

American-Marsh Pumps

Series 300 REF



A WILO BRAND

Flex-Coupled End Suction Pumps

August 2004

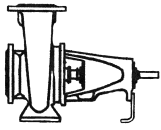
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vanes	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
1.5x2.5-5	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	5.500	3.875	0.313	4.750

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1.5x2.5-5	0.016	N/A	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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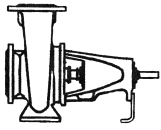
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vanes	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
1.5x2.5-7	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	6.875	5.125	0.188	4.188

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1.5x2.5-7	0.016	0.080	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
1.5x2.5-10	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	10.375	8.000	0.188	7.188

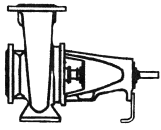
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1.5x2.5-10	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.185	1.752	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

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1.5x2.5-10 REF



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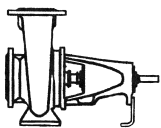
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
1.5x2.5-13	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-7	13.000	10.000	0.125	5.875

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1.5x2.5-13	0.018	F/R WR	1.625	6307	6307	6.339	50000 hrs	2.756	2.421	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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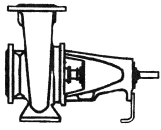
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vanes	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
1.25x2-5	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	5.500	4.000	0.125	3.438

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box		O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth
			in.							
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1.25x2-5	0.014	N/A	1.250	6305	6305	4.606	50000 hrs	2.189	1.759	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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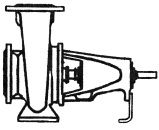
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vanes	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
1.25x2-7	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	6.875	5.000	0.125	3.625

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box		O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1.25x2-7	0.014	0.080	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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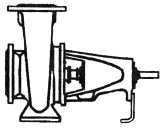
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Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vanes	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
1.25x2-8	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-4	8.375	6.500	0.188	4.188

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
1.25x2-8	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.185	1.752	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
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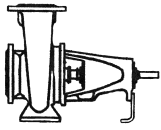
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1.25x2-10	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	10.375	8.250	0.031	4.563

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1.25x2-10	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.185	1.752	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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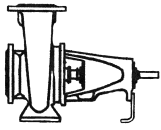
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vanes	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2.5x3-5	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-7	5.500	5.125	0.625	10.688

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2.5x3-5	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



American-Marsh Pumps

Series 300 REF



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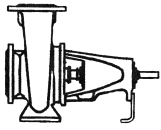
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2.5x3-7	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-7	6.875	5.000	0.625	12.063

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2.5x3-7	0.016	0.120	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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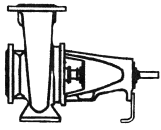
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2.5x3-8	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	8.375	6.500	0.625	11.500

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2.5x3-8	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.185	1.752	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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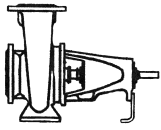
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2.5x3-13	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-7	13.000	10.000	0.250	13.250

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2.5x3-13	0.018	F/R WR	1.625	6307	6307	6.339	50000 hrs	2.756	2.224	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2x2.5-5	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	5.500	4.375	0.500	8.125

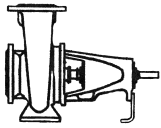
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2x2.5-5	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

2x2.5-5 REF



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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2x2.5-7	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	6.875	5.250	0.500	7.375

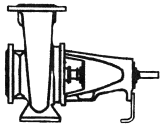
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2x2.5-7	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

2x2.5-7 REF



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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2x2.5-8	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-6	8.375	6.500	0.250	7.875

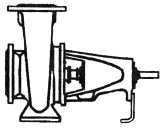
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2x2.5-8	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.185	1.752	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

2x2.5-8 REF



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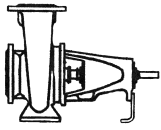
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2x2.5-10	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-7	10.375	8.000	0.188	9.563

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2x2.5-10	0.016	0.040	1.250	6305	6305	4.606	50000 hrs	2.185	1.752	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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Flex-Coupled End Suction Pumps

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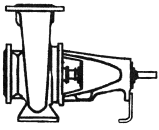
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
2x2.5-13	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-6	12.875	10.000	0.313	10.688

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2x2.5-13	0.016	F/R WR	1.625	6307	6307	6.339	50000 hrs	2.756	2.421	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



American-Marsh Pumps

Series 300 REF



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Flex-Coupled End Suction Pumps

