



Ceramic

PRODUCT INFORMATION



ECCO
ECCO FINISHING

Spraying Ceramic Glaze

Ecco Finishing has more than 80 years experience of supplying spray guns to the ceramic industry. The Ecco guns are, thanks to their robust design, resistant to the extremely hard wear from the types of fluids sprayed in the ceramic industry. The unique fluid needle packing system of the Ecco spray guns offer extended service without leakage. The high resistance towards abrasive fluid is typical for all Ecco spray guns, and is due mainly to the material in the gun body and the design and positions of the fluid channels. The spray guns are, in addition to steel needle, also available with fluid needle and fluid nozzle in tungsten carbide for very abrasive materials like glaze and vitreous enamel.



For supplying all types of material to the spray guns in the ceramic industry, the Ecco Flow Diaphragm Pumps AL15, ALT25, CT15, PN15, PT15 and SS15 are used. Within the ceramic industry, Ecco guns and pumps are used for several different areas, for example:

- Spraying on ceramic tiles
- Spraying on table ware
- Spraying on sanitary ware



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Application Areas

Ceramic Tiles

Spraying on ceramic tiles, where an abrasive fluid is sprayed on the tiles in several layers. For spraying on ceramic tiles the automatic spray guns Ecco 40DA, Ecco 60AS, Ecco 71FA and Ecco 40FA are recommended. Depending on the material being sprayed, fluid nozzle and needle can be in steel or in tungsten carbide. For airless spraying of abrasive materials the airless spray tip ECCOMANT in tungsten carbide, mounted onto an automatic airless spray gun for continuous spraying on the ceramic surface. The ECCOMANT spray tips give a uniform spray pattern and extended service life. They are available in sizes from 0.005" up to 0.082".



Table ware

The extremely abrasive material glaze is sprayed on table ware, for example plates and cups, in one or several layers. For spraying of glaze, the spray guns Ecco 40S, Ecco 40DA and Ecco 75AP are frequently used, normally equipped with a tungsten carbide needle and nozzle. For fixed automatic installations the spray gun Ecco 40DA or Ecco 60AS is the perfect choice. On modern robot installations for spraying glaze on sanitary ware, the automatic spray gun Ecco 75AP with tungsten needle and nozzle is a perfect solution, available with or without circulation. Ecco 75AP is capable of handling material fluids up to 7 litre per minute per gun. The stable and precise spraying result gives a high quality finish and a minimum of production stops.



Sanitary Ware

On sanitary ware, for example water closets and wash basins, glaze is sprayed on the product in one or several layers. For spraying of glaze with fixed automatic installations, the spray gun Ecco 40DA is frequently used, normally equipped with a tungsten carbide nozzle. For manual applications, Ecco 40 with tungsten carbide needle and nozzle is used.

On modern robot installations for spraying glaze on sanitary ware, the automatic spray gun Ecco 70AS with tungsten carbide needle and nozzle is a perfect solution, with or without circulation. Ecco 70AS is capable of handling material fluids up to 7 litre per minute. The stable and precise spraying result gives a high quality finish and a minimum of production stops.



Ecco Feed Spray Pack

Ready-to-use spraying units

Thanks to the exclusive use of high wear resistant materials and equipments, Spray Packs are perfectly adapted for use with abrasive materials such as glaze or vitreous enamel. The Ecco Feed Spray Packs are using air powered piston or diaphragm pumps. Compact and light equipment, ready-to-use and easy to clean.

An Ecco Feed Spray Pack consists of:

- Paint feeding pump with silencer and strainer
- Paint pressure regulator with gauge for precise settings of the material pressure. The regulator also works as a pulsation damper
- Regulator with gauge for precise settings of the air pressure
- An Ecco 40 spray gun including a paint nozzle and air cap that can handle the most common fluids. Tungsten carbide nozzles are available on request.
- All necessary valves, hoses and couplings
- Earthing device

Spray Pack 115 (diaphragm pump)

Complete spraying unit mounted on a tubular steel frame, bracket for wall mounting or on a lid for 20 lit. container. Max. air pressure 8 bar, max paint pressure 8 bar. The Spray Pack units are equipped with stainless steel nozzles. Nozzles in tungsten carbide are available on request.



