

Bartec Plasma System

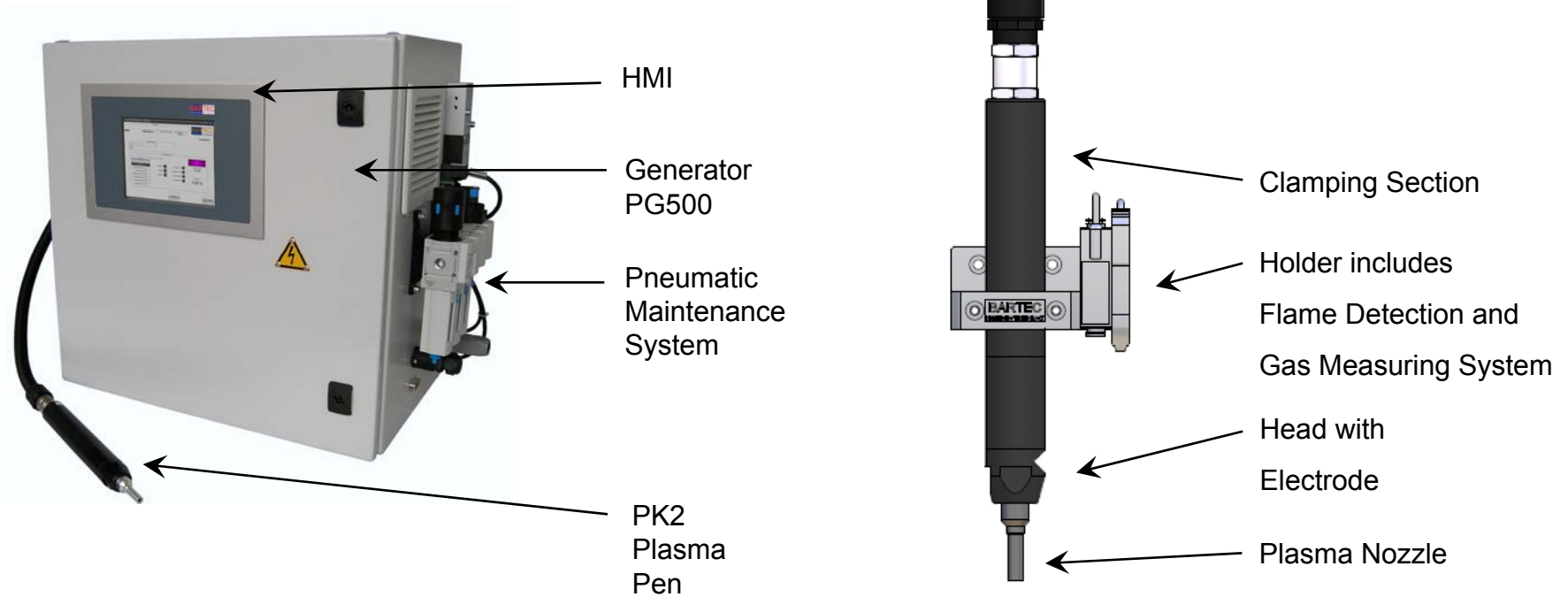


Plasma Processing

Bartec Plasma System



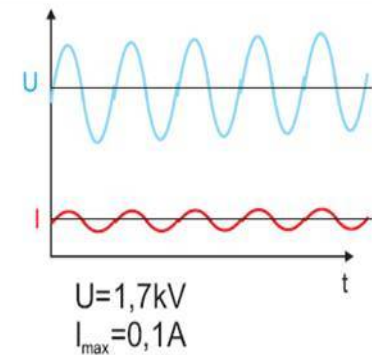
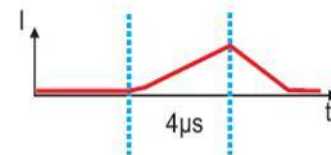
Components



Technology:

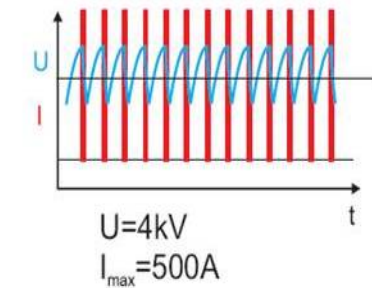
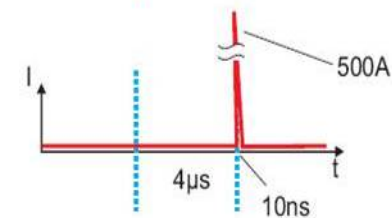
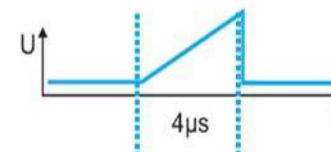
– Common systems

- AC voltage
- 2000 W



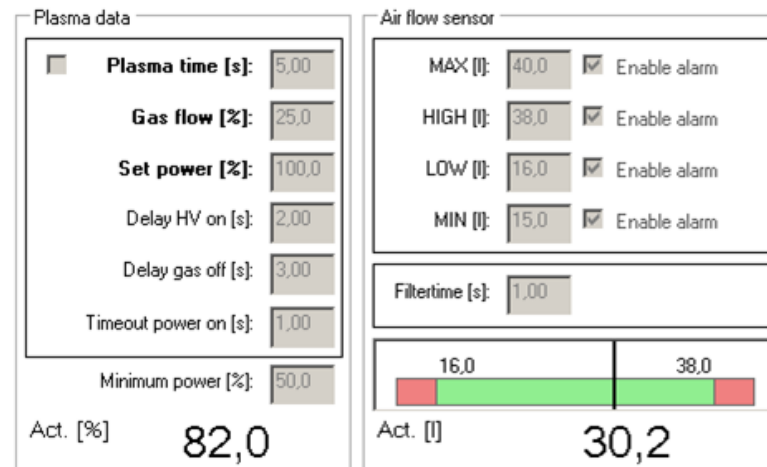
– BPS:

- Pulsed DC voltage
- 52 kHz
- 500 W



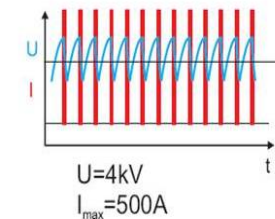
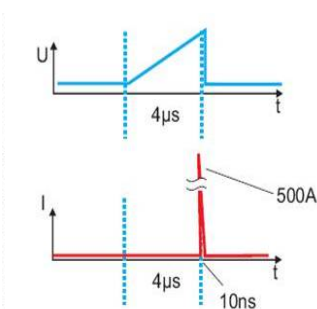
Process Values:

- Setting Parameters:
 - Set power [%]
 - Gas flow [%]
- Process Control:
 - Actual power [%]
 - Actual gas flow (20 – 40 NI/min)
 - Optical Plasma Detection



Features of BPS:

- Cold Plasma (safe for electronics)
- Potential-free (no charge)
- Complete Process Control
- Low waste (gas and electric power)
- Multi-gas Operation (air, nitrogen, etc.)
- High Power Activation Energy
- High Efficiency



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Sample HMI Screens

Mode: Automatic User level: Level1 12.02.2010 16:10:05

Bartec Plasma System

Start Plasma active Plasma program: 1

Plasma data

- Plasma time [s]: 5.00
- Gas flow [%]: 25.0
- Set power [%]: 100.0
- Delay HV on [s]: 2.00
- Delay gas off [s]: 3.00
- Timeout power on [s]: 1.00
- Minimum power [%]: 50.0
- Act. [%]: 82,0

Air flow sensor

- MAX [l]: 40.0 Enable alarm
- HIGH [l]: 38.0 Enable alarm
- LOW [l]: 16.0 Enable alarm
- MIN [l]: 15.0 Enable alarm
- Filtertime [s]: 1.00
- Act. [l]: 30,2

IOs

- Power on:
- Plasma on:
- Gas on:
- Power on OK:
- Temperature OK:
- Pressure NOK:
- Plasma OK:
- Flame NOK:
- Filtertime [s]: 1.00

Mode: Automatik User level: Level4 10.02.2010 15:18:26

Messages

Actual History Logfile

2010-02-10 10:20:18 351	Message (+) Plasmagerät: Plasma Status nok
2010-02-10 10:20:25 311	Message (-) Plasmagerät: Plasma Status nok
2010-02-10 10:48:08 212	Message (+) Plasmagerät: Plasma Status nok
2010-02-10 10:48:09 714	Message (-) Plasmagerät: Plasma Status nok
2010-02-10 10:54:56 239	Message (+) Plasmagerät: Plasma Status nok
2010-02-10 10:55:11 310	Message (-) Plasmagerät: Plasma Status nok
2010-02-10 11:38:39 621	Message (+) NOT-AUS aktiv
2010-02-10 11:38:44 087	Message (-) NOT-AUS aktiv
2010-02-10 11:41:24 398	Message (+) Flammenerkennung nok
2010-02-10 11:43:40 093	Message (-) Flammenerkennung nok
2010-02-10 11:43:42 116	Message (+) Plasma - Druck nok
2010-02-10 11:43:50 628	Message (-) Plasma - Druck nok
2010-02-10 11:43:52 631	Message (+) Plasma - Druck nok
2010-02-10 11:46:30 878	Message (-) Plasma - Druck nok
2010-02-10 11:46:32 861	Message (+) Plasmagerät: Temperatur nok
2010-02-10 11:47:16 905	Message (-) Plasmagerät: Temperatur nok
2010-02-10 11:47:18 968	Message (+) Plasmagerät: Plasma Status nok
2010-02-10 11:59:04 562	Message (+) Plasma - Störung Netz ein
2010-02-10 11:59:04 572	Message (-) Plasmagerät: Plasma Status nok
2010-02-10 12:01:23 802	Message (-) Plasma - Störung Netz ein
2010-02-10 12:03:36 593	Message (+) Mindestleistung unterschritten

Mode: Automatik User level: Level4 10.02.2010 15:11:04

Handshake

IOs

Start Ready Busy Error

Mode: Automatik User level: Level4 10.02.2010 15:11:36

Language Selection

User Common

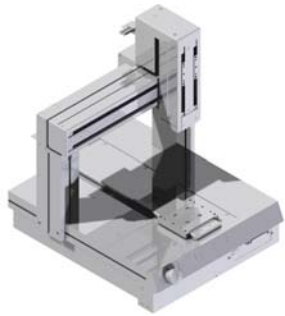
Please notify: Some parameters will be updated only after restart!!!

Bartec Plasma System



Machine Integration Possibilities:

Table Top



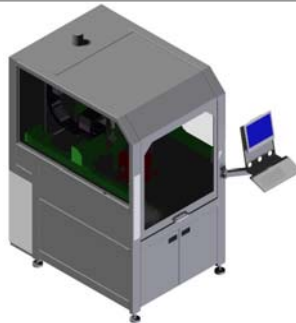
Plasma System for low volume production or laboratory use on tabletop 3 axis machine

B2000-P



Plasma System for lean production with manual load and unload part handling; Three axis programmable axis

B5100



Plasma System for higher volume with automated production lines

BPS



BPS Integration System incl.

- ▶ Housing
- ▶ Touchpanel with PLC
- ▶ Digital handshake / Profibus

Thank you for your interest!

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