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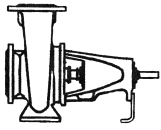
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
3x4-7	0.750	0.945	1.250	1.260	0.875	6.438	0.002	335	Enclosed-7	6.750	5.750	1.125	16.188

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3x4-7	0.018	0.040	1.250	6305	6305	4.606	50000 hrs	2.189	1.756	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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Series 300 REF



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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
3x4-8	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-6	8.500	6.500	0.750	16.188

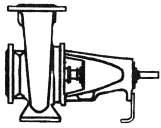
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3x4-8	0.018	0.020	1.625	6307	6307	6.339	50000 hrs	2.756	2.106	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

3x4-8 REF



American-Marsh Pumps

Series 300 REF



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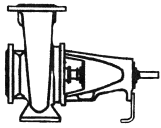
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
3x4-10	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-6	10.375	8.000	0.625	14.875

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3x4-10	0.018	0.060	1.625	6307	6307	6.339	50000 hrs	2.756	2.224	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



American-Marsh Pumps

Series 300 REF



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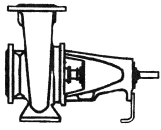
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
3x4-13	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-7	13.000	10.000	0.313	16.563

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3x4-13	0.018	F/R WR	1.625	6307	6307	6.339	50000 hrs	2.756	2.224	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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Series 300 REF



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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
3x4-16	1.500	1.732	2.125	2.126	1.625	8.688	0.002	73	Enclosed-7	16.000	12.500	0.250	16.563

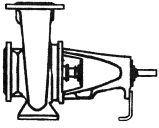
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3x4-16	0.018	F/R WR	2.125	6309	6309	6.378	50000 hrs	3.347	3.047	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

3x4-16 REF



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Series 300 REF



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Flex-Coupled End Suction Pumps

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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
4x5-8	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-7	8.500	6.875	0.875	22.500

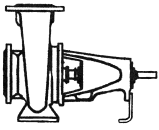
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
4x5-8	0.019	0.060	1.625	6307	6307	6.339	50000 hrs	2.756	2.106	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

4x5-8 REF



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Series 300 REF



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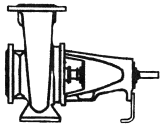
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
4x5-10	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-7	10.375	8.000	0.750	23.000

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
4x5-10	0.019	0.040	1.625	6307	6307	6.339	50000 hrs	2.756	2.067	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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Flex-Coupled End Suction Pumps

August 2004

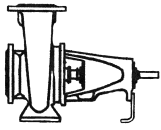
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
4x5-13	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-7	13.000	10.000	0.500	23.125

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
4x5-13	0.019	F/R WR	1.625	6307	6307	6.339	50000 hrs	2.756	2.224	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



American-Marsh Pumps

Series 300 REF



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Flex-Coupled End Suction Pumps

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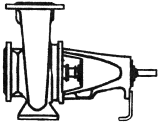
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
4x5-16	1.500	1.732	2.125	2.126	1.625	8.688	0.002	73	Enclosed-6	16.125	12.500	0.375	23.000

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
4x5-16	0.019	F/R WR	2.125	6309	6309	6.378	50000 hrs	3.347	3.047	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



American-Marsh Pumps

Series 300 REF



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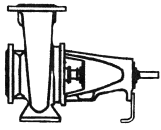
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
5x6-8	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-7	8.500	7.625	1.000	31.688

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
5x6-8	0.019	0.060	1.625	6307	6307	6.339	50000 hrs	2.756	2.106	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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Series 300 REF



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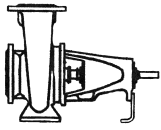
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
5x6-10	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-6	10.375	8.000	0.750	31.250

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
5x6-10	0.019	0.060	1.625	6307	6307	6.339	50000 hrs	2.756	2.067	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



American-Marsh Pumps

Series 300 REF



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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
5x6-13	1.500	1.732	2.125	2.126	1.625	8.688	0.002	73	Enclosed-6	13.000	10.000	0.750	30.250

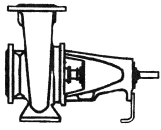
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
5x6-13	0.019	F/R WR	2.125	6309	6309	6.378	50000 hrs	3.347	3.008	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

5x6-13 REF



American-Marsh Pumps

Series 300 REF



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Flex-Coupled End Suction Pumps

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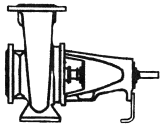
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
5x6-16	1.500	1.732	2.125	2.126	1.625	8.688	0.002	73	Enclosed-6	16.125	12.625	0.750	31.063

