



PWI

**API 610
VERTICAL IN-LINE
SINGLE STAGE OH4**



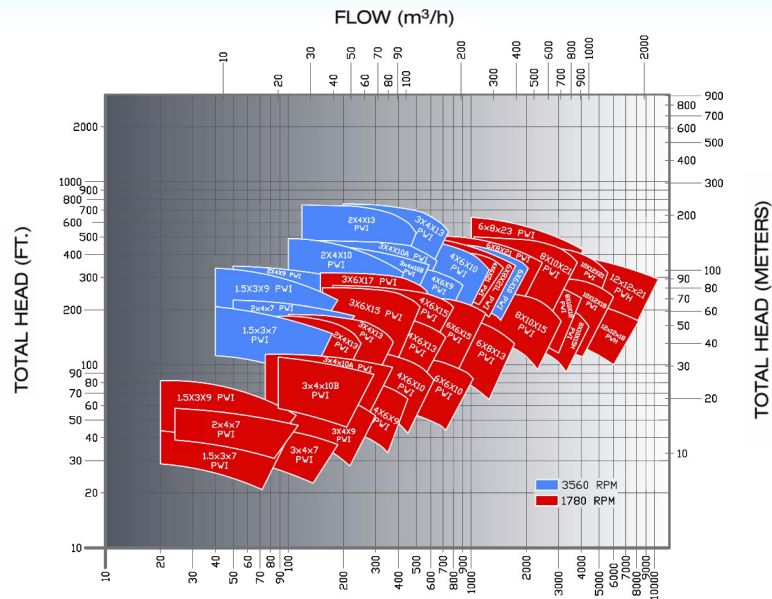
PWI API 610 VERTICAL IN-LINE SINGLE STAGE OH4

HYDRAULIC PERFORMANCE COVERAGE

60 Hz Performance Coverage



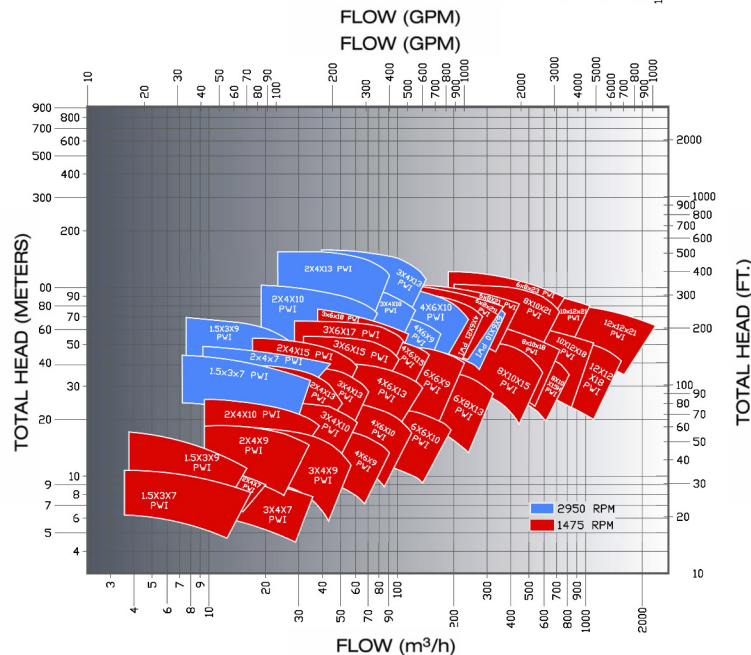
Visit our web site at
www.pumpworks610.com
and specify flow and
performance needs and
obtain pump selection
and performance curve.



50 Hz Performance Coverage



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Performances
shown are nominal
and are to be used
for preliminary
selection only.

