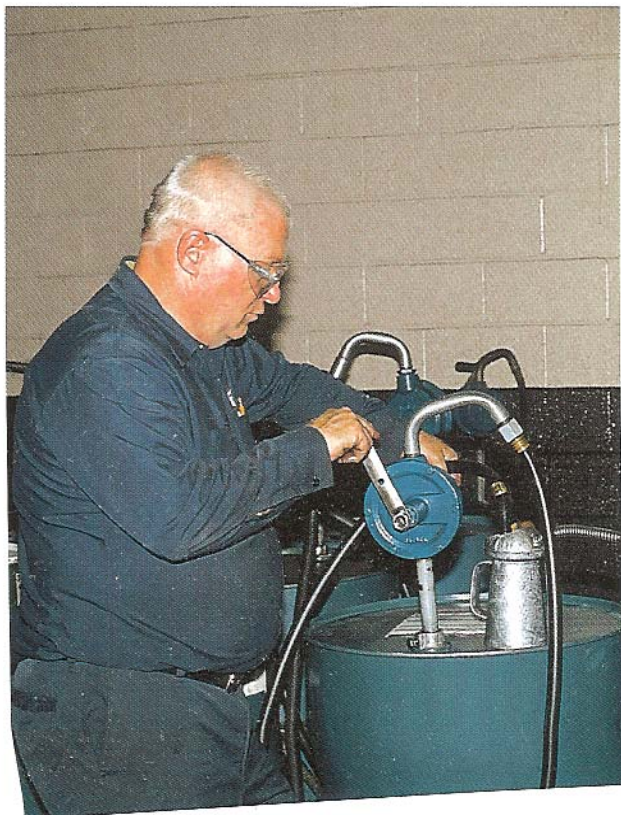
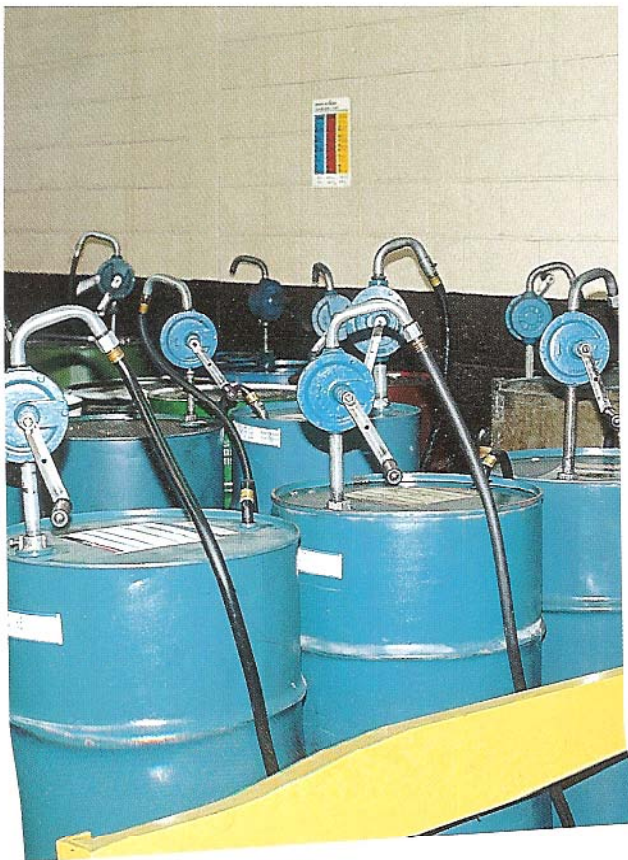
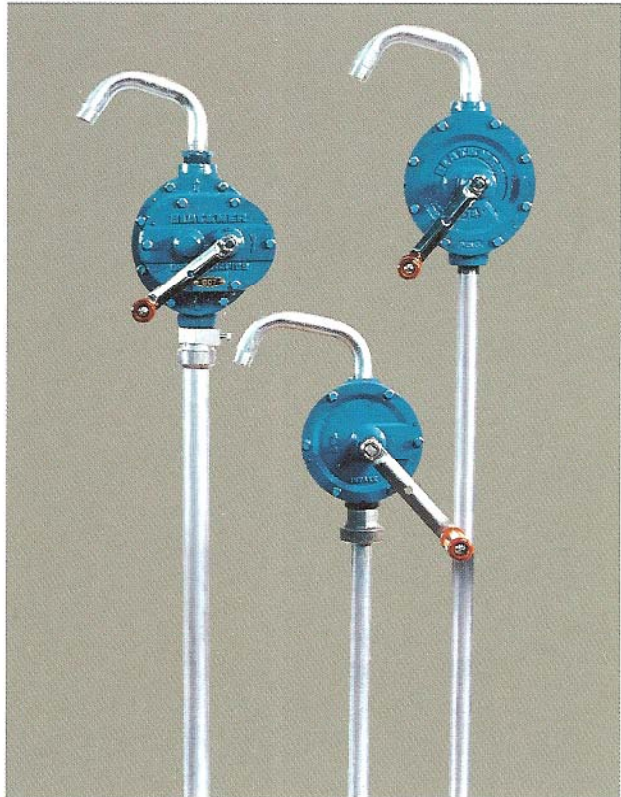


