

YOUR **PARTNER** *FOR*
INNOVATIVE PUMPING **SOLUTIONS**

FOCUS MARKET:
ASPHALTIC ROOFING



VIKING PUMP
A Unit of IDEX Corporation

VIKING PUMP

Viking Pump and our Authorized distributors have been trusted partners for the manufacturers of asphalt roofing and sealants for more than a century. Viking invented the internal gear pump, and has worked with the world's leading roofing manufacturers to develop reliable solutions for handling everything from flux, seal-down and adhesive asphalts to high-temperature blown and polymer modified asphalts, to highly abrasive coating asphalts.

Roofing plants often rely on 40 or more Viking pumps for 24/7 operation, and Viking's goal is to ensure that no plant has to stop the line for unplanned maintenance on a pump. With a spectrum of products to choose from, Viking has the right solutions to solve any pumping problem at your facility.

As the world's leading positive displacement process pump manufacturer, solving difficult liquid transfer problems is what we do. It doesn't get more difficult than coating asphalt, so rely on Viking's experience and expertise.



THE VIKING PUMP ADVANTAGE

- **Design Options:**
 - 34 Series for simplest maintenance
 - 224A Series for rugged reliability
- **Sealing Options:**
 - Packed gland for maximum simplicity
 - Seal options to prevent leakage, even on coating asphalt
- **Hard Part Options:**
 - Range of options from carbon graphite, bronze and hardened iron to tungsten carbide offer range of choices from lowest cost to longest life
- **High Temp Options:**
 - Special construction options for asphalts over 450°F (230°C) for longest life
- **Clearance Options:**
 - Extra clearances for high viscosities
 - Adjustable end clearances to compensate for wear over time
- **Heating Options:**
 - Integral jacketing for steam or hot oil
 - Jacketed pressure relief valve option protects pump when line is blocked
 - Electrically heated models eliminate hot oil leakage, provide precise control
- **Reversible direction of flow to strip line after pumping**
- **Robust design is very forgiving of operator error**
- **Easy, in-house maintenance**
- **Stocking distributors worldwide provide local support**

VIKING IS THE GLOBAL LEADER IN PUMPING ASPHALTIC PRODUCTS FOR TWO REASONS: *RELIABILITY & LOCAL SUPPORT*



RELIABILITY is built into the product, based on more than 100 years of experience handling many different types of asphalt in such diverse applications as:

- Refineries (resids, asphalt/bitumen, pitch)
- Terminals (straight-run, cutbacks, emulsions, PMA)
- Roofing Manufacturers (flux, blown asphalt, PMA, coating asphalt, seal-down, laminate)
- Transportation (loading/unloading ships, barges, rail cars, tanker trucks)
- Hot Mix Plants (cutbacks, emulsions)
- Sealant packaging, tar kettles, distributor trucks, pipe lining, etc.

Viking also has pumps for roofing plant utilities, including fuel oil for boilers and backup generators, heat transfer oil, knockdown tank liquids and more.

