

SEALING TECHNOLOGY
TAPER SEAL
PATENT No.
US 9,969,527 B2

Ideal vacuum cube



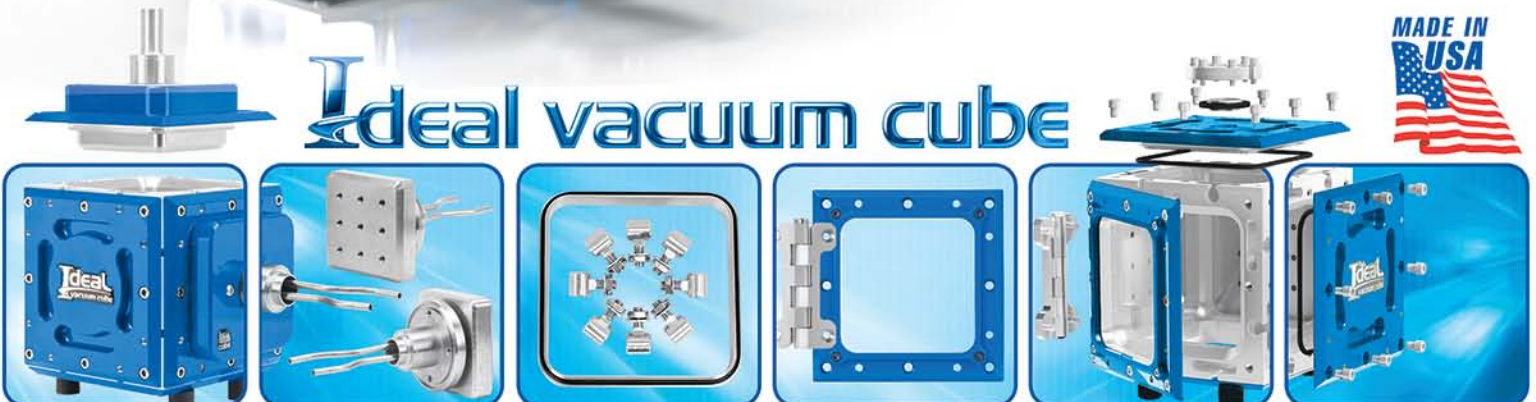
- ❏ Ideal Vacuum Cubes are a perfect configurable solution for vacuum chamber application needs.
- ❏ Get a precision vacuum-tight seal every time using our new "Taper-Seal" vacuum sealing technology.
- ❏ Designed for quick implementation into research laboratory vacuum applications, including laser research & optics laboratories.
- ❏ Cubes can easily be attached together to build a complex lightweight vacuum system.
- ❏ Available plate features include windows, optical mounts, industry-standard ports, heating and cooling. Feedthrough ports (sizes **KF**: 16, 25, 40 & 50. **ISO**: 63, 80, 100, 160 & 200. **CF**: 2.75, 3.375, 4.5, 6, 8 & 10 inches).

- ❏ Ideal Vacuum Cubes are sold in sizes 6x6x6, 6x6x12, 9x9x9, 6x12x12, 12x12x12, and 24x24x24 cubic inches.

- ❏ Unleash research creativity, quickly design long or odd shaped vacuum chamber systems.

- ❏ Single cube kits can be expanded with additional cubes, plates and accessories.

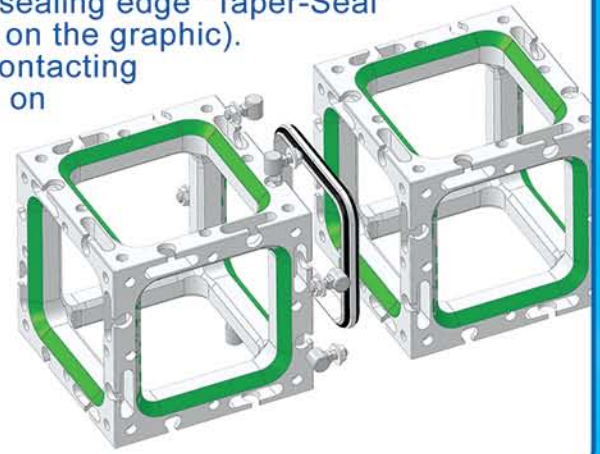
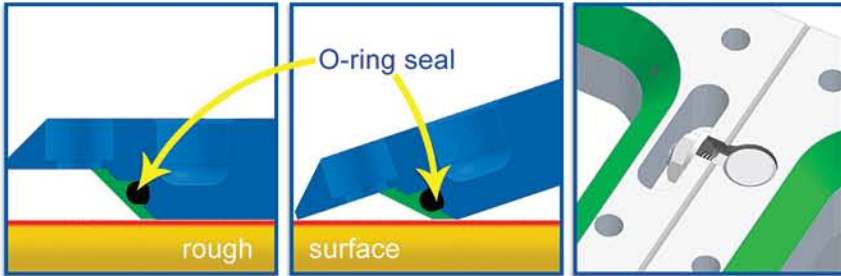
Ideal vacuum cube



Ideal vacuum cube

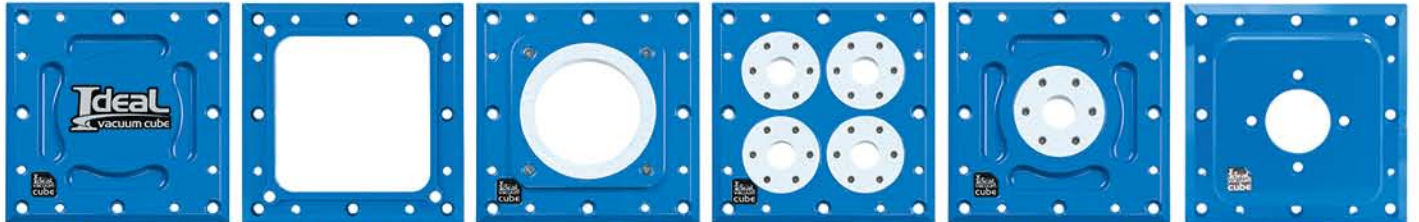
TAPER SEAL TECHNOLOGY

Ideal Vacuum Cubes are manufactured with our innovative sealing edge "Taper-Seal" design which forms a tapered groove seal (see green areas on the graphic). This helps prevent O-ring seals and sealing surfaces from contacting common work table tops. Our Taper-Seal prevents damage on the sealing areas for better vacuum performance.