The Spray Packs consists of:
 Paint feeding unit Ecco Feed 115, -615
 Spray gun: Ecco 40
 Ecco Ergotube 5 m (3/8" air hose & 4mm paint hose)

Units with spray gun Ecco 40S:	
Spray Pack 115 (steel frame)	8613 2311 57
Spray Pack 115L (lid for container 20 lit.)	8613 2311 58
Spray Pack 115B (for wall mounting)	8613 2311 59

Ecco PSU-20

One pump for all needs in low pressure systems for material feeding, local or central. Suitable for all types of abrasive material. The same type of panel with stand is used for the different systems. This gives an easy installation and makes it easy to keep clean during operation. All parts in the stand and paint systems are made in stainless steel for optimal function.

The construction gives a very clean surface around the system. All the hoses and connections are placed in the same height as the pump panel and is protected by this. The whole design gives a very low sound-level and operative cost, often reduced by 50% or more.

The unit is very user friendly and easy to install and service. The operator has all information clearly displayed and labelled. All service can be done rapidly on the functional parts without any risk of splashing material or solvent.

Paint Supply Unit (PSU)



Solvent flushing system	6004 0163 80
Base-/Clear coat system	6004 0163 70
Catalyst system	6004 0163 90

Ecco 40S Manual spray gun

Pressure feed & Gravity Feed

Pressure feed - Ecco 40S



Pressure feed spray gun, with robust design and high quality components. The material is supplied from pressure pots, pumps or circulation system. Stainless Steel material channels as standard, tungsten carbide needle and nozzle available. High quality components and easy maintenance makes this gun ideal for the ceramic industry.

Technical data

Fluid nozzles	1,3 -2,7 mm
Fluid connection	G 3/8
Air connection	G 1/4
Air pressure	max. 7 bar
Air consumption	250 - 700 l/min
Weight	568 g

Viscosity SIS/DIN 4 (sec.)	Paint nozzle Ø mm	Air Cap	Ord. no.
30-40	1.3	T272	8611 4049 13
40-50	1.8	T272	8611 4049 18
50-70	2.1	T374	8611 4049 21
70-90	2.7	T474	8611 4049 27

Gravity feed - Ecco 402S



Gravity feed spray gun, where the sprayed material is supplied from a 0,5 litre paint cup. Paint channels in stainless steel for long life-time, also when spraying glaze or vitrous enamel. Fluid needles and nozzles in tungsten carbide is available.

Technical data

Fluid nozzles	1,3 - 2,7 mm
Fluid connection	G 3/8
Air connection	G 1/4
Air pressure	max. 7 bar
Air consumption	200 - 500 l/min
Weight	654 g

Viscosity SIS/DIN 4 (sec.)	Paint nozzle Ø mm	Air Cap	Ord. no.
30-40	1.3	271	8611 4029 13
40-50	1.8	271	8611 4029 18
50-70	2.1	375	8611 4029 21
70-90	2.7	475	8611 4029 27

Ecco Automatic spray guns

The Ecco Automatic spray guns are durable and ensure excellent finish at high production levels.

- For mounting on robots or reciprocators
- Simple and rigid mounting
- External control of spraying parameters
- Durable spray gun ensure excellent finish to meet high production levels
- Unique technology in air cap design and manufacturing gives a controlled spraying process.

- Service friendly
- Suitable for all types and flow rates of liquid material.
- Large variability in types, sizes and materials of fluid nozzles, air caps and fluid needles. (SS, Tungsten Carbide, Zirconium and titanium)

Ecco 70 AS



For use with water or solvent borne materials on all types of robots and reciprocators. Ecco 70 ensures a uniform spray pattern even after replacement of air cap and fluid nozzle. Due to reduced internal pressure drop of atomizing and fan air, the Ecco 70 can stabilize the output parameters. Atomizing and fan air is completely separated from the inlet to the air cap. Exterior surfaces are easy to clean and treated to ensure minimum dirt collection

Options: Needle sensor, mounting plate for reciprocator or robot, strainer inserts 10 µ - 250 µ.

