

# American-Marsh Pumps Series 460 OSD



A WILO BRAND

Flex-Coupled ANSI End Suction Pumps

January 2005

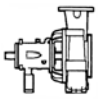
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
1L1.5x3-6	1.375	1.125	1.375	1.625	0.875	5.969	0.002	59.48	Open	6.250	4.000	.438	4.4

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
				Type	Type	in.	hrs.	in.	in.	#
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1L1.5x3-6	0.020-0.030	0.015	1.375	6207	5306	3.594	50000 hrs	2.875	2.281	5

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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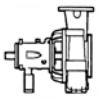
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Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
1L1.5x3-8	1.375	1.125	1.375	1.625	0.875	5.969	0.002	59.48	Reverse Vane	8.188	4.000	0.563	5.5

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
				Type	Type	in.	hrs.	in.	in.	#
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1L1.5x3-8	0.020-0.030	0.015	1.375	6207	5306	3.594	50000 hrs	2.875	2.281	5

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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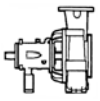
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Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
1L1x1.5-6	1.375	1.125	1.375	1.625	0.875	5.969	0.002	59.48	Reverse Vane	6.250	3.500	0.375	3.1

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
				Type	Type	in.	hrs.	in.	in.	#
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1L1x1.5-6	0.020-0.030	0.015	1.375	6207	5306	3.594	50000 hrs	2.875	2.281	5

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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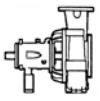
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Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
1L1x1.5-8	1.375	1.125	1.375	1.625	0.875	5.969	0.002	59.48	Reverse Vane	8.188	4.500	0.344	3.1

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
				Type	Type	in.	hrs.	in.	in.	#
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1L1x1.5-8	0.020-0.030	0.015	1.375	6207	5306	3.594	50000 hrs	2.875	2.281	5

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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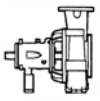
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Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
1L2x3-6	1.375	1.125	1.375	1.625	0.875	5.969	0.002	59.48	Reverse Vane	6.250	3.500	0.438	5.6

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
				Type	Type	in.	hrs.	in.	in.	#
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
1L2x3-6	0.020-0.030	0.015	1.375	6207	5306	3.594	50000 hrs	2.875	2.281	5

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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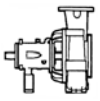
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Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
2L1.5x3-10A	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	10.000	6.000	0.469	5.5

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L1.5x3-10A	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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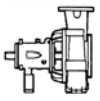
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	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type / Number Of Vaness	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
2L1.5x3-13	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	13.000	9.000	0.593	7.5

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L1.5x3-13	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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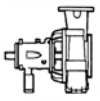
Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
2L1x2-10A	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	10.000	6.000	0.406	3.5

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L1x2-10A	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30





# American-Marsh Pumps Series 460 OSD



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January 2005

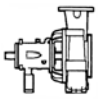
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L2x3-8	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	8.188	5.000	0.531	6.8

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L2x3-8	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



A WILO BRAND

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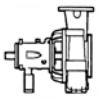
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L2x3-10A	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	10.000	6.000	0.531	6.4

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L2x3-10A	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



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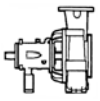
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L2x3-13	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	13.000	9.000	0.406	7.5

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L2x3-13	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



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Flex-Coupled ANSI End Suction Pumps

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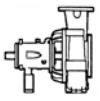
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L3x4-8	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	8.188	5.500	0.500	12.4

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L3x4-8	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



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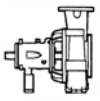
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L3x4-10	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	10.000	6.000	0.656	13.2

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L3x4-10	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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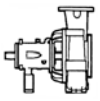
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L3x4-10H	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	10.000	6.000	0.781	13.2

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L3x4-10H	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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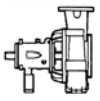
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L3x4-13	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	13.000	9.000	0.688	15.2

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L3x4-13	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



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Flex-Coupled ANSI End Suction Pumps

January 2005

## ENGINEERING INFORMATION

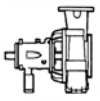
Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	Maximum Diameter	Minimum Diameter	Maximum Solids Diameter	Eye Area
		Less Sleeve	With Sleeve										
Units	in.	in.	in.	in.	in.	in.	in.	#	#	in.	in.	in.	in. <sup>2</sup>
2L3x4-13HH	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	13.000	9.000	0.688	15.2

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L3x4-13HH	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30





# American-Marsh Pumps Series 460 OSD



A WILO BRAND

Flex-Coupled ANSI End Suction Pumps

January 2005

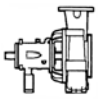
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L4x6-10	1.875	1.500	1.875	2.438	1.500	7.688	0.002	36.77	Reverse Vane	10.000	7.000	0.688	19.6

