UNITEC™ SERIES

Enrich your process

WILDEN®

A DOVER COMPANY

Handcrafted PERFORMANCE

UNITEC™ SERIES

Type
- Positive displacement, reciprocating
- Air-operated, double-diaphragm

German Engineering and Craftsmanship
- Simplicity of design complements unique technology
- Reliable, leak-free, and quiet operation
- Validated and certified

World-Wide Service and Response
- Factory trained distributors in 64 countries
- Local service with local inventory
- Specialized knowledge and experience

Features
- Conductive plastic available
- No diaphragm piston plates
- Pneumatic operation
- Variable flow and pressure
- Ability to run dry and deadhead

Benefits
- Intrinsically safe
- Reliably transfers corrosive chemicals
- Simplicity of operation and maintenance
- Long MTBF and service life
- Succeeds where other pumps fail

Applications
- General chemical transfer
- Solvents, acids, and caustics
- Chemical batching and dosing
- Slurry & ceramic slip
- Paint, ink and resin
- Hazardous and toxic solutions
- High or low viscosity
- Hot or cold temperatures
- Shear sensitive emulsions
- Drum pumping

Enrich YOUR PROCESS

UNI-FLO™
PROGRESSIVE PUMP TECHNOLOGY

- Reliable, long-lasting operation
- Lubrication free
- Plastic construction (polyethylene)
- Air valve and pilot spool in one assembly
- Replaceable air system cartridge for quick repair

The Uni-Flo™ air system requires clean, oil-free compressed air to ensure optimal results (see UNITEC™ EOM manuals)

Integral Piston Diaphragms

- No piston plates or two-piece diaphragm assemblies
- Two potential leak points are eliminated
- Large diameter and a short stroke length results in a long service life

Materials

- Teflon® PTFE / Nordel® composite (conductive)
- Nordel® (conductive)
- Buna-N (high pressure pump only)

Materials of Construction

- Polyethylene (unfilled or conductive)
- Teflon® PTFE (unfilled or conductive)
- Conductive versions have a surface resistance less than $10^5\ \Omega$

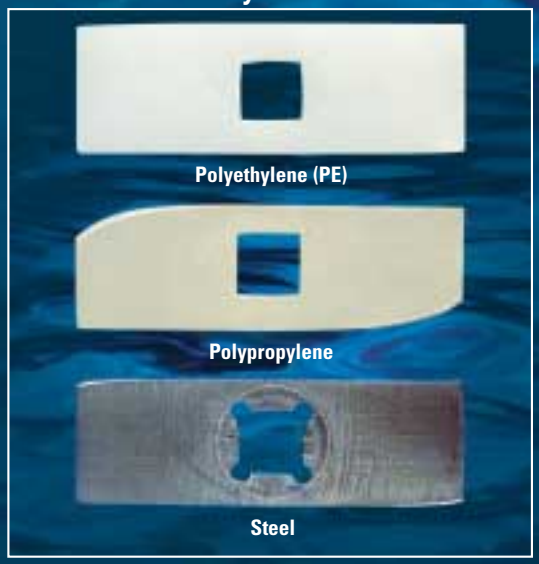
Polyethylene (PE) Material Properties

- Superior abrasion resistance (7 times more abrasion resistant than polypropylene and 1.6 times more abrasion resistant than steel)
- See abrasion test results to the right
- Good chemical compatibility (see Wilden Chem. Guide)

Teflon® PTFE Material Properties

- Clean material with low particle count
- Universal resistance to chemicals
- High temperature limitations

Sand-Slurry Test Results



Samples of material after 24 hours in a mixture of quartz sand and water (ratio 3:2) at 1200 rpm

Connection Options

UNITEC™ Series pumps are equipped with a variety of fluid connection options:

- UA and UX available with FNPT/BSP
- UA and UH available with ANSI or DIN

UNITEC™ UX SERIES

UX Design Advantages

- Complies with the ATEX directive
- Surface resistance is less than 10^5 Ω
- Machined conductive PE wetted construction
- Machined conductive PE non-wetted construction
- Conductive diaphragms (Teflon® PTFE or Nordel®)
- Reliable Uni-Flo™ air distribution system
- Compact, space-saving design
- Multi-position porting options

