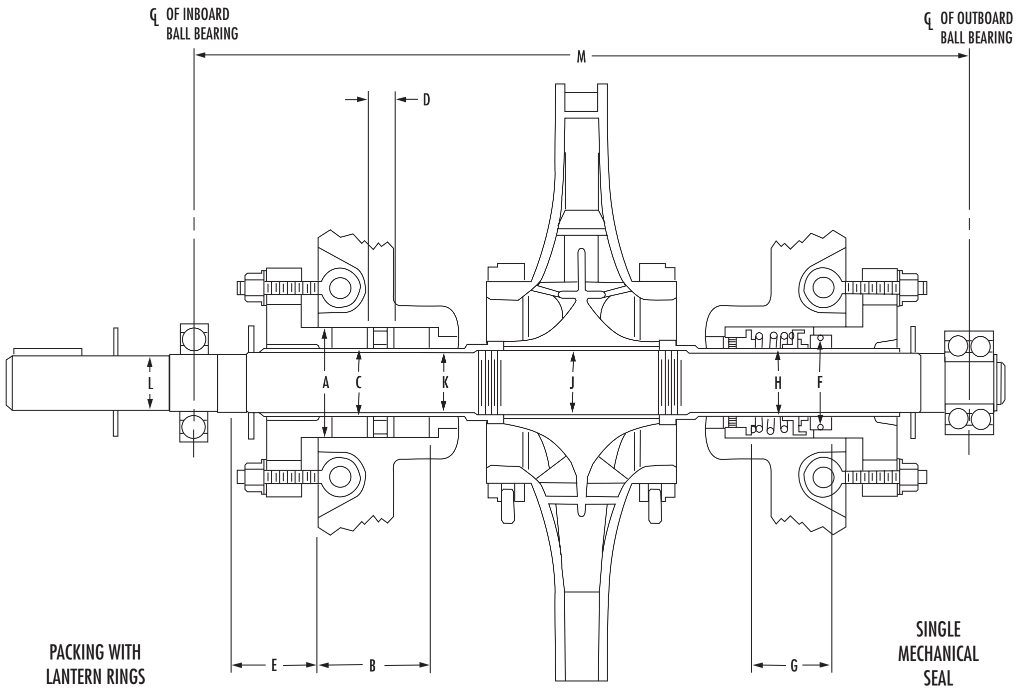
MATERIALS OF CONSTRUCTION

PUMP CONSTRUCTION				
Descrip.	Bronze Fitted	All Bronze	All Iron	Stainless Steel
Plug	Mall. Iron A197	Bronze Wrought	Mall. Iron A197	Stainless Steel AISI 316
Plug				
Capscrew	Steel SAE2	Steel SAE2	Steel SAE2	Stainless Steel AISI 316
Capscrew				
Casing Half	Cast Iron A48	Bronze B62	Cast Iron A48	Stain. Stl. ACI CF8M
Gasket	Buna-N Treated Cellulose			
Gr. Ftg.	Steel Zerk			
Plug	Malleable Iron ASTM A197			
Nut	Bronze Wrought		Steel SAE2	Stain. Stl. AISI 316
Washer	Cadmium Plated Steel	Bronze Wrought	Cadmium Plated Steel	Stain. Stl. AISI 316
Gland Clamp				
Gland	Cast Iron A48	Bronze B62	Cast Iron A48	Stain. Stl. ACI CF8M
Swing Bolt	Cadmium Plated Steel	Silicon Bronze Wrought	Cadmium Plated Steel	Stain. Stl. AISI 316
Packing	Graphited Acrylic			
Key	Steel Wrought			
Capscrew	Steel SAE 2	Bronze Wrought	Steel SAE 2	Stain. Stl. AISI 316
Bearing Cap	Cast Iron A48	Bronze B62	Cast Iron A48	Stain. Stl. ACI CF8M
Pin	Cadmium Plated Steel	Stain. Stl. AISI 416	Cadmium Plated Steel	Stain. Stl. AISI 316
Case Ring	Bronze ASTM B62		Cast Iron A48	Stain. Stl. ACI CF8M
Protector	Steel Wrought			
Capscrew	Steel SAE 2			
Cart. Cap	Cast Iron ASTM A48			
Gasket	Buna-N Treated Cellulose			
Ret. Ring	Spring Steel			
Cartridge	Cast Iron ASTM A48			
Gr. Seal	Buna-N and Seal			
Bearing	Steel Commercial			
Slinger	Neoprene			
Slinger	Neoprene			
Capscrew	Steel SAE 2			
Cart. Cap	Cast Iron ASTM A48			
Gr. Seal	Buna-N and Steel			
Gasket	Buna-N Treated Cellulose			
Cartridge	Cast Iron ASTM A48			
Gr. Seal	Buna-N and Steel			
Bearing	Steel Commercial			
Slinger	Neoprene			
Gland	Cast Iron A48	Bronze B62	Cast Iron A48	Stain. Stl. ACI CF8M
O-ring	Buna-N			
Lantern Ring	Bronze ASTM B62		Cast Iron A48	Stain. Stl. AC CF8M
Seal	Stain. Stl. (1)	Stain. Stl. (2)	Stain. Stl. (1)	Stain. Stl. (2)
Collar	Bronze ASTM B62		Cast Iron A48	Stain. Stl. AISI 316
Setscrew	Stainless Steel AISI 316			
Bushing	Bronze ASTM B62		Cast Iron A48	Stain. Stl. AISI 316

