



Water-Jet Cutting Systems

Hydro-Jet Eco 0515 S • Eco 0515 SL

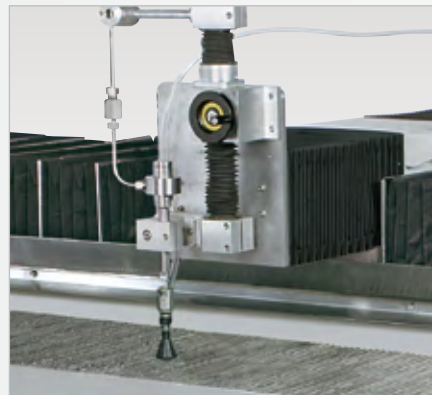
Eco 0515 S • Eco 0515 SL



Robust System with small footprint and maximum operator comfort

Tate-of-the-art GPlus Cut control

- High-pressure system up to 40,600 psi bar or 50,800 psi
- Completely equipped for Abrasive & Pure-Water Cutting
- Axes are driven via preloaded ball screws
- Flying Bridge design



www.knuth-usa.com



Eco 0515 S • Eco 0515 SL

DESCRIPTION

Enter the fascinating world of water-jet cutting technology!

Compact Machine Design: guide machine, water tank, settling tank, and control cabinet are mounted on a granite machine frame, making the machine easy to transport and requiring minimal installation

- **Abrasive Cutting of steel, aluminum, marble, compound materials and much more**
- Compact water-jet cutting center for abrasive cutting for an extremely competitive price
- High-precision cuts in virtually any material
- quick programming on an integrated PC control with graphical user interface; software package included
- Perfectly tuned drive system
- High-pressure pump, 30 Hp
- **The water-jet is a universal tool with many benefits:**
 - No thermal stresses, hardening, or tension on the part
 - No dust, smoke or toxic fumes
 - Small kerf width and very clean cut edges
 - Virtually burr-free cuts = no rework necessary
 - Direct plunge-cut at any position
 - Very low mechanical stress on the part



Actual machine may vary slightly



GPlus 450
www.knuth-gplus.de

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Eco 0515 S • Eco 0515 SL

SPECIFICATIONS

Specifications	Hydro-Jet Eco 0615 S	Hydro-Jet Eco 0615 SL
Cutter System		
Cutting capacity	59 x 20"	59 x 20"
Z axis travel	3"	3"
Operating pressure	40,600 psi	50,800 psi
Abrasive / pure-water	yes	yes
Sbrasives containers	165 lbs	2200 lbs
Drive type		
- For X / Y axis	preloaded ball screws	preloaded ball screws
- For Z axis	man. adjustment / hand wheel	man. adjustment / hand wheel
Feed		
Max. feed	157" /min	157" /min
Accuracy		
Positioning accuracy - X / Y axis	± 0.002" / 12"	± 0.002" / 12"
Repeatability - X / Y axis	± 0.002" / 12"	± 0.002" / 12"
Measures and Weights		
Overall dimensions (L x W x H)	102" x 161" x 118"	102" x 161" x 118"
Weight (with high pressure pump)	8378 lbs	8025 lbs
Weight (without high pressure pump)	6614 lbs	6614 lbs
Part No.	166 205	166 207

Standard Equipment

- GPlus 450 Cut CNC control with TFT monitor
- Grid nesting
- Electronic hand-wheel
- Control panel
- Intensifier pump NEOLine 40i
- Sound proof enclosure (Hydro-Jet Eco 0515 S)
- Abrasive cutter head
- Abrasives container
- Sand metering
- 3-chamber settling tank
- Operating and programming instructions

Optional

- Contour nesting
- Pump enclosure for Eco 0515 SL
- Oil/air cooler for Eco 0515 SL
- Abrasives reservoir, 1 ton cap. for Eco 0515 S
- Starter set
- Light curtains on 2 sides



Intensifier Pump **NEOLine 40i**

- **Maximum power and reliability for pure-water and abrasive cutting operations**
- **Superior operation safety and ease of maintenance**
- Hydraulic drive with axial-piston pump
- Infinitely variable pressure control via CNC
- Pressure booster, complete with high-pressure tubing
- Relief valve integrated in the high-pressure circuit

