THE HEART OF WATERJET CUTTING

STREAMLINE SL-VI

The Right Solution for Every Application

High Pressure Pumps

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The right solution for every application

With the introduction of the new modular STREAMLINE SL-VI series of high pressure pumps for waterjet cutting, KMT Waterjet Systems offers the ideal technology for every requirement – from occasional cutting needs to multi-shift operation. Depending on the application the pump is needed for, customers can choose from different pressure ranges, motorizations and configuration levels.

Different configuration levels to cover any demand

- Pressure Range

KMT offers the STREAMLINE SL-VI pump at three pressure levels. The PRO intensifier enables waterjet cutting at 6,200 bar for maximum performance. The model type PLUS operates at a pressure level of 4,100 bar, and the type STD allows for a maximum pressure of 3,800 bar.

- Motorization

The STREAMLINE SL-VI high pressure pump will be available with motor ratings from 15 to 200 HP (11 to 149 kW). The first release of the pump will include a 30 and 50 HP motor for the PLUS and STD intensifier as well as a 60 HP motor for the PRO intensifier – other motor ratings to follow.

- Configuration

The different configuration possibilities range from the *Stripped* model without electrical cabinet, doors and cover for complete integration into the centralized control unit of an entire turnkey system to basic stand-alone machines for occasional cutting needs to fully equipped pumps which enable the most demanding cutting applications in an industrial environment.

Unsurpassed productivity

Waterjet cutting at 6,200 bar has a few major advantages which are particularly relevant for efficiency where operators need to cut thick and/or very hard materials. The high operating pressure improves conformality as well as the quality of the cut edge compared to traditional 4,000 bar applications.

- Depending on the material and its thickness, cutting with 6,200 bar allows operators to increase the cutting speed by up to 50%. In some applications, the increase is even higher.
- Higher operating pressures improve conformality as well as the quality of the cut edge. In many cases, there is no need for reworking cut edges.
- Cutting with 6,200 bar significantly reduces the consumption of abrasive.
- Thanks to the increased cutting speed, more workpieces can be cut in the same time. This leads to lower costs per piece.
- The high working pressure when piercing and cutting the workpiece reduces the delamination for composite material.

High Pressure Pumps

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With the new series of STREAMLINE SL-VI high pressure pumps for waterjet cutting, KMT Waterjet Systems optimizes their complete range of high pressure intensifier pumps. Based on four frames in different sizes, the SL-VI series will grant the KMT customers an unprecedented choice of configuration possibilities. And while being based on tried and tested technology, the SL-VI comes up with some considerable improvements compared to the predecessor model.

Higher performance at the same motor rating

The KMT Waterjet engineers were able to optimize the motor performance and with it the flow rate of the high pressure water. This leads to an **increased maximum orifice size** and thus to an **increased productivity**.

For example, the maximum possible orifice size for a 50 HP pump operating at 4,100 bar can be increased from 0.013" to 0.014" (0.33 mm to 0.35 mm).

Harmonized PLC platform

KMT has globally harmonized the PLC platform used for the control of the intensifier pumps thus being able to service their customers even better and more consistently when it comes to the electrical system. The new Siemens Control features 11 operating languages, soft start to optimize the power consumption as well as a network cable and USB port next to the display.

Top cover guard interlock design

The top cover is made of transparent material. Therefore, a visual inspection of the intensifier assembly is possible without the necessity to open the cover. Moreover, the top cover guard interlock design meets the EN ISO 13849-1 safety performance standard thus providing **increased operational safety** when working with the pump.

Patented intensifier technology

The new patented Curve-On-Curve Design of our intensifiers allows for a longer lifetime of the cylinder body / seal head connection. The optimized geometry of the metal-on-metal seals facilitates the installation and endures more maintenance cycles than conventional technologies.

The plunger of every SL-VI pump model consists of a ceramic material. Compared to a metal plunger, the harder and smoother surface resists better against wear, eliminates scoring and increases seal lifetimes.

