

AFM

Abrasive Flow Machining

ECOFLOW



Compact

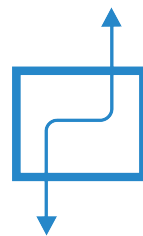
& Capable entry-level
Abrasive Flow
Machine

Perfect choice

for finishing small
components in
small-to-medium
production volumes

Feature rich

host of standard &
optional features put
you in control



AFM

ECOFLOW

The most compact model in the AFM Machine portfolio

ECOFLOW is the entry-level model in Extrude Hone's Abrasive Flow Machines product line, designed specifically for small components produced in small to medium volumes.

It polishes and blends features uniformly, automatically, and controllably to match the quality level of its larger family counterparts.

Its affordable pricing allows die shops to upgrade from traditional die polishing to precise, productive, and repeatable Abrasive Flow Machining.



Benefits of Ecoflow



Compact footprint
Ideal for your tool shop



Two variants to choose from
Get the machine that suits your application the best



Small volume & high media pressure
Ideal for carbide die polishing applications



HMI for operator interface
Conveniently positioned operating panel for precise process control



Optional features to choose from
Put you in control of the process, all the time

Abrasive Flow Machining (AFM)

AFM uses abrasive media under high pressure to polish, edge-break, and micro-debur difficult-to-finish components.



AFM Improves

- Surface structure & wear resistance
- Fatigue strength & durability
- Flow characteristics



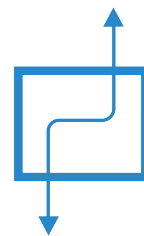
AFM Removes

- Thermally affected layer
- Coating residue & deposits



AFM Reduces

- Internal stress



Key Features

Available in two variants

ECOFLOW is available in two variants, with 80mm & 100mm media tubes. The selection is based on the component size, media pressure & flow rate required by the application, as well as production demand.

As the smallest machine in the family, it has limited media-holding capacity, making it particularly suitable for applications involving diamond media.



Media system		ECOFLOW 80	ECOFLOW 100
Media cylinder diameter	mm (inch)	80 (3.1)	100 (3.9)
Media cylinder length	mm (inch)	250 (9.8)	250 (9.8)
Media capacity	ltr. (cu inch)	1.3 (77)	2.0 (120)
Max. media pressure	bar (psi)	156 (2263)	100 (1450)
Media flow rate (@ 50Hz supply)	lpm (gpm)	5.1 (1.3)	8.0 (2.1)



Efficient, compact hydraulics

ECOFLOW is ably supported by an efficient & compact hydraulic power unit driving all operations. It is integrated with the machine and operated through the HMI panel.

Robust clamping system

A hydraulic clamping system of 295mm (11.6") daylight accommodates a wide range of fixtures and holds them securely while processing.





Key Features

Capable PLC & user-friendly interface

Siemens S7-1200 PLC and a 7" TFT touchscreen control the machine. In various operating modes, the HMI can control all operations effortlessly.

Six operating screens

- Home
- Manual
- Auto
- Process data setting
- Maintenance
- Timer

Different operating modes

- Auto / Manual
- Two way / One way media flow
- Volume / Time based

Multiple programs containing different process recipes for different components can be easily created, stored, recalled & run.



Mitsubishi controls can be offered as an option.



Uncompromised operator safety

The standard machine comes with a 2-hand operating system. And light curtains are offered as an optional feature to enhance operator safety.

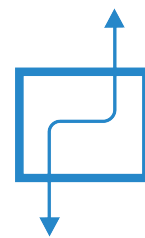
Innovative & compact construction

Optimized machine construction enhances strength while reducing weight to 1025 kg (2255 lbs). The entire machine can be easily transported with a standard pallet jack and is designed to fit through a standard man-door.

The machine can be installed on a regular factory floor.

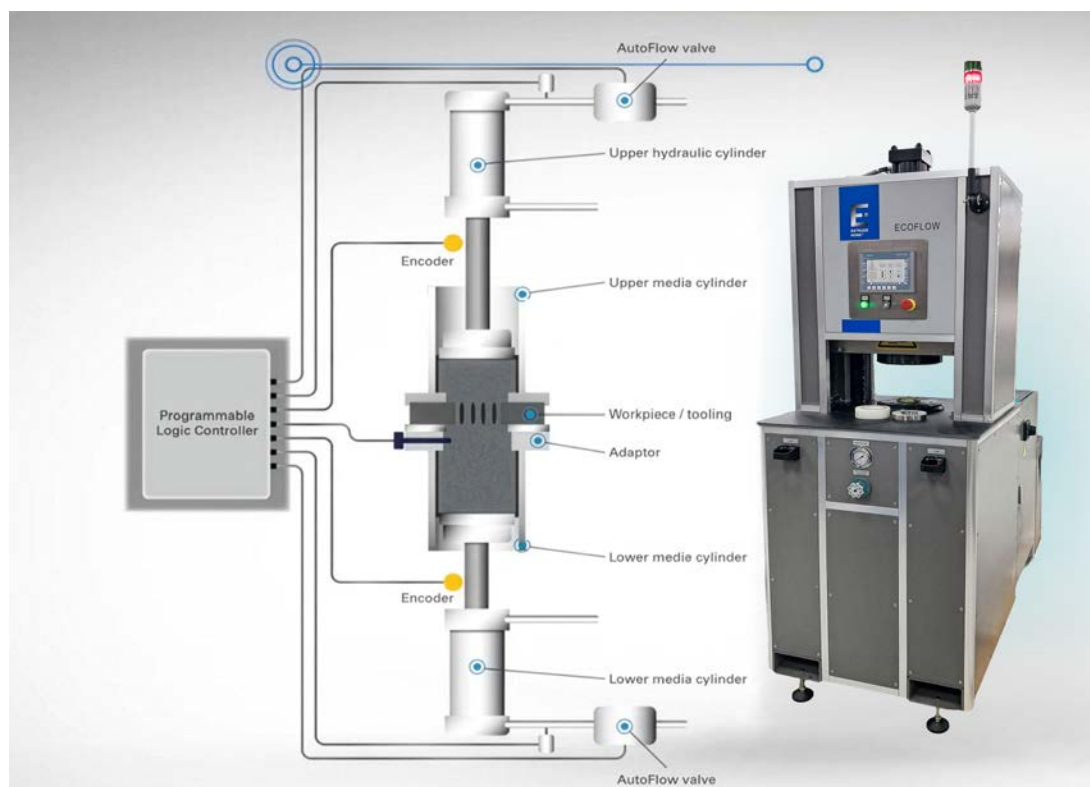
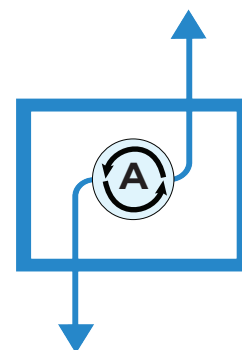