Specifications High-Pressure NEOLine 40i Intensifier Pump

Nominal power rate	40 Hp
Max. continuous pressure	55,000 psi
Max. water flow rate (@ full pressure)	0.72 gpm
Max. single orifice dia. (@ full pressure)	0.012 in
Hydraulic reservoir capacity	32 gal
Cooling water flow @ 75°(24° C) Water Temp	<3 gpm
Attenuator volume	0.26 gal
Overall dimensions (L x W x H)	58 x 49 x 41.6 in
Weight	2,000 lb

NEW with **KMT NEOLine 40i** **Intensifier Pump!**

- **High power**
- **Low consumption**
- **Minimal maintenance cost**



CNC Cutting with GPlus 450 Cut

features the ideal user-interface

to accommodate the special requirements of 2D Water-Jet Cutting

Intuitive programming

- **easy, user-oriented operation** allows quick creation of programs
- **geometry imports** from DXF and DIN/ISO program files
- faulty geometries can be repaired and edited with the **integrated DXF Analyzer**
- **50 standard macros** simplify the creation of a wide variety of geometries
- **instant display** of all starting cut changes in the drawing with simulation option
- **optimum material utilization** via grid nesting function with critical features like turning, mirroring, and manual sorting
- **material database with plate management function** - for the management of all customer-specific data on machined materials, including cutting technology data, and dimensions

- **optimum contour approach** made possible by a multitude of definable starting cut conditions differentiating between circular and non-circular inside and outside contours
- **zoom feature** - enlarges the part view and all starting cuts

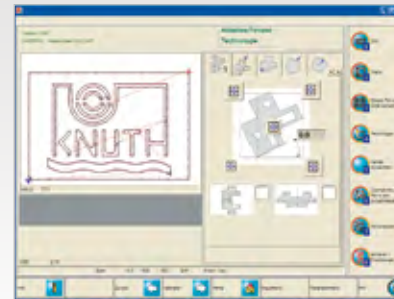
Accessories

- **contour nesting**, allows nesting of several workpiece types on just one plate

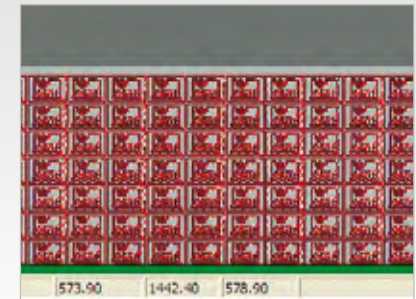
Samples of Parameter Help Graphics



Plate and Parameter Database



Technology and Machine Setup



Grid Nesting (rectangular nesting)



GPlus Cut - our Windows-based CNC control system for Cutting Systems

Quick - powerful - user-oriented: key hardware facts

- **Workshop-oriented programming** at the control or external programming (CAD/CAM)
- **450 NC blocks/sec**, 200 sets LookAhead
- The GPlus 450 features a **17" TFT color monitor** shows all data for a user-friendly programming experience and easy operation
- Status messages show the user the current state of the control
- **Graphic simulation** with integrated Zoom function for a detailed display of the actual chip removal
- A standard 10/100 MBit Ethernet interface and **USB port** allow fast data transfers from externally created programs (CAD/CAM) and saving these on the GPlus 450 hard drive
- **Single CPU concept** (advantage: ties up only 2% of the system capacity)
- **40 GB storage**, , 2.0 GHz Intel Celeron processor, 256 MB RAM
- **Worldwide remote diagnostics**
- Profibus, CANopen, DeviceNet implementation is possible
- **Easy integration** of the machine in factory networks
- **The mobile hand-held** device combines practical and compact controls to simplify machine setup



Your GPlus Advantage

- easy to learn without prior DIN-ISO programming knowledge - from newcomers to professional users
- short learning curve for experienced users - immediate productivity
- quick programming directly at the machine, or easy transfer of programs to minimize down-times
- GPlus Support for any programming questions and quick assistance for problems