Improvements for the customer's benefit

As usual, KMT's engineers sought to optimize the new pump model for the customer's benefit. The motor allows for multi input voltages and has been upgraded to IE3 according to the norm EC 640/2009. This leads to an **optimized motor efficiency**.

On customer's choice, the pump can be equipped with an Oil/Water Heat Exchanger or with an Oil/Air Cooler.

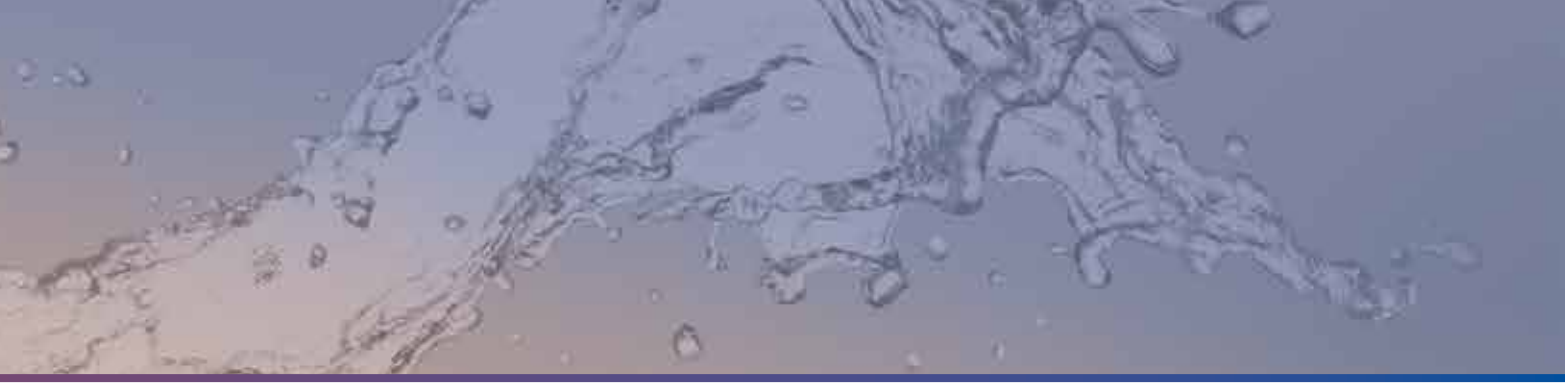


		PRO	PLUS		STD
Description	**Unit**	**60**	**50**	**30***	**50**
Motor Rating	kW/hp	45 / 60	37 / 50	22 / 30	37 / 50
Pressure Range	bar	800 - 6,200	500 - 4,100		500 - 3,800
Max. Flow Rate at max. Pressure	l/min	3.4	4.1	2.6	4.1
Length	mm	2,095	1,689		1,689
Width	mm	1,320	1,114		1,114
Height	mm	1,508	1,508		1,508
Cutting Water Circuit					
Intensification Ratio		38.5 : 1	20 : 1	20 : 1	20 : 1
Max. Stroke Rate	1/min	54	60	38	60
Attenuator Volume	l	1.6	2	1	1
Cutting Water Inlet Pressure	bar	2.4 - 5.5	2.4 - 5.5	2.4 - 5.5	2.4 - 5.5
Min. Cutting Water Inlet Flow	l/min	12	16	11	16
Low Pressure Filter	µm abs.	10	10	10	10
Electric					
Nom. Current at 400V/50Hz	A	90	72	44	72
Fuse Size		For the necessary fuse size please adhere to your local requirements			
Hydraulics					
Hydraulic Tank Capacity	l	220	150	150	150
Oil Level and Temperature Control		Sensor	Sensor	Sensor	Sensor
Standard Features & Options					
Redundant Intensifier		O		O	
High Pressure Transducer		●		O	
Dual Pressure Setting		–		●	
Proportional Control		●		O	
Soft Start		●		●	
Cutting Water Inlet Shut-Off Valve		●		●	
Safety Dump Valve		●		●	
Adjustable Booster Pump		●		●	
Oil Drip Pan		●		●	
Max. Number of Orifices at max. Pressure [mm]					
0.10** / 0.12** / 0.15**		7 / 4 / 3	13 / 8 / 5	8 / 5 / 3	14 / 9 / 6
0.17		2	4	2	4
0.20		1	3	2	3
0.25		1	2	1	2
0.30		0	1	0	1
0.33		0	1	0	1
0.35		0	1	0	1
0.38		0	0	0	1