UX Flexibility

- Valve configuration can easily be changed from ball to cylinder valve for enhanced suction lift
- A variety of porting configurations are available depending upon the position of the central housing
- Valve assemblies (inlet and outlet) can easily be inspected and maintained via the top plugs

	UX.038	UX.050	UX.075	UX3
Max. Flow Rate:	10.0 lpm (2.6 gpm)	20.0 lpm (5.3 gpm)	50.0 lpm (13.2 gpm)	130 lpm (34 gpm)
Max. Air Pressure:	7 bar (100 psig)	7 bar (100 psig)	7 bar (100 psig)	7 bar (100 psig)
Max. Temperature:	70 °C (158 °F)	70 °C (158 °F)	70 °C (158 °F)	70 °C (158 °F)
Max. Size Solids:	1.5 mm (0.06")	2.0 mm (0.08")	3.0 mm (0.12")	4.0 mm (0.16")
Max. Suction Lift (Dry)				
Valve Ball (PTFE):	0.5 m (1.6')	0.5 m (1.6')	1.5 m (4.9')	2.5 m (8.2')
Cylinder Valve:	1.5 m (4.9')	2.0 m (6.6')	3.0 m (9.8')	4.0 m (13.1')
Liquid Inlet:	10 mm (3/8") FNPT/BSP	13 mm (1/2") FNPT/BSP	19 mm (3/4") FNPT/BSP	32 mm (1-1/4") FNPT/BSP
Liquid Outlet:	10 mm (3/8") FNPT/BSP	13 mm (1/2") FNPT/BSP	19 mm (3/4") FNPT/BSP	32 mm (1-1/4") FNPT/BSP
Height:	96 mm (3.8")	128 mm (5.0")	173 mm (6.8")	225 mm (8.9")
Width:	137 mm (5.4")	155 mm (6.1")	206 mm (8.1")	269 mm (10.6")
Depth:	86 mm (3.2")	124 mm (4.9")	175 mm (6.9")	240 mm (9.5")
Air Inlet:	6 mm (1/4") FNPT/BSP	6 mm (1/4") FNPT/BSP	6 mm (1/4") FNPT/BSP	6 mm (1/4") FNPT/BSP
Est. Ship Weight:	1 kg (2 lbs)	2 kg (4 lbs)	5 kg (11 lbs)	10 kg (22 lbs)
Max. Viscosity:	3,000 cP	6,000 cP	10,000 cP	15,000 cP

UA Design Advantages

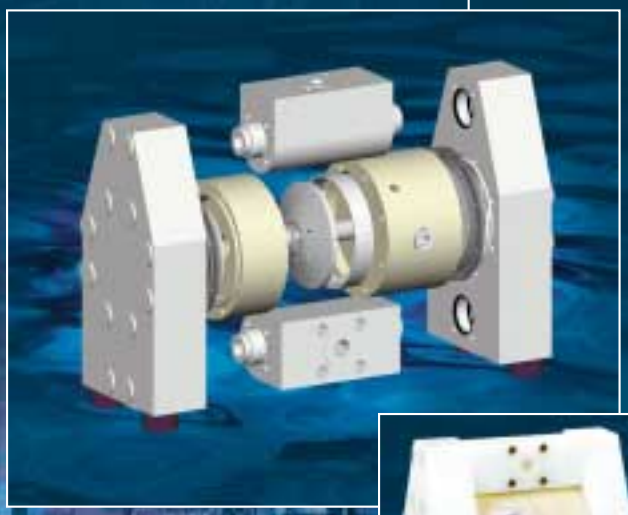
- Machined plastic pumps
- Polyethylene
- Conductive polyethylene (ATEX compliant)
- Teflon® PTFE
- Conductive Teflon® PTFE (ATEX compliant)
- Wetted and center housing are the same material for superior chemical resistance
- Consistent pump design from 6 mm (1/4") to 51 mm (2") size

UA Flexibility

- A variety of porting configurations are available depending upon the position of the center section and location of plug
- 25 mm (1") and above UA pumps have both a flanged and threaded liquid connection (FNPT/BSP with ANSI or DIN)
- Many accessories and configurations are available to customize the pump for your application

