



Barmesa® Pumps

Quality Pumps Since 1953



8 x 8 x 13



3 x 3 x 6



4 x 4 x 10

BVL series |

Split Coupled Vertical In-Line Pumps

- ▶ Capacities up to 6,400 GPM
- ▶ Heads up to 560 ft
- ▶ Temperatures up to 194 °F

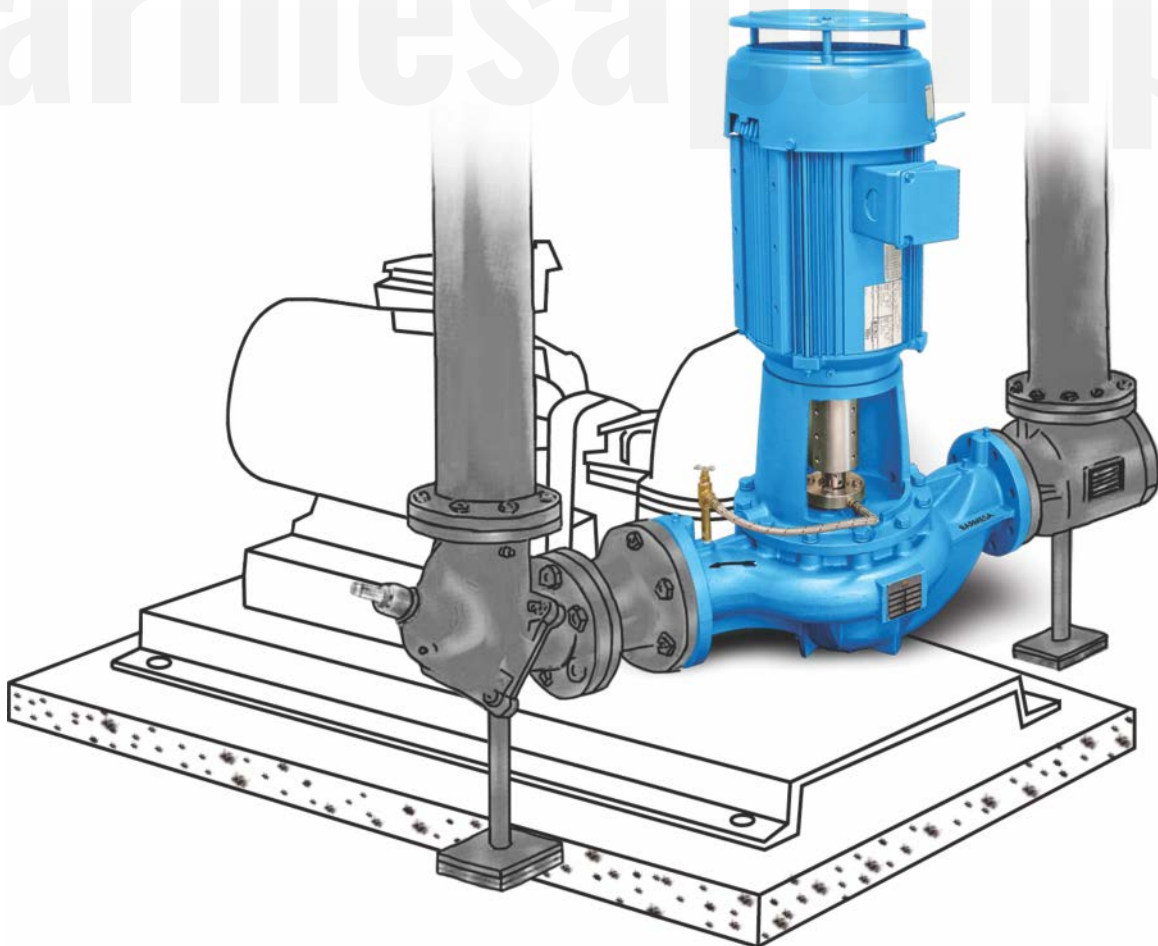
Typical Applications

- ▶ Air conditioning
- ▶ Condensed water
- ▶ Chilled water
- ▶ Service water

Advantages

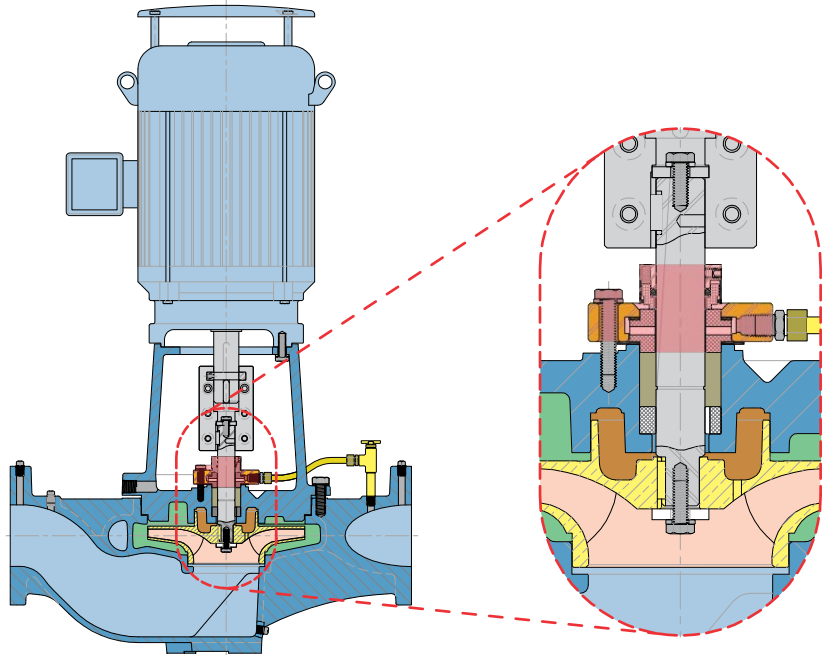
- ▶ The BVL Pump does not require field alignment or a foundation.
- ▶ Saving space, it may take three times less space than the horizontal split case pump.
- ▶ Coupling allows all mechanical seals components to be removed for servicing without disturbing other components. Reinstalling it gets the pump back to its original specifications.
- ▶ Highly reliable due to the rotating assembly and the dynamically balanced impeller assuring a silent operation.
- ▶ Simplifies pipes fixing considerably. The pump is supported by the pipes avoiding misalignment.
- ▶ Installation and servicing costs are highly reduced.
- ▶ Minimum time required for maintenance.
