

uva **Nomyline**

Customized grinding solutions for high precision product components



ABOUT US

UVA LIDKÖPING develops, markets, manufactures, and installs high-precision grinding machines with surrounding equipment within the area of high precision grinding. We market our products under the trademarks LIDKÖPING and UVA. UVA LIDKÖPING business areas include grinding machines, and complete aftermarket solutions that include service, productivity enhancing upgrades, and rebuilds.

UVA LIDKÖPING has delivered over 10 000 machines, and is represented in every part of the industrialized world. With over a 100 year old tradition of engineering excellence, UVA LIDKÖPING is today a high-technology company in the vanguard of grinding research and development.

Extensive knowledge and grinding experience gives UVA LIDKÖPING a powerful technological advantage and our products are recognized for their consistently high performance and quality. Customers include many of the world's leading producers in the bearing, automotive and hydraulic industries.

TECHNICAL MILESTONES

1943	First UVA internal Grinder
1980	U80 series and CNC
1989	U88 series and UVATRONIC 2
2000	External handling
2001	Linear motors
2002	Nomyline series
2006	Uvatronic 3
2008	Nomyline UVAe - First Nomyline external grinder.
2011	UVA external loader with palett handling system.
2013	Nomyline UVAe multi axis concep
2015	Nomyline UVAe twin grinder
2017	Flexible bearing grinding solution

Advanced precision grinding specialists

UVA LIDKÖPING produces modular grinding solutions for small, high precision product components under the trademark UVA. We are committed to innovation and performance through precision in all aspects of our work and to added-value for customers through customized, high-speed, high volume solutions.

DEMAND FOR SPECIALIZED TECHNOLOGY

Since the mid-1960s, we have been the world's leading producer of grinding machines for fuel injection components for internal combustion engines, especially diesel. In today's market, we face excellent opportunities for continued growth. Increasingly stringent fuel consumption and emission require-ments and new injection systems for alternative fuels are triggering the development of new fuel technology. In addition, more and more passenger cars are utilizing diesel technology.

SYNERGISTIC RESEARCH AND DEVELOPMENT

In 2001, we introduced UVA Nomyline, the world's first grinding system to capitalize on linear servo-motor and hydrostatic slide technology. With fewer components and no contact, wear-free movable parts, UVA Nomyline systems run by UVA LIDKÖPING trained operators offer more than 98 % uptime for customers.

UVA Nomyline also features UVATRONIC, our proprietary CNC system, which is specially designed to optimize UVA LIDKÖPING products and processes. The precision of our systems is backed by our vast grinding knowhow and extensive metrological resources for test-grinding and measurement.

NOT JUST A SUPPLIER BUT A PARTNER

We count world-renowned companies such as Bosch, Siemens, Delphi, Caterpillar, and Cummins among our satisfied customers.

With our specialized know- how, customers know they can trust us for superior product quality. In many cases, we provide concurrent engineering services, such as feasibility studies and test and prototype grinding, long before our machines are even ordered.

WORLDWIDE STRENGTH

We offer worldwide aftermarket support through locally-based service and spare part supply.

More than just high tech grinding machines

The UVA Nomyline is a modular system that can be highly customized for today's grinding challenges. Yet its flexible design makes it easy to retool when needed to meet future business and product demands. An investment in a Nomyline promises a lifetime return in profitable, grinding performance.

SUPERIOR GRINDING TECHNOLOGY

UVA Nomyline solutions feature multiple spindles and chucks, complex and parallel grinding processes, and integrated accessories for complete automation. Each UVA Nomyline accessory has been specially designed to optimize the capability of each solution. The result is better grinding precision, higher production volume, and more system uptime.

STANDARD YET CUSTOMIZED

Many grinding systems on the market today offer modularized machine construction. But we have taken the concept farther by offering virtually standard yet customized grinding solutions.

Depending on the application, standard machine modules comprise 80 - 95 % of a UVA Nomyline solution. UVA Nomyline's unique and competitive strength, however, is its wide array of proprietary, easily adaptable addon tooling and accessories for completely customized applications.