	UA.025	UA.038	UA.050	UA2	UA4	UA8
Max. Flow Rate:	10.0 lpm (2.6 gpm)	20.0 lpm (5.3 gpm)	50.0 lpm (13.2 gpm)	100 lpm (26 gpm)	300 lpm (79 gpm)	530 lpm (140 gpm)
Max. Air Pressure:	7 bar (100 psig)	7 bar (100 psig)	7 bar (100 psig)	7 bar (100 psig)	7 bar (100 psig)	7 bar (100 psig)
Max. Temperature						
Polyethylene:	NA	NA	70 °C (158 °F)	70 °C (158 °F)	70 °C (158 °F)	70 °C (158 °F)
PTFE:	100 °C (212 °F)	100 °C (212 °F)	120 °C (248 °F)	120 °C (248 °F)	120 °C (248 °F)	120 °C (248 °F)
Max. Size Solids:	2.0 mm (0.08")	3.0 mm (0.12")	4.0 mm (0.16")	6.0 mm (0.24")	9.0 mm (0.35")	11.0 mm (0.43")
Max. Suction Lift (Dry)						
Valve Ball (PTFE):	0.5 m (1.6')	1.5 m (4.9')	2.0 m (6.6')	3.0 m (9.8')	4.0 m (13.1')	4.0 m (13.1')
Cylinder Valve:	1.0 m (3.3')	2.0 m (6.6')	3.0 m (9.8')	4.0 m (13.1')	5.0 m (16.4')	5.0 m (16.4')
Liquid Inlet:	6 mm (1/4") FNPT/BSP	10 mm (3/8") FNPT/BSP	13 mm (1/2") FNPT/BSP	25 mm (1") FNPT/BSP with ANSI or DIN 25	38 mm (1-1/2") FNPT/BSP with ANSI or DIN 40	51 mm (2") FNPT/BSP with ANSI or DIN 50
Liquid Outlet:	6 mm (1/4") FNPT/BSP	10 mm (3/8") FNPT/BSP	13 mm (1/2") FNPT/BSP	25 mm (1") FNPT/BSP with ANSI or DIN 25	38 mm (1-1/2") FNPT/BSP with ANSI or DIN 40	51 mm (2") FNPT/BSP with ANSI or DIN 50
Height:	129 mm (5.1")	169 mm (6.7")	240 mm (9.4")	320 mm (12.6")	432 mm (17.0")	552 mm (21.7")
Width:	113 mm (4.5")	127 mm (5.0")	176 mm (6.9")	231 mm (9.1")	326 mm (12.8")	396 mm (15.6")
Depth:	90 mm (3.5")	110 mm (4.3")	166 mm (6.5")	220 mm (8.7")	280 mm (11.0")	360 mm (14.2")
Air Inlet:	3 mm (1/8") FNPT/BSP	3 mm (1/8") FNPT/BSP	6 mm (1/4") FNPT/BSP	6 mm (1/4") FNPT/BSP	13 mm (1/2") FNPT/BSP	13 mm (1/2") FNPT/BSP
Est. Ship Weight						
Polyethylene:	NA	NA	5 kg (11 lbs)	13 kg (29 lbs)	29 kg (64 lbs)	58 kg (128 lbs)
PTFE:	2 kg (4 lbs)	4 kg (9 lbs)	10 kg (22 lbs)	20 kg (44 lbs)	60 kg (132 lbs)	120 kg (265 lbs)

UNITEC™ UH SERIES



UH Design Advantages

- All plastic pump with discharge pressures to 16 bar (230 psig)
- Machined ultra-high molecular weight polyethylene
- Machined nylon center section
- Teflon® PTFE, Nordel®, or Buna-N diaphragm options
- Reliable Uni-Flo™ air distribution system
- No external boosters required to achieve amplified output