- ▶ Servicing can be done without disassembling it.

BVL PUMP vs. SPLIT CASE PUMP



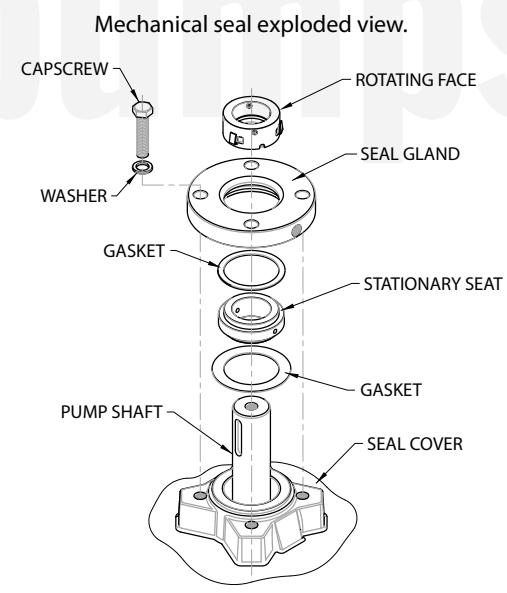
Mechanical seal

- ▶ Stainless steel multi-spring outside balanced type.
- ▶ Materials: viton secondary seal, carbon rotating face and silicon carbide stationary seat.



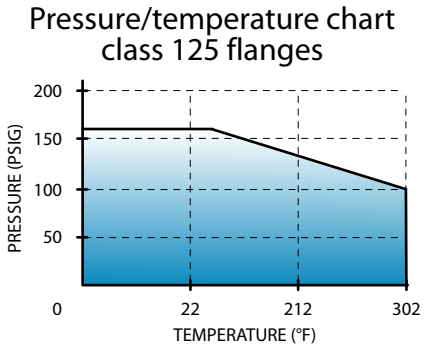
Mechanical seal on the BVL pump.

SEAL DIAMETERS					
GROUP	FRAME	FLANGE	SHAFT MOTOR DIAMETER	SPACE BETWEEN SHAFTS	MECHANICAL SEAL DIAMETER
S	143 - 145	TC	7/8"	1 3/8"	1 1/8"
	182 - 184		1 1/8"	2 1/2"	
	213 - 215		1 3/8"	2"	
	254 - 256		1 5/8"	1 3/8"	
M	284 - 286	TSC	1 5/8"	2 3/4"	1 5/8"
	324 - 326		1 7/8"	2 7/8"	
	364 - 365		1 7/8"	2 7/8"	
	404 - 405	2 1/8"	2 3/8"		
	284 - 286	TC	1 7/8"	1 3/8"	
	324 - 326		2 1/8"	1 3/8"	
	364 - 365		2 3/8"	1 3/8"	
	445 - 446	TSC	2 3/8"	1 3/8"	
	182 - 184	TC	1 1/8"	2 1/2"	
	213 - 215		1 3/8"	2"	
254 - 256	1 5/8"		1 3/8"		
L	324 - 326	TC	2 1/8"	1 3/8"	2 1/8"
	364 - 365		2 3/8"	1 3/8"	
	404 - 405		2 7/8"	2 5/8"	
	444 - 445		3 3/8"	1 3/8"	
	447 - 449		3 3/8"	1 3/8"	