6x6 PLATES

FRONT



BLANK PLATE

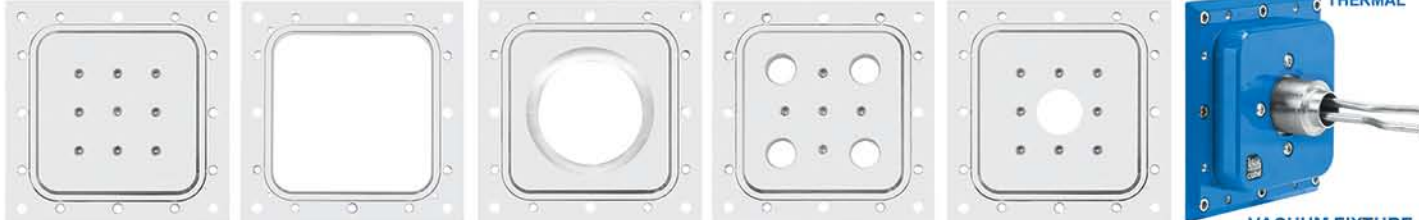
GLASS WINDOW

ISO-63 PORT

4 KF-16 PORTS

KF-25 PORT

RECIRCULATING THERMAL



BLANK / BACK

WINDOW / BACK

ISO-63 / BACK

4 KF-16 / BACK

KF-25 / BACK

VACUUM FIXTURE



KF-40 PORT

KF-50 PORT

CF-1.33" PORT

CF-2.75" PORT

CF-3.37" PORT

CF-4.50" PORT

STANDARD OPTICAL WINDOW PLATES



XYZ STAGE PLATE

XY STAGE PLATE WITH MICS & MOTORS



1.0" WINDOW



1.5" WINDOW



2.0" WINDOW



HEATER PLATE



6x12 FRAMES & PLATES

6x6x12



6x12x12



VIEWING WINDOW



KF25



KF40



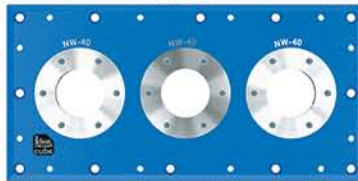
CF 2.75"



