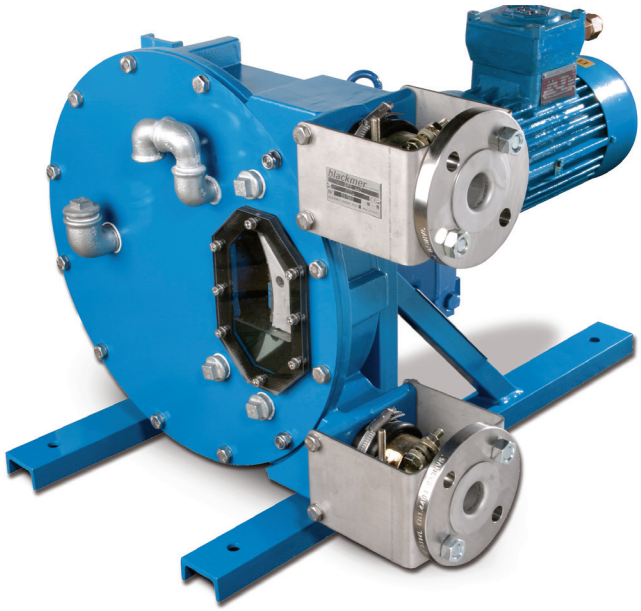
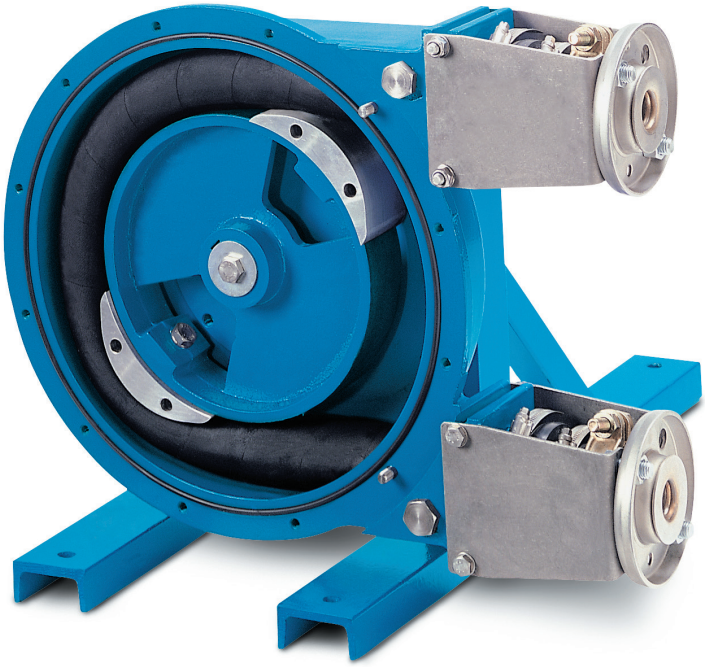
Neptune
Part of Pump Solutions Group
A DOVER COMPANY

Spec Sheet 1103-001
Effective: **February 2013**
Replaces: **May 2009**

Abaque
Peristaltic (Hose) Pump





Pump With Confidence

The Abaque Series pump can handle your toughest pumping needs – from abrasive and aggressive to shear-sensitive and viscous materials.

Durable

Ductile iron and steel construction allow higher discharge pressures to 217.5 psi (15 bar). Its solid construction and advanced design also reduce maintenance and repairs.

Reliable

The Abaque Series pump is self-priming to 29.5 ft (9 meters) manometric lift. This pump is able to run dry continuously without detrimental effects. The pump is capable of running in forward or reverse.

Seal-Free

Seal-free design eliminates leaks and contamination. Fluids are contained within the hose. The hose is the primary maintenance component.