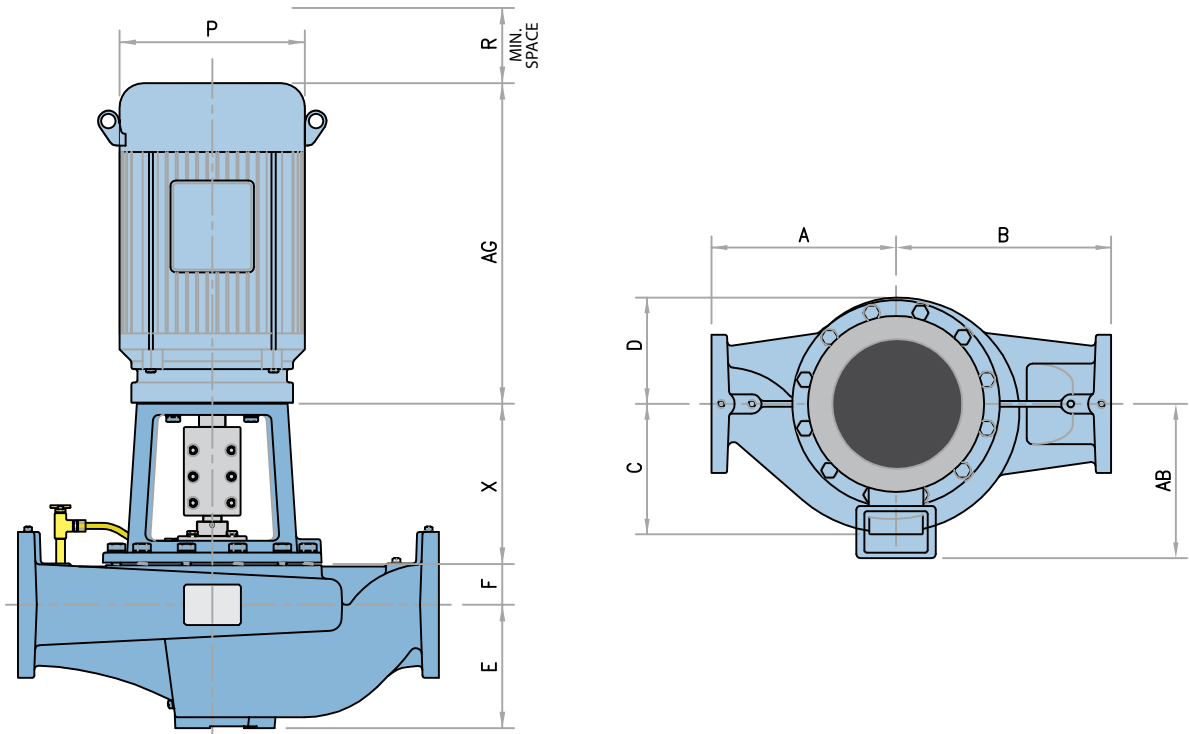


Split spacer coupling allows seal maintenance without disturbing pump or motor.

The outside mounting mechanical seal makes more simple its maintenance because it is accessible and easily replaceable; after removing the coupling, the space left between shafts is enough to remove the seal.



General dimensions



*All dimensions in inches.

BVL PUMP						
SIZE	DIMENSIONS					
	A	B	C	D	E	F
1.5x1.5x6	7	7.00	4.50	4.3	4.3	1.75
2x2x6	7	8	5.25	4.3	4.81	1.81
3x3x6	8.25	9.75	6.00	4.75	6	1.81
4x4x6	10	12	7.00	5.50	7.63	2.06
6x6x6	11	17.5	8.50	6.35	9.75	4.00
1.5x1.5x8	8	8	5.50	5.00	4.63	2.4
2x2x8	8.6	9.6	6.00	5.50	5.75	2.4
3x3x8	10	12	6.88	6.00	6.38	2.50
4x4x8	11	14	8	6.35	8.00	2.50
5x5x8	12	13	7.8	6.35	8	2.3
6x6x8	13.5	19.5	10.38	7.5	10.38	3.09
8x8x8	16	22	11.00	8.50	11.50	5.50
2x2x10	9	10	6.75	6.75	5.38	2.4
3x3x10	9.5	11.5	7.38	6.75	5.5	2.4
4x4x10	12	14	8.50	7.00	7.63	2.4
6x6x10	15	17	10.00	8.13	8.94	2.6
8x8x10	17	22	11.8	9.00	9.75	3.00
4x4x11.5	12.75	15.25	8.50	7.38	7.69	2.6
5x5x11.5	13.75	17.25	9.38	8.13	8.63	2.88
6x6x11.5	16.5	18.5	10.25	8.50	9.88	2.75
8x8x11.5	18	22.0	12	9.63	10	3.25
3x3x13	12.0	14	9.00	8.25	6.63	2.50
4x4x13	13.5	15.5	9.88	8.50	8.13	2.50
6x6x13	17.0	19.0	11.38	9.00	10.25	2.75
8x8x13	19	23	12	10	10.00	2.88
10x10x13	21	26	14	10.88	12	3.63
12x12x13	24	22.00	17	13	11	10.50
8x8x15	23	25.88	14	12	12.6	3