Technical data	Ecco 70AS
Weight	960 g
Housing	SS
Cylinder	Alu/Tuf*
Nozzle	SS or TC**
Air cap	Alu/Tuf*
Needle	4 mm SS or TC**
Sealings	Teflon/Perfl.***

* Tuf is a unique process of hardening and reducing friction on aluminium
 ** Tungsten Carbide *** Perfluor 128 is equal to Kalrez 4079

Ecco 70AS 8611 6171 XX

When ordering, please state fluid nozzle, air cap and fluid needle (see spare part list)

Air Ventilation for Back Ecco 75

Intended for guns used in polluted atmosphere. Allows the cylinder of the gun to breath without any risk for contamination of the cylinder and piston.



Air ventilation back 6004 0176 30

Ecco 75AP

The Ecco 75 AP is an improved Ecco 70AS for sensitive applications with high demands on purging and colour changing efficiency. The internal paint volume is reduced by 70% and all the threads in contact with paint is eliminated. Angles of paint channels is optimized for best possible cleaning effect. The seal arrangement between gun and manifold are designed to prevent fluid to be trapped. This to reduce the risk of contamination of the paint e.g. after a colour change. New type of piston and piston sealing (UHMW) used for improved performance. Ecco 70AP is designed for applications where the areas are small and narrow.

The gun represent the latest development in automatic guns. Well-known technology has been used in the air caps and nozzles, in combination with new design on the gun body. The result is a very compact unit with highest possible core values in performance. TCP and interface is equal to the Ecco 70 models.



Technical data	Ecco 75AP
Weight	490g
Body	SS
Nozzle	SS, Tungsten C.
Air Cap	Alu/Tuf*
Needle	4 mm SS, Tungsten C., Ceramic
Sealings	Teflon/Perfl., UHMV

* Tuf is a unique process of hardening and reducing friction on aluminium
 ** Tungsten Carbide *** Perfluor 128 is equal to Kalrez 4079

Ecco 75AP 8611 6175 XX

Ecco Automatic spray guns

Ecco 60AS, Ecco 65AS

The Ecco 60AS and Ecco 65AS are compact and well suited for mounting on reciprocators and robot arms. The paint needle has air operated opening and closing by spring action. The short reaction time ensures a perfect spraying result and low paint consumption. The needle seal is adjustable during operation. Simple and rigid mounting. Precise alignment by locating pin. Large paint supply control with exact setting with stepped positions.

Ecco 60AS/65AS are stainless steel versions for abrasive and corrosive fluids. The guns are service friendly, requiring only standard tools.



Technical data - Ecco 60AS

Paint nozzles	1.3 - 2.7 mm
Paint connection	G 3/8
Air connection	Ø 8 and 10 mm
Air pressure	max. 7 bar
Air consumption	250 - 700 l/min
Weight	837 g

Viscosity SIS/DIN 4 (sec.)	Paint nozzle Ø mm	Air cap	Ord. no.
10 - 35	1.3	T272	8611 6160 90 (TC)
15 - 40	1.5	T272	8611 6160 67 (SS)
20 - 50	1.8	T278	8611 6160 94 (TC)
25 - 85	2.1	T374	8611 6160 91 (TC)
30 - 90	2.7	T474	8611 6160 73 (TC)

Accessories

Kit for remote fan width control (Ecco 60AS)	6003 6691 80
Kit for remote fan width control (Ecco 65AS)	6003 9697 80



Technical data - Ecco 65AS

Paint nozzles	1.4 - 2.7 mm
Paint connection	G 3/8
Air connection	Ø 8 and 10 mm
Air pressure	max. 3 bar
Air consumption	approx. 260 l/min
Weight	828 g

Viscosity SIS/DIN 4 (sec.)	Paint nozzle Ø mm	Ord. no.
25 - 40	1.4	8611 6549 14 (TC)
30 - 55	1.8	8611 6549 18 (TC)
35 - 85	2.1	8611 6549 21 (TC)
40 - 90	2.7	8611 6549 27 (SS)

Ecco 40DA



The Ecco 40DA is an automatic spray gun for spraying abrasive and other similar material (i.e. vitreous enamel). The gun has no paint needle. The material flow is accurately controlled by a diaphragm, sealing against a tungsten carbide seat. The gun is small and easy to install.