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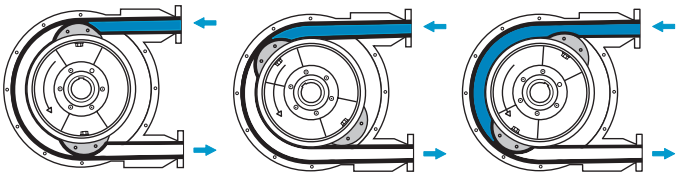


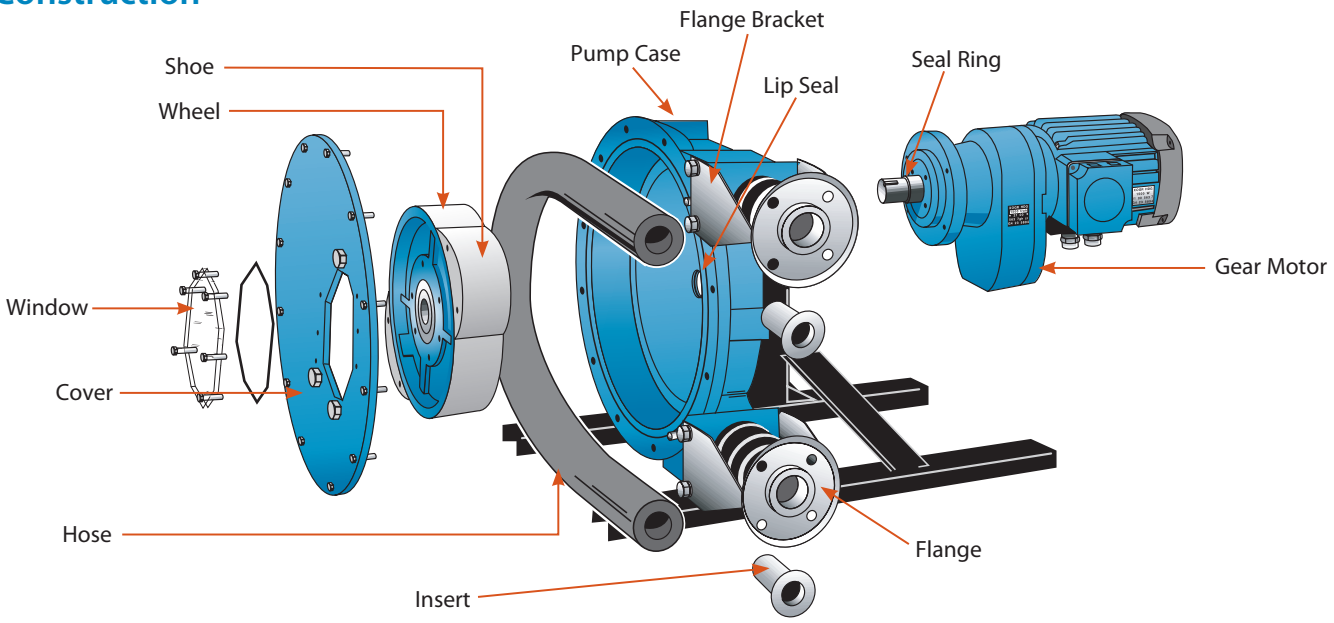
Principle of Operation

Pumping action is achieved by compression of a circular loop of elastomeric hose with two diametrically opposed rotating shoes. This rotational motion forces the fluid in the hose to move ahead of each shoe. When each shoe reaches the end of the loop, the reinforced tube immediately returns to its original shape, thereby ensuring suction and priming. The pump housing is partially filled with lubricant, aiding smooth running of the shoes on the hose. The inside of the hose and hose inserts are the only pieces of equipment in contact with pumped fluids, allowing aggressive and contaminated fluids to be pumped.

Applications

- Chemical process industry
- Food industry
- Industrial and municipal water treatment
- Paints and coatings
- Ceramics
- Mining
- Filter press equipment

Construction



Abaque Series Pump Construction

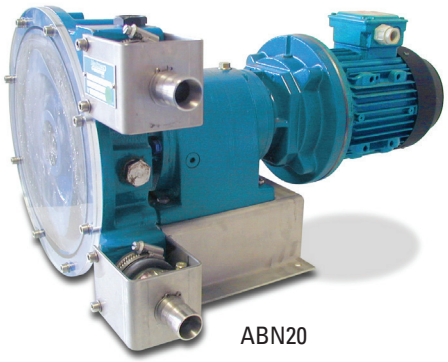
Pump Case:	Ductile iron
Wheel:	Ductile iron
Shoes:	Aluminum or cast iron
Cover:	Steel and Polycarbonate
Flange and brackets:	Stainless steel - ANSI
Hoses:	Natural rubber, Buna (NBR) or EPDM
Hoses inserts:	Stainless steel (std.), PPH or PVDF

ABN10 ABN20 ABN25 ABN40 ABNX40

Hoses

The following hoses are available for use in the Abaque pump:

- **Natural rubber:** Highly resilient with excellent abrasion resistance and strength. Generally resistant to diluted acids and alcohols.
- **Buna (NBR):** Highly wear resistant to oily products.
- **EPDM:** High chemical resistance, especially with concentrated acids, alcohols and ketones.



