



AFM Abrasive Flow Machining



VECTOR

Precision Deburring and Polishing System

The VECTOR Abrasive Flow Machining (AFM) system is capable of polishing and deburring precision parts in small to high-volume batch quantities for a wide range of applications.

By the end of 2020, with 400+ VECTOR machines in 22 countries around the world, VECTOR is the best seller in his category. Benefit now from the best VECTOR.



FEATURES and BENEFITS

+ AUTOFLOW™ Advanced Control

For maximum process control. The ability to control flow rate, temperature and viscosity also contributes to improving the life span of the abrasive media.

+ Media Temperature Management

Controlling the temperature of the abrasive media gives a more consistent machining rate. (Basic as a standard, Advanced as an option).

+ Intuitive Operator interface

State-of-the-art control system for operation, monitoring, setup and maintenance with a 12" Touch screen interface. Enables to save multiple processing parameters as required for ease of use and quick recall in the manufacture of multiple customer parts.

+ Options to increase productivity

Swing arms, hydraulic or manual ones, manual tooling cart, these are the options that help with heavy fixture handling.



TECHNICAL INFORMATION

AFM VECTOR



MACHINE SPECIFICATIONS

The standard VECTOR Abrasive Flow Machine consists of a machine with touch screen HMI and a hydraulic power unit.

Height fully open	102" (2590 mm)
Height closed	92" (2335 mm)
Width	52.5" (1335 mm)
Depth	36.5" (926 mm)
Table top height	41" (1040 mm)
Working area:	
Width	35.4" (900 mm)
Depth	19.7" (500 mm)
Opening	19.5" (495mm)
Estimated weight	4,300 lbs (1955 kg)

MEDIA DELIVERY

Media delivery is reciprocating between the top and bottom assemblies. Both assemblies consist of media cylinders, pistons, seals and caps. Media size reconfiguration is possible.

HYDRAULIC SPECIFICATIONS

Main components of the hydraulic system are a hydraulic power unit, two media hydraulic cylinders, and two clamp cylinders with an air/oil pump assist.

Standard Power Unit

Reservoir	20 gal (75,7 l)
Pump capacity @ 1,750 RPM	5 GPM (18,9 L/min)
Pressure	350–2500 psi (24,1–172,4 bar)

Clamp Cylinders

(Clamping is powered hydraulically)

Bore diameter	5" (127 mm)
Stroke	20" (508 mm)
Maximum opening	19.5" (495mm)
Minimum opening	0" (0 mm)

ELECTRICAL SPECIFICATIONS

The machine is controlled by a PLC. The operator interface terminal is a touch screen. Standard functions include remote media pressure adjustment, automatic and manual mode, displacement counter, cycle counter, and cycle timer. The machine process parameters are preset via the operator interface terminal and can also be monitored on the terminal once the automatic cycle has been initiated.

Electrical

Voltage	230/460 VAC, 3 phase, 60 Hz
	400 VAC, 3 phase, 50 Hz
Motor	7,5 kW
Peak amperage	15/7.5 amps
Standard PLC	Allen Bradley / Siemens

Controls

AUTOFLOW™ Controls and 12" touch screen

FLUID CONNECTION SPECIFICATIONS

Hydraulic

Ports	NPT
Hose/Tube	37° JIC

Water

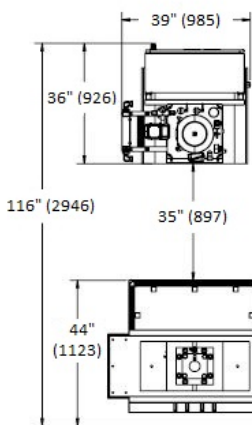
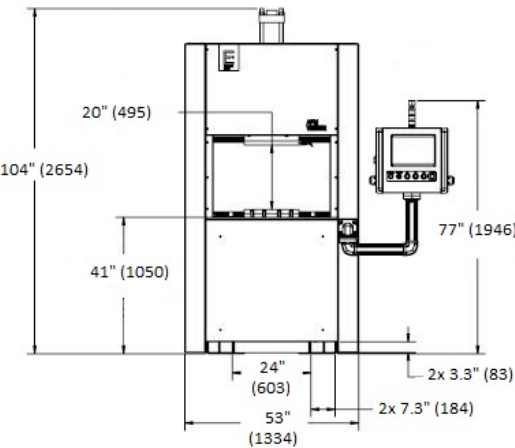
Ports	NPT
Hose/Tube	NPT and/or Push Lock

Pneumatic

Ports	NPT
Hose/Tube	Push Lock

ACCESSORIES/OPTIONS

Hydraulic or manually operated swing arms.
Manually operated tooling slide cart.
Front doors and light curtains.
and more...



SYSTEM CONFIGURATIONS

	Media Cylinder Diameter	Hydraulic Cylinder Diameter	Media Stroke Length	Media Capacity	*Total Media Volume (Incl. fixture)	Media Flow Rate	Media Pressure min/max
Vector 100	4" (100 mm)	6" (150 mm)	12.5" (320 mm)	157 cu.in. (2.6 l)	20 lb. (9 kg)	2.2 GPM (8.3 L/m)	575/4000 psi (40/276 bar)
Vector 150	6" (150 mm)	6" (150 mm)	12.5" (320 mm)	353 cu. in. (5.8 l)	50 lb. (23 kg)	5 GPM (19 L/m)	350/2400 psi (24/166 bar)
Vector 200	8" (200 mm)	6" (150 mm)	12.5" (320 mm)	628 cu. in. (10.3 l)	100 lb. (45 kg)	8.8 GPM (33.3 L/m)	200/1440 psi (14/93 bar)
Vector 250	10" (255 mm)	6" (150 mm)	12.5" (320 mm)	981 cu.in. (16.1 l)	150 lb. (68 kg)	14 GPM (53 L/m)	125/900 psi (9/62 bar)
Vector 300	12" (300 mm)	6" (150 mm)	12.5" (320 mm)	1413 cu. in. (23.2 l)	200 lb. (91 kg)	20 GPM (76 L/m)	85/600 psi (6/41 bar)

*Estimate

NOTE: Specifications and availability are subject to change without notice.