Technical data

Pain nozzle diam.	1,3 - 2,7 mm
Paint connection	G 3/8
Air connection	G 1/4
Air pressure	max. 6 bar
Air consumption	250 - 700 l/min
Weight	305 g

Paint nozzle Ø mm/Air cap type	Material	
1.3 mm/T275	Tung. C	8611 5210 77
1.5 mm/T272	SS	8611 5210 10
1.8 mm/T274	Tung. C	8611 5210 71
2.1 mm/T374	Tung. C	8611 5210 41
2.7 mm /T474	Tung.C	8611 5210 65

Accessories

Kit for remote fan width control (Ecco 40DA)	6101 5627 90
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For more combinations see spare part list

Ecco 40 FA and Ecco 71 FA

Ecco 40FA



The Ecco 40FA is an automatic spray gun for spraying abrasive and other similar material (i.e. vitreous enamel). The gun has no paint needle. The material flow shall be controlled externally, paint nozzle in tungsten carbide for long lifetime. The gun is small and easy to install on a 13 mm beam. Atomizing air and fan air separately fed by external air supply.

Technical data

Fluid nozzle diam.	1,3 - 2,7 mm
Fluid connection	G 3/8
Air connection	1/8" push in fittings for 8/6 mm hose
Air pressure	max. 8 bar
Air consumption	250 - 700 l/min
Weight	305 g

Tungsten Carbide - Fluid nozzle Ø mm/Air cap type

1,3 mm/T274	8611 5240 13
1,4 mm/T274	8611 5240 14
1,8 mm/T274	8611 5240 18
2,1 mm/T374	8611 5240 21
2,7 mm/T474	8611 5240 27

For more combinations see spare part list

Ecco 71FA



The Ecco 71FA is an automatic spray gun for spraying abrasive and other similar material (i.e. vitreous enamel). The gun has no paint needle. The material flow shall be controlled externally, paint nozzle in tungsten carbide for long lifetime. The gun is small and easy to install on mounting plates or gun adapters for robots. Equipped with Fix 4 - Air Cap locates the nozzle in 0, 90, 180 or 270 degrees. Also available with standard air caps.

Technical data

Fluid nozzle diam.	1,3 - 2,7 mm
Fluid connection	1/8" push on fittings for 8/6 and 6/4 hose
Air connection	1/8" push in fittings for 8/6 mm hose
Air pressure	max. 8 bar
Fluid Pressure	max. 8 bar
Air consumption	250 - 700 l/min
Weight	305 g

Tungsten Carbide - Fluid nozzle Ø mm/Air cap type

1,3 mm/T274 Fix 4	8611 5271 13
1,8 mm/T274 Fix 4	8611 5271 18
2,1 mm/T374 Fix 4	8611 5271 21
2,7 mm/T474 Fix 4	8611 5271 27

For more combinations see spare part list

Ecco Automatic spray gun accessories

Gun adapters for robot

All gun adapters are produced in aluminium with Tufram coating for mechanical and chemical resistance to all types of paints and solvents. The aluminium gives also better sealing surface to the gun and the hose kit, compared with plastic adapters. TCP remains unchanged to standard gun adapters. Interface for all Ecco 70 and 75 guns.