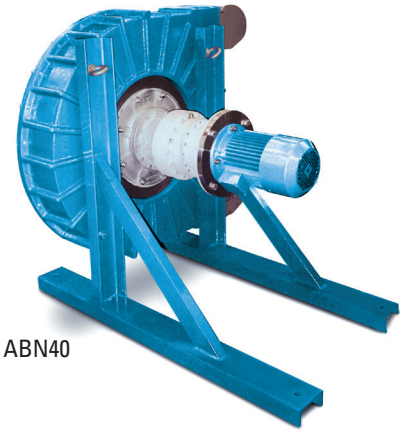
ABN20

Options

The Abaque pump is available in 9 different sizes, ranging from flow rates of .07 to 211 gpm (.015 to 48 m3/hr).

Also available:

- Leak detector
- Vacuum assist
- Non-metallic inserts (PPH, PVDF)



ABN40

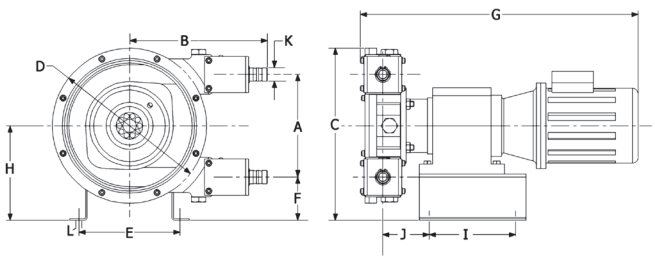
Performance Data

Flow Rates		10 rpm	20 rpm	30 rpm	40 rpm	50 rpm	60 rpm	70 rpm	80 rpm	90 rpm	100 rpm	110 rpm	120 rpm	130 rpm	140 rpm	Max Discharge Pressure
ABN10	m^3/hr	0.015	0.030	0.045	0.060	0.075	0.090	0.105	0.120	0.135						116 psi
	gpm	0.07	0.13	0.20	0.26	0.33	0.40	0.46	0.53	0.59						8.0 bar
ABN20	m^3/hr	0.08	0.17	0.25	0.33	0.42	0.50	0.58	0.67	0.75						116 psi
	gpm	0.37	0.73	1.10	1.47	1.83	2.20	2.57	2.93	3.30						8.0 bar
ABN25	m^3/hr	0.17	0.33	0.50	0.67	0.83	1.00	1.17	1.33	1.50	1.67	1.83	2.00	2.17	2.33	217 psi
	gpm	0.73	1.47	2.20	2.93	3.67	4.40	5.13	5.87	6.60	7.33	8.07	8.80	9.53	10.27	15.0 bar
ABN40	m^3/hr	0.52	1.03	1.55	2.07	2.58	3.10	3.62	4.13	4.65	5.17	5.68	6.20	6.72	7.23	217 psi
	gpm	2.3	4.5	6.8	9.1	11.4	13.6	15.9	18.2	20.5	22.7	25.0	27.3	29.6	31.8	15.0 bar
ABNX40	m^3/hr	0.8	1.6	2.4	3.2	4.0	4.8	5.6	6.4	7.2	8.0	8.8	9.6			217 psi
	gpm	3.5	7.0	10.6	14.1	17.6	21.1	24.6	28.2	31.7	35.2	38.7	42.2			15.0 bar
ABN65	m^3/hr	2.03	4.05	6.08	8.10	10.13	12.15	14.18	16.20	18.23						217 psi
	gpm	8.9	17.8	26.7	35.6	44.6	53.5	62.4	71.3	80.2						15.0 bar
ABNX80	m^3/hr	5	10.7	16.0	21.3	26.7	32.0									217 psi
	gpm	23.5	46.9	70.4	93.8	117.3	140.7									15.0 bar
ABN80	m^3/hr	6.5	13.0	19.5	26.0	32.5	39.0									217 psi
	gpm	29	57	86	114	143	172									15.0 bar
ABN100	m^3/hr	12	24	36	48											217 psi
	gpm	53	106	158	211											15.0 bar