ELECTRIC MOTORS					
FRAME	DIMENSIONS				
	AG	AB	P	R	SHAFT Ø
143TC					
145TC	11.23	5.86	7.047	5	0.875
182TC					
184TC	13.02	7.53	8.90	5	1.125
213TC					
215TC	16.1	8.63	10.71	5	1.375
254TC					
256TC	21.04	10.45	12.95	6	1.625
284TSC					
286TSC					1.625
284TC	23.39	11.01	14.17	8	1.875
286TC					1.875
324TSC					1.875
326TSC					2.125
324TC	25.81	12.5	15.27	10	2.125
326TC					2.125
364TSC					1.875
365TSC					2.375
364TC	28.54	16.01	17.91	12	2.375
365TC					2.375
404TSC					2.125
405TSC					2.875
404TC	32.55	16.01	19.13	14	2.875
405TC					2.875
444TSC					2.375
445TSC					3.375
444TC	36.73	18.57	23.58	16	3.375
445TC					3.375
447TSC					2.375
449TSC					3.375
447TC	47.84	25.65	26.16	20	3.375
449TC					3.375

COUPLINGS		
IMPELLER DIAM.	DIMENSIONS	
	FRAMES	X
6"	143-145TC	8.81
	182-256TC	10.63
8"	143-145TC	8.38
	182-256TC	10.00
	284-286TSC	13.00
10"	324-326TSC	13.50
	143-145TC	8.38
	182-256TC	9.81
	284-286TSC	13.19
	284-286TC	13.69
11.5"	324-326TC	13.69
	404-405TSC	13.63
	444-447TSC	13.19
	182-256TC	10.00
13"	284-286TC	13.00
	324-326TC	13.56
	182-256TC	12.50
	284-286TC	13.13
	324-326TC	13.75
15"	404-405TSC	13.75
	444-449TSC	13.25
	364-365TC	15.75
	404-405TC	18.25
	444-449TC	18.50
	404-405TC*	16.75
	444-449TC*	16.75
15"	364-365TC	15.63
	404-405TC	18.25
	444-449TC	18.31