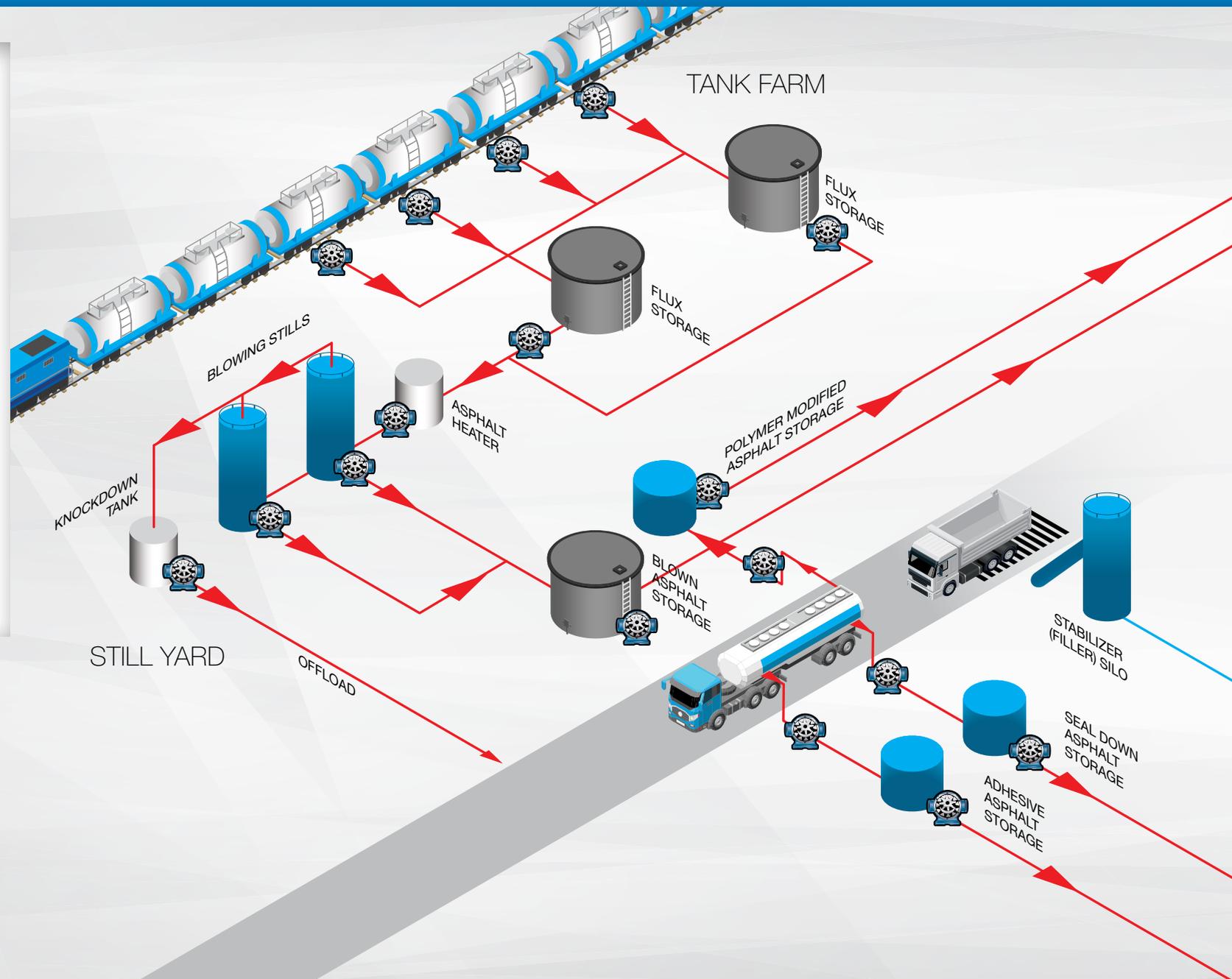
Your Viking Authorized Distributor provides **LOCAL SUPPORT** to keep you running, including:

- Stocking spare parts and pumps
- Drives, strainers and other accessories
- Pump selection expertise, commissioning and troubleshooting
- Maintenance
- Operator training