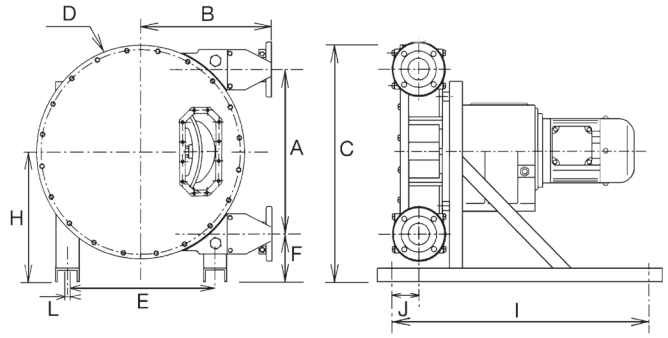
Legend	Constant Duty at Maximum Pressure	Intermittent Duty at Maximum Pressure

*Flow rates may vary depending upon application.

Abaque Peristaltic (Hose) Pump



ABN10 - ABN20 Pump



ABN25 - ABN100 Pump

Dimensions (inches)

Pump	A (in.)	B (in.)	C (in.)	D (in.)	E (in.)	F[1] (in.)	G[1] (in.)	H[1] (in.)	I (in.)	J[1] (in.)	K[2] (in.)	L (in.)	M (in.)	N (in.)	Weight[3] (lb.)
ABN10	4.53	7.72	10.71	7.48	7.48	4.7	23.82	6.97	6.69	3.15	0.63	0.35	5.79	4.13	33
ABN20	7.56	10.20	12.80	11.42	7.48	3.19	25.6	6.97	6.69	3.31	0.98	0.35	7.15	6.50	49
ABN25	10.31	12.19	16.34	14.96	8.66	3.70	32.87	8.86	22.44	3.78	1	0.59	8.09	7.68	110
ABN40	12.99	15.00	20.63	18.74	12.40	4.76	40.16	11.26	25.98	5.08	1.5	0.59	10.73	10.08	198
ABNX40	16.93	16.36	24.25	22.91	13.39	4.33	34.06	12.80	37.40	3.54	1.5	0.59	10.02	11.02	264
ABN65	21.81	17.91	31.57	28.35	20.04	6.50	41.73	17.40	37.40	6.10	2.5	0.75	12.48	15.63	506
ABNX80	29.37	22.91	39.53	37.24	22.83	6.22	49.21	20.91	43.31	4.72	3	0.75	15.75	18.94	880
ABN80	34.49	28.76	49.41	43.70	27.17	10.31	56.50	27.56	51.18	8.09	3	1.10	17.76	25.20	1,650
ABN100	40.94	32.17	59.25	53.94	32.28	11.81	59.06	32.28	74.80	11.61	4	1.10	22.52	29.92	2,200

Dimensions (millimeters)

Pump	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F[1] (mm)	G[1] (mm)	H[1] (mm)	I (mm)	J[1] (mm)	K[2] (mm)	L (mm)	M (mm)	N (mm)	Weight[3] (kg)
ABN10	115	196	272	190	190	120	605	177	170	80	16	9	147	105	15
ABN20	192	259	325	290	190	81	650	177	170	84	25	9	181.5	165	26
ABN25	262	309.5	415	380	220	94	835	225	570	96	25	15	205.5	195	56
ABN40	330	381	524	476	315	121	1,020	286	660	129	40	15	272.5	256	102
ABNX40	430	415.5	616	582	340	110	865	325	950	90	40	15	254.5	280	130
ABN65	554	455	802	720	509	165	1,060	442	950	155	65	19	317	397	244
ABNX80	746	582	1,004	946	580	158	1,250	531	1,100	120	80	19	400	481	457
ABN80	876	730.5	1,255	1,110	690	262	1,435	700	1,300	205.5	80	28	451	640	790
ABN100	1,040	817	1,505	1,370	820	300	1,500	820	1,900	295	100	28	572	760	963

[1] Gear Motor - actual dimensions may vary with final selection
[2] ABN25 - ABN100 are ANSI 150 Flanges; ABN10 - ABN20 use Hose Barb Connections
[3] WEIGHTS ARE APPROXIMATE AND DO NOT INCLUDE REDUCERS OR MOTORS
ALL INFORMATION IS SUBJECT TO CHANGE

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