* For models size 12x12x13

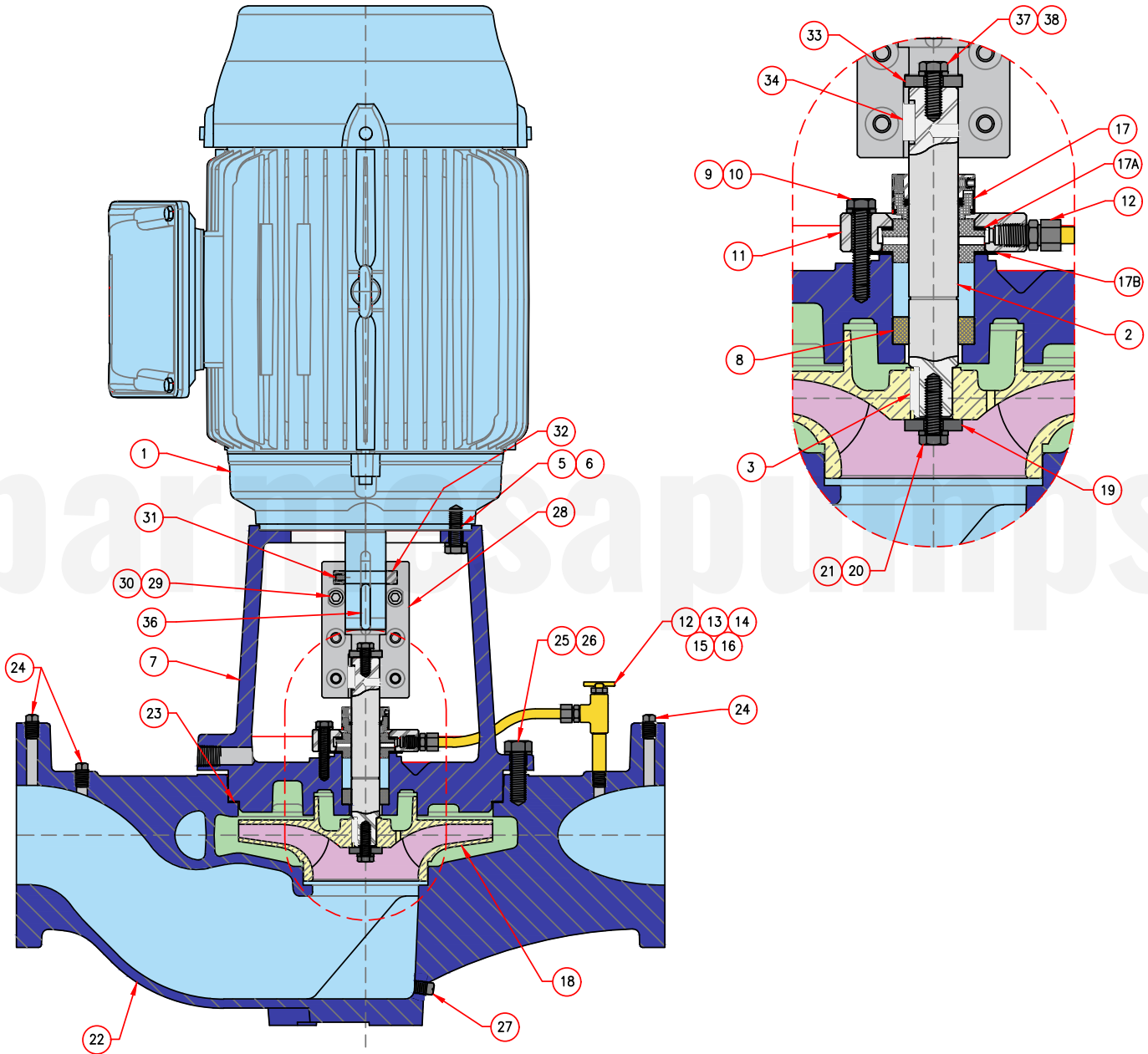
Selection chart

"S" GROUP - MECHANICAL SEAL DIAMETER 1 1/8"				
SIZE	MOTOR FRAME			
	143 - 145	182 - 184	213 - 215	254 - 256
1.5 x 1.5 x 6	TC	TC	-	-
2 x 2 x 6	TC	TC	TC	-
3 x 3 x 6	TC	TC	TC	-
4 x 4 x 6	TC	TC	TC	TC
6 x 6 x 6	TC	TC	TC	-
1.5 x 1.5 x 8	TC	TC	TC	-
2 x 2 x 8	TC	TC	TC	TC
3 x 3 x 8	TC	TC	TC	TC
4 x 4 x 8	TC	TC	TC	TC
5 x 5 x 8	TC	TC	TC	TC
6 x 6 x 8	-	TC	TC	TC
8 x 8 x 8	-	TC	TC	TC
2 x 2 x 10	TC	TC	TC	TC
3 x 3 x 10	TC	TC	TC	TC
4 x 4 x 10	-	TC	TC	TC
6 x 6 x 10	-	-	TC	TC
8 x 8 x 10	-	-	TC	TC
4 x 4 x 11.5	-	TC	TC	TC
5 x 5 x 11.5	-	TC	TC	TC
6 x 6 x 11.5	-	TC	TC	TC
8 x 8 x 11.5	-	-	-	TC
Pump shaft	Ø1 1/8"			
TC motor shaft	Ø7/8"	Ø1 1/8"	Ø1 3/8"	Ø1 5/8"
TC space between shafts	1 3/8"	2 1/2"	2"	1 3/8"

"L" GROUP - MECHANICAL SEAL DIAMETER Ø2 1/8"					
SIZE	MOTOR FRAME				
	143 - 145	182 - 184	213 - 215	254 - 256	254 - 256
10 x 10 x 13	TC	TC	TC	TC	TC
12 x 12 x 13	TC	TC	TC	TC	TC
8 x 8 x 15	-	TC	TC	TC	TC
Pump shaft	Ø2 1/8"				
TC motor shaft	Ø2 1/8"	Ø2 3/8"	Ø2 7/8"	Ø3 3/8"	
TC space between shafts	1 3/8"		2 5/8"	1 3/8"	

"M" GROUP - MECHANICAL SEAL DIAMETER Ø1 5/8"								
SIZE	MOTOR FRAME							
	182 - 184	213 - 215	254 - 256	284 - 286	324 - 326	364 - 365	404 - 405	444 - 445
2 x 2 x 8	-	-	-	TSC	-	-	-	-
3 x 3 x 8	-	-	-	TSC	TSC	-	-	-
4 x 4 x 8	-	-	-	TSC	TSC	TSC	-	-
5 x 5 x 8	-	-	-	TSC	TSC	-	-	-
2 x 2 x 10	-	-	-	TSC	TSC	-	-	-
3 x 3 x 10	-	-	-	TSC	TSC	TSC	-	-
4 x 4 x 10	-	-	-	TSC	TSC	TSC	-	-
6 x 6 x 10	-	-	-	TSC	TSC	TSC	TSC	-
8 x 8 x 10	-	-	-	TSC	TSC	-	-	-
4 x 4 x 11.5	-	-	-	TC	TC	-	-	-
5 x 5 x 11.5	-	-	-	TC	TC	-	-	-
6 x 6 x 11.5	-	-	-	TC	TC	-	-	-
8 x 8 x 11.5	-	-	-	TC	TC	TC	-	-
3 x 3 x 13	TC	TC	TC	TC	TC	TC	TSC	TSC
4 x 4 x 13	TC	TC	TC	TC	TC	-	-	-
4 x 4 x 13L	TC	TC	TC	TC	TC	-	-	-
6 x 6 x 13	-	TC	TC	TC	TC	-	-	-
8 x 8 x 13	-	TC	TC	TC	TC	TC	-	-
10 x 10 x 13	-	-	-	TC	TC	-	-	-
Pump shaft	Ø1 5/8"							
TSC motor shaft	-	-	-	Ø1 5/8"	Ø1 7/8"	Ø1 7/8"	Ø2 1/8"	Ø2 3/8"
TSC space between shafts	-	-	-	2 3/4"	2 7/8"	2 7/8"	2 3/8"	1 3/8"
TC motor shaft	Ø1 1/8"	Ø1 3/8"	Ø1 5/8"	Ø1 7/8"	Ø2 1/8"	Ø2 3/8"	-	-
TC space between shafts	2 1/2"	2"	1 3/8"	1 3/8"	1 3/8"	1 3/8"	-	-