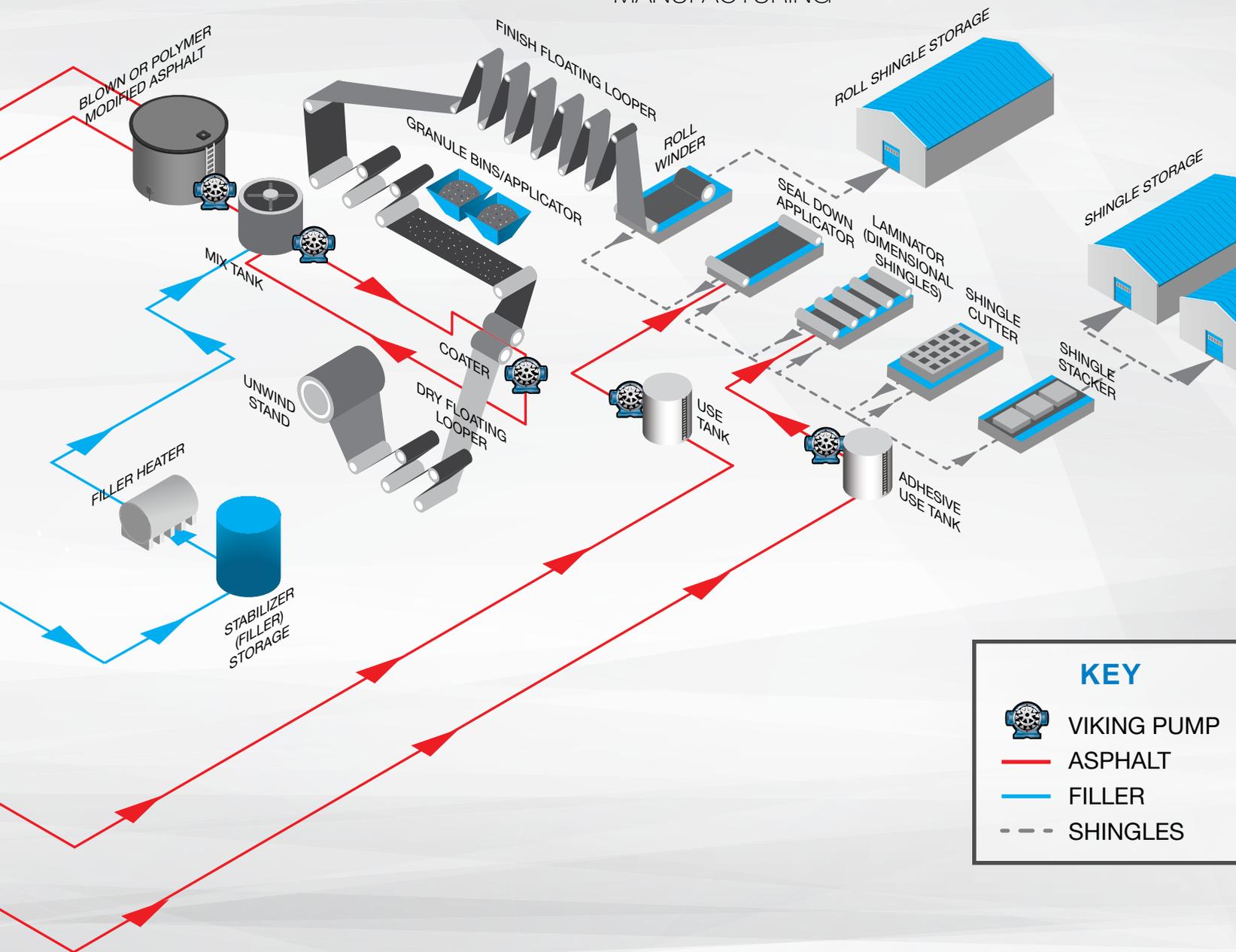
ASPHALT ROOFING PROCESS: SIMPLIFIED FLOW

VIKING PUMPS...

- Unload flux from railcars to tank farm
- Transfer flux from tank farm to pre-heater
- Transfer flux from pre-heater to blowing stills
- Transfer blown (oxidized) asphalt to storage
- Transfer knockdown tank liquids to disposal
- Unload PMA, Seal-Down and Laminate (adhesive) asphalt from trucks to storage



MANUFACTURING



VIKING PUMPS...