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
5x6-16	0.018	F/R WR	2.125	6309	6309	6.378	50000 hrs	3.347	3.047	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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Series 300 REF



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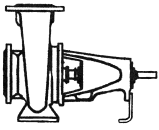
ENGINEERING INFORMATION

REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vanes	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
6x8-8	1.125	1.260	1.625	1.732	1.125	7.625	0.002	176	Enclosed-6	8.625	7.500	1.750	33.125

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
6x8-8	0.019	F/R WR	1.625	6307	6307	6.339	50000 hrs	2.756	1.417	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



American-Marsh Pumps

Series 300 REF



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August 2004

ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
6x8-13	1.500	1.732	2.125	2.126	1.625	8.688	0.002	73	Enclosed-6	13.000	10.000	1.125	38.250

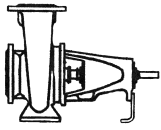
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
6x8-13	0.019	F/R WR	2.125	6309	6309	6.378	50000 hrs	3.347	3.008	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

6x8-13 REF



American-Marsh Pumps

Series 300 REF



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Flex-Coupled End Suction Pumps

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ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
6x8-16	1.500	1.732	2.125	2.126	1.625	8.688	0.002	73	Enclosed-7	16.125	12.625	1.000	40.250

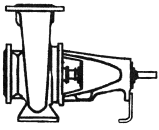
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
6x8-16	0.020	F/R WR	2.125	6309	6309	6.378	50000 hrs	3.347	3.047	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

6x8-16 REF



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Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
6x8-20	2.125	2.362	3.125	2.756	2.125	11.250	0.002	65	Enclosed-5	19.625	15.750	1.125	32.875

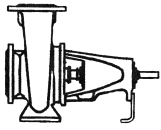
Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
6x8-20	0.020	F/R WR	3.125	6312	6312	9.213	50000 hrs	4.921	4.866	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M

REF Flex-Coupled End Suction

6x8-20 REF



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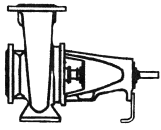
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
8x10-10	1.500	1.732	2.125	2.126	1.625	8.688	0.002	73	Enclosed-6	10.437	8.000	1.500	46.375

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
8x10-10	0.020	F/R WR	2.125	6309	6309	6.378	50000 hrs	3.347	2.811	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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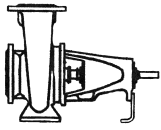
ENGINEERING INFORMATION

Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
8x10-13	2.000	2.165	2.750	2.559	1.875	11.250	0.002	65	Enclosed-6	13.000	10.625	1.500	72.875

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
8x10-13	0.020	F/R WR	2.750	6311	6311	9.291	50000 hrs	4.134	3.969	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M



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Pump Model REF	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L ³ /D ⁴) With Sleeve	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. ²
8x10-16	2.000	2.165	2.750	2.559	1.875	11.250	0.002	65	Enclosed-6	16.000	12.625	1.500	68.375

Pump Model REF	Clearances		Sleeve	Bearings				Mechanical Seal		
	Impeller To Case Wear Ring (Max)	Pump Out Vanes to Stuffing Box	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
8x10-16	0.020	F/R WR	2.750	6311	6311	9.291	50000 hrs	4.134	3.850	N/A

MATERIALS OF CONSTRUCTION

Pump Const.	Casing	Case Wear Ring(s)	Power Frame	Impeller	Impeller Wear Ring (Optional)	Shaft	Shaft Sleeve	Seal Chamber	Packing Housing (Optional)
CI/BZ	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Bronze B505 Alloy C83600	Bronze B505 Alloy C83600	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/CI	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Cast Iron A48 Class 30	Stainless Steel A276 Type 420	Bronze B505 Alloy C83600	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/Ni-R	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Cast Iron A48 Class 30	Ni-Resist A436 Grade 2B	Ni-Resist A436 Grade 2B	Stainless Steel A276 Type 420	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
CI/316SS	Cast Iron A48 Class 30	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Cast Iron A48 Class 30	Cast Iron A48 Class 30
ALL 316SS	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Cast Iron A48 Class 30	Stainless Steel A743 Grade CF8M	Stainless Steel A-494 Grade WM88	Stainless Steel A276 Type 316	Stainless Steel A276 Type 316	Stainless Steel A743 Grade CF8M	Stainless Steel A743 Grade CF8M