List of parts & materials



List of parts & materials

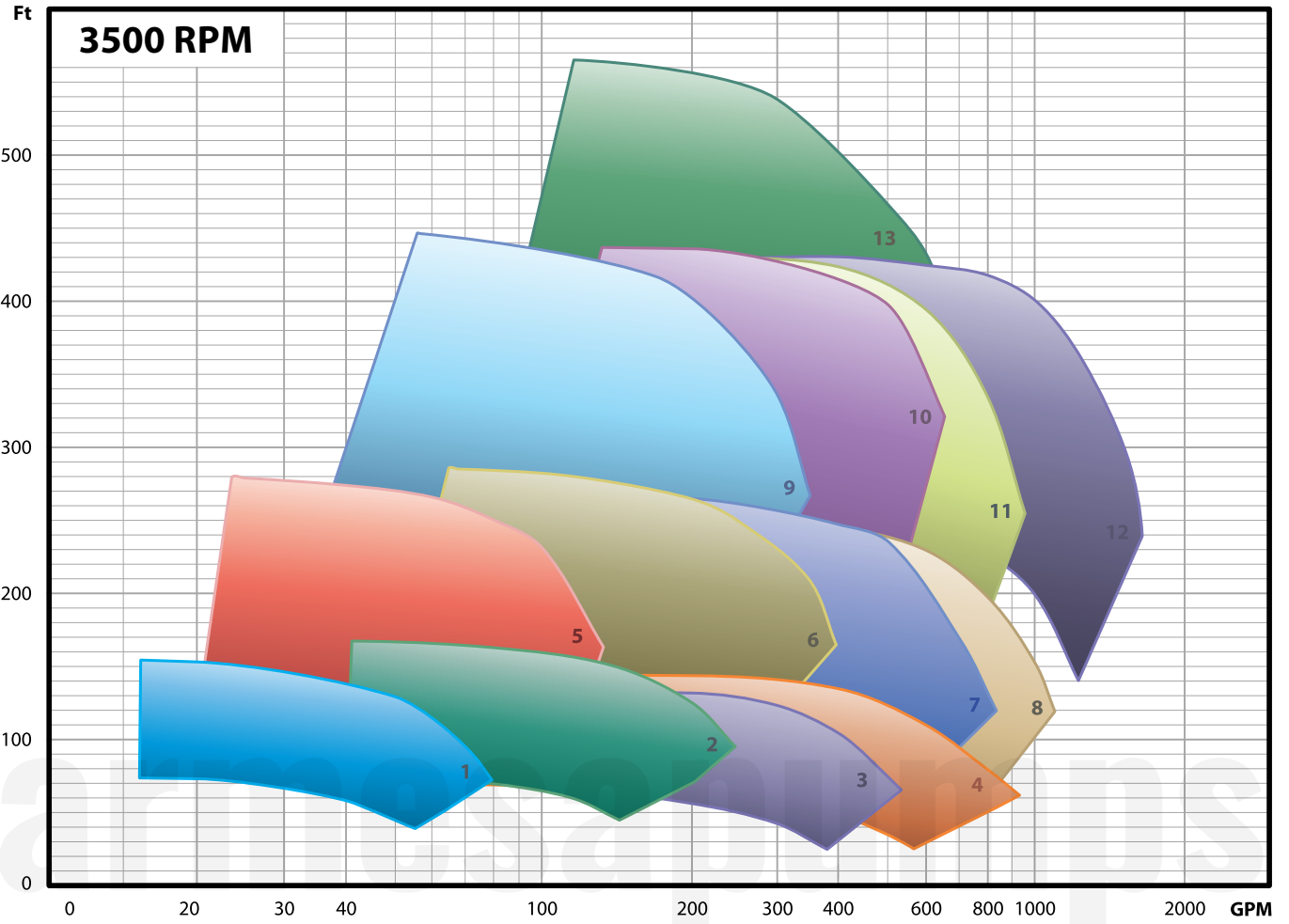
ITEM	DESCRIPTION	MATERIAL
1	MOTOR	
2	SHAFT	STAINLESS STEEL 416
3	IMPELLER KEY	CARBON STEEL 1018
4	ADAPTER	CAST IRON, ASTM-A48, CLASS 30
5	MOTOR LOCKWASHER	CARBON STEEL
6	MOTOR BOLTS	
7	COUPLING	CAST IRON, ASTM-A48, CLASS 30
7A	SEAL PLATE	
8	BUSHING	GRAPHITE
9	BRACKET BOLTS	STAINLESS STEEL 304
10	LOCKWASHER	
11	MECHANICAL SEAL BRACKET	STAINLESS STEEL 316
12	STRAIGHT CONNECTOR	BRONZE
13	TUBING	3/8" COPPER TUBING
14	TEE CONNECTION	BRONZE
15	NIPPLE	
16	AIR VALVE	
17	MECHANICAL SEAL	CARBON-SILICON-VITON-INOX.
17A	UPPER GASKET	NON-ASBESTOS OR TEFLON
17B	LOWER GASKET	
18	IMPELLER	BRONZE ASTM-B584 OR CAST IRON
19	IMPELLER LOCKWASHER	STAINLESS STEEL 304
20	IMPELLER BOLTS	
21	IMPELLER PRESSURE WASHER	
22	VOLUTE	CAST IRON, ASTM-A48, CLASS 30
23	VOLUTE GASKET	NON-ASBESTOS
24	PLUG	GALVANIZED STEEL
25	VOLUTE BOLTS	CARBON STEEL
26	PRESSURE WASHER	
27	DRAIN PLUG	GALVANIZED STEEL OR CAST IRON
28	COUPLING SET	ALUMINUM 6061-T6
29	SOCKET HEAD CAP SCREW	CARBON STEEL
30	LOCKWASHER	
31	RETAINING RING	
32	COLLAR	STEEL 1045
33	COUPLING-SHAFT LOCKWASHER	
34	COUPLING KEY	CARBON STEEL 1018
35	COUPLING GUARD (NOT SHOWN)	STEEL ASTM-A36
36	MOTOR KEY	CARBON STEEL 1018
37	LOCKWASHER	CARBON STEEL
38	BOLT	