Gun adapter for robot (60°) ABB	6004 0099 00
Gun adapter for robot (90°) ABB	6004 0099 20
Gun adapter for robot (54°) Kobelco/B&M	6004 0099 30

Paint connections

Larger sized paint connections for mounting plate 6003 9770 20-25

Paint connection 3/8"	6003 9770 51
Paint connection 1/4"	6003 5798 21

Ecco Cap cleaner

The Ecco cap cleaner is the perfect choice to be used with Ecco 70/75 range of automatic guns. With this device you are securing production quality by knowing that the air cap is always clean. The 4+4 nozzles clean and dry the air cap in just a few seconds. Solvent and dumped paint material can also easily be collected for reducing waste handling in the booth. The cap cleaner is available in alternative models for single, dual or triple guns.



Ecco cap cleaner	6004 0101 00
Ecco cap cleaner twin	6004 0101 40
Ecco cap cleaner triple	6004 0101 50

Hose kits for robots

The hose kits are made to fit hollow wrist painting robots. Fluid hoses in FEP and air hoses in PU. Standard length: 4,2 meter. Sealings in PF 128 (equal to Kalrez).

Single gun ABB 580/5400	6004 0100 00
Single gun with dump valve ABB 580/5400	6004 0100 50
Single gun Kobelco/B&M	6004 0100 40

Mounting plate

This universal mounting plate is produced in SS or aluminium with Tufram coating. Interface for all Ecco 70 and 75 guns. Can be used for mounting on robots, reciprocators or other installations. Is prepared for paint circulation.



Mounting plate SS	6003 9770 20
Mounting plate Aluminium	6003 9770 25

Adapter for mounting plate

This adapter ensures right TCP with 60 or 0 degree gun angle. To be used with mounting plate 6003 9770 xx and IRB flexi wrist tool holder.



Adapter for mounting plate (60°/0°) ABB	6004 0102 00
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Ecco Pressure Feed Tanks

Closed and safe handling

The Ecco Pressure Feed Tanks are suitable for all sprayable material and provide safe storage. Having almost no wearing parts they are first choice for paints with abrasive pigments.

To prevent the build up static charge all of the tanks have an earthing device

Complete, ready for start up

The tanks are made of galvanized steel and as standard equipped with regulator, pressure gauge, safety relief valve, re-filling port and ball valves for air and paint.

You just have to fill with paint and connect to your air supply and spray gun.

Volume 9 - 90 litres. Other sizes or stainless steel versions available on request.

Pneumatic stirrer

For continuous stirring Ecco Pressure Feed Tanks with a manual stirrer can easily be equipped with an oilfree air motor.

Top or bottom feed

For more viscous materials Ecco tanks with bottom outlet should be used.

Approved and safe

Ecco Pressure Feed Tanks conforms regarding material, design and safety standards with requirements set by the Swedish and German authorities.

Pressure feed tank

Air connection: G 1/4 male. Paint connection: G 3/8 male.



10 lit. container



45 lit. container

Top feed

Type	Volume litre	Air pressure max., bar	Height mm	Inner Ø mm	Width mm	Weight kg	
P10R(S)-2.4	9	2.4	520	210	330	8	8622 0216 09
P12R-6	12	6	545	245	350	25	8622 0116 12
P12RA-6*	12	6	695	245	350	27	8622 0116 13
P24R-6*	24	6	945	245	350	32	8622 0116 24
P45R-4*	45	4	885	360	470	46	8622 0116 45
P45R-6*	45	6	885	360	470	46	8622 0116 46
P90R-6*	90	6	1165	360/440	470	63	8622 0116 90

* With manual stirrer

Bottom feed

Type	Volume litre	Air pressure max., bar	Height mm	Inner Ø mm	Width mm	Weight kg	
P24RP-6	24	6	795	245	525	30	8622 0116 25
P45RP-4	45	4	735	360	645	44	8622 0116 47
P45RP-6	45	6	735	360	645	44	8622 0116 48

For stainless steel versions, please contact your ECCO specialist.

Air motor for stirrer

Explosion proof air powered motor for Ecco tanks with stirrers. Including bracket, quick coupling for air hose, speed control valve and silencer.

Air consumption at 100 - 150 rpm: 150 - 200 l/min.



ELM 33 P

8610 0110 60

Overflow protector

Facilitates the filling of Ecco Pressure Feed Tank 12 - 500 litres.



StopFlow

6003 9157 00



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