ISO63



1-KF25, 1-KF40, 2-KF16



3-KF40



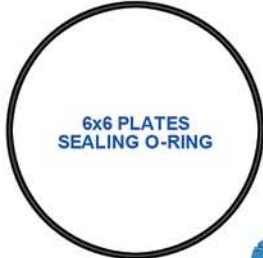
HEATER PLATE

COMPONENTS & ACCESSORIES

FOR MULTIPLE CUBE SIZES



INNER CONNECTION KIT



6x6 PLATES SEALING O-RING



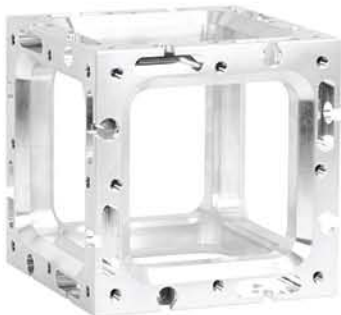
QUICK KNOB ASSEMBLY



LN2 THERMAL VACUUM TEST FIXTURE



RECIRCULATOR THERMAL VACUUM TEST FIXTURE



6x6x6 CUBE FRAME



DOOR HINGE



PLATE BOLTS



SINGLE CLAW CLAMPS FOR ISO-63 PORTS



RUBBER SUPPORT FEET



REDUCER KF-25 to KF-16

BULKHEAD CLAMPS



KF-50



KF-40



KF-25

KF-16

CENTERING O-RINGS



KF-16



KF-25



KF-40



KF-50

Ideal vacuum cube

9x9x9 CUBE & PLATES



BLANK PLATE



KF-25 PORT



KF-40 PLATE



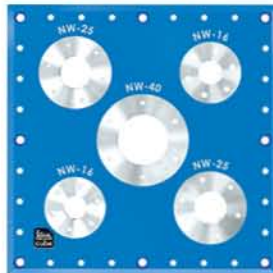
KF-50 PORT



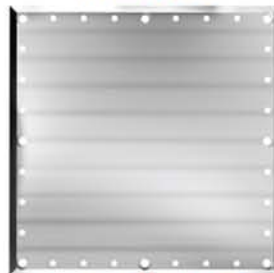
KF-16 - 4 PORT



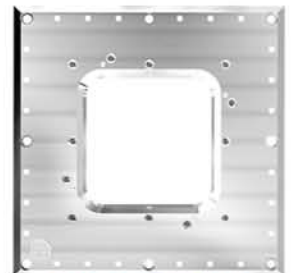
KF-25 - 4 PORT



2xKF16, 1-KF40, 2-KF25



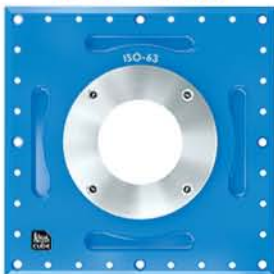
BLANK UNCOATED



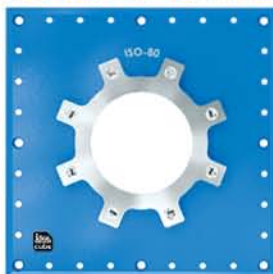
ADAPTER PLATE



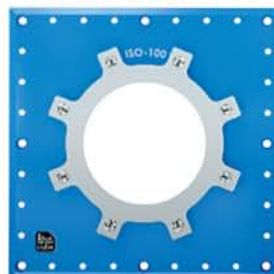
GLASS WINDOW



ISO-63 PORT



ISO-80 PORT



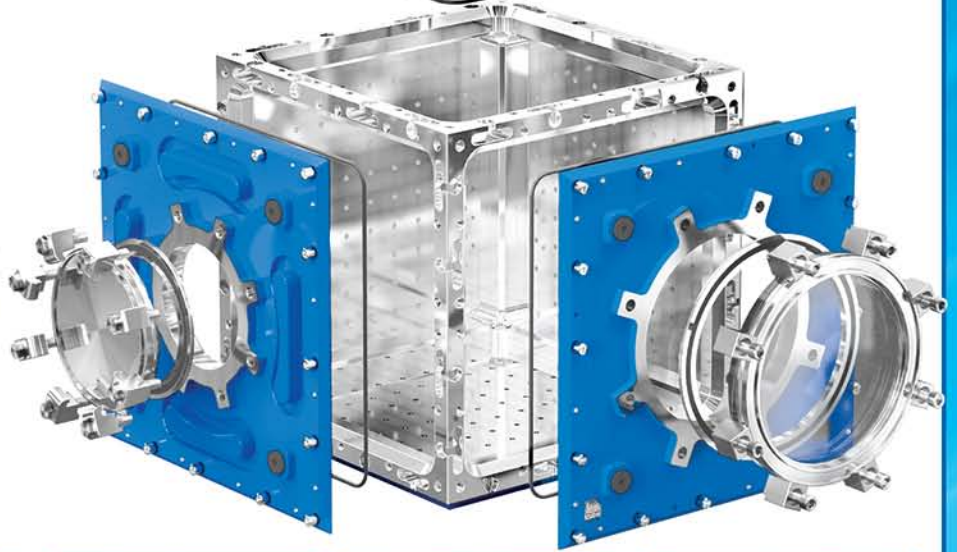
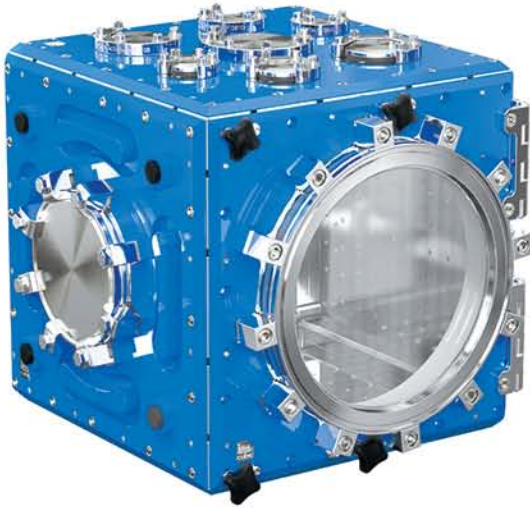
ISO-100 PORT



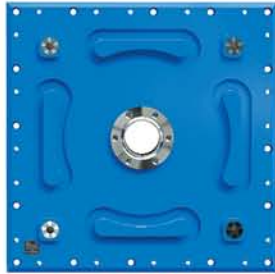
ISO-200 PORT



12x12x12 CUBE & PLATES



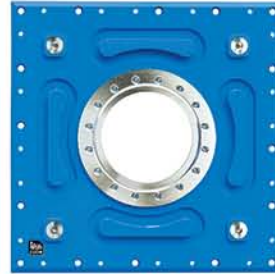
BLANK PLATE



CF-2.75" PORT



CF-4.5" PORT



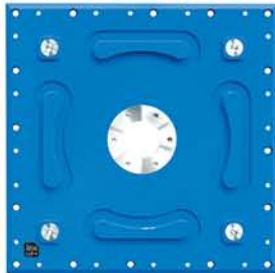
CF-6" PORT



CF-10" PORT



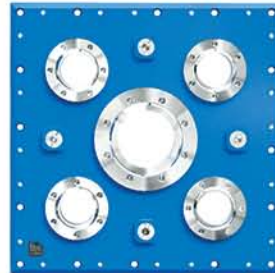
GLASS WINDOW



KF-40 PORT



4xCF-2.75", 1xCF-4.5"



4xCF-2.75", 1xCF-4.5"



2xKF16, 2xKF25, 2xKF40, 1xKF50



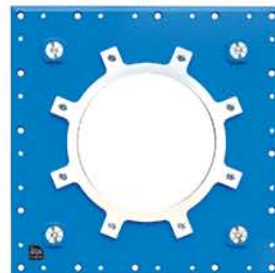
THERMAL TEST FIX.



ISO-63 PORT



ISO-100 PORT



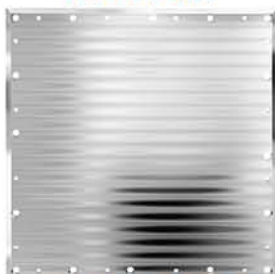
ISO-160 PORT



ISO-200 PORT



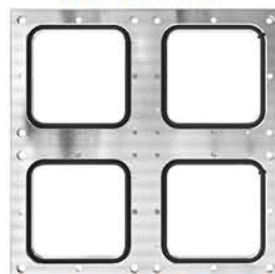
THERMAL TEST FIX.



