

# Vacuum Capacitors

**MEIDEN**  
Quality connecting the next



MADE IN JAPAN  
RoHS compliant

Supporting solutions for issues customers face  
with environmental consideration and high quality.

# Reliable Vacuum Technology Since 1968

MEIDEN has been developing and manufacturing highly reliable vacuum capacitors since 1994, utilizing vacuum technology and know-how we have accumulated through the development and manufacture of vacuum circuit breakers for over half a century. There are two methods of manufacturing vacuum devices: constant air exhaustion using a vacuum pump and the vacuum sealing at the manufacturing stage. MEIDEN vacuum capacitors are manufactured using the vacuum sealing method and are designed to maintain the vacuum state for a long period of time.



## Production location

Our vacuum capacitors are all manufactured at Meiden Numazu Works.

## Main Applications



### Semiconductor Manufacturing Equipment

Vacuum capacitors (VCs) are an integral part of semiconductor manufacturing processes. VCs are used in the impedance matching networks which enable physical vapor deposition (PVD), chemical vapor deposition (CVD) and etching.



### Liquid Crystal Display (LCD) Panel Manufacturing Equipment

VCs are a key component of the impedance matching networks of the radio frequency (RF) generators used to manipulate high-current plasma in order to manufacture LCD panels, such as flat screen TVs.

### Photovoltaic Cell Manufacturing Equipment

LCD technology is used for the manufacture of photovoltaic power generating panels (solar cells). Here too, VCs are incorporated in the impedance matching network of RF generators for plasma generation.

### Broadcasting

VCs are used in communications equipment, transmission systems for short and medium wave broadcasting, aircraft antenna tuners used in harsh environments, and various mobile communications equipment.

### Medical Care and Measuring Devices

Vacuum capacitors are used in chemical composition analysis and magnetic resonance imaging (MRI).

### Research

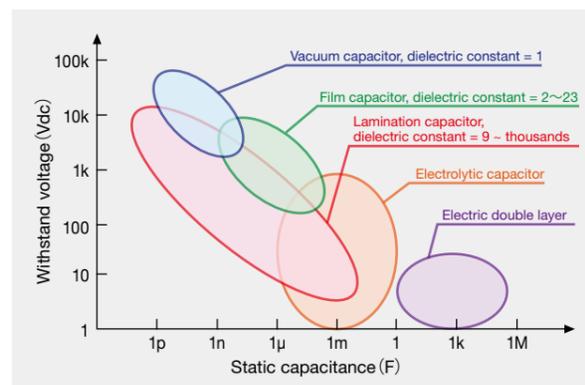
Vacuum capacitors are used in particle accelerators and other fundamental science research facilities.

### Wireless charging

Vacuum capacitors are used in wireless charging research facilities of electric vehicles and plug-in hybrid vehicles.

## Features

Vacuum capacitors (VCs) have a significantly lower Equivalent Series Resistance (ESR) than other technologies. Using high vacuum as the dielectric results in high current and voltage ratings, coupled with low losses, especially when compared to alternative forms of dielectrics. We offer five series of VCs, ranging in capacitance from 1 pF to 6000 pF, with peak voltage tolerance ranging from 3 kVp to 40 kVp. Vacuum capacitors are the optimal choice where high voltage, high current and high frequencies intersect.

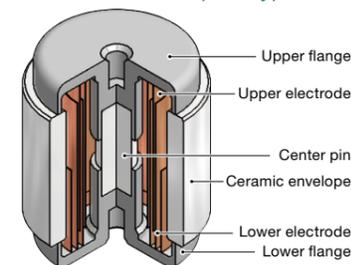


## Structure

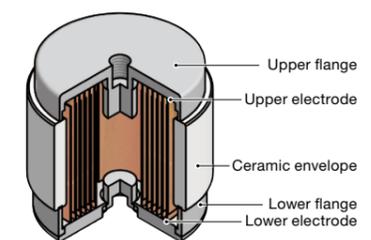
Variable vacuum capacitors incorporate movable plate electrodes. The plates move in relation to each other within the vacuum, using precision screw actuators, which provide excellent accuracy and repeatability. The bellows contains the vacuum, allowing motion without the use of seals. Since the bellows also carry current, we have engineered our VCs with a variety of internal structures to choose from, including long-lasting stainless steel bellows or double bellows, to accommodate any current handling and life cycle needs in the industry. This technology is also used in our high-power vacuum contactors and interrupters, which are used in utility power systems, bullet trains and other high-power infrastructure projects.