UVATRONIC

UVATRONIC is our own PC-based computerized numerical control (CNC) system, a key software tool for UVA Nomyline applications. UVATRONIC controls not only the machine but the entire grinding process.

With UVATRONIC, UVA Nomyline technology can be easily updated and adapted for the production of other specialized automotive components, such as other fuel injection components, needles and plungers as well as components for valve trains, transmissions, air conditioning compressors, power-steering, and braking systems.

UVA Nomyline component production systems are also used in the aerospace and hydraulics industries.





UVA NOMYLINE PLATFORM

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UVAi Multiple internal grinding operations in a single chucking.

UVAi Twin Cuts cycle time by half or more.

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UVAe For multiple grinding operations and complicated profile dressing.

UVAie Internal and external grinding in a single chucking.

UVAi Index Successive grinding operations performed simultaneous.

UVAi mc Middle clamping, simultaneous grinding from both sides.



Machine Program



UVAI - FOR INTERNAL GRINDING

Excellent for multiple grinding operations in a single chucking or batch production with quick changeover. Up to five internal, or four internal and one face grinding operation in a single chucking.

UVAE - FOR EXTERNAL GRINDING

Perfect for multiple plunge grinding operations and complicated profile dressing. Also suitable for cubic boron nitride (CBN) abrasives and match grinding. Infeed angle of 10–30° for chucked or center-supported workpieces.



UVAI TWIN - FOR PARALLEL INTERNAL GRINDING

Two parallel grinding processes and automatic loading cut cycle time by half or more compared to conventional multispindle machines. Two workheads with three internal, or two internal and one face grinding operation per workhead.



UVAIE - FOR INTERNAL AND EXTERNAL GRINDING

Internal and external grinding for improved quality and productivity. Multiple grinding operations in a single chucking.

UVAI INDEX

Two indexing workheads and a double cross slide with two top slides. Successive grinding operations performed simultaneous e.g. Bore and seat.



UVAI MC - MIDDLE CLAMPING

Simultaneous grinding from both sides gives improved geometry and high output.

Application Examples



Pump UVAi - Internal and Face



Nozzle UVAi - Internal and Face



Plate UVAie - Internal and Face



Valve Lifter UVAi - Internal



Pump Body UVAi - Internal



Pump Head UVAie - External and Internal



Needle UVAe - External



Nozzle UVAe - External



Nozzle UVAie - External and Internal



Nozzle Control Valve UVAi - Internal, Bore and Seat



Body UVAi - Bore and Seat



Pin UVAe - External

Technical Data

Please note that all data stated are correct at time of printing but are subject to change.

Machine Capacity	UVAi	UVAi Twin	UVAe	UVAie	UVAi Index	UVAi mc
Grinding diameter, Ø mm	0.5 - 100	0.5 - 36	1.0 - 80	1.0 - 36	0.5 - 36	1.0 - 36
Max. clamping diameter, Ø mm	120	40	80	40	40	40
Max. grinding length, mm	200	120	160	160	80	80
Tablestroke	250	250	250	250	150	150
Cross slide stroke	550	2x250	250	120/550	2x250	250/500

HF Grinding Spindles

Power, kW	0.4 – 10	0.4 - 5.0	9	0.4 - 5.0	0.4 - 5.0	0.4 - 5.0
Speed, rpm	18,000 - 180,000	45,000 - 180,000	6000	45,000 - 180,000	45,000 - 180,000	45,000 - 180,000
Wheel size, Ø mm	< 50	< 26	-	< 26	< 26	< 26
Spindles, max. number	5	6	1	3	4	4/6

OD/Face Wheelheads

Power, kW	4.0 / 2.2	2.2 / 4	9	7.5	2.2 / 4	4
Speed, rpm	1,500 / 11,200	11,200 / 6,000	1,500 / 6,000	1,500 / 6,000	11,200 / 6,000	6000
Wheel size, Ø mm	230 / 75	75 / 125	400 / 500	400	75 / 125	50
Cutting speed m/s max	-	-	60 / 120	60 / 120	-	-

Dimensions and Weight

Machine length, mm	2,300	2,300	2,300	2,300	2,300	2,500
Machine width, mm	1,800	1,800	1,800	1,800	1,800	1,800
Machine height, mm	2,200	2,200	2,200	2,200	2,200	2,200
Floor footprint, m ²	12	12	12	12	12	13
Shipping weight, kg	5,000	6,000	6,000	6,000	6,000	6,500

UVA LIDKÖPING reserves the right to change above data without advising.