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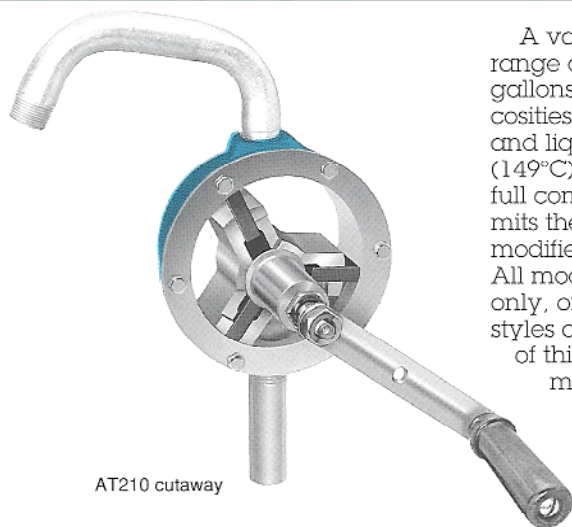
HAND OPERATED PUMPS

FOR ALL TYPES OF TRANSFER AND DISPENSING APPLICATIONS



BLACKMER HAND PUMPS

RUGGED CONSTRUCTION/SUPERIOR QUALITY



AT210 cutaway

Blackmer rotary hand pumps provide a safe, convenient method of dispensing or transferring non-corrosive liquids from drums, barrels, tanks or vats. They are designed for easy, efficient operation in handling a wide range of liquids in industrial, construction and agricultural applications.

Operating on the same principle as Blackmer power pumps, these positive displacement, self-priming, sliding-vane pumps provide steady, non-pulsating flow at easy turning speeds. Cylinder and head are of cast iron construction for greater durability. The carbon sliding-vanes are tough, low-friction, chemically inert and long wearing. They self-compensate for wear to maintain high-suction lift, and are easily replaced at low cost after years of service.

A variety of models offer a range of capacities from 7 to 28 gallons (26-106 lts.), with fluid viscosities up to 30,000 SSU (6300 Cs), and liquid temperature to 300°F (149°C). For added versatility, a full complement of accessories permits the standard models to be modified for special requirements. All models are available as pump only, or in either AT, BR or DP styles as shown on the back page of this brochure. In addition, all models are easily adaptable to in-line, permanently piped systems and OEM applications.

World-class Quality - ISO 9001 Certified

Blackmer hand pumps are produced in conformance with ISO 9001 certification. Each pump is performance tested to ensure the highest quality standards.

Blackmer's worldwide reputation for superior product quality begins with computer aided design and integrated manufacturing capabilities. Blackmer operates its own modern foundry and metallurgical laboratory. Computerized machine tools and statistical process controls (SPC) are used throughout the manufacturing process.

Field Proven Reliability

Blackmer was first established in 1901, and has been manufacturing rotary hand pumps in the U.S.A. since that time. Today, Blackmer is the world's leading manufacturer of rotary-vane pumps. Blackmer hand pumps

may cost a little more, however, their exceptionally rugged construction assures long service life and reliable performance, year after year.

APPLICATIONS

Liquid dispensing: Pumping petroleum products, solvents, coolants or curing agents from barrels or drums into smaller containers for convenient handling, sales, or small quantity use.

Liquid transfer: Moving fuels, solvents, commercial and process liquids from drums to other large tanks with a hose and nozzle, as in refueling diesel or gasoline powered vehicles or equipment.

In-line systems applications:

Transfer of fuels, solvents, and other liquids from one large container to another by means of a permanently piped, fixed system with the pump as an integral part of a transfer line. Often used to move liquids from central or nearby outside storage to in-plant drums or tanks.

Flammable liquids handling:

FM Approved models meet OSHA safety guidelines and regulations for handling Class I and Class II flammable and combustible liquids like gasoline, naphtha, solvents and thinners.

OEM applications: With pumps mounted directly on agricultural or off-road equipment for standby fueling or pre-lubricating of bearing surfaces on large diesel engines before start-up.

