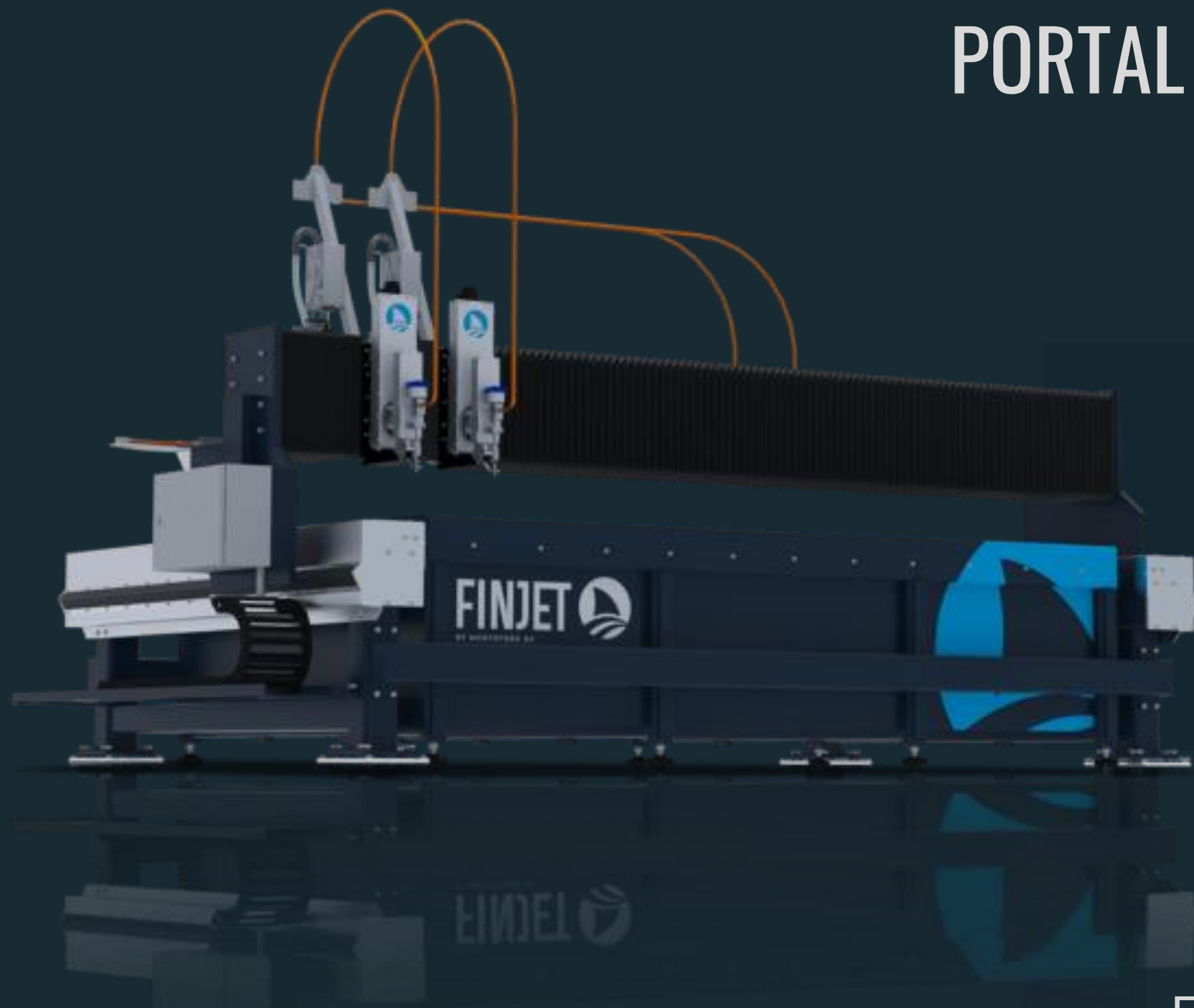


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# FINJET H

## PORTAL ABRASIVE WATERJET CUTTING MACHINE

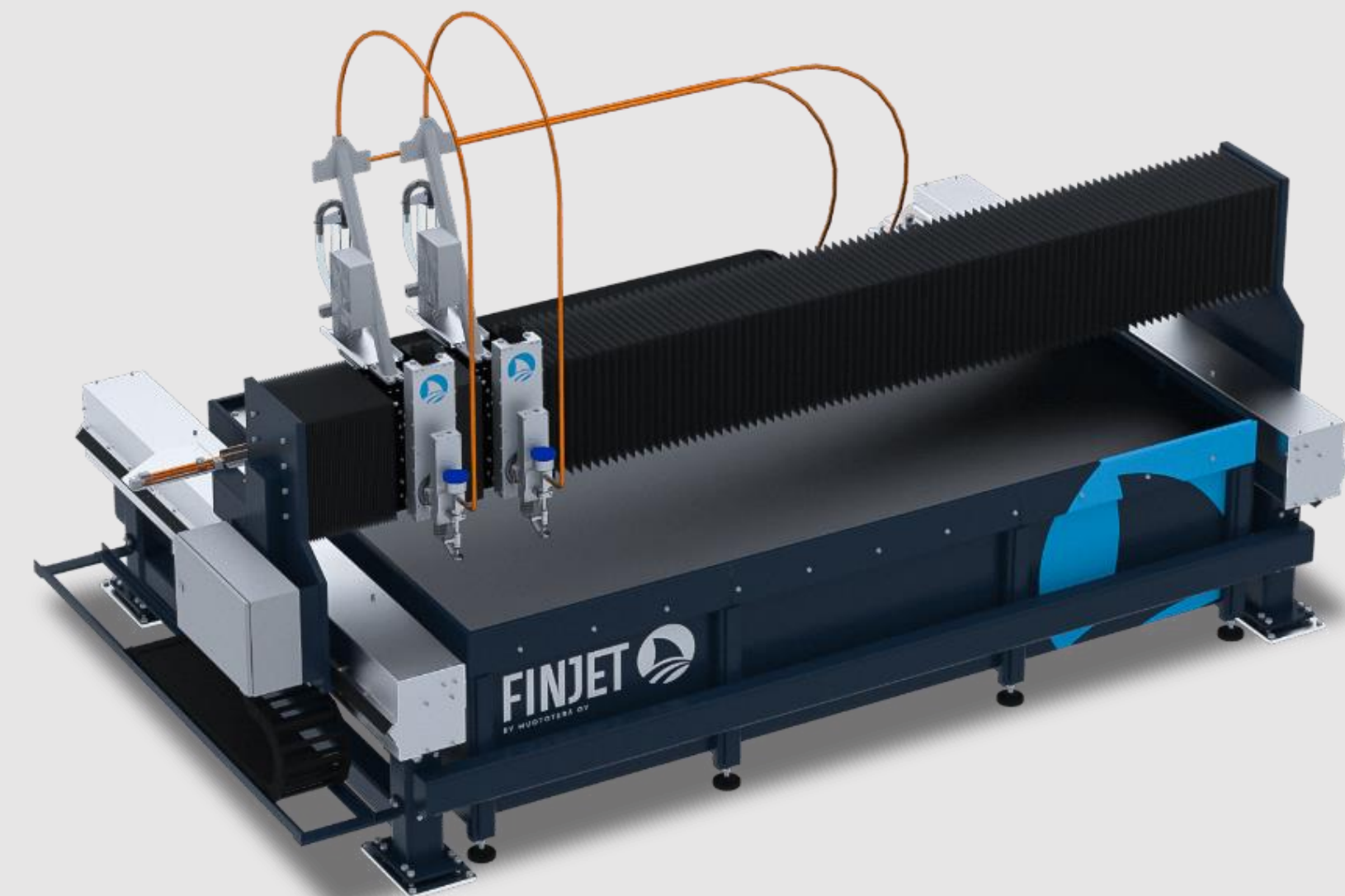


|                           |  |
|---------------------------|--|
| <b>Product:</b>           | Portal Abrasive Waterjet Cutting Machine |
| <b>Brand Name:</b>        | FinJet H                                 |
| <b>Manufacturer:</b>      | Muototerä Ltd.                           |
| <b>Country of Origin:</b> | Finland                                  |

FinJet H-series is designed for continuous heavy-duty water jet cutting. Its modular design enables numerous different variations so that every demanding need can be fulfilled. H-series can be equipped with several cutting heads including 5-axis bevel cutting units. For 24/7 production a shuttle table is preferred option in order to get most out of the machine.