Sleeve		Bronze High Lead Tin		Stain. Stl. AISI 316	
Gasket		PTFE Coated Steel			
Impeller		Bronze ASTM B584		Cast Iron A48	Stain. Stl. ACI CF8M
Impeller Ring		Bronze ASTM B62			
Gasket		PTFE Coated Steel			
Key		Stain. Stl. AISI 416	Stain. Stl. AISI 316	Stain Stl. AISI 416	Stain Stl. AISI 316
Sleeve		Bronze High Lead Tin		Stain Stl. AISI 316	
Shaft	P.S. 1-5	Stl. ASIS C1045	Stain. Stl. AISI 316	Stl. AISI C1045	Stain. Stl. AISI 316
	6B-7	Alloy Stl.	(3)	Alloy Stl.	(3)
Pin Pin* Pin*		Cad. Plated Steel	Stain. Steel AISI 416	Cad. Plated Steel	Stain. Steel AISI 316
Casing Half		Cast Iron A48	Bronze B62 4A	Cast Iron A48	Stain Stl. ACI CF8M
Drive Screw		Steel Bronze Plated			
Nameplate		Stainless Steel AISI 303			
Capscrew		Steel SAE 2			
Bracket		Cast Iron ASTM A48			
Capscrew		Steel SAE 2			
Capscrew		Steel SAE 2			
Base		Cast Iron ASTM A48			

All material specifications are in accordance with ASTM unless otherwise noted.
(1) $B_{30}P_{66}$171(JC) (2) XP_{66}1C1 (JC) (3) AISI 416 chrome steel heat treated power series 6B-7.