SELECTION DATA

PUMP MODEL	LIQUID SERVICE	CAPACITY GAL @ 115 REV (LITS. @ 115 REV)	PORT SIZE NPT	MAXIMUM VISCOSITY SSU (Cs)	MAXIMUM PRESSURE PSI (kPa)	MAXIMUM TEMPERATURE °F (°C)
210A	General Transfer	10 (38)	3/4"	2000 (420)	10 (0.7)	300 (149)
F210A	Flammable/Combustible Fluids	10 (38)	3/4"	2000 (420)	10 (0.7)	300 (149)
414B	Heavy-Duty Transfer	14 (53)	1 1/4"	10,000 (2,200)	20 (1.4)	300 (149)
807B	Heavy-Duty Viscous Fluid Transfer	7 (26)	1 1/4"	30,000 (6,300)	40 (2.8)	300 (149)
828B	Heavy-Duty High Volume Transfer	28 (106)	1 1/4"	5,000 (1,050)	10 (0.7)	300 (149)

STANDARD MATERIALS OF CONSTRUCTION - AT MODELS

PUMP CASING	ROTOR	VANES	SPRINGS	SPOUT/ SUCTION PIPE	SUCTION PIPE O-RING
Cast Iron	Cast Iron	Carbon	Stainless Steel	Galvanized Steel	Buna-N

PROVEN RELIABILITY

Model 210A: The rugged 210A has earned a world-wide reputation for durability and longevity. Typical applications include dispensing of light to medium weight cutting oils, solvents and fuels.

Model F210A: FM Approved for handling Class I and Class II flammable and combustible liquids. Available in two styles:

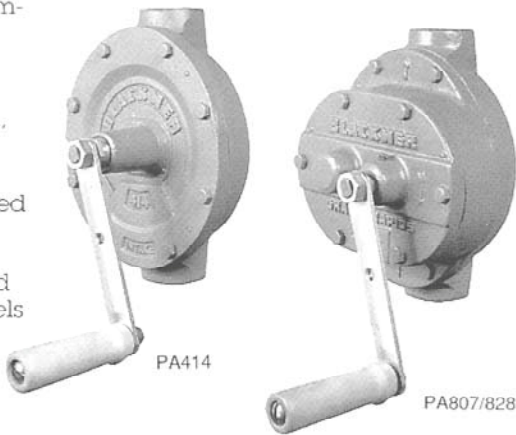
DPF210A - dispensing model is equipped with a spout, drip pan, bung adapter, flame arresting screen and baffle.

BRF210A - transfer model is offered with a 3/4" x 8' anti-static hose, spout, non-sparking aluminum nozzle, flame arresting baffle and vacuum breaker. Both FM models include a telescoping suction pipe with strainer basket.

Model 414B: Slightly larger than the 210A model, the heavy-duty 414 offers increased outputs. Generally used for rapid transfer of fuel, lube oils and non-corrosive industrial process fluids.

Model 828B: Features a gear drive for fast, high volume output of light liquids. Commonly used for refueling construction equipment and off-road vehicles from mobile supply tanks.

Model 807B: Fitted with a gear reduction drive, this heavy-duty pump is designed to handle fluid viscosities beyond the capabilities of ordinary hand pumps. The 807 is ideal for transferring or dispensing heavy liquids such as greases, lube oils, resins and glucose solutions.



TYPICAL APPLICATIONS

The chart below lists many of the more commonly used industrial, commercial and agricultural liquids. A (•) dot indicates which hand pump models are best suited for each application. For other liquids not shown, please contact your Blackmer representative for application assistance.