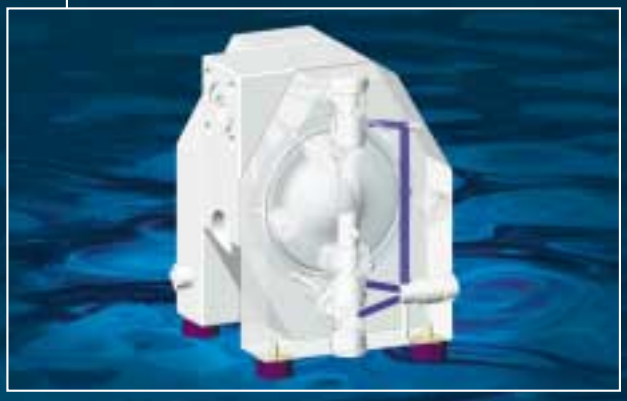
UH Flexibility

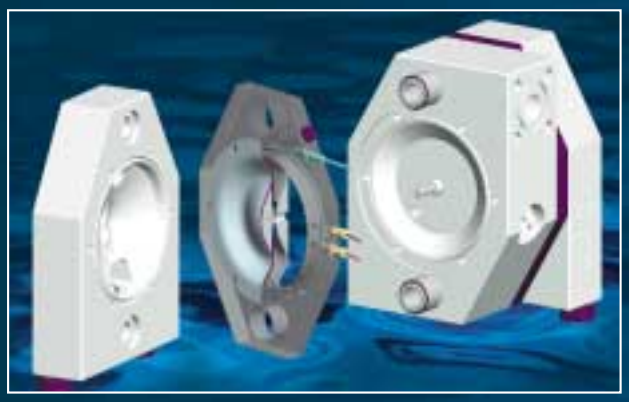
- Variable speed and pressure
- Adjustable manifold connections
- 3 Compact and robust pump sizes
- Pre-process, process, and waste applications

	UH.050	UH2	UH4
Max. Flow Rate:	70.0 lpm (18.5 gpm)	180 lpm (48 gpm)	330 lpm (87 gpm)
Max. Air Pressure:	7 bar (100 psig)	7 bar (100 psig)	7 bar (100 psig)
Max. Liquid Pressure:	15 bar (218 psig)	16 bar (230 psig)	15 bar (218 psig)
Max. Temperature:	70 °C (158 °F)	70 °C (158 °F)	70 °C (158 °F)
Max. Size Solids:	4.0 mm (0.16")	5.0 mm (0.20")	8.0 mm (0.31")
Max. Suction Lift (Dry):	3.0 m (9.8')	2.0 m (6.6')	3.0 m (9.8')
Liquid Inlet:	13 mm (1/2") ANSI or DIN 15	25 mm (1") ANSI or DIN 25	38 mm (1-1/2") ANSI or DIN 40
Liquid Outlet:	13 mm (1/2") ANSI or DIN 15	25 mm (1") ANSI or DIN 25	38 mm (1-1/2") ANSI or DIN 40
Height:	323 mm (12.7")	406 mm (16.0")	539 mm (21.2")
Width:	282 mm (11.1")	382 mm (15.0")	490 mm (19.3")
Depth:	179 mm (7.0")	256 mm (10.1")	296 mm (11.7")
Air Inlet:	6 mm (1/4") FNPT/BSP	6 mm (1/4") FNPT/BSP	6 mm (1/4") FNPT/BSP
Est. Ship Weight:	11 kg (24 lbs)	30 kg (66 lbs)	58 kg (127 lbs)

Back-Flushing System

- Available on UA series only
- Two systems available: manual or pneumatic
- Enables pump to be drained while in-line
- System simply lifts check valves from their seat allowing the fluid to drain into inlet pipe
- Protects diaphragms upon start-up
- Useful when pumping liquids with solids that settle out in the bottom of the liquid chamber





Barrier Chamber

- Available on UA series only
- A barrier chamber is installed between two diaphragms on each side of the pump
- The chamber is filled with a neutral fluid
- Conductivity sensors monitor the conductivity of this fluid
- If the diaphragm fails, the sensors detect a conductivity variance and a signal is sent to a user-supplied controller

