

11

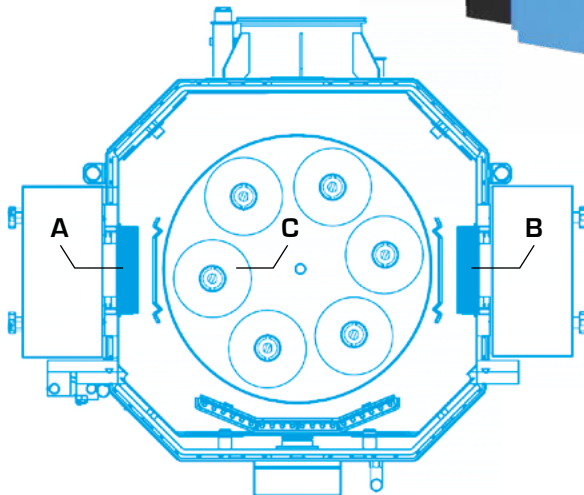
DLC SPUTTER Unit



PLATIT® 11 - Series

711 DLC SPUTTER Unit

- A Planar SPUTTER Cathode
- B Planar SPUTTER Cathode
- C Carousel



The PL711 is a compact SPUTTER coating unit based on HiPIMS technology (High Power Impulse Magnetron SPUTTERING). It's equipped with two Planar HiPIMS cathodes and allows for the deposition of selected nitride as well as carbon-based coatings (DLC2) using highly productive processes.

Technologies applied:

- 2 × Planar SPUTTER cathode with HiPIMS technology
- Dense plasma with a high ionization degree in the carousel generates homogeneous coatings and reaches a high deposition rate. Coatings from the PL711 provide outstandingly smooth surfaces with a high density, hardness and excellent adhesion.

PLATITE®



Targets
2



Signature Coatings



Cycle
≥ 8.5 h



Max. Load
250 kg



Solution
Turnkey



Service
Worldwide



711 DLC SPUTTER Unit

Specifications

Etching technologies applied:

- LGD® (Lateral Glow Discharge)
- Plasma etching with argon, glow discharge
- Metal ion etching (Ti, Cr)

Deposition types:

- SPUTTER nitride coatings
 - Reactive and non-reactive processes
 - Targets: Ti, Cr
 - Coating temperature up to 350°C
- SPUTTER Cr and PECVD a-C:H:Si
 - DLC2 (PECVD)
 - Targets: Cr
 - Coating temperature: 180 - 220 [°C]

Load and cycle times:

- Max. coating volume: \varnothing 600 × H 805 [mm]
- Max. coating height with defined coating thickness: 500 mm
- Max. load: 250 kg, higher weight upon request

2 batches / day for*:

Shank tools (2 μm):	\varnothing 8 × 70 [mm]	DLC2	540 pcs.	8.5 h
Molds and dies (3 μm):	$\leq \varnothing$ 150 × 150 [mm]	CrN	12 pcs.	12 h
Sliding mold inserts (3 μm):	25 × 150 × 10 [mm]	DLC2	72 pcs.	9–10 h

* Average cycle times in an ongoing production with max. number of cathodes in use.

Modular carousel systems:

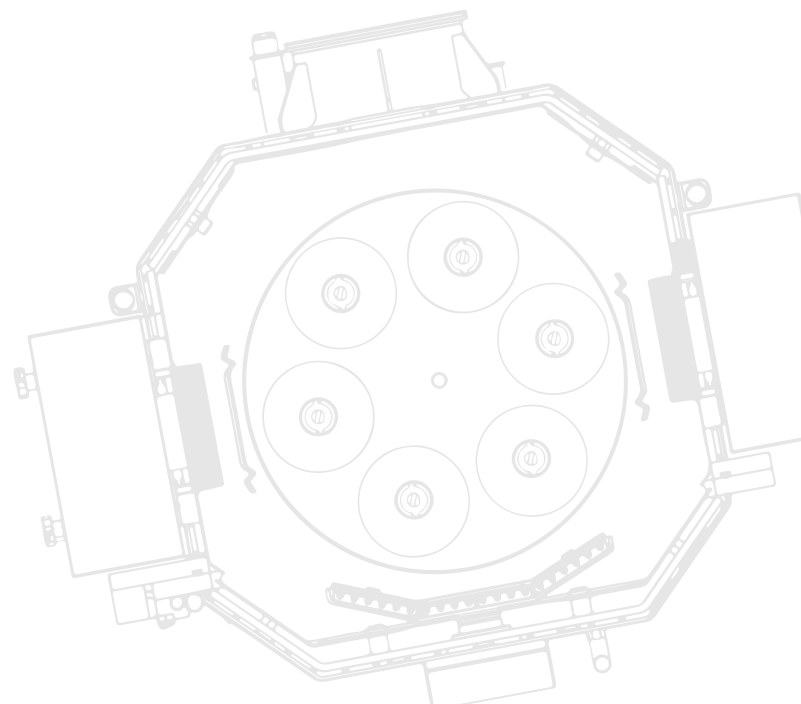
- 3 or 6 or 9 axes

Software:

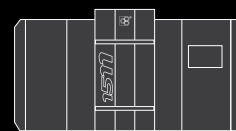
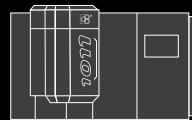
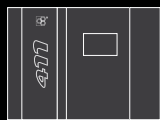
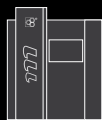
- Simple use and maintenance
- PLATIT SmartSoftware (PC and PLC system)
- Modern control system with touch screen
- Data recording and real-time display of process parameters and flow
- Manual and automatic process control
- Remote diagnostics and maintenance

Machine dimensions:




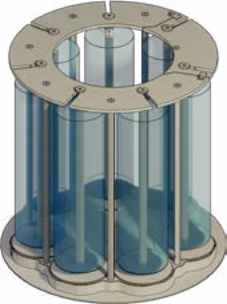

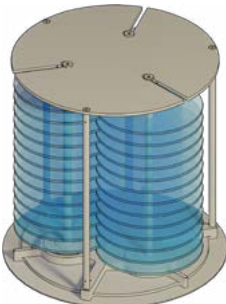
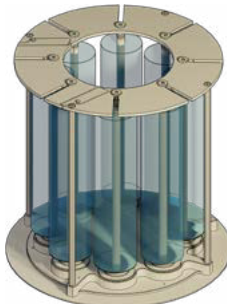

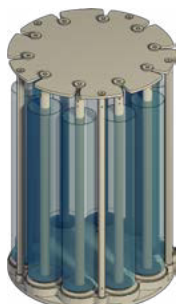
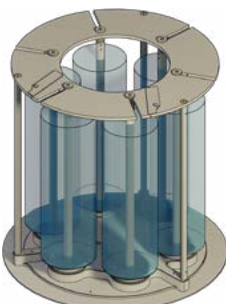
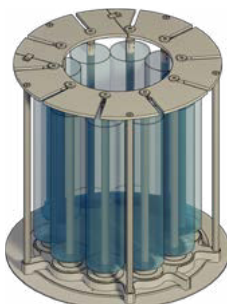
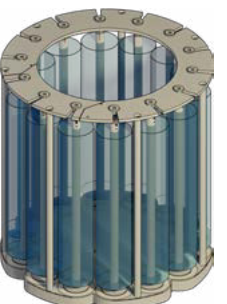
- Footprint: W 3,450 × D 2,250 × H 2,595 [mm]



11-SERIES ACCESSORIES



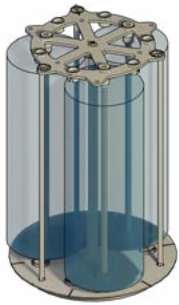
Carousels

	111	411		
Max. coatable height	498 mm	500 mm		
	 <p>Single rotation D ≤ 355 mm</p>	 <p>Single rotation D ≤ 500 mm for saw blades, D ≤ 460 mm for molds & dies</p>	 <p>4 asymmetric axes D3 ≤ 183 mm, D1 ≤ 250 mm</p>	 <p>7 axes for triple rotation for gearboxes D ≤ 143 mm</p>
	 <p>4 axes for continuous triple rotation for gearboxes D ≤ 143 mm</p>	 <p>3 axes for saw blades with overlap D ≤ 285 mm</p>	 <p>4/8 axes D4 ≤ 215 mm / D8 ≤ 115 mm</p>	 <p>6/12 axes D6 ≤ 145 mm / D12 ≤ 100 mm</p>
	 <p>10 axes for continuous double rotation D ≤ 77 mm</p>	 <p>3/6 axes D3 ≤ 220 mm / D6 ≤ 150 mm</p>	 <p>5/10 axes D5 ≤ 175 mm / D10 ≤ 94 mm</p>	 <p>14 axes D ≤ 85 mm</p>

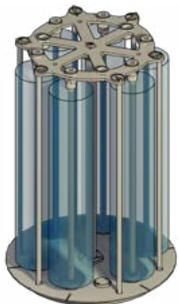
Exemplary illustrations

711

805 mm



3 axes for kicker
 $D \leq 270$ mm



**6 axes for kicker
or gearboxes**
 $D \leq 150$ mm



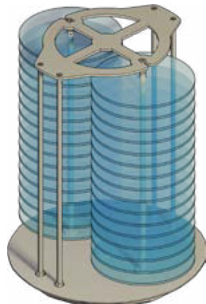
9 axes for kicker
 $D \leq 95$ mm

1011

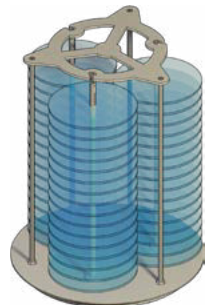
805 mm



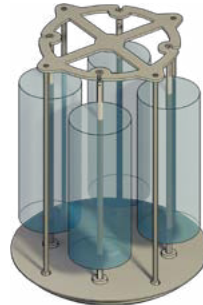
Single rotation
 $D \leq 700$ mm



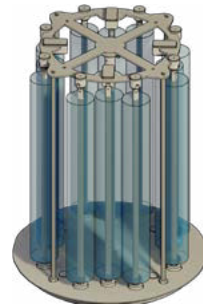
**2 axes for saw blades
with overlap**
 $D \leq 450$ mm