LIQUID	HAND PUMP MODEL			LIQUID	HAND PUMP MODEL		
	210A	414B 828B 807B	F210A		210A	414B 828B 807B	F210A
ACETATES				SOLVENTS, AROMATIC			
Amyl Acetate			1	Benzene (Benzol)			2
Butyl Acetate			1	Toluene (Toluol)			2
Ethyl Acetate			1	Xylene (Xylol)			2
Isopryl Acetate			1	Hi-Flash Coal Tar Naphtha	•	•	•
ALCOHOLS				SOLVENTS, CHLORINATED			
Amyl	•	•	•	Monochlorobenzene	2		2
Butyl	•	•	•	Orthodichlorobenzene	2		2
Ethyl (Ethanol)			•	Perchloroethylene	•	•	•
Isopryl			•	Trichlorobenzene	2		2
Methyl (Methanol)			•	Trichloroethylene	2		2
Propyl			•	SOLVENTS, PETROLEUM			
ETHERS AND KETONES				Heptane			•
Acetone			1	Hexane			•
Diacetone Alcohol			1	Mineral Seal Oil	•	•	•
Diethylene Glycol Monoethyl	•	•	•	Mineral Spirits	•	•	•
Ether (Carbitol)	•	•	•	Stoddard Solvent	•	•	•
Ether (Butyl Cellosolve)			1	Textile Spirit			2
Methyl Ethyl Ketone			1	Painter's Naphtha			2
Methyl Isobutyl Ketone			1	TERPENES			
GLYCOLS				Dipentene	•	•	•
Diethylene Glycol	•	•	•	Turpentine	•	•	•
Dipropylene Glycol	•	•	•	Pine Oil	•	•	•
Ethylene Glycol	•	•	•	MISCELLANEOUS LIQUIDS			
Propylene Glycol	•	•	•	Anti-Freeze	•	•	•
Triethylene Glycol	•	•	•	Creosote	•	•	•
Tripropylene Glycol	•	•	•	Cresols	2		2
PETROLEUM PRODUCTS				Cutting Oils	•	•	•
Diesel Fuel	•	•	•	Flushing Oils	•	•	•
Fuel Oil No. 2	•	•	•	Glucose		•	
Fuel Oil No. 6	•	•	•	Glycerin	•	•	•
Gasoline			•	Ink	•	•	•
Hydraulic Oil (non-synthetic)	•	•	•	Lacquer Thinner (consult factory)			
Lube Oil	•	•	•	Linseed Oil	•	•	•
Petroleum Naphtha			•	Silicone Fluids	•	•	•
PLASTICIZERS				Soybean Oil	•	•	•
Butyl Stearate	•	•	•	Styrene (C.H.)			2
Dibutyl Phthalate			1	Tung Oil	•	•	•
Diocetyl Phthalate			1	Water/Water Solutions - no suitable pump			

1 O-Rings are used with telescoping suction pipes only: Use EPR from solvent O-Ring kit.

2 O-Rings are used with telescoping suction pipes only: Use Viton from solvent O-Ring kit.

Note: When ordering hose assembly with pump, use solvent hose if note 1 or 2 are applicable. (Solvent hose is not available for F210A model.)

MOUNTING STYLES



PA
Basic Pump for In-line
Installation



AT
Pump with Discharge Spout
& 40" Suction Pipe

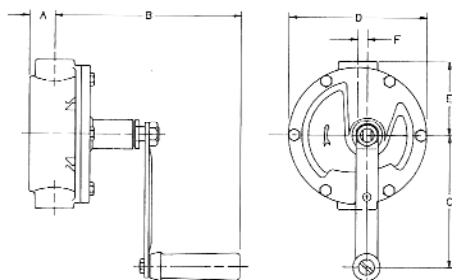


BR
Pump with Discharge Hose,
Nozzle & 40" Suction Pipe



DP
Pump with Drip Pan, Discharge
Spout & 40" Suction Pipe

PUMP DIMENSIONS



PUMP MODEL		A	B	C	D	E	F
PA210A F210A	IN.	1 3/16	9 11/16	6	6 1/4	3 1/2	1/2
	MM.	30	246	152	159	89	13
PA414B	IN.	1 1/4	9 1/4	10	7 5/8	4 3/4	1/2
	MM.	32	235	254	194	121	13
PA807B PA828B	IN.	1 1/4	10 1/8	10	8 3/8	4 3/4	1 7/8
	MM.	32	257	254	213	121	48

HAND PUMP ACCESSORIES

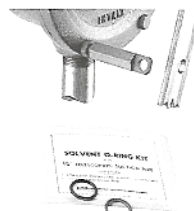


Model 220 Flowmeter Kit: Shows each delivery to 100 gallons. Wheel-type register indicates 1/10 gallons precisely and totalizer registers to 100,000 gallons. Operates at a maximum 50 psi with capacity of 3-20 gpm. U.I. listed. Liter register also available.



Drip Pan: Holds container during dispensing. Designed with drain return and built-in bung adapter.

Mounting Bracket: For locating and securing pump for in-line or OEM applications.



Locking Device: For securing pump handle to pump casing with padlock. Steel construction.

Solvent O-Ring Kit: Has Ethylene Propylene and Viton O-rings to convert telescoping suction pipe for solvent use.



Hose and Nozzle/Hanger Kits:

- 5/8" x 8' Standard Hose
- 1" x 8' Standard Hose - with vacuum breaker.
- 3/4" x 8' Solvent Hose - with vacuum breaker.
- 3/4" x 8' Anti-static Hose - with static wire and vacuum breaker.

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