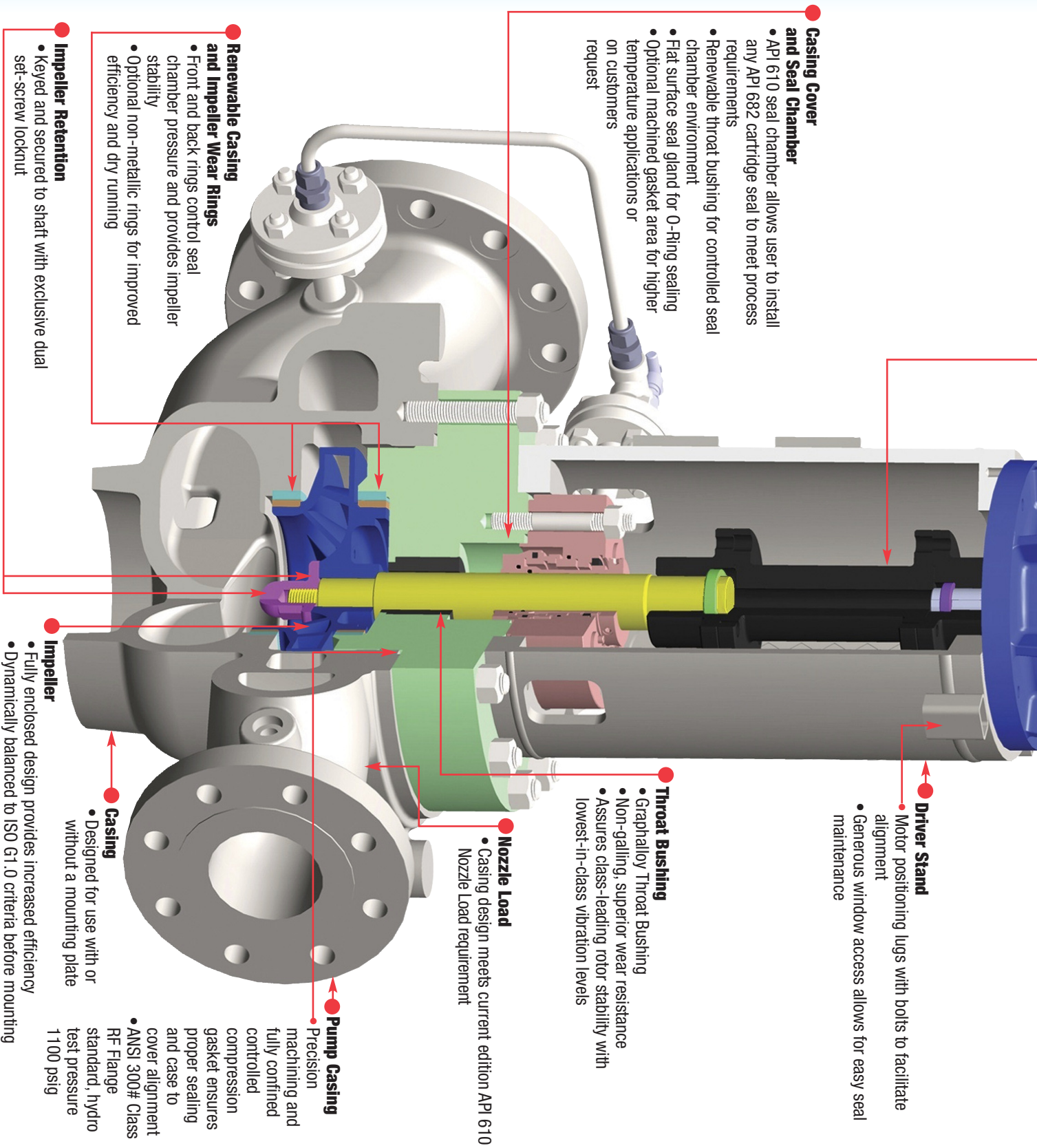
STANDARD MATERIALS OF CONSTRUCTION

API MATERIAL CLASS	S-6	S-8	C-6	A-8
CASING	A216 GRADE WCB	A216 GRADE WCB	A487 GRADE CA6NM	A351 GRADE CF3M
COVER	A516 GRADE 70	A516 GRADE 70	A479 TYPE 410SS	A479 TYPE 316/316L
IMPELLER	A743 GRADE CA6NM	A743 CF3M 316SS	A743 GRADE CA6NM	A743 CF3M 316SS
SHAFT	A276 TYPE 410SS CONDITION "T"	A479 TYPE XM-19	A276 TYPE 410SS CONDITION "T"	A479 TYPE XM-19
IMPELLER LOCK NUT	A479 TYPE 316L	NITRONIC 60	A479 TYPE 316L	NITRONIC 60
IMPELLER WEAR RINGS	410 SS HT: 262-302 BHN	NITRONIC 50	410 SS HT: 262-302 BHN	NITRONIC 50
CASING WEAR RINGS	420 SS HT: 400-450 BHN	NITRONIC 60	420 SS HT: 400-450 BHN	NITRONIC 60
THROAT BUSHING	GRAPHALLOY	GRAPHALLOY	GRAPHALLOY	GRAPHALLOY
CASING STUDS	A193 GRADE B-7	A193 GRADE B-7	A193 GRADE B-7	A193 GRADE B-8