UNCOATED PLATE



12x12 to TWO 6x12



12x12 to 6x6 ADAPTER



HEATER PLATE



Ideal vacuum cube

MODULAR VACUUM CHAMBERS

Our Ideal Vacuum Cube is a modular high-vacuum chamber system, conceived to enable creativity and design flexibility in vacuum chamber system construction. Cubes can be stacked together into various shapes and configurations, with interchangeable plates offering a variety of features for connections, windows, and feedthroughs. Plates include 1/4"-20 mounting threads on a standard 1" optical pattern for easy connection of hinges, posts, mounts, lenses, polarizers, and other accessories.

The large inner dimensions and open design of Ideal Vacuum Cubes makes them perfect for many vacuum chamber applications and experiments. Vacuum Cubes are constructed of lightweight 6061 aluminum alloy, allowing them to be easily transported around the lab and mounted on optical tables (unlike heavy stainless steel chambers). A patented protective seal design, stainless steel thread inserts, and powder-coated outside plate finish help make the Vacuum Cube a durable tool for even the most demanding use.



CUBE

6x6x6



SHORT CUBE

6x12x12



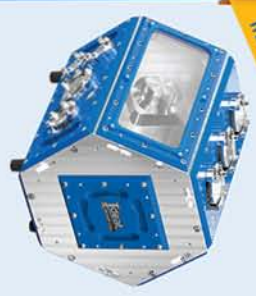
OCTAGONAL

6x6x12



CUBE

9x9x9



HEXAGONAL

6x6x12



HEXAGONAL

6x6x6



CUBE

12x12x12



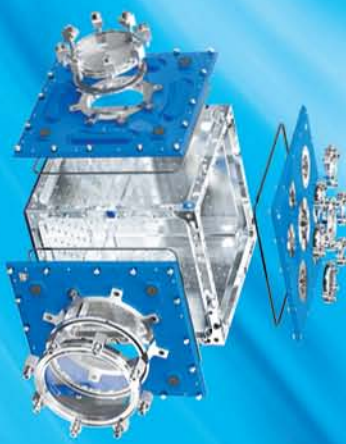
RECTANGULAR

6x6x12

CUBE

24x24x24

The 24x24x24 Ideal Vacuum Cube has a welded stainless steel frame with open front of 21x21 inches & hinged aluminum door and a variety of 20 6x6 aluminum plates.



OUR PRODUCTS DEVELOP
TOMORROW'S
TECHNOLOGIES

Ideal vacuum cube

CUBE SPECIFICATIONS & KITS ORDERING LIST

CUBE SPECIFICATIONS

| DIMENSIONS | 6x6x6 | 9x9x9 | 12x12x12 | 24x24x24 |
|-----------------------------------|---|---|---|---|
| Cube Volume | 134 in ³ (2.2 Liters) | 555 in ³ (9.0 Liters) | 1380 in ³ (22.6 Liters) | 14,470 in ³ (237 Liters) |
| "Plate to plate" Inner Dimensions | 5.4" x 5.4" x 5.4" | 8.4" x 8.4" x 8.4" | 11.4" x 11.4" x 11.4" | 23.4" x 23.4" x 23.4" |
| Cube Inside Surface Area | 157 in ² (1010 cm ²) | 402 in ² (2600 cm ²) | 736 in ² (4750 cm ²) | 3,431 in ² (22,140 cm ²) |
| Vacuum Cube Material | 6061-T6 Aluminum | | | 304L Stainless Steel |
| Cube Mass (No Plates) | 3.7 lbs. (1.7kg.) | 6.5 lbs (3.0 kg) | 8.4 lbs (3.8 kg) | 308 lbs (140 kg) No Door |
| Accessory Mounting Threads | 1/4"-20 | | | |

PRESSURES

| | |
|---------------------------------|-------------------------------------|
| Ultimate Vac. Pressure | 3 x 10 ⁻⁸ Torr |
| Max. Internal Positive Pressure | 1 Atm |
| Vacuum Cube Leak Rate | 1 x 10 ⁻⁸ std cc/sec atm |

TEMPERATURES

| | |
|--|--------------------------------|
| Recommended Min. Operating Temp (Viton) | -20°C (-4°F) |
| Recommended Max. Operating Temp (Viton) | 150°C (300°F) |
| LN2 and Recirculatory Accessories (Heating or Cooling) | 150°C to -100°C (302 to 148°F) |