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L4x6-10	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



A WILO BRAND

Flex-Coupled ANSI End Suction Pumps

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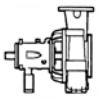
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L4x6-10H	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	10.000	6.500	0.563	22.0

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L4x6-10H	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



A WILO BRAND

Flex-Coupled ANSI End Suction Pumps

January 2005

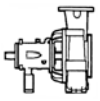
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
2L4x6-13A	1.875	1.500	1.875	2.438	1.125	7.688	0.002	36.77	Reverse Vane	13.000	9.000	1.03	29.0

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
2L4x6-13A	0.020-0.030	0.015	1.875	6310	5310	6.875	50000 hrs	3.625	2.250	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Modified Teflon	CD <sub>4</sub> MCu A744 & A351 Grade CD <sub>4</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



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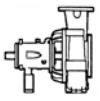
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
3L4x6-16	2.625	2.125	2.625	3.250	2.375	10.25	0.002	22.68	Reverse Vane	16.000	12.000	1.188	26.7

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3L4x6-16	0.020-0.030	0.015	2.625	6314	5314	10.500	50000 hrs	4.625	3.313	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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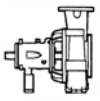
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
3L6x8-14A	2.625	2.125	2.625	3.250	2.375	10.25	0.002	22.68	Reverse Vane	14.000	11.000	1.625	45.3

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3L6x8-14A	0.020-0.030	0.015	2.625	6314	5314	10.500	50000 hrs	4.625	3.313	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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Flex-Coupled ANSI End Suction Pumps

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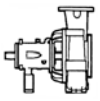
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
3L6x8-16A	2.625	2.125	2.625	3.250	2.375	10.25	0.002	22.68	Reverse Vane	16.000	12.000	1.250	45.3

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3L6x8-16A	0.020-0.030	0.015	2.625	6314	5314	10.500	50000 hrs	4.625	3.313	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



# American-Marsh Pumps Series 460 OSD



A WILO BRAND

Flex-Coupled ANSI End Suction Pumps

January 2005

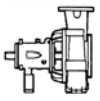
## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
3L8x10-14	2.625	2.125	2.625	3.250	2.375	10.25	0.002	22.68	Reverse Vane	14.000	13.000	1.500	63.2

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3L8x10-14	0.020-0.030	0.015	2.625	6314	5314	10.500	50000 hrs	4.625	3.313	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30



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## ENGINEERING INFORMATION

Pump Model OSD	Shaft								Impeller				
	Diameter @ Impeller	Diameter In Stuffing Box		Diameter Between Bearings	Diameter @ Coupling	Overhang	Maximum Shaft Deflection	Shaft Deflection Index (L <sup>3</sup> /D <sup>4</sup> )	Type Of Impeller	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. <sup>2</sup>
3L8x10-16H	2.625	2.125	2.625	3.250	2.375	10.25	0.002	22.68	Reverse Vane	15.000	11.000	1.625	78.5

Pump Model OSD	Clearances		Sleeve	Bearings				FML Seal Chamber		
	Impeller To Case Wear Ring (Std)	Pump Out Vanes to Stuffing Box (Std)	O.D. Thru Stuffing Box	Radial	Thrust	Bearing Span	Average L10 Bearing Life (Min)	Bore	Depth	Number of Rings of Packing (CBS)
Units	in.	in.	in.	Type	Type	in.	hrs.	in.	in.	#
3L8x10-16H	0.020-0.030	0.015	2.625	6314	5314	10.500	50000 hrs	4.625	3.313	6

## MATERIALS OF CONSTRUCTION

Pump Construction	Casing	Rear Cover	Impeller	Gland	Shaft Sleeve (Optional)	Casing Gasket	Shaft	Power Frame	Bearing Carrier
<b>ALL DS</b>	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	Cast Steel A216 Grade WCB	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	Carbon Steel A108 Grade 1045	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL D4</b>	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A744 & A351 Grade CF-8M	316 Stainless Steel A276	Modified Teflon	316 Stainless Steel A276	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL CD4</b>	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Modified Teflon	CD <sub>2</sub> MCu A744 & A351 Grade CD <sub>2</sub> MCu	Cast Iron A48 Class 30	Cast Iron A48 Class 30
<b>ALL Alloy 20</b>	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Alloy 20 A744 & A351 Grade CN-7M	Modified Teflon	Alloy 20 A744 & A351 Grade CN-7M	Cast Iron A48 Class 30	Cast Iron A48 Class 30