DESIGN DETAILS



PUMP PART		DIMENSION	POWER SERIES 1	POWER SERIES 2	POWER SERIES 3	POWER SERIES 4	POWER SERIES 4A	POWER SERIES 5	POWER SERIES 5A	POWER SERIES 6B	POWER SERIES 7	POWER SERIES 7B
STUFFING BOX	PACKING	A Stuffing Box Bore Dia.	2-1/16	2-7/16	2-13/16	3-1/16	3-1/16	3-7/16	3-7/16	3-11/16	3-15/16	4
		B Stuffing Box Depth	2-3/8	3-1/8	3	3-1/2	3-1/2	3-3/4	3-3/4	3-3/4	3-7/8	4-3/8
		C Outside Dia., Sleeve for Packing	1-1/18	1-1/2	1-3/4	2	2	2-3/8	2-3/8	2-1/2	2-7/8	3
		– No. of Packing Rings without Lantern Ring	10	12	10	12	12	12	12	12	14	12
		– Total Number of Packing Rings with Lantern Ring	8	10	8	10	10	10	10	10	12	10
		– No. of Rings in Front of Lantern Ring	1	2	2	2	2	2	2	2	3	2
		– Packing Size	7/16 Sq.	7/16 Sq.	1/2 Sq.	1/2 Sq.	1/2 Sq.	1/2 Sq.	1/2 Sq.	9/16x1/2	1/2Sq.	1/2 Sq.
		D Width of Lantern Ring	1/2	5/8	5/8	5/8	5/8	3/4	3/4	3/4	3/4	3/4
		E Distance from Box to Nearest Obstruction	1-1/4	1-5/8	1-11/16	1-11/16	1-11/16	2	2	2-3/8	2-1/2	2-5/8
	M. SEAL	F Dia. of Mechanical Seal Seat	1-3/4	2-1/8	2-1/2	2-3/4	2-3/4	3-1/4	3-1/4	3-3/8	3-3/4	3-7/8
		G Length of Mechanical Seal	1-1/2	1-9/16	1-7/8	2	2	2-3/8	2-3/8	2-3/8	2-7/8	3-1/2
		H Outside Dia., Sleeve for Mech. Seal	1-1/8	1-1/2	1-3/4	2	2	2-3/8	2-3/8	2-1/2	2-7/8	3
SHAFT		J Dia. at Impeller (Max. Shaft Dia.)	1-1/8	1-3/8	1-5/8	1-7/8	1-7/8	2-1/8	2-1/8	2-3/8	2-3/4	2-3/4
		K Diameter of Shaft Sleeve	7/8	1-1/4	1-1/2	1-3/4	1-3/4	2	2	2-1/4	2-5/8	2-5/8
		L Diameter at Coupling End	3/4	1-1/8	1-3/8	1-1/2	1-1/2	1-3/4	1-3/4	2-1/8	2-1/2	2-1/8
		– Max. Deflection at Sealing Face	.002	.002	.002	.002	.002	.002	.002	.002	.002	.002
BALL BEARINGS		– Ball Bearing No. (Inboard Radial)	204	206	207	208†	208	309	309	211	213	211
		– Ball Bearing No. (Outboard Thrust)	5303	5305	5306	5307	5307	5309	5309	5211	5213	5211
		M Bearing Centers	14-3/4	18-3/8	19-3/8	21-1/4	25-3/8	24	28-1/2	28-3/8	33-1/8	33
		– Minimum Life of Bearing under Worst Conditions of Load (*)	6 YEARS	6 YEARS	6 YEARS	6 YEARS	6 YEARS	6 YEARS	6 YEARS	6 YEARS	6 YEARS	6 YEARS

* Average life of bearings is 5 times minimum life

†5208 is provided as standard on 5" 1813B, 5" 1823B, 5" 1843B when operating at 3500 RPM

Technical Data – 1800 Series Split Case Pumps / Engineering Data

MAXIMUM CASE WORKING PRESSURE is the sum of the differential pressure and the suction pressure. Table 2 indicates the maximum case working pressure for the 1800 Series Split Case Pumps in various materials at the various operating temperatures. These maximum allowable pressures are based on wall thickness for the particular series of pumps, ratings of American Standard Flange Specifications, see Table 1, and take into account the material at various allowable temperatures. Table 1 offers the available casing material and flange ratings for the 1800 Series Split Case Pumps.

EXTERNAL INERTIA OR FLYWHEEL EFFECT is the kinetic energy stored in the rotating assembly that must be overcome when the pump impeller is caused to rotate within the casing. This energy frequently must be calculated to determine the torque required to start, accelerate or decelerate the pump. If the acceleration is rapid, the torque may be several times greater than the torque required to run the pump at normal or constant speed. WR^2 values in lbs-ft^2 are provided for these calculations. See tables 3 through 8.
WR^2 values given in table are for bronze impeller...lbft^2

TABLE 1

PUMP CASING MATERIAL	MINIMUM REQUIREMENT FOR STANDARD SUCTION AND DISCHARGE FLANGES		PIPE SIZE	CODE
	A.S.A. SPEC.	CLASSIFICATION		
Cast Iron ASTM A48	B16.1	125 psi Flat Face	1-12	A
			14-24	B
		250 psi Flat Face	1-12 14-24	C
Bronze ASTM B62	B16.24	150 psi Flat Face	All	D
		300 psi Flat Face		C
Stainless Steel ASTM 296 Grade CF8M	B16.5	150 psi Flat Face	All	E
		300 psi Flat Face		C

Maximum Hydrostatic Pressure 1-1/2 times maximum case working pressure at 100°F

EXAMPLE: A Model 1800 pump with a bronze casing has been selected for operating at a case working pressure of 240 psig at 150°F. Enter Table 2 at 150°F and read upward to 240 psig. It is determined that the selection is within the recommended maximum case working pressure area for 300 psi flanges and is therefore acceptable. Note that the example exceeds the maximum case working pressure unit if the material selected would have been 125 psi flanged cast iron or 150 psi flanged bronze.