PN

MODULAR VACUUM CHAMBER KITS

| | |
|----------|---|
| P106860 | 6x6x6 Cubic Modular Vacuum Chamber, Basic Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P109139 | 6x6x6 Cubic Modular Vacuum Chamber, Advanced Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P109149 | 6x6x6 Cubic Modular Vacuum Chamber, Heated Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P109151 | 6x6x6 Cubic Modular Vac. Chamber, Thermally Controlled Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P109996 | 9x9x9 Cubic Modular Vacuum Chamber, Basic Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P109997 | 9x9x9 Cubic Modular Vacuum Chamber, Advanced Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P109998 | 9x9x9 Cubic Modular Vacuum Chamber, Heated Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P1010002 | 9x9x9 Cubic Modular Vac. Chamber, Advanced Turbo Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P108246 | 12x12x12 Cubic Modular Vacuum Chamber, Basic Chamber Development Kit, Includes Plates, Seals, and Hardware |
| P109184 | 12x12x12 Cubic Modular Vac. Chamber w Door, Advanced Chamber Development Kit, Includes Plates, Hinges, Seals, and Hardware |
| P109187 | 12x12x12 Cubic Modular Vacuum Chamber, Heated Chamber Development Kit, Includes Plates, Hinges, Seals, and Hardware |
| P109192 | 12x12x12 Cubic Modular Vac. Chamber, Thermally Controlled Chamber Development Kit, Includes Plates, Hinges, Seals, and Hardware |
| P109350 | 24x24x24 Cubic Modular Vacuum Chamber with Door, Basic Chamber Development Kit, Includes 20 Plates, Seals, and Hardware |
| P109353 | 24x24x24 Cubic Modular Vac. Chamber with Door, Advanced Chamber Development Kit, Includes 20 Plates, Seals, and Hardware |
| P108245 | 6x6x12 Rectangular Modular Vacuum Chamber, Basic Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109131 | 6x6x12 Rectangular Modular Vacuum Chamber, Advanced Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109132 | 6x6x12 Rectangular Modular Vacuum Chamber, Heated Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109160 | 6x12x12 Short Cube Modular Vacuum Chamber, Basic Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109161 | 6x12x12 Short Cube Modular Vacuum Chamber, Advanced Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109162 | 6x12x12 Short Cube Modular Vacuum Chamber, Heated Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109177 | 6x12x12 Short Cube Modular Vacuum Chamber, Thermally Controlled Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109098 | 6x6x6 Modular Vacuum Chamber, Hexagonal Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109253 | 6x6x6 ISO 63 Modular Vacuum Chamber, Hexagonal Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109128 | 6x6x12 Modular Vacuum Chamber, Basic Hexagonal Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109263 | 6x6x12 ISO 63 Modular Vacuum Chamber, Hexagonal Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109101 | 6x6x12 Modular Vacuum Chamber, Octagonal Chamber Development Kit, Includes Plates, Seals, And Hardware |
| P109294 | 6x6x12 Advanced Modular Vacuum Chamber, Octagonal Chamber Development Kit, Includes Plates, Seals, And Hardware |

To see more options and configurations go to: ideallvac.com/Modular-Vacuum-Chambers