3 axes for saw blades
 $D \leq 420$ mm with overlap,
 $D \leq 250$ mm without overlap



4 axes for kicker
 $D \leq 270$ mm



4/8/12 axes for kicker
 $D \leq 170$ mm



10 axes for gearboxes
 $D \leq 143$ mm

HOLDERS



Disc with gears



Gearbox with triple rotation



Quad gearbox for quad rotation

Loading capacities

Pi111

Tool type	Tool diameter	Tool length	Satellites	Discs / satellite	Holders / disc	Tools / holder	Tools / disc	Tools / batch	Holder type
Shaft Tool	6 mm	50 mm	4	4	5	9	45	720	G
	6 mm	50 mm	4	4	8	4	32	512	D
	6 mm	50 mm	4	4	18	1	18	288	A
	8 mm	60 mm	4	4	18	1	18	288	A
	10 mm	70 mm	4	4	18	1	18	288	A
	20 mm	100 mm	4	3	12	1	12	144	A
Insert	12 mm	4 mm	4	38	18	1	684	2,736	C
Hob	80 mm	100 mm	4	4	1	1	1	16	F
	75 mm	100 mm	10	4	1	1	1	40	F

Pi411

Tool type	Tool diameter	Tool length	Satellites	Discs / satellite	Holders / disc	Tools / holder	Tools / disc	Tools / batch	Holder type
Shaft Tool	6 mm	50 mm	7	4	5	9	45	1,260	G
	6 mm	50 mm	7	4	8	4	32	896	D
	6 mm	50 mm	7	4	18	1	18	504	A
	8 mm	60 mm	7	4	18	1	18	504	A
	10 mm	70 mm	7	4	18	1	18	504	A
	20 mm	100 mm	7	3	12	1	12	252	A
Insert	12 mm	4 mm	7	38	18	1	684	4,788	C
Hob	80 mm	100 mm	7	4	1	1	1	28	F
	80 mm	100 mm	14	4	1	1	1	56	F

PL711

Tool type	Tool diameter	Tool length	Satellites	Discs / satellite	Holders / disc	Tools / holder	Tools / disc	Tools / batch	Holder type
Shaft Tool	6 mm	50 mm	6	5	5	9	45	1,350	G
	6 mm	50 mm	6	6	8	4	32	1,152	D
	6 mm	50 mm	6	6	18	1	18	648	A
	8 mm	60 mm	6	5	18	1	18	540	A
	10 mm	70 mm	6	5	18	1	18	540	A
	20 mm	100 mm	6	4	12	1	12	288	A
Insert	12 mm	4 mm	6	38	18	1	684	4,104	C
Molds & dies	160 mm	130 mm	3	4	1	1	1	12	F
Sliding parts with DLC2	25 × 10 mm	130 mm	3	4	4	1	4	48	F

PL1011

Tool type	Tool diameter	Tool length	Satellites	Discs / satellite	Holders / disc	Tools / holder	Tools / disc	Tools / batch	Holder type
Shaft Tool	6 mm	50 mm	4	7	15	4	60	1,680	E
	6 mm	50 mm	4	7	42	1	42	1,176	B
	8 mm	60 mm	4	7	36	1	36	1,008	B
	10 mm	70 mm	4	6	30	1	30	720	B
	20 mm	100 mm	4	5	23	1	23	460	B
Insert	12 mm	4 mm	4	2 × 35	42	1	1470	11,760	C
Hob	140 mm	100 mm	10	6	1	1	1	60	F
	80 mm	100 mm	12	6	1	1	1	72	F

Holder type:

A Tool in a sleeve, driven by a gearbox

B Tool in a sleeve, driven by a kicker

C Insert with a hole, speared on a rod

D Tool in a revolver, driven by a gearbox

E Tool in a revolver, driven by a kicker

F Hob on a satellite / rod

G Tool in a sleeve, driven by a quad gearbox

PLATIT AG

Headquarters
Eichholzstrasse 9
CH-2545 Selzach
info@platit.com
+41 32 544 62 00

PLATIT AG

Custom Coating Solutions (CCS)
Champ-Paccot 21
CH-1627 Vaulruz
info@platit.com
+41 32 544 62 00

PLATIT a.s.

Production, R&D, Service, CEC
Průmyslová 3020/3
CZ-78701 Šumperk
info@platit.com
+420 583 241 588

PLATIT Advanced Coating Systems (Shanghai) Co., Ltd

Sales, Service, CEC
No. 161 Rijjing Road (Shanghai) PFTZ
CN-200131 Pudong Shanghai
china@platit.com
+86 2158 6739 76

PLATIT Inc.

Sales, Service, CEC
1840 Industrial Drive, Suite 220
Libertyville, IL 60048, US
usa@platit.com
+1 847 680 5270
Fax: +1 847 680 5271

PLATIT Scandinavia ApS

Sales
Rabalderstraede 7
DK-4000 Roskilde
scandinavia@platit.com
+45 46 74 02 38

COMPENDIUM



PLATIT  [®]
Advanced Coating Systems
SWISS  QUALITY