### Fixed Type

#### FS • FC Series Compact type

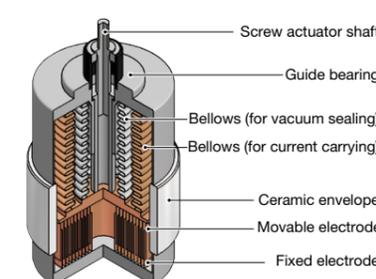


#### FH Series Large current type

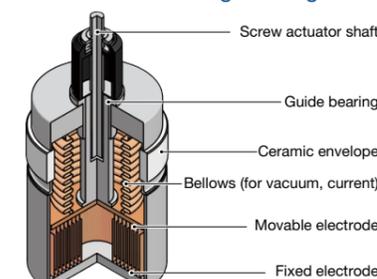


### Variable Type

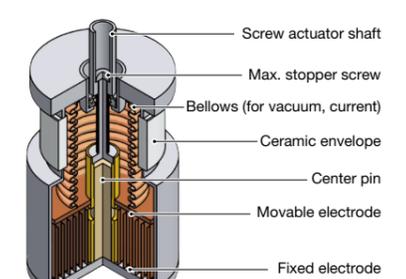
#### VP Series Double bellows



#### UW Series Low-loss high-strength bellows



#### VM Series The first model

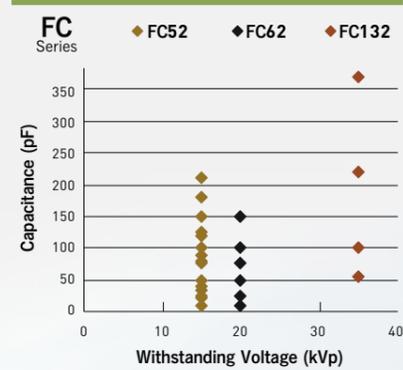
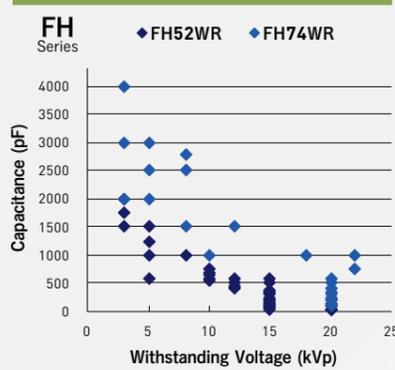
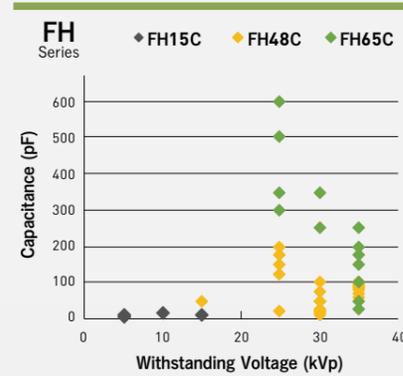
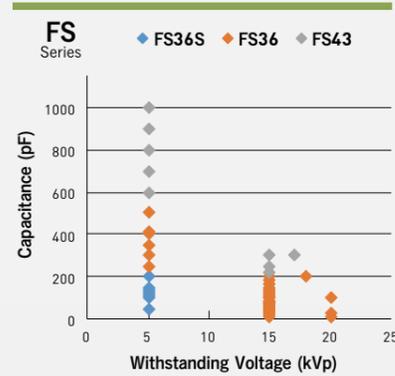


# Fixed Vacuum Capacitors

Trimmable vacuum capacitors

<b>FS Series</b>	up to 50 Arms	P.4
<b>FC Series</b>	up to 100 Arms	P.5
<b>FH Series</b>	up to 172 Arms	P.7
<hr/>		
<b>TC Series</b>	up to 50 Arms	P.6

## Withstand Voltage vs Capacitance



## FS Series up to 50 Arms (13.56 MHz)

Designed for low-power applications

### Features

- Compact design
- Stainless steel electrodes facilitate high voltage tolerance in a compact form.
- Robust internal construction