Key Features



Autoflow™ control (as an option)

Advance Autoflow™ control is optional with ECOFLOW. It features a programmable system that includes position sensors, hydraulic valves, and an advanced control program that offers two different operating modes.



▪ Back pressure control

When selected, the opposing hydraulic cylinder generates a backpressure defined by the program, which maintains the media pressure at the set level throughout the operating cycle.

During abrasive flow machining, Autoflow™ keeps the media stable, reducing heat generation and maintaining consistent viscosity.

By doing this, the predictability of abrasive flow processing times and overall results improves significantly. Additionally, the media performs better and lasts much longer.

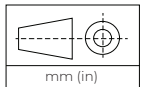
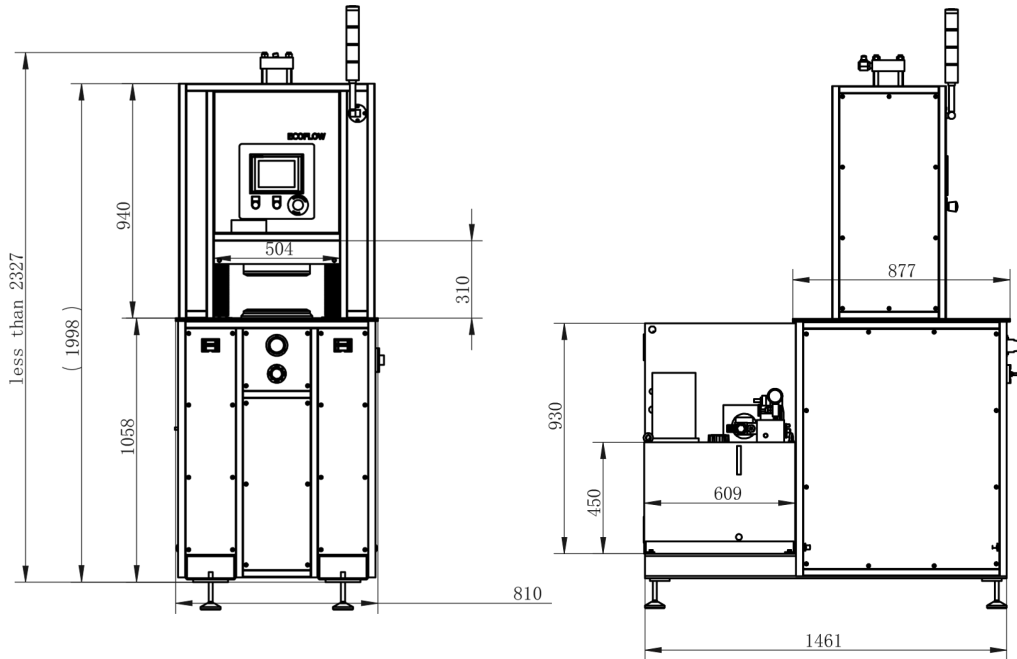
▪ Flow control

This feature, when activated, maintains the media flow rate at the set level throughout the operating cycle by continuously adjusting the back pressure in the opposing hydraulic cylinder.

AFM ECOFLOW



Technical details



Hydraulic Power Unit

Pump flow rate	lpm (gpm)	8.0 (2.1)
Max pressure	bar (psi)	140 (2030)
Tank capacity	ltr. (gal)	100 (26)

Electrical Specification

Input (USA)	230 / 460 V AC, 3Ph 60Hz
Input (EU, Asia)	400V AC, 3Ph 50Hz
Control voltage	24V DC
PLC HMI	Siemens S7-1200 7", TFT
Installed load (kVA)	3
Peak current (A)	6

Work Table

L x B	mm (inch)	838 (33) x 810 (32)
Height	mm (inch)	1058 (42)
Capacity	kg (lbs)	100 (220)

Accessories / Optional features

- Autoflow™ control
- Light curtain
- Mitsubishi control

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

Learn more
about ECOFLOW

Email us to learn how your tool room can
benefit from ECOFLOW



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