Table 2

Pressure – Temperature Ratings

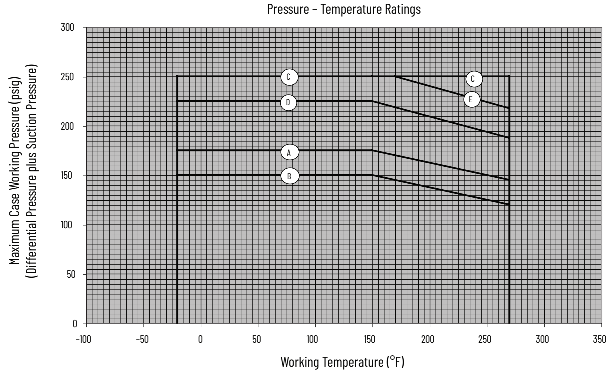


TABLE 3

SPECIFIC GRAVITY OF COMMON METALS	
METALS	S.G.
Bronze	8.86
Cast Iron	7.20
Carbon Steel	7.84
Stainless Steel	7.90

TABLE 4

WR^2 VALUE OF ROTATING ELEMENT LESS IMPELLER	
POWER SERIES	WR^2
1	0.006
2	0.020
3	0.038
4	0.075
4A	0.087
5	0.154
5A	0.181
6B	0.294
7	0.536
7A	0.413

EXAMPLE 1: Find WR^2 value for a 15" diameter 8" 1823B bronze fitted pump handling cold water.
From chart find the "WET" value for
a 15" diameter impeller ....10.38 lbs-ft^2
Add power series 5 rotating element
less impeller..0.15 lbs-ft^2
Total 10.53 lbs-ft^2

EXAMPLE 2: Find WR^2 value for a 15" diameter 8" 1823B all iron pump handling 0.67 specific gravity gasoline.
From chart find the "DRY" value and correct for difference in materials.
$\frac{\text{SP. GR. cast iron}}{\text{SP. GR. bronze}}$ x 9.29 lbs-ft^2 ....7.54 lbs-ft^2
Take difference ("WET"–"DRY") values and correct for difference in specific gravities.
1.09x0.67^2.................................. 0.73 lbs-ft^2
Add power series 5 rotating element
less impeller..0.15 lbs-ft^2
Total 10.53 lbs-ft^2

TABLE 5

	PUMP SIZES									
	2" 1813 2" 1823 2" 1843		2" 1814 2" 1824 2" 1844		2-1/2" 1813B 2-1/2" 1823B 2-1/2" 1843B		3" 1814B 3" 1824B 3" 1844B		4" 1812B 4" 1822B 4" 1842B	
DIA.	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET
10"	–	–	–	–	–	–	1.17	1.30	–	–
9.5"	–	–	0.72	0.88	0.84	0.95	0.98	1.10	0.90	1.03
9.0"	0.56	0.63	0.60	0.70	0.70	0.85	0.80	0.90	0.80	0.90
8.5"	0.37	0.43	0.46	0.54	0.62	0.73	0.70	0.75	0.68	0.75
8.0"	0.28	0.32	0.40	0.47	0.56	0.65	0.56	0.60	0.56	0.63
7.5"	0.23	0.26	0.36	0.41	0.47	0.56	0.46	0.50	0.48	0.54
7.0"	0.19	0.22	0.29	0.33	0.42	0.49	0.36	0.40	0.43	0.46
6.5"	0.18	0.19	0.27	0.31	0.39	0.44	0.32	0.36	0.38	0.41
6.0"	0.16	0.18	–	–	0.35	0.41	0.28	0.31	0.33	0.36
IMP. WT.	10#		12#		14#		18#		15#	