The following applies to all pumps:

CE Mark according to EC Machinery Directive
Min. pneumatic air pressure 5.9 bar
Max. pneumatic air flow rate 28.3 l/min
Ambient temperature at Oil-to-Water cooling circuit 5 - 40 °C
Ambient temperature at Oil-to-Air cooling circuit 5 - 30 °C

* On request
** This orifice size is used for pure water cutting only.
● Standard O Option



Configuration Level *Stripped*

No electrical cabinet, controls, doors and top cover

		PRO	PLUS		STD
Description	**Unit**	**60**	**50**	**30***	**50**
Motor Rating	kW/hp	45 / 60	37 / 50	22 / 30	37 / 50
Pressure Range	bar	800 – 6,200	500 - 4,100		500 - 3,800
Max. Flow Rate at max. Pressure	l/min	3.4	4.1	2.6	4.1
Length	mm	2,095	1,689		1,689
Width	mm	1,320	1,114		1,114
Height	mm	1,376	1,376		1,376
Cutting Water Circuit					
Intensification Ratio		38.5 : 1	20 : 1	20 : 1	20 : 1
Max. Stroke Rate	1/min	54	60	38	60
Attenuator Volume	l	1.6	2	1	1
Cutting Water Inlet Pressure	bar	2.4 - 5.5	2.4 - 5.5	2.4 - 5.5	2.4 - 5.5
Min. Cutting Water Inlet Flow	l/min	12	16	11	16
Low Pressure Filter	µm abs.	10	10	10	10
Electric					
Nom. Current at 400V/50Hz	A	90	72	44	72
Fuse Size		For the necessary fuse size please adhere to your local requirements			
Hydraulics					
Hydraulic Tank Capacity	l	220	150	150	150
Oil Level and Temperature Control		Sensor	Sensor	Sensor	Sensor
Standard Features & Options					
Redundant Intensifier		O		O	
High Pressure Transducer		●		O	
Dual Pressure Setting		–		●	
Proportional Control		●		O	
Soft Start		●		●	
Cutting Water Inlet Shut-Off Valve		●		●	
Safety Dump Valve		●		●	
Adjustable Booster Pump		●		●	
Oil Drip Pan		●		●	
Control Cabinet		O		O	
Electrical Controls		O		O	
Doors		O		O	
Top Cover		O		O	
Max. Number of Orifices at max. Pressure ➔ see table on the left					

The following applies to all pumps:

Including Declaration of Incorporation
Min. pneumatic air pressure 5.9 bar
Max. pneumatic air flow rate 28.3 l/min
Ambient temperature at Oil-to-Water cooling circuit 5 - 40 °C
Ambient temperature at Oil-to-Air cooling circuit 5 - 30 °C

* On request

● Standard O Option

KMT GmbH • KMT Waterjet Systems
Hohe Straße 4-6 ■ 61231 Bad Nauheim ■ Germany
Phone: +49-6032-997-0 ■ Fax: +49-6032-997-270
www.kmt-waterjet.com ■ info@kmt-waterjet.com

KMT Waterjet Systems Inc.
635 West 12th Street ■ Baxter Springs ■ KS 66713
USA
Phone: +1-620-856-2151

KMT Machine Tool Ltd.
No. 251 Ri Ying Nan Road ■ WaiGaoQiao Free Trade Zone
Shanghai, 200131 ■ China
Phone: +86-21-5048-4621

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