### Type

Type	Part Number	Capacitance (pF) <sup>※3</sup>	Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)	Weight (kg)	Options (Mounting kit)
			RF Working	Peak Test	13.56MHz	40MHz	60MHz			
FS36S	SCF-51S <sup>※2</sup>	100	3	5	18	38	34	L30 × φ36	~0.5	—
	SCF-51.1S <sup>※2</sup>	110	3	5	19	38	34			
	SCF-51.2S <sup>※2</sup>	120	3	5	21	38	34			
	SCF-51.3S <sup>※2</sup>	130	3	5	23	38	34			
	SCF-51.4S <sup>※2</sup>	140	3	5	25	38	34			
	SCF-51.5S <sup>※2</sup>	150	3	5	27	38	34			
	SCF-52S <sup>※2</sup>	200	3	5	36	38	34			
	SCF-150.1Z <sup>※2</sup>	10	9	15	5	15	23			
	SCF-200.1Z <sup>※2</sup>	10	12	20	7	21	31			
	SCF-150.2Z <sup>※2</sup>	20	9	15	10	31	34			
FS36	SCF-150.25Z <sup>※2</sup>	25	9	15	13	38	34	L43 × φ36	~0.6	—
	SCF-200.3Z <sup>※2</sup>	30	12	20	21	38	34			
	SCF-150.33Z <sup>※2</sup>	33	9	15	17	38	34			
	SCF-150.4Z <sup>※2</sup>	40	9	15	21	38	34			
	SCF-150.5Z <sup>※2</sup>	50	9	15	27	38	34			
	SCF-150.6Z <sup>※2</sup>	60	9	15	32	38	34			
	SCF-200.6Z <sup>※2</sup>	60	12	20	43	38	34			
	SCF-150.75Z <sup>※2</sup>	75	9	15	40	38	34			
	SCF-150.8Z <sup>※2</sup>	80	9	15	43	38	34			
	SCF-150.84Z <sup>※2</sup>	84	9	15	45	38	34			
	SCF-150.9Z <sup>※2</sup>	90	9	15	48	38	34			
	SCF-151Z <sup>※4</sup>	100	9	15	50	38	34			
	SCF-151.1Z <sup>※4</sup>	110	9	15	50	38	34			
	SCF-151.15Z <sup>※4</sup>	115	9	15	50	38	34			
	SCF-151.2Z <sup>※4</sup>	120	9	15	50	38	34			
	SCF-151.3Z <sup>※4</sup>	130	9	15	50	38	34			
	SCF-151.4Z <sup>※4</sup>	140	9	15	50	38	34			
	SCF-151.5Z <sup>※4</sup>	150	9	15	50	38	34			
	SCF-151.8Z <sup>※4</sup>	180	9	15	50	38	34			
	SCF-152Z <sup>※4</sup>	200	9	15	50	38	34			
SCF-52.5Z <sup>※2</sup>	250	3	5	45	38	34				
SCF-102.5Z <sup>※4</sup>	250	6	10	50	38	34				
SCF-53Z <sup>※4</sup>	300	3	5	50	38	34				
SCF-103Z <sup>※4</sup>	300	6	10	50	38	34				
SCF-53.5Z <sup>※4</sup>	350	3	5	50	38	34				
SCF-103.5Z <sup>※4</sup>	350	6	10	50	38	34				
SCF-54Z <sup>※4</sup>	400	3	5	50	38	34				
SCF-104Z <sup>※4</sup>	400	6	10	50	38	34				
SCF-55Z <sup>※4</sup>	500	3	5	50	38	34				
SCF-105Z <sup>※4</sup>	500	6	10	50	38	34				
FS43	SCF-152.2 <sup>※4</sup>	220	9	15	50	38	34	L43 × φ43	~0.8	—
	SCF-152.5 <sup>※4</sup>	250	9	15	50	38	34			
	SCF-153 <sup>※4</sup>	300	9	15	50	38	34			
	SCF-173 <sup>※4</sup>	300	10.2	17	50	38	34			
	SCF-56 <sup>※4</sup>	600	3	5	50	38	34			
	SCF-57 <sup>※4</sup>	700	3	5	50	38	34			
	SCF-58 <sup>※4</sup>	800	3	5	50	38	34			
	SCF-59 <sup>※4</sup>	900	3	5	50	38	34			
	SCF-510 <sup>※4</sup>	1000	3	5	50	38	34			

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※2: Max current values assume base sink/convection cooling.  
 ※3: Capacitance tolerance: below 50 pF : ±10 %, above 50 pF : ±5 %  
 ※4: Water cooling adds 50W thermal capacity.