TABLE 6

	PUMP SIZES																							
	2" 1815 2" 1825 2" 1845		2-1/2" 1814 2-1/2" 1824 2-1/2" 1844		4" 1813A 4" 1823A 4" 1843A		4" 1813C 4" 1823C 4" 1843C		4" 1813D 4" 1823D 4" 1843D		5" 1812A 5" 1822A 5" 1842A		5" 1812C 5" 1822C 5" 1842C		6" 1812 6" 1822 6" 1842		6" 1812HH 6" 1822HH 6" 1842HH		8" 1811B 8" 1821B 8" 1841B		8" 1812 8" 1822 8" 1842		10" 1812B 10" 1822B 10" 1842B	
DIA.	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET
12"	1.55	1.82	1.70	1.95	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.91	3.43	4.10	4.60	5.80	6.75
11.5"	1.25	1.45	1.40	1.55	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2.55	3.00	3.80	4.00	5.32	6.10
11.0"	1.05	1.20	1.10	1.25	1.90	2.10	1.65	1.80	–	–	2.04	2.47	3.00	3.60	2.04	2.47	3.36	2.76	2.15	2.45	3.40	3.80	5.00	5.60
10.5"	0.93	1.04	0.98	1.10	1.60	1.75	1.45	1.55	1.28	1.23	1.80	2.10	2.90	3.20	1.80	2.10	3.03	2.49	1.95	2.20	3.10	3.30	4.90	5.50
10.0"	0.81	0.90	0.83	0.90	1.35	1.52	1.22	1.35	1.18	1.14	1.60	1.85	2.65	3.10	1.60	1.85	2.74	2.25	1.73	1.95	2.85	3.10	4.80	5.40
9.5"	0.75	0.83	0.68	0.75	1.20	1.33	1.08	1.19	1.00	1.05	1.45	1.65	2.50	2.90	1.45	1.65	2.48	2.04	1.50	1.66	2.70	2.90	–	–
9.0"	0.70	0.78	0.60	0.67	1.05	1.22	1.00	1.10	1.09	0.97	1.30	1.45	2.40	2.80	1.30	1.45	2.25	1.86	1.40	1.50	2.60	2.70	–	–
8.5"	–	–	–	–	0.95	1.05	0.88	0.99	0.95	0.89	1.20	1.35	2.35	2.60	1.20	1.35	2.06	1.72	1.30	1.40	2.50	2.60	–	–
8.0"	–	–	–	–	0.83	0.95	0.75	0.84	0.88	0.83	1.06	1.15	2.00	2.40	1.06	1.15	1.90	1.60	1.15	1.20	–	–	–	–
7.5"	–	–	–	–	–	–	0.73	0.80	0.78	0.75	0.93	1.05	1.90	2.20	0.93	1.05	1.78	1.51	1.09	1.12	–	–	–	–
7.0"	–	–	–	–	–	–	0.65	0.74	0.75	0.69	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IMP. WT.	15#		17#		26#		22#		24#		27#		32#		27#		37#		29#		43#		59#	

TABLE 7

	PUMP SIZES																			
	3″ 1815 3″ 1825 3″ 1845		4″ 1814 4″ 1824 4″ 1844		5″ 1813 5″ 1823 5″ 1843		6″ 1813HH 6″ 1823HH 6″ 1843HH		6″ 1813 6″ 1823 6″ 1843		8″ 1813A 8″ 1823A 8″ 1843A		8″ 1813B 8″ 1823B 8″ 1843B		10″ 1813B 10″ 1823B 10″ 1843B		10″ 1813C 10″ 1823C 10″ 1843C		12″ 1813B 12″ 1823B 12″ 1843B	
DIA.	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET
15"	–	–	4.51	5.18	6.18	6.76	–	–	7.39	8.51	7.39	8.51	9.29	10.4	9.20	10.0	14.5	17.5	14.3	17.7
14.5"	–	–	3.80	4.50	5.40	6.00	–	–	6.75	7.50	6.75	7.50	7.75	8.80	8.50	9.25	13.5	16.2	14.0	16.5
14.0"	3.62	4.36	3.50	3.90	4.60	5.20	7.50	6.63	6.00	6.75	6.00	6.75	6.75	7.75	8.00	9.00	12.2	14.4	13.0	15.0
13.5"	3.10	3.60	3.00	3.40	4.20	4.50	6.97	6.16	5.40	6.00	5.40	6.00	6.10	7.00	7.50	8.50	11.3	12.2	12.5	14.5
13.0"	2.70	3.10	2.55	2.95	3.60	3.90	6.46	5.69	5.00	5.50	5.00	5.50	5.70	6.25	6.75	7.60	10.5	11.4	11.8	13.9
12.5"	2.25	2.65	2.20	2.60	3.20	3.50	5.97	5.27	4.50	5.00	4.50	5.00	5.10	5.80	6.50	7.25	10.0	11.0	11.0	13.0
12.0"	1.98	2.30	1.95	2.25	3.05	3.20	5.48	4.83	4.10	4.40	4.10	4.40	4.80	5.30	6.25	7.00	–	–	10.5	12.5
11.5"	1.60	1.90	1.70	2.00	2.70	2.98	5.06	4.45	3.70	4.00	3.70	4.00	4.50	5.00	–	–	–	–	–	–
11.0"	1.40	1.65	1.50	1.75	2.50	2.70	4.62	4.06	3.30	3.55	3.30	3.55	4.10	4.40	–	–	–	–	–	–
10.5"	1.25	1.50	–	–	2.30	2.45	4.23	3.70	3.00	3.20	3.00	3.20	3.70	4.10	–	–	–	–	–	–
10.0"	1.10	1.35	–	–	2.05	2.25	3.87	3.38	2.85	3.10	2.85	3.10	3.50	3.80	–	–	–	–	–	–
9.5"	–	–	–	–	–	–	3.47	3.02	–	–	–	–	–	–	–	–	–	–	–	–
9.0"	–	–	–	–	–	–	3.11	2.69	–	–	–	–	–	–	–	–	–	–	–	–
IMP. WT.	28#		30#		45#		62#		56#		56#		59#		70#		85#		87#	

