

# AI4D SERIES PUMP

## THREE-SCREW PUMP STANDARD PRODUCT SPECIFICATIONS

### CIRCOR INDUSTRIAL SOLUTIONS

The AI4D series pump is suitable for operation on clean lubricating liquid and is especially well suited for lubrication and hydraulic services. Typical applications are found on rotating machinery and other equipment where forced oil flow is required.

The AI4D series is available in six displacements across eleven frame sizes. The pump case and covers are cast iron.

The AI4D series three-screw pump delivers the benefits that matter most to OEM's: quiet operation, long service life, low pressure ripple and maximum energy savings, resulting in the highest "Total Savings of Ownership" across the entire life cycle of your pumping equipment.



SERIES AI4D

### PRODUCT SPECIFICATIONS

Casing / Case and Covers	Cast Iron* and steel except for 140 size which has steel case and covers
Rotor Housing	Aluminum
Idler Rotor Balance Pistons	Aluminum
Power rotor	Alloy Steel
Idler rotor	Alloy Steel
O-rings	Fluorocarbon
Seal & bearing	Buna N fitted, single spring, friction drive mechanical seal; Open, product lubricated ball bearing
Outlet pressure	To 580psiG / Pump size 140 limited to 435psiG
Inlet pressure	70psiG
Viscosity	50ssu to 1500ssu
Temperature	0 to 180 deg F
Speed	To 3600 RPM
Drive	Direct only
Rotation	Clockwise facing pump driveshaft
Mounting	Foot Mount
Port connections	DIN
Filtration	60 mesh recommended

Size	Theoretical Flow (GPM @ 1750)	
AI4D-80	170	279
AI4D-90	245	393
AI4D-100	349	540
AI4D-110	467	542
AI4D-120	611	704
AI4D-140*	904	

\* 140 size pump to be supplied in fabricated steel case construction

### Typical Performance

Capacity:	To 900gpm
Viscosity Range:	12 -760cSt
Pumped Temperature:	To 180°F
Inlet Pressure:	To 70psiG
Outlet Pressure:	To 580psiG
Differential Pressure:	To 580psiG
Speed:	To 1800rpm
Flanges:	DIN

### Applications

Transfer
Loading/Unloading
Hydraulic
Lubrication
Cooling

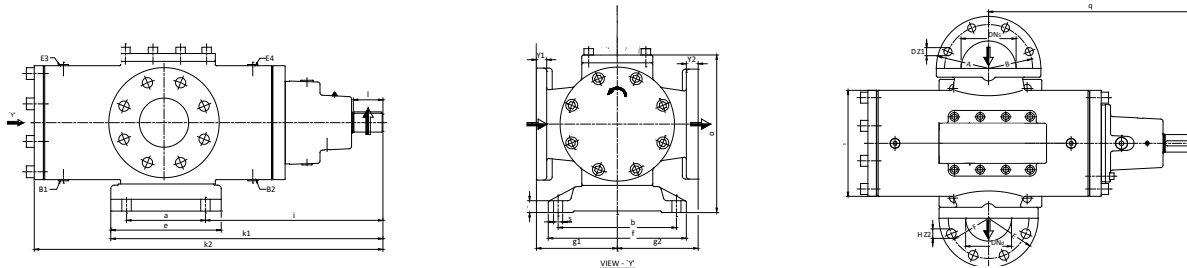
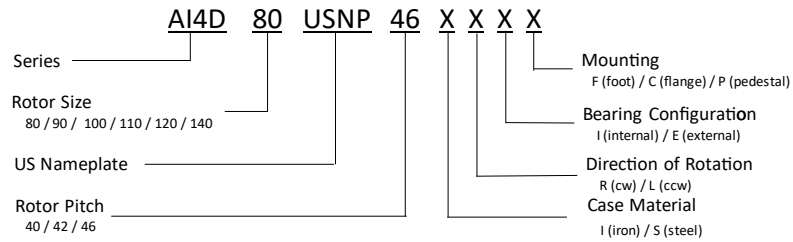
### Fluids Pumped

Hydraulic Oil
Lube Oil

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Pumps in the AI4D series are fitted with a single spring, elastomeric bellows mechanical seal. The elastomeric components are made of fluorocarbon material. The ball bearing is located within the pumped liquid and receives constant lubrication and cooling via the pumped fluid. Inlet and outlet ports are for mounting purposes, the pump is provided with a bolt-on foot.

### AI4S SERIES PUMP NOMENCLATURE



INCH DIMENSIONS																
	Nom Dia DN <sub>s</sub>	Suction Flange						Nom Dia DN <sub>s</sub>	Discharge Flange						Connections	
		A	B	D	g1	Y1	Z1		E	F	H	g2	Y2	Z2	Drain	Vent
AI4D-80	33.03	66.05	55.48	4.76	51.52	6.87	2.11	26.42	62.09	50.20	5.81	51.52	7.40	2.11	1/2	1/2
AI4D-90	39.63	75.30	63.41	5.81	54.16	6.87	2.11	33.03	71.33	58.12	6.87	54.16	7.93	2.11	1/2	1/2
AI4D-100	39.63	75.30	63.41	5.81	58.12	6.87	2.11	33.03	71.33	58.12	6.87	58.12	7.93	2.11	1/2	1/2
AI4D-110	52.84	89.83	77.94	5.81	63.41	6.87	2.11	39.63	79.26	66.05	6.87	63.41	8.98	2.11	3/4	3/4
AI4D-120	52.84	89.83	77.94	5.81	66.05	6.87	2.11	39.63	79.26	66.05	6.87	66.05	8.98	2.11	3/4	3/4
AI4D-140	Dimensions Available Upon Request															

INCH DIMENSIONS																		
	h	k1	k2	o	q	r	a	b	c	e	f	i	s	d	l	t	u	wt (lbs)
AI4D-80	56.80	166.45	211.36	100.40	129.46	71.33	52.84	79.26	7.93	73.98	92.47	103.04	6.34	11.096	17.17	11.89	3.170	330
AI4D-90	59.45	182.30	233.55	105.94	146.63	76.62	52.84	79.26	7.93	73.98	92.47	118.89	6.34	12.682	19.82	13.61	3.699	418
AI4D-100	63.41	200.79	255.22	113.08	150.59	81.90	79.26	97.75	9.25	100.40	113.61	110.96	6.34	12.682	22.46	13.61	3.699	616
AI4D-110	68.69	213.74	280.05	124.17	166.45	92.47	79.26	97.75	9.25	100.40	113.61	123.91	6.34	14.531	25.10	15.59	4.227	726
AI4D-120	70.01	233.82	300.13	126.82	188.90	95.11	79.26	97.75	9.25	100.40	113.61	143.99	6.34	15.852	25.10	16.91	4.756	902
AI4D-140	Dimensions Available Upon Request																	



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