- Transfer blown asphalt or PMA to plant day tank
- Transfer from day tank to mix tank for blending with filler
- Transfer coating asphalt to coater
- Return coating asphalt to mix tank
- Meter seal-down onto shingles
- Meter laminate onto shingles

KEY



VIKING PUMP



ASPHALT



FILLER



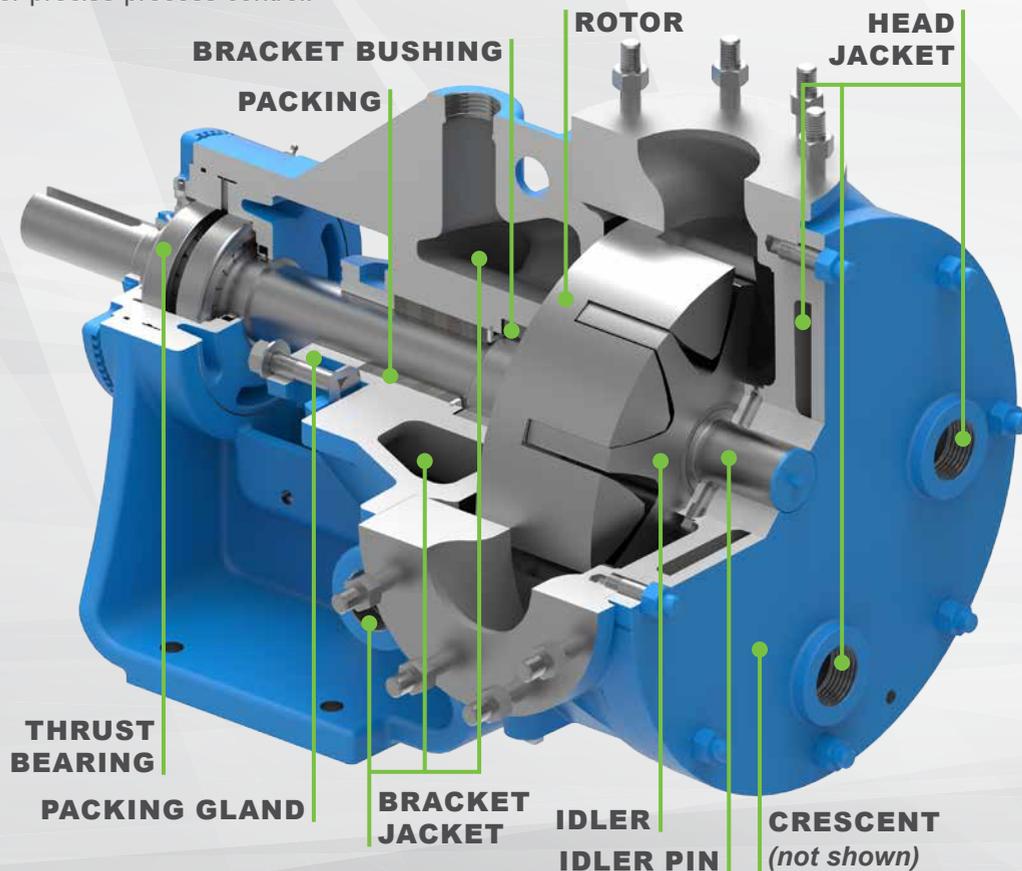
SHINGLES

THE VIKING PUMP SOLUTION

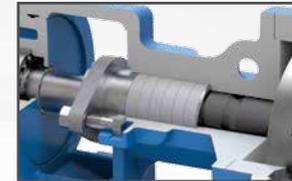
INTERNAL GEAR PUMPING PRINCIPLE - HOW IT WORKS

The pump rotor turns at slow speeds within the casing. The idler gear rotates on an idler pin, mounted on the pump head. As the rotor turns, it turns the idler gear. The crescent, also part of the pump head, separates the liquid into two streams. As the gears re-mesh, the liquid is forced out the discharge port. The rotor is positioned radially by a fluid-lubricated bracket bushing just behind the rotor, and a pair of anti-friction bearings in the bearing housing. By locating the seal between bearings, it greatly extends seal life. The anti-friction (thrust) bearings also position the rotor axially, and are located in a rotatable housing to enable adjustment of rotor end clearances without removing the pump.