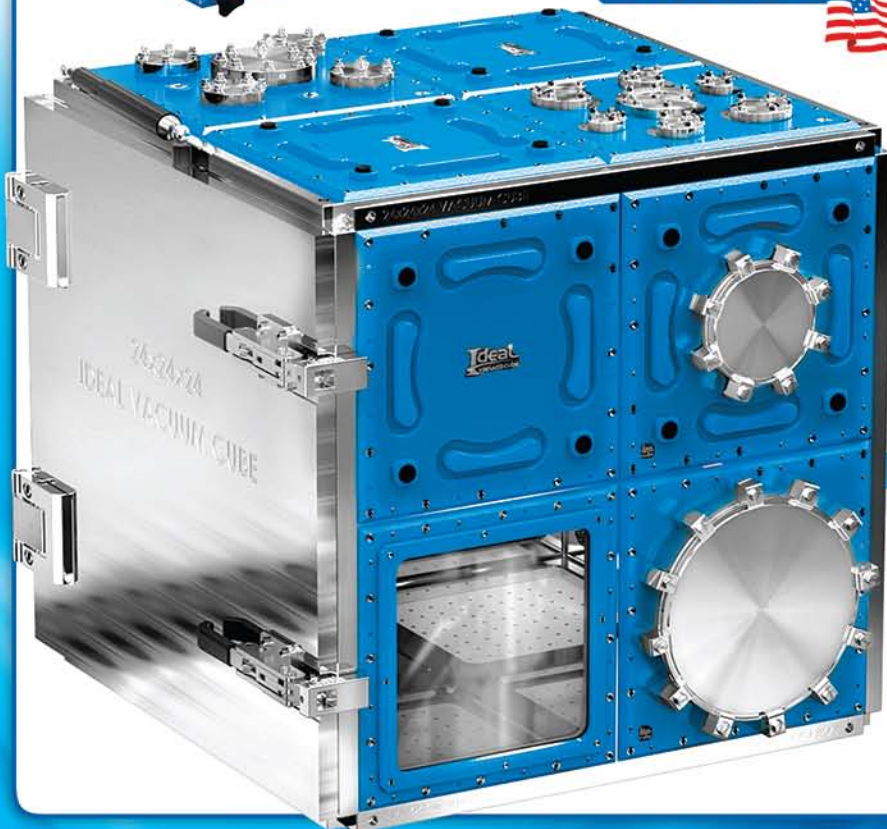
6x6x6



9x9x9



12x12x12



Ideal vacuum cube

MILLED CHAMBERS

MADE IN USA



24x24x24



Ideal vacuum cube

PART NUMBERS / ORDERING CHART

6x6 CUBE PLATES

| PART No. | DESCRIPTION | PART No. | DESCRIPTION | PART No. | DESCRIPTION |
|----------|-----------------------------------|----------|------------------------------------|----------|----------------------------------|
| P106862 | Blank Plate without Flanged Ports | P107298 | Plate with CF 2.75" Feedthr. Port | P108477 | XY Stage Plate, no Mics/Motors |
| P108195 | Blank Plate Uncoated, no Ports | P107299 | Plate with CF 3.375" Feedthr. Port | P108247 | XY Stage self-tensioning system |
| P106866 | Plate with 4 KF-16 Feedt. Ports | P107300 | Plate with CF 4.5" Feedthr. Port | P108478 | XYZ Stage Plate, no Mics/Motors |
| P108745 | Plate with KF-16 Feedthr. Port | P106869 | Glass Viewing Window Plate | P108248 | XYZ Stage self-tensioning system |
| P106865 | Plate with KF-25 Feedthr. Port | P108325 | Clear Fused Quartz Window | P108315 | Plate for 1.0" Standard Optical |
| P106863 | Plate with KF-40 Feedthr. Port | P107301 | LN2 Trap Cryogenic Test Fixture | P108316 | Plate for 1.5" Standard Optical |
| P107296 | Plate with KF-50 Feedthr. Port | P107302 | Thermal Vacuum Test Fixture | P108317 | Plate for 2.0" Standard Optical |
| P106864 | Plate with ISO-63 Feedthr. Port | P108743 | Zero Length Adapter Plate/ISO-63 | P108318 | UV Fused Silica Win. AR Coated |
| P107426 | Plate with CF 1.33" Feedthr. Port | P108744 | Zero Length Adapter Plate/ISO-100 | P108319 | Heater Plate, Aluminum |

6x12 CUBE PLATES

| | | | | | |
|---------|-----------------------------------|---------|--------------------------------------|---------|----------------------------------|
| P108196 | Blank Plate without Flanged Ports | P108220 | Plate with KF-50 Feedthr. Port | P108218 | Plate with Triple KF-40 Feedt. P |
| P108221 | Blank Plate Uncoated, no Ports | P108199 | Plate with ISO-63 Feedthr. Port | P108219 | Plate 2xKF-16, 1xKF-25, 1xKF-40 |
| P108695 | Standard Glass Viewing Window | P108730 | Plate with CF 2.75" Feedthr. Port | P108729 | Heater Plate, 6061-T6 Aluminum |
| P108197 | Plate with KF-25 Feedthr. Port | P108731 | Plate with CF 4.5" Feedthr. Port | | |
| P108217 | Plate with KF-40 Feedthr. Port | P108200 | Plate with Triple KF-25 Feedt. Ports | | |

12x12 CUBE PLATES

| | | | | | |
|---------|-----------------------------------|---------|------------------------------------|---------|---------------------------------|
| P108171 | Blank Plate without Flanged Ports | P108155 | Plate with ISO-200 Feedthr. Port | P108173 | Plate w/ 1/CF-2.75", 4/CF-4.5" |
| P108473 | Blank Plate Uncoated, no Ports | P108172 | Plate with CF 2.75" Feedthr. Port | P108174 | Plate 2 ea KF16/25/40, 1/KF50 |
| P108156 | Plate with one KF-40 Feedt. Port | P108201 | Plate with CF 4.5" Feedthr. Port | P108474 | Thermal Test Fixture Cool/Heat |
| P108157 | Plate with ISO-63 Feedthr. Port | P108151 | Plate with CF 6" Feedthrough Port | P108476 | 12x12 to 4/ 6x6 Plates Adapter |
| P108153 | Plate with ISO-100 Feedthr. Port | P108152 | Plate with CF 8" Feedthrough Port | P108718 | 12x12 to 2/ 6x12 Plates Adapter |
| P108154 | Plate with ISO-160 Feedthr. Port | P108475 | Plate with CF 10" Feedthrough Port | P108320 | Heater Plate, 6061-T6 Aluminum |

9x9 PLATES

| | | | | | |
|---------|-----------------------------------|---------|-----------------------------|---------|---------------------------------|
| P109590 | Blank Plate without Flanged Ports | P109599 | Plate with one ISO-63 Port | P109596 | Plate with 4-KF16 Feedth. Ports |
| P109591 | Blank Plate Uncoated, no Ports | P109602 | Plate with one ISO-80 Port | P109598 | Plate with 4-KF25 Feedth. Ports |
| P109593 | Plate with one KF-25 Port | P109603 | Plate with one ISO-100 Port | P109601 | Plate 2-KF16, 2-KF25, 1-KF40 |
| P109594 | Plate with one KF-40 Port | P109604 | Plate with one ISO-200 Port | P109592 | 9x9 to 6x6 Plate Adapter Kit. |
| P109595 | Plate with one KF-50 Port | P109976 | Glass Viewing Assembly | | |

CUBE SYSTEMS

| | | | | | |
|---------|--------------------------------|---------|------------------------------------|---------|--------------------------------|
| P107304 | 6x6x6 Cube Pack. Ed. E2M1.5 rv | P107291 | 6x6x6 Cube Pack. IDP-3 & Gauge | P108246 | 12x12x12 Vac. Cube Starter Kit |
| P107305 | 6x6x6 Packg. E2M1.5 & Gauge | P106860 | 6x6x6 Vac. Cube Starter Kit | P108788 | 24x24x24 Vac Cube Cart with |
| P107303 | 6x6x6 Packg. Agilent IDP-3 | P108245 | 6x6x12 Vac. Cube Basic Starter Kit | | 24x24x24 Vacuum Cube Frame |

