

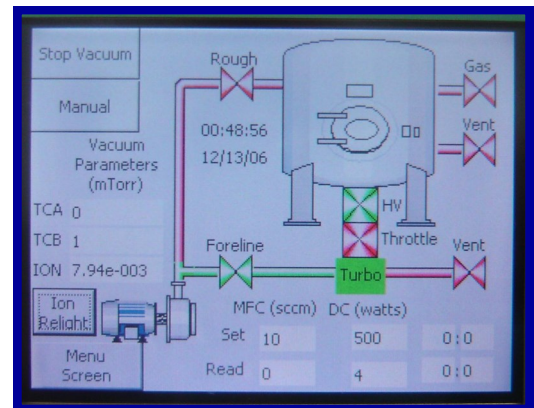
Hummer® BC-20 Series

ONE SYSTEM IN A FAMILY OF PLANAR MAGNETRON SPUTTERING SYSTEMS

THIN FILM DEPOSITION OF METALS AND INSULATORS



BC Systems are available in sizes;
16", 20", 24" and 30" D-style chambers



TOUCH-PANEL SYSTEM CONTROL

Vacuum and Process Control all in one.
Functions are clearly displayed

**QUARTZING
CV DOT MATRIX
FAILURE ANALYSIS
MATERIALS RESEARCH
MICROELECTRONICS RE-**

The **HUMMER BC-20** sputter coater combines a high degree of process control and flexibility with ease of operation.

THIN FILM RESEARCH - FAILURE ANALYSIS - PILOT PRODUCTION

HUMMER[®] BC-20

PLANAR MAGNETRON SOURCE

TARGET DIAMETER -

3" Standard,
Optional - 2" & 4" diameter
sources and Multiple sources
TARGET THICKNESS - 1/16 to
1/4" standard

TARGET MATERIALS - Metals
and / or insulators

SOURCE MOUNTING - Quick
coupling to chamber, shutters,
shields between sources as
necessary

POWER SUPPLY - 300 watts,
13.56 MHz. Standard
Optional - 600, 1000 watts RF
at 13.56 MHz.

1500 Watts Standard, Optional
- 2500 Watts DC, or various
combinations of supplies

COOLING WATER - .2 to 10
GPM required.

Optional - Recirculation system

TARGET MOUNTING - Mechanical
clamp or magnetic keeper
depending upon requirement

OVERALL SYSTEM

CHAMBER - 304 Stainless steel,
20" ID nominal, aluminum door,
4" Door view port, roughing,
High Vacuum pump and instrument
ports

CONTROL - Siemens S7-200
Series PLC control for each vacuum
function and sputtering
source. Fully integrated with easy
"Touch-Panel" control pad for
diagnostic and setting system parameters

DESIGN - Floor mount cabinet
on casters with leveling pads

SAFETY INTERLOCKS - Water, door
and vacuum interlocks.

ELECTRICAL REQUIREMENTS -
40-75 AMP, 208-240 Volt,
50/60 HZ

SPUTTERING - Standard top down
sputtering. Optional - Sputter-up
or horizontal sputter

AUTOMATIC SEQUENCING -
Standard

VACUUM SYSTEM

PUMPING - Roughing pump and Turbo
molecular pump - Standard
Optional - Cryo pump or Larger
pumps

VACUUM GAUGING - Convectron
gauges (2), Ion gauge (1).
Atmosphere to 1×10^{-8} TORR

VALVES - Electro-Pneumatic actuated
High Vacuum/Throttle valve between
pump and chamber. Fore-line
and chamber roughing isolation
valves. Pneumatic air or nitrogen
(clean, dry) operating at 60-PSI.

GAS CONTROL - Mass Flow Controller
(1) 100 sccm. Optional - Gases (3)
maximum, for mixing and reactive
gas sputtering

STAGE FIXTURE

SIZE - 2", 3", 4", 6", 8", 12" or 16"

MOTION -360° rotation standard.

Optional - Variable angle of incidence
to sputter source

COOLING - Optional

REVERSE SPUTTER/ETCH - Optional

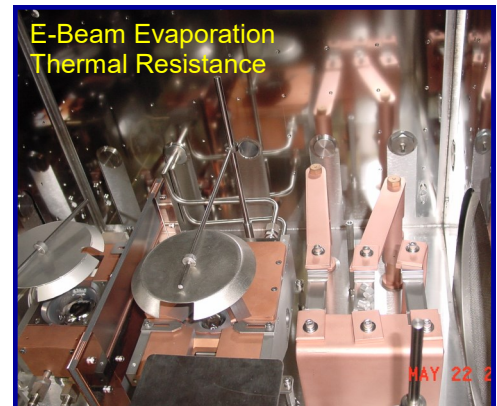
HEATED - Optional to 900° Celsius

IONIZATION SPECIES

GAS REQUIREMENTS - Argon
regulated from 5 to 20 PSI

OPERATING PRESSURE -
 2×10^{-3} to 5×10^{-2}

REACTIVE SPECIES - Optional



SOURCE OPTIONS

Anatech USA offers alternatives for source configuration.
Contact our sales staff.

CALL ANATECH USA TODAY TO DISCUSS YOUR APPLICATION

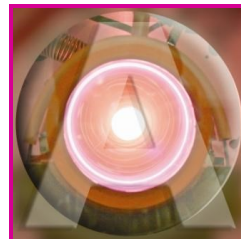
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HUMMER[®] BC-20

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30 Years - Serving Science & Industry

Round Planar Sources
BC-20 Chamber
Three (3)
3-Inch Round Sources



Linear Planar Sources
BC-16 Chamber
Two (2)
2-Inch x 10-Inch Linear Sources
And One (1)
2-Inch round source
(partially obstructed in photo view)

BOX COATER MAGNETRON SPUTTER SOURCES

Source configuration is available in Round or Linear planar magnetron designs. Sources are "Flex-Mounted" for 0-30° angle of incidence adjustability. Source shutter options include: Manually operated shutter assembly or Pneumatically actuated.