Pumps are long coupled to a gear reducer or gearmotor, or may be belt- or chain-driven for speed reduction. Flow rate is directly proportional to speed, so variable speed drives may be used for precise process control.



SEALING OPTIONS:



PACKING



BEHIND THE ROTOR SEAL



CARTRIDGE SEAL

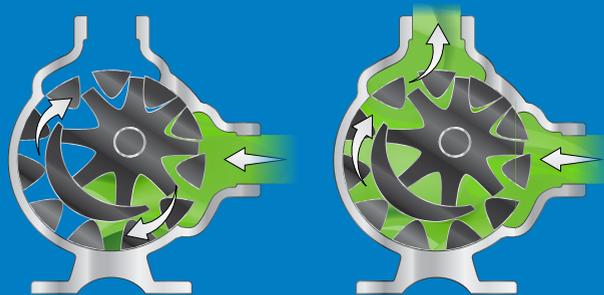
PERFORMANCE:

UNIVERSAL SERIES MAXIMUM RECOMMENDED SPEEDS

VIKING PUMP SIZE	CLEAN ASPHALT			FILLED ASPHALT		
	Max RPM	Nominal Flow Rate		Max RPM	Nominal Flow Rate	
		GPM	m ³ /h		GPM	m ³ /h
H	1750	15	3.4	640	5	1.1
HL	1750	30	6.8	640	10	2.2
K	780	75	17	280	25	5.6
KK	780	100	23	280	35	8
L/LQ	640	135	30	230	50	11
LL	520	140	32	230	65	15
LS	640	200	45	230	72	16
Q	520	300	68	190	110	25
QS	520	500	114	190	182	41
M	420	420	95	157	157	35
N	350	600	136	128	220	50
R	280	1100	250	102	400	91
RS	280	1600	364	102	582	132

INTERNAL GEAR PUMP PRINCIPLE:

Clockwise Rotation
(viewed from shaft end)



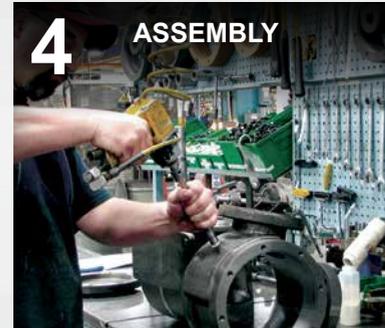
Counter-Clockwise Rotation
(viewed from shaft end)



VIKINGPUMP.COM

VERTICALLY INTEGRATED PRODUCTION PROCESS:

Viking Pump operates two foundries, a 200,000+ sq. ft. machining, assembly and testing center, and an extensive product engineering and testing lab in its world headquarters in Cedar Falls, Iowa, USA. This level of vertical integration ensures maximum quality, ability to satisfy special needs, and to meet project schedules.



Contact Your Stocking Distributor Today

Distributed By:

VIKING PUMP, INC.
A Unit of IDEX Corporation
406 State Street
Cedar Falls, Iowa 50613 U.S.A.
Telephone: (319) 266-1741
Fax: (319) 273-8157
vikingpump.com

United States
vikingpump.com

Cedar Falls, Iowa
Phone: (319) 266-1741

Canada
vikingpumpcanada.com

Windsor, Ontario
Phone: (519) 256-5438

Europe & Africa
vikingpump.com

Shannon, Ireland
Phone: +353 (61) 471933

Asia-Pacific
idexfmt-asia.com

China - Shanghai Phone: +86-21-5241-5599
Singapore Phone: +65-6684-7305
India - Mumbai Phone: +91-22-6643-5563
Korea - Seoul Phone: +82-19-9134-1110

Latin America
vikingpump.com

Mexico D.F., C.P. Phone: +52 (55) 5255-1357
Brazil - Sao Paulo Phone: +55 (19) 3871-3500

Middle East
idexfmt-asia.com

Dubai, UAE Phone: +973-4-299-1095/1097

Australia & New Zealand
vikingpump.com