NOTES:

1. ITEMS 4 AND 7A ONLY USED IN COUPLING SIZE 13", 14" Y 15" INSTEAD OF ITEM 7.

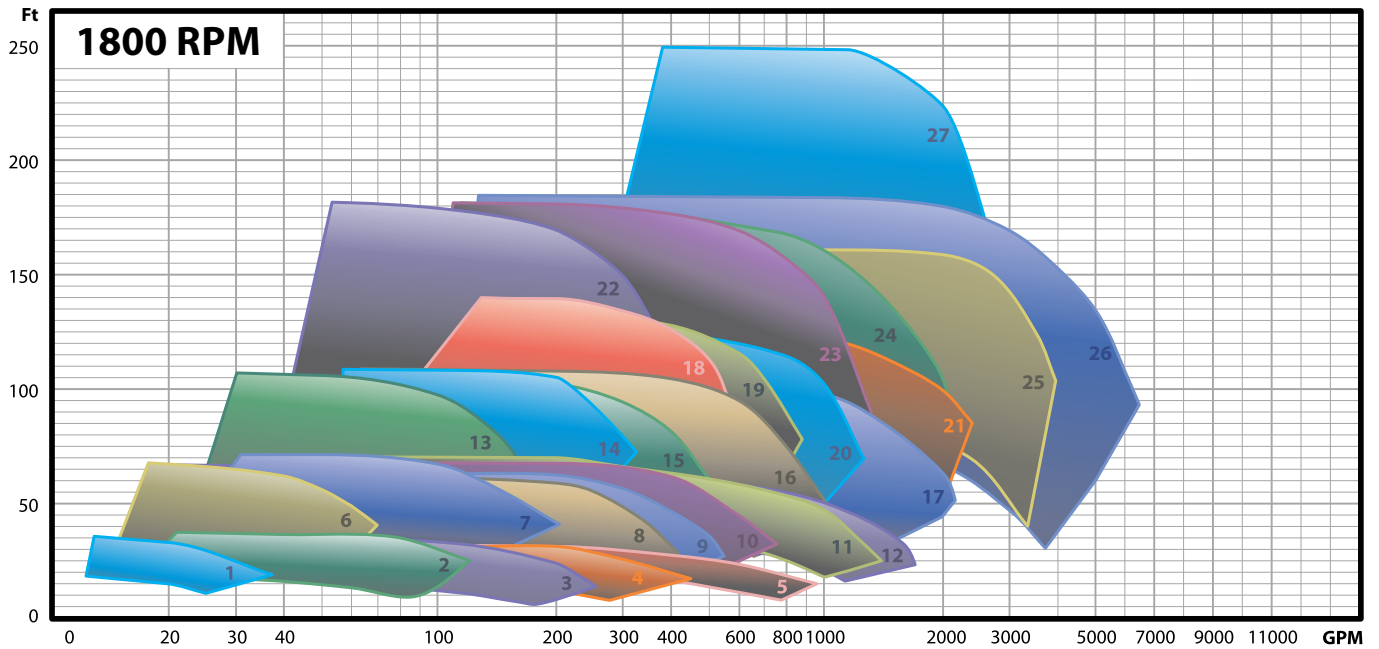
* ASTM-B584, Gr. C84400 (OPTIONAL)