Customize

Modules to customize the machine to the customers' application. UVA Nomyline components have been specially designed by UVA LIDKÖPING to satisfy customers' unique precision needs.



GRINDING SPINDLES

For grinding small bores and seats. Rotation speed of 45,000–150,000 rpm. Superb accuracy for superior grinding quality.



DRESSING

Proprietary grinding wheel dressing devices to insure correct geometry and cutting characteristics.



PIVOTING SPINDLE HOLDER

Unique to UVA LIDKÖPING. Proprietary technology that compensates for quill bending. Dramatically higher grinding precision.



CHUCKS

Large selection with extensive choice of clamping tooling to meet specialized production needs. Extremely precise and consistent clamping with no component deformation.



AUTOMATIC LOADING

Standard option. Reduces cycle time and improves component quality through extremely consistent loading. Palette loading system - External loader with palett handling system.

DIRECT DRIVEN WORKHEAD

Torque motor direct driven.Hydrostatic radial and axial bearings. Stepless programmable speed from 0 to 3 000 rpm.



MEASURING STATION High resolution pneumatic measuring station for pre and post process and match grinding.



DOUBLE CROSS SLIDE

Linear motor driven & hydrostatic. Positioning repeat-ability $<0,1~\mu m.$ Straightness over 30 mm $<0,1~\mu m.$



UVATRONIC 3

The technology brain that brings it all together.

- World's first system for grinding. Launched 1979.
- Second generation UVATRONIC launched 1989. Current UVATRONIC 3
- Powerful control supporting 64 axes and 12 channels.
- Handles a complete Nomyline machine with up to 4 simultaneous grinding operations and multiple loaders.
- In-house support and knowledge. Open architecture to accommodate addon systems such as external robots, palletizers, deburring, flushing, gauging etc.
- Flexible auto cycle with extended option selections without reprogramming.

- Correctors for inprocess adjustments and function selections, e.g. forcing wheel dress and wheelchange.
- Guided menus with text and pictures used for reference settings etc.
- PC based system for easy intranet connection and remote diagnostics.
- Extensive alarms and messages for fault diagnostics without the need for PLC program inspection.



Aftermarket Services

Ongoing value through continuous precision

The creation of value through precision does not end the day we deliver a machine. In fact, our aftermarket program to keep customer systems functioning at peak efficiency represents a third and growing portion of our total turnover.

SPARE PARTS AND SERVICE

We guarantee worldwide availability of spare parts for ten years (five years for certain electronic components). But in most cases, we will support and deliver spare parts to machines more than 25 years old. We maintain a large spare part inventory and, as the system designer, can deliver the correct spare quickly. We assume full responsibility for our machines and systems and use locally based, trained service technicians in all our major markets.

UPGRADE KITS

We offer upgrade kits that customers can install themselves. The kit is comprised of a set of customized improvements to be installed on site. The upgrades are designed to modernize and improve machine performance as cost-effectively as possible.

REBUILDS

Our machines typically outlive their designed function. But thanks to their modular construction, they can be rebuilt and retooled for a fraction of the cost of a new machine. We offer the same warranty on a rebuilt machine as on a new one.

PREVENTIVE MAINTENANCE AND RECONDITIONING

About once a year, our trained technicians measure the accuracy of our systems' functions and compare the results to company standards and to those from previous inspections, and, as needed, recommend reconditioning measures for improved performance.

PROCESS OPTIMIZATION

Upon request, our experts will conduct a comprehensive review of a customer's production process, update grinding wheel specifications and process parameters, and install new tooling, as needed. Process optimization represents significant cost savings for customers who depend on optimal machine and system performance.

UVA LIDKÖPING GLOBAL PRESENCE



SALES AND SERVICE OFFICES

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