CUBE HARDWARE & ACCESSORIES

| | | | | | |
|---------|-----------------------------------|---------|------------------------------------|---------|---------------------------------|
| P106868 | 6x6 Vac. Chamber Hinge Assemb. | P106867 | 6x6 Multi Tight Coupling Connector | P108744 | 6x6 Zero Length Adapter ISO-100 |
| P107295 | 6x6 Plates Viton Sealing O-ring | P108736 | 12x12 Multi Tight Coupl. Connector | P106870 | 6x6x6 Multicube Inner Connec. |
| P108339 | 6x12 Plates Viton Sealing O-ring | P108167 | 6x12 to 6x6 Plate Adapter Kit | P108222 | Conduct. Limit. Coupl. 0.5 mm |
| P108428 | 12x12 Plates Viton Sealing O-ring | P108476 | 12x12 to 6x6 Plate Adapter Kit | P108223 | Conduct. Limit. Coupl. 1.0 mm |
| P107293 | 6x6x6 Cubes Hardware Kit | P108718 | 12x12 to Two 6x6 Plates Adapt. Kit | P108224 | Conduct. Limit. Coupl. Ins. 1.5 |
| P107294 | 6x6x6 Cubes HiTemp Hardwar. Kit | P107297 | Rubber Vibration Support Feet Kit | P108225 | Conduct. Limit. Coupl. Ins. 2.0 |
| P108176 | 12x12x12 Cubes Hardware Kit | P107292 | Connecting Hardware Regular | P101786 | Single Claw Clamp for ISO-63 |
| P108338 | 6x6x12 Cubes Hardware Kit | P108235 | Connecting Hardware XTA Long | P104598 | KF-16 Bulkhead Clamp, Alumin |
| P108743 | 6x6 Zero Length Adapter ISO-63 | P108236 | Conductance Limiting Plate Coupl. | P101242 | KF-16 Centering Viton O-ring |



RECOMMENDED PUMPS

ROUGHING PUMPS

| Brand | Model | Type | Pumping Speed (CFM) | Ultimate Pressure (mTorr) |
|----------|------------|-------------|---------------------|---------------------------|
| Agilent | IDP-3 | Dry Scroll | 2.1 | 250 |
| Agilent | SH-110 | Dry Scroll | 4.0 | 50 |
| Agilent | DS-42 | Rotary Vane | 1.2 | 3 |
| Agilent | DS-102 | Rotary Vane | 3.5 | 1 |
| Edwards | NXDS-6i | Dry Scroll | 4.0 | 7 |
| Edwards | E2M0.7 | Rotary Vane | 0.65 | 3 |
| Edwards | E2M1.5 | Rotary Vane | 1.2 | 3 |
| Edwards | RV3 | Rotary Vane | 2.6 | 2 |
| Leybold | SC5D | Dry Scroll | 3.8 | 20 |
| Leybold | Trivac D4B | Rotary Vane | 3 | 1 |
| Pfeiffer | ACP 15 | Dry Roots | 8.5 | 22.5 |
| Pfeiffer | DUO 3 | Rotary Vane | 2.5 | 3 |

TURBO PUMPS

| Brand | Model | Pumping Speed |
|----------|-----------------|---------------|
| Pfeiffer | HiPace 80 | 60 l/s |
| Agilent | TwisTorr 84-FS | 53 l/s |
| Edwards | EXT 75DX | 61 l/s |
| Leybold | TurboVac TMP 50 | 55 l/s |



PUMPING DATA (6x6x6 CUBES)



COMPETITIVE COMPARISONS

6x6x6 Cube Chamber

- 1 ea. Chamber
- 4 ea. Gaskets
- 48 ea. Bolts
- 6 ea. O-rings
- 1 ea. Adapter
- 4 ea. Plates
- 1 ea. Fitting

6" CF Cube Chamber

- 1 ea. 6" CF Cube
- 4 ea. 6" Blank Non-Rotatable SS CF Fitting
- 1 ea. 6" CF to 3.375" CF Adapter Fitting
- 1 ea. 6" CF to 4.5" CF Adapter Fitting
- 6 ea. 6" CF Copper Gaskets
- 6 Bolt Kits (36 Bolts & Nuts ea.)

CF 6" 6-way Chamber

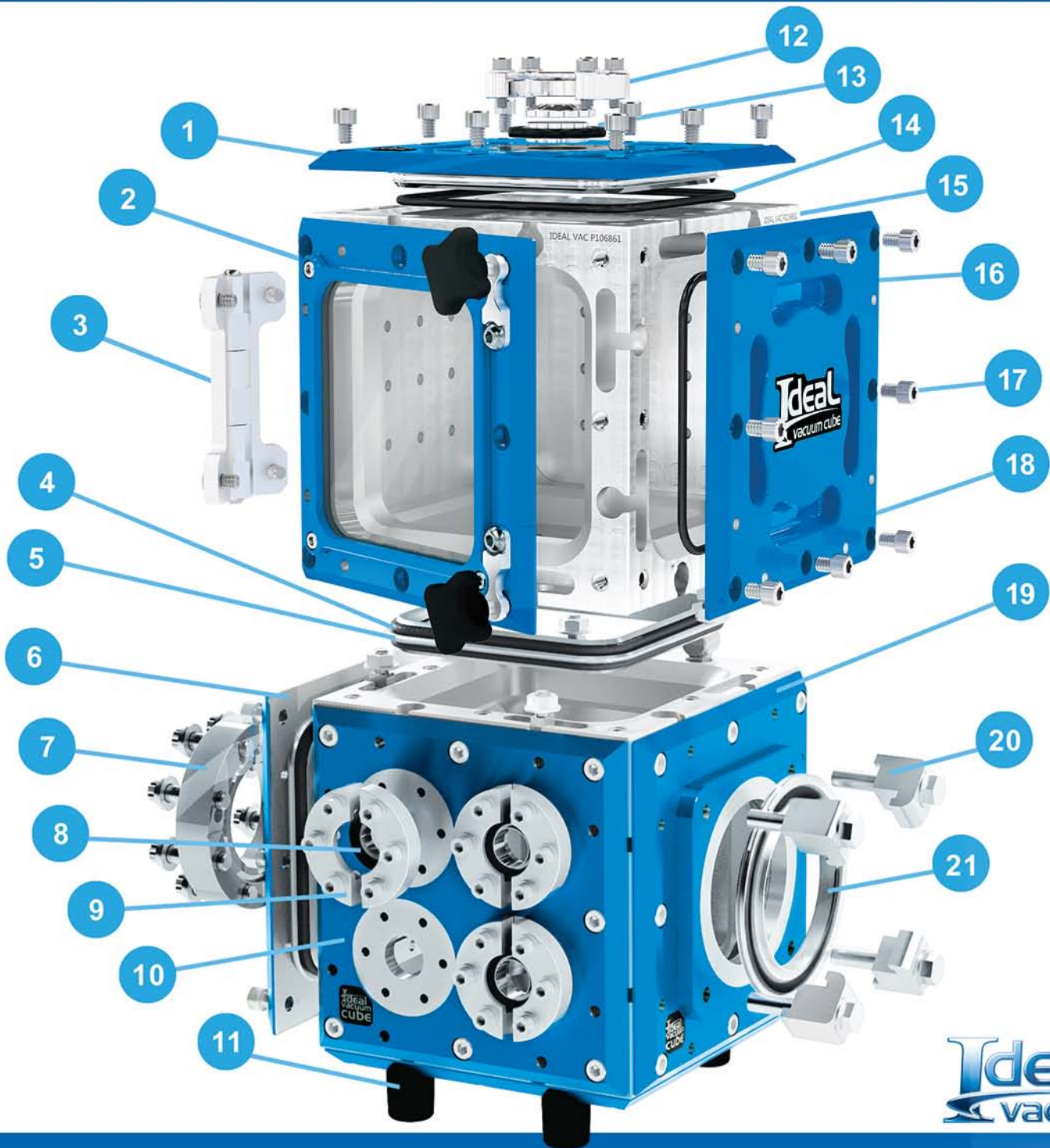
- 1 ea. Chamber
- 6 ea. Gaskets
- 6 sets (96 bolts)
- 5 ea. Plates
- 1 ea. Fitting