# General specification

|                          |                                  |
|--------------------------|----------------------------------|
| Cutting area:            | 1 x 1 – 4 x 15 m                 |
| Required footprint:      | dependent on the machine size    |
| Z-axis:                  | standard 200 / 300 mm            |
| Positioning accuracy:    | ± 0,025 mm/m                     |
| Repeatability:           | ± 0,015 mm                       |
| X and Y axis max speed:  | 15 / 40 m/min                    |
| Z axis max speed:        | 5 m/min                          |
| Cutting heads:           | 1 – 6                            |
| 5-axis cutting heads:    | 45 or 60 -degree angles possible |
| Operating pressure up to | 6200 bar                         |





## MOVEMENT

In FinJet H models, movement is executed with  $\varnothing$  30/40 mm precision ball screws, which achieve a movement speed of 15m / min. High-quality B&R (ABB) servomotors are equipped with absolute measurement, which allows the machine to be started without the need for extra reference run. The bearings of the sleds are always mounted on precision guides with four bearings and at sufficient distances to eliminate vibration. The machine's mechanics are designed for durability and longevity in all conditions.

The movement can also be done by linear motors. This results in higher speeds (40m or even 100m / min) and accelerations

## PROTECTION

Since abrasive waterjet cutting machines are always exposed to at least abrasive and water, protection must be designed accordingly. In FinJet H models, the X-axis is always protected by a tight round bellows. The Y-movement is protected by a tight rubber lip and the machine frame is covered to withstand extreme conditions. The machine frame is designed so that it can be walked on, if needed, for easy operation and maintenance.

## ELECTRICITY & AUTOMATION

Electrical and automation design on all FinJet waterjet cutting machines are planned and executed by Muototerä's own personnel. This allows optimum compatibility between mechanical and automation components. A good waterjet cutting machine is made from quality components, but it is not enough on its own. All parts must work together seamlessly. The objective of Muototerä is always to make the waterjet cutting machines to perform better than the sum of their parts. In practice, this means collaborative design. In other words, mechanical and automation design are executed simultaneously for best results.

Electric cabinets are always built on FinJet H models with closed-circulation cooling, which makes the electrical and automation components more durable and the waterjet cutting machine less prone to failures. The machine is controlled by Muototerä's own interface for waterjet cutting. The HMI (Human Machine Interface) is a 21.5" Full HD touchscreen with a powerful 1.91GHz processor. The user interface has been designed based on the user experience so that it is simple yet powerful, offering all the features needed for effective waterjet cutting.





## **HIGH PRESSURE COMPONENTS**

High pressure components play a critical role in waterjet cutting. As it is a high pressure device (3800 – 6200 bar), the high pressure components are subjected to extremely heavy stress. In addition to the self-made components, Muototerä uses components from KMT Waterjet. High-quality components guarantee the reliability of the machine at all pressure levels.

All FinJet waterjet cutting machines can be connected to any high-pressure pump, including old ones already at the client's site. Muototerä is an official distributor of KMT High Pressure Pumps and a Premium OEM Partner.

# Available options

## SAFETY CONTROL & MACHINE

- Safety light barrier
- Isolated cutting area with either fixed walls or mesh fence and sliding door
- Safety dump valve package, allows pressure relief from line without stopping pump
- Operator panel either in a movable rack or fixed on the machine
- Remote control, wireless or with cord
- Mobile alarms to your phone about machine and cutting status
- Multiple zero-point setting for automatic cutting job que
- X and Y axis movement with linear motors instead of ball screws
- Stainless steel frame
- Automatic machine lubrication system
- Tube cutting unit

## CUTTING TANK & ABRASIVE HANDLING

- Water level adjustment to allow underwater cutting
- Automatically rising cover in front of the waterjet machine
- Splash protectors on the back and sides of the machine
- Stainless steel lamellas
- Stainless steel cutting tank and lamellas
- Abrasive removal system for waste abrasive, either fixed or mobile
- Pure water surface for abrasive waterjet cutting machines
- Stainless steel settling tank
- Water and pneumatic hoses and guns connected to the machine
- Own infinitely variable sand feeder for each cutting head, 0-600g/min
- 200kg manual abrasive sieve or 1500kg automatic abrasive bulk silo

## CUTTING HEAD

- 3D-cutting head: 45- or 60-degrees tilting 5-axis cutting head
- Multiple cutting heads: 2-6
- Automatic nozzle distance adjustment for 2-6 nozzles
- Height Sensor
- Drill Unit
- Collision Sensor
- Manual nozzle rotation  $\pm 0... 45$  degrees
- Sapphire crystal protected laser pointer for zero-point setting
- Sapphire or diamond waterjet orifice
- Integrated marking device

## HIGH PRESSURE PUMP ACCESSORIES

- Oil-air cooler
- Tool kit
- Spare parts kit
- Stroke control, multiple pumps on the same pressure line
- Analog pressure gauge
- Pressure display and / or control directly from the machine control
- Line filter
- Water softener / water treatment
- Water booster pump
- 1000l Boosterline water tank to equalize inlet pressure