Hydraulic coverage

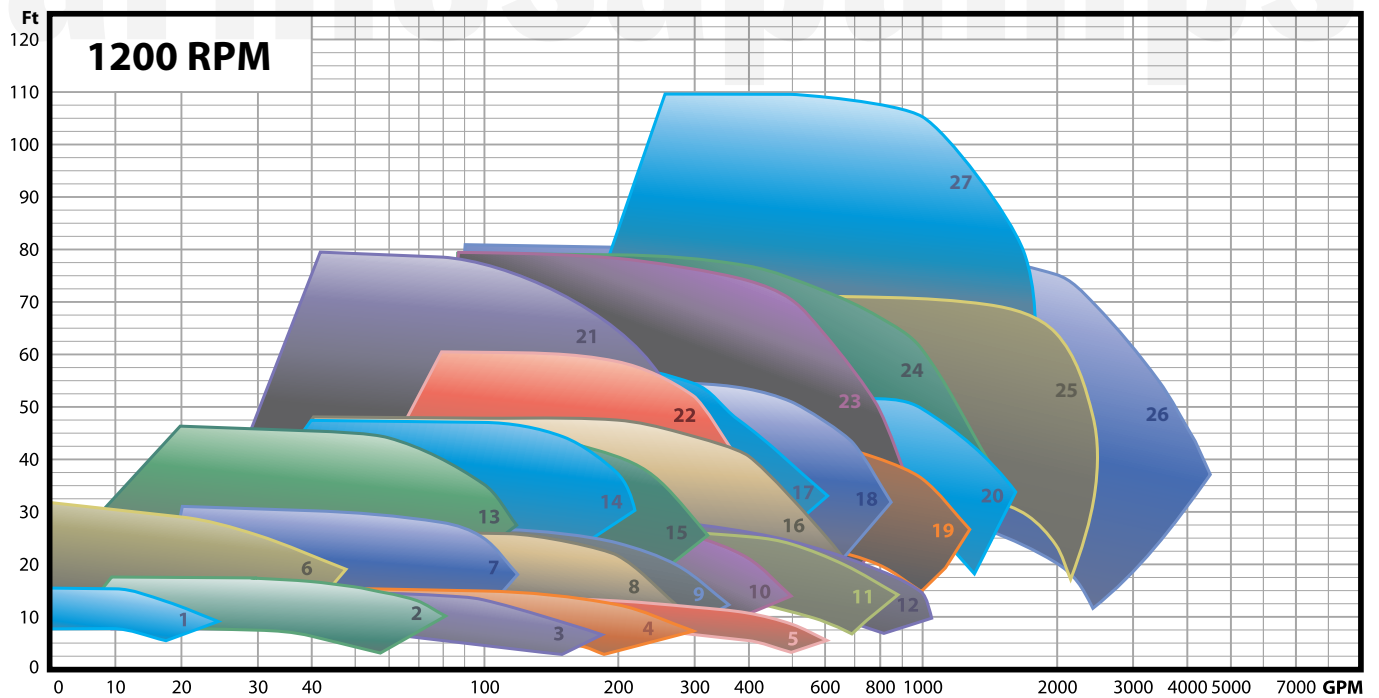


1 1.5x1.5x6	3 3x3x6	5 1.5x1.5x8	7 3x3x8	9 2x2x10	11 4x4x10	13 3x3x13
2 2x2x6	4 4x4x6	6 2x2x8	8 5x5x8	10 3x3x10	12 6x6x10	

Hydraulic coverage



1	1.5x1.5x6	6	1.5x1.5x8	11	6x6x8	16	6x6x10	21	8x8x11.5	26	12x12x13
2	2x2x6	7	2x2x8	12	8x8x8	17	8x8x10	22	3x3x13	27	8x8x15
3	3x3x6	8	3x3x8	13	2x2x10	18	4x4x11.5	23	6x6x13		
4	4x4x6	9	5x5x8	14	3x3x10	19	5x5x11.5	24	8x8x13		
5	6x6x6	10	4x4x8	15	4x4x10	20	6x6x11.5	25	10x10x13		



1	1.5x1.5x6	6	1.5x1.5x8	11	6x6x8	16	6x6x10	21	3x3x13	26	12x12x13
2	2x2x6	7	2x2x8	12	8x8x8	17	5x5x11.5	22	4x4x11.5	27	8x8x15
3	3x3x6	8	3x3x8	13	2x2x10	18	6x6x11.5	23	6x6x13		
4	4x4x6	9	5x5x8	14	3x3x10	19	8x8x10	24	8x8x13		
5	6x6x6	10	4x4x8	15	4x4x10	20	8x8x11.5	25	10x10x13		



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