CASING NUTS	A194 GRADE 2H	A194 GRADE 2H	A194 GRADE 2H	A194 GRADE B8M

*Other API 610 Material Classes and Combinations are available

PWI API 610 VERTICAL IN-LINE SINGLE STAGE OH4

DESIGN FEATURES AND BENEFITS



PWI API-610 CONSTRUCTION Vertical In-Line Single Stage OH4

Quality

- Manufactured and tested in the USA

Coupling

- Radially split spacer coupling allows mechanical seal to be removed without disturbing the driver

Delivery

- 16 weeks for API 610 material class S-6, S-8, and C-6
- Refer to the factory on deliveries for other API material classes and customer specific material combinations

ePOD Pump Selector

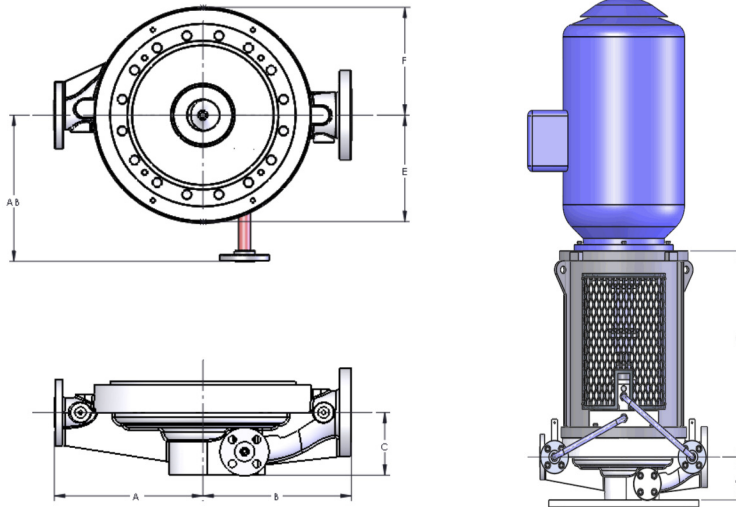
- Access to end users and specifiers to select your pump online at www.pumpworks610.com – no password or login required