TABLE 8

	PUMP SIZES																			
	4″ 1815B 4″ 1825B 4″ 1845B		5″ 1814 5″ 1824 5″ 1844		6″ 1814A, B & C 6″ 1824A, B & C 6″ 1844A, B & C		6″ 1815 6″ 1825 6″ 1845		8″ 1814B 8″ 1824B 8″ 1844B		10″ 1814 10″ 1824 10″ 1844		10″ 1814D 10″ 1824D 10″ 1844D		8″ 1826		12″ 1814A 12″ 1824A 12″ 1844A		14″ 1814 14″ 1824 14″ 1844	
DIA.	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET	DRY	WET
24.0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–	50.1	52.5	–	–	–	–
22.5"	–	–	–	–	–	–	–	–	–	–	–	–	–	–	44.0	46.5	–	–	–	–
21.0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–	38.0	40.5	–	–	–	–
19.5"	–	–	–	–	–	–	18.0	20.3	–	–	–	–	–	–	35.0	35.5	–	–	–	–
19.0"	–	–	–	–	–	–	16.5	19.0	–	–	–	–	–	–	–	–	–	–	–	–
18.5"	–	–	–	–	–	–	15.0	17.2	–	–	–	–	–	–	–	–	–	–	–	–
18.0"	11.6	13.5	–	–	15.0	18.0	14.0	15.4	–	–	19.5	22.6	–	–	–	–	30.0	32.0	46.0	48.0
17.5"	10.8	12.0	–	–	13.0	16.0	12.6	14.3	16.5	18.5	18.5	21.0	27.78	21.29	–	–	25.0	29.0	40.0	42.0
17.0"	10.1	11.1	–	–	11.5	13.5	11.4	13.4	15.2	16.5	17.0	19.5	26.12	20.15	–	–	22.0	26.5	36.0	39.0
16.5"	9.50	10.3	8.64	9.69	10.0	11.6	10.5	12.0	12.6	14.5	15.5	18.5	24.46	19.01	–	–	20.0	24.0	31.0	34.0
16.0"	9.00	9.50	8.00	9.00	8.80	9.70	9.93	11.2	11.5	13.0	14.0	17.1	22.95	17.97	–	–	17.5	21.5	28.0	31.5
15.5"	8.81	8.90	7.30	8.30	7.50	8.80	9.00	10.0	10.0	11.5	13.1	16.0	21.43	16.93	–	–	15.5	19.5	25.0	29.0
15.0"	–	–	6.80	7.80	6.70	7.00	8.10	9.25	9.10	9.90	12.0	14.5	20.08	15.99	–	–	14.0	18.0	22.5	27.5
14.5"	–	–	6.00	7.00	6.00	6.50	7.36	8.28	7.50	8.60	–	–	18.72	15.05	–	–	–	–	–	–
14.0"	–	–	5.30	6.20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
13.5"	–	–	4.90	5.80	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
13.0"	–	–	4.40	5.20	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
IMP. WT.	28#		30#		45#		56#		59#		70#		166#		105#		85#		87#	