ISO-100 6-way Chamber

- 1 ea. 6-Way ISO-100 Cross
- 1 ea. ISO-100 Blank Flange
- 1 ea. ISO-100 to KF-25
- 1 ea. ISO-100 to KF-40
- 6 ea. ISO-100 Viton Centering Ring
- 6 ea. ISO-100 Replacement O-ring
- 36 ea. Double Claw Clamp

| SYSTEM CHAMBERS | TOTAL COST | VOLUME | ULTIMATE PRESSURE | MAX. TEMP. with 80 L/s Turbo | CLEAR APERTURE | OPENING AREA | MATERIAL | ACCESS DOOR VIEWPORT WINDOW | FULL WEIGHT | BOLTS QTY. | STACKABLE | OPTICAL MOUNTS | REUSABLE SEALS | SEALS COST |
|---------------------------|-------------|---------------------|--------------------------|------------------------------|----------------|----------------------|------------|-----------------------------|-------------|------------|-----------|----------------|----------------|------------|
| Ideal Vacuum Cube Chamber | \$ 1,499.00 | 134 in ³ | <3x10 ⁻⁶ Torr | 150° C | 4.1 x 4.1 in. | 16.8 in ² | 6061 Alloy | ✓ +\$ 249 | 11 lbs. | 48 | ✓ | ✓ | ✓ | \$ 17.94 |
| 6" CF 6-Way Chamber | \$ 2,362.00 | 293 in ³ | <1x10 ⁻⁶ Torr | 450° C | 4 in. Diam. | 12.6 in ² | 304 SS | ✓ +\$ 899 | 63 lbs. | 96 | ✓ | X | X | \$ 132.00 |
| 6" CF Cube Chamber | \$ 3,069.23 | 132 in ³ | <1x10 ⁻⁶ Torr | 450° C | 4 in. Diam. | 12.6 in ² | 304 SS | ✓ +\$ 899 | 61 lbs. | 96 | X | X | X | \$ 33.84 |

EXPLODED VIEW & PARTS LIST



| | DESCRIPTION | PN | | DESCRIPTION | PN |
|----|---|---------|----|--|---------|
| 1 | 6x6 Plate with KF-25 Feedthrough Port | P106865 | 12 | KF-25 Bulkhead Clamp | P104599 |
| 2 | 6x6 Plate with Glass Window | P106869 | 13 | KF-25 Centering Viton O-ring | P101243 |
| 3 | Hinge Assembly & Hardware | P106868 | 14 | Viton O-ring for Sealing 6x6 Plates | P107295 |
| 4 | Coupling Sealing Viton O-ring | P107295 | 15 | 6x6x6 Vacuum Chamber Frame, 6061 Alloy | P106861 |
| 5 | 6x6 Coupling Connector to Join Cubes | P106867 | 16 | Blank Plate without Flanged Ports | P106862 |
| 6 | 6x6 Plate with KF-40 Feedthrough Port | P106863 | 17 | 1/4" - 20 Bolts Plate Mounting Kit | P107293 |
| 7 | KF-40 Bulkhead Clamp, Aluminum | P104600 | 18 | Multicube Inner Frame Connector | P107292 |
| 8 | KF-16 Centering Viton O-ring | P101242 | 19 | 6x6 Plate with ISO-63 Feedthrough Port | P106864 |
| 9 | KF-16 Bulkhead Clamp, Aluminum | P104598 | 20 | Single Claw Clamp for ISO-63 Port | P101786 |
| 10 | 6x6 Plate w/ 4 KF-16 Feedthrough Ports | P106866 | 21 | ISO-63 Centering Ring w/ Viton O-ring | P101766 |
| 11 | Rubber Vibration Cube Support, 4 Foot Kit | P107297 | | | |