Driver

- Readily available standard “P” base motor to accommodate pump thrust



OUTLINE DIMENSIONS



PUMP AND DRIVER DIMENSIONS

PUMP	SUCTION	DISCHARGE	FRAME SIZE	A	B	C	D	E	F	AB
1.5x3x7	3	1.5	I-7	10.00	10.00	4.75	25.50	6.00	6.00	12.38
2x4x7	4	2		9.50	10.50	5.25	25.75	6.50	6.50	8.00
3x4x7	4	3		12.00	12.00	5.50	26.00	6.50	5.75	15.12
1.5x3x9	3	1.5	I-9	11.00	11.00	5.75	26.25	7.00	7.00	13.00
2x4x9	4	2		11.50	11.50	5.50	26.00	7.58	7.58	18.00
3x4x9	4	3		12.50	12.50	6.00	26.50	7.63	7.63	9.13
4x6x9	6	4	I-9A	16.50	16.50	8.00	28.50	10.00	8.75	12.00
6x6x9	6	6		20.00	16.50	8.50	29.00	12.50	10.00	11.25
2x4x10	4	2		12.00	12.25	7.00	27.50	8.63	8.63	10.00
3x4x10A	4	3	I-10	13.00	13.00	7.00	27.50	8.00	8.00	9.25
3x4x10B	4	3		13.25	13.25	7.25	27.75	8.00	8.00	9.25
4x6x10	6	4		15.00	16.50	8.50	29.00	10.00	8.00	10.00
6x6x10	6	6	II-13	18.50	16.50	9.00	29.50	12.00	8.75	10.50
1.5x3x13	3	1.5		14.00	14.00	6.00	34.75	10.38	10.38	14.00
2x4x13	4	2		14.00	14.00	6.50	35.25	8.50	8.50	9.75
3x4x13	4	3	II-15	15.00	15.00	8.00	36.75	10.19	10.19	12.00
4x6x13	6	4		16.50	17.00	7.75	36.50	10.00	10.25	11.50
6x8x13	8	6		8.00	20.00	8.00	36.75	8.50	8.25	9.50
2x4x15	4	2	II-17	15.00	15.00	8.00	36.75	9.00	9.00	10.25
3x6x15	6	3		16.00	16.00	7.50	36.25	9.50	9.50	10.75
4x6x15	6	4		19.50	19.50	8.00	36.75	12.28	10.31	12.00
4x6x15B	6	4	II-18	19.50	20.00	8.25	37.00	11.50	11.50	12.75
6x6x15	6	6		21.00	22.00	12.00	40.75	12.00	11.00	12.25
8x10x15	10	8		24.00	26.00	11.50	40.25	14.75	13.25	14.50
8x10x15H	10	8	II-21	25.00	26.25	13.00	41.75	15.00	13.75	15.00
10x12x15	12	10		26.00	27.00	15.00	43.75	15.00	14.00	15.25
3x6x17	6	3		17.00	16.50	8.50	36.25	10.00	9.00	10.25
8x10x18	10	8	III-18	30.00	30.00	14.65	42.50	19.00	13.75	22.06
4x6x21	6	4		16.75	15.50	11.25	40.00	9.00	9.00	10.25
6x8x21	8	6		24.00	28.00	12.38	41.13	17.35	13.47	15.00
6x8x21L	8	6	III-21	24.00	28.00	12.38	41.13	17.35	13.47	15.00
8x10x21	10	8		32.00	31.50	14.00	42.75	17.50	16.25	17.50
10x12x18	12	10		28.00	22.00	14.00	42.75	14.00	13.50	14.75
12x12x18	12	12	III-23	31.00	30.50	14.25	43.00	17.00	17.00	18.25
10x12x21	12	10		27.00	24.00	13.00	41.75	14.00	14.00	15.25
12x12x21	12	12		32.00	33.00	15.00	43.75	18.00	17.00	18.25
6x8x23	8	6		33.00	30.00	14.00	42.75	18.00	17.00	18.25

NOTES:

1. Dimensions are in inches.
2. Dimensions of pump are $\pm 0.12"$ unless otherwise noted.
3. Dimensional tolerances of motor are in compliance with NEMA MG-1.
4. Pump flange ratings are ANSI B16.5 300# RF.
5. CCW rotation viewed from top of motor.