Air Exhaust Muffler Sensor

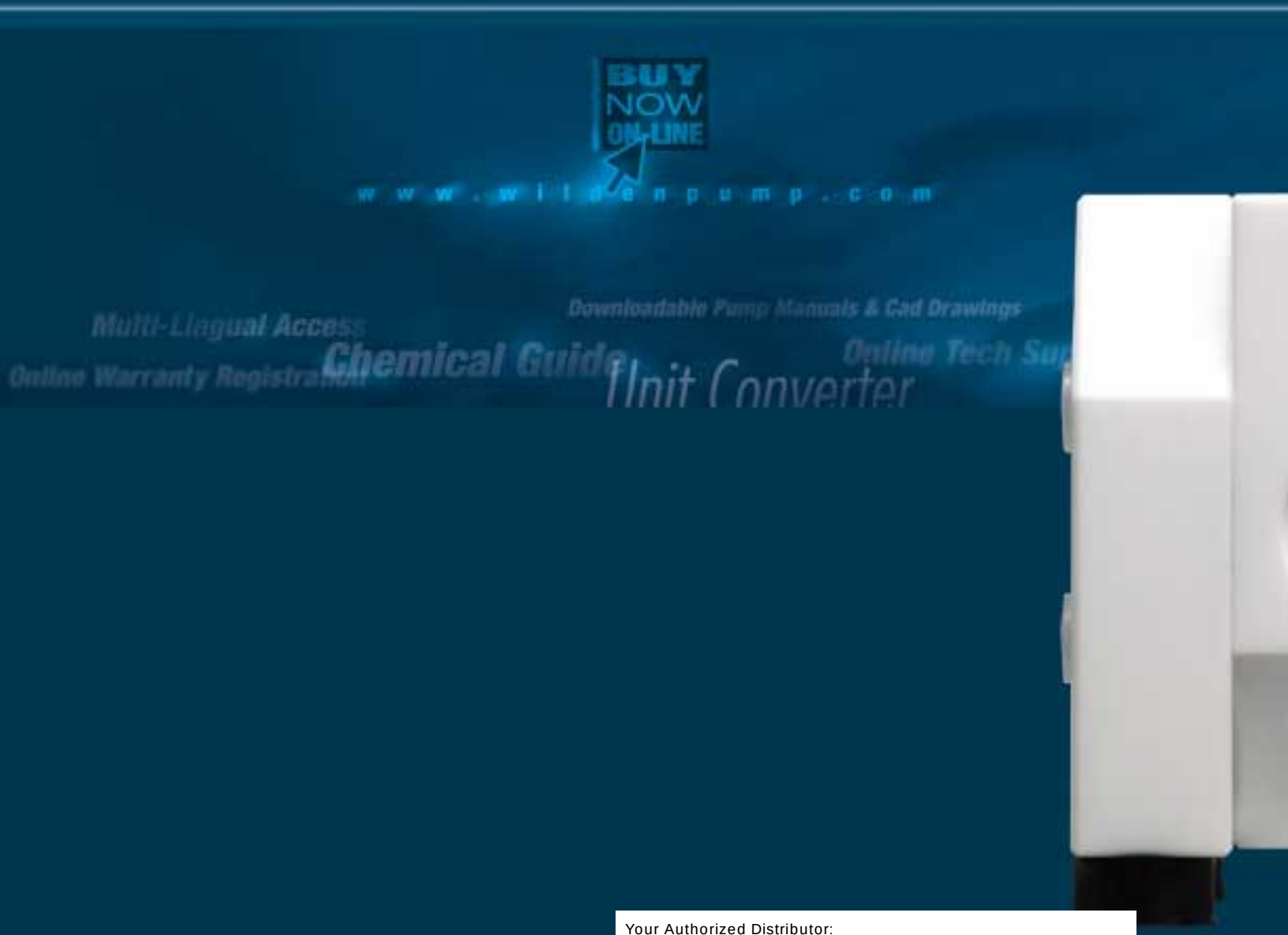
- Capacitive sensor is installed in pump muffler to detect fluid

Equalizer™

- Available in Polyethylene, Conductive Polyethylene, Teflon® PTFE, and Conductive Teflon® PTFE
- Reduces the pressure fluctuation caused by reciprocating, positive displacement pumps
- Protects in-line equipment and pipe connections
- UA series pumps are available with an Equalizer™ as an intregral pump component (see photo at right)
- SD or BF Equalizers™ can be placed in-line with UA and UX series pumps

Air Exhaust Muffler

- UNITEC™ pumps are quiet and suitable for indoor use
- Mufflers are included with each UNITEC™ pump
- Sintered polyethylene or brass material
- Noise is muffled in two stages
- Mufflers can be cleaned with appropriate liquid



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