TECHNICAL DATA

Pump Size		1.5x3x7	2x4x7	3x4x7	1.5x3x9	2x4x9	3x4x9	4x6x9	6x6x9	2x4x10	3x4x10	3x4x10	4x6x10	6x6x10
Flange	Suction - 300# RF (IN)	3	4	4	3	4	4	6	6	4	4	4	6	6
	Discharge - 300# RF (IN)	1.5	2	3	1.5	2	3	4	6	2	3	3	4	6
MAWP	S-6 (PSIG @ 100°F)	740												
	S-8 (PSIG @ 100°F)													
	C-6 (PSIG @ 100°F)													
	A-8 (PSIG @ 100°F)													
	Mechanical Group	I-7			I-9			I-9A	I-10					
	Volute Type	SINGLE			SINGLE			DOUBLE	SINGLE			DOUBLE		
AUX PORTS	Discharge (Flush) (IN)	3/4												
	Drain (IN)													
	Suction (IN)													
SHAFT	Max Impeller (IN)	7	7	7	9.00	9.00	9.00	9.00	9.00	10.50	10.50	10.50	10.50	10.50
	Min Impeller (IN)	5.5	5.5	5.5	7.00	7.00	7.00	7.00	7.00	7.50	8.00	8.00	8.00	8.00
	Diameter at Coupling (IN)	1.63												
	Keyway at Coupling (IN)	0.38												
	Extension at coupling (IN)	4.5												
	Diameter at Mechanical Seal (IN)	2												
	Maximum RPM	3560												
	Maximum HP/100 RPM	2.0									4.5			

Pump Size		1.5x3x13	2x4x13	3x4x13	4x6x13	6x6x13	2x4x15	3x6x15	4x6x15	4x6x15B	6x6x15	8x10x15	8x10x15H	10x12x15	3x6x17	8x10x18	4x6x21	6x6x21	6x6x21L	8x10x21	10x12x18	12x12x18	10x12x21	12x12x21	6x6x23
Flange	Suction - 300# RF (IN)	3	4	4	6	8	4	6	6	6	6	10	10	12	6	10	6	8	8	10	12	12	12	12	8
	Discharge - 300# RF (IN)	1.5	2	3	4	6	2	3	4	4	6	8	8	10	3	8	4	6	6	8	10	12	10	12	6
MAWP	S-6 (PSIG @ 100°F)	740																							
	S-8 (PSIG @ 100°F)																								
	C-6 (PSIG @ 100°F)																								
	A-8 (PSIG @ 100°F)																								
	Mechanical Group	I-13					II-15							II-17	II-18	II-21			III-18	III-21	III-23				
	Volute Type	SINGLE			DOUBLE		SINGLE	DOUBLE							DOUBLE	DOUBLE	DOUBLE			DOUBLE					
AUX PORTS	Discharge (Flush) (IN)	3/4																							
	Drain (IN)																								
	Suction (IN)																								
SHAFT	Max Impeller (IN)	13.25	13.25	13.25	13.25	13.25	15.50	15.50	15.50	15.50	15.50	15.50	15.50	15.50	17.00	18.00	21.00	21.00	21.00	21.00	18.00	18.00	21.00	21.00	23.50
	Min Impeller (IN)	10.00	10.00	10.00	10.00	10.00	12.00	12.00	12.00	12.00	12.00	12.00	11.63	12.00	13.50	13.75	16.00	14.00	14.00	14.00	13.50	13.50	17.00	17.00	17.50
	Diameter at Coupling (IN)	2.25																		2.38					
	Keyway at Coupling (IN)	0.5																		0.63					
	Extension at coupling (IN)	4.5																		4.50					
	Diameter at Mechanical Seal (IN)	2.75																		3.37					
	Maximum RPM	3560																							
	Maximum HP/100 RPM	6.9	8	11.5	15	6.1	7.5	13.2	13.5	7.7	8.8	11.9	12	12.5	15.0	9.0	15.0	13.0	23.0	23.0	28.0	35.4	51.4	31.9	

Typical Applications

The PWI is an API rigid coupled vertical in-line pump designed to cover a wide range of applications found in petroleum processing facilities, gas processing, petrochemical, offshore installations (platforms), hydrocarbon and crude oil pipeline an aviation (jet) fueling applications. The rugged, economical and compact PWI in-line design eliminates the need for an expensive baseplate and saves valuable floor space.

Typical Services

Services covered but not limited by the PWI pump include:

- Refinery Process Services
- Off-site hydrocarbon
- Tank Transfer
- Tank Farm Booster
- Fuel Oil
- Gasoline
- Crude Oil
- LPG
- Water
- Naptha
- Kerosene