# FC Series

up to 100 Arms (13.56 MHz)

Designed for medium-power applications

## Features

- High-current copper electrode
- Robust internal construction



## FC Series Product Types

### SCF-□□□□□CA

Fixed Vacuum Capacitors

### IK-□

①: Peak test voltage (kV)	②: Capacitance (x100pF)	③: Symbol (Series)	④: Mounting kit (Options)
		C Flat mounting surface CA With centering structure	IK-0 IK-2

## Optional

### ● Mounting kit

Screws and washer sets commonly used in installation

Applicable models	FC52, FC62	FC52A
Mounting kit		

## Type

Type	Part Number	Capacitance (pF) <sup>※3</sup>	Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)	Weight (kg)	Options (Mounting kit)
			RF Working	Peak Test	13.56MHz	40MHz	60MHz			
FC52	SCF-150.5C <sup>※2</sup>	50	9	15	27	79	89	L48 × φ52.4	~0.4	IK-0
	SCF-151C <sup>※2</sup>	100	9	15	54	99	89			
	SCF-151.5C <sup>※2</sup>	150	9	15	81	99	89			
	SCF-152C <sup>※2</sup>	200	9	15	108	99	89			
FC52A	SCF-150.5CA <sup>※2</sup>	50	9	15	27	61	55	L52 × φ52.4	~0.4	IK-2
	SCF-150.8CA <sup>※2</sup>	80	9	15	43	61	55			
	SCF-150.9CA <sup>※2</sup>	90	9	15	48	61	55			
	SCF-151CA <sup>※2</sup>	100	9	15	54	61	55			
	SCF-151.2CA <sup>※2</sup>	120	9	15	65	61	55			
	SCF-151.5CA <sup>※2</sup>	150	9	15	80	61	55			
	SCF-151.8CA <sup>※2</sup>	180	9	15	80	61	55			
	SCF-152.1CA <sup>※2</sup>	210	9	15	80	61	55			
FC62	SCF-200.1C <sup>※2</sup>	9	12	20	6	19	28	L50 × φ62.4	~0.6	IK-0
	SCF-200.5C <sup>※2</sup>	50	12	20	36	76	68			
	SCF-200.75C <sup>※2</sup>	75	12	20	54	76	68			
	SCF-201C <sup>※2</sup>	100	12	20	72	76	68			
	SCF-201.5C <sup>※4</sup>	150	12	20	100	76	68			

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※2: Max current values assume base sink/convection cooling.  
 ※3: Capacitance tolerance: below 50 pF : ±10 %, above 50 pF : ±5 %  
 ※4: Water cooling adds 50W thermal capacity.

# TC Series

High voltage and High frequency tolerance

## Features

- Fine-tuning Option ( Trimmer Capacitors )  
The capacitance can be adjusted by few picofarads
- Can be adjusting after installation



## Optional

### ● Mounting kit

Screws and washer sets commonly used in installation

Applicable models	TC48
Mounting kit	

## Type

Type	Part Number	Capacitance (pF)		Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options (Mounting kit)
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
TC48	SCT-300.2H48C <sup>※4</sup>	8	20	18	30	21	63	78	72	62	48	~0.5	IK-9
	SCT-300.3H48C <sup>※4</sup>	25	35	18	30	37	86	78					
	SCT-210.4H48C <sup>※4</sup>	35	45	12.6	21	34	86	78					

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※4: Water cooling adds 50W thermal capacity.

Designed for high power applications

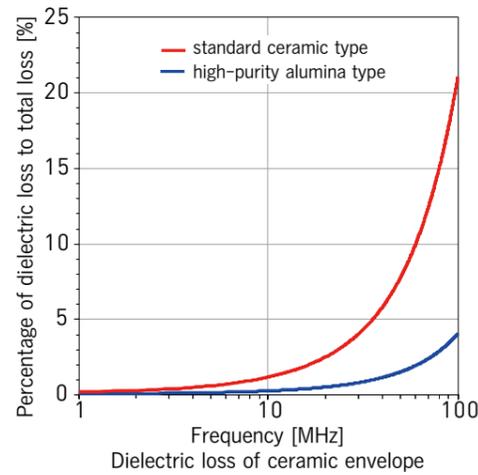
### Features

#### ● High voltage tolerance

We offer a variety of different capacitors covering peak test voltages of 25 kVp, 30 kVp, and 35 kVp



### Low-Loss with High-Purity Alumina Ceramic



#### Dielectric losses of ceramic envelope

Vacuum capacitor has resistance losses and dielectric as heat losses.

High purity alumina ceramics exhibit reduced low dielectric losses and is recommended for applications requiring higher power at frequencies over 40MHz.



Standard Ceramic Type (FH52)



High Purity Alumina Ceramic Type (FHA52)

### FH Series Product Types

SCF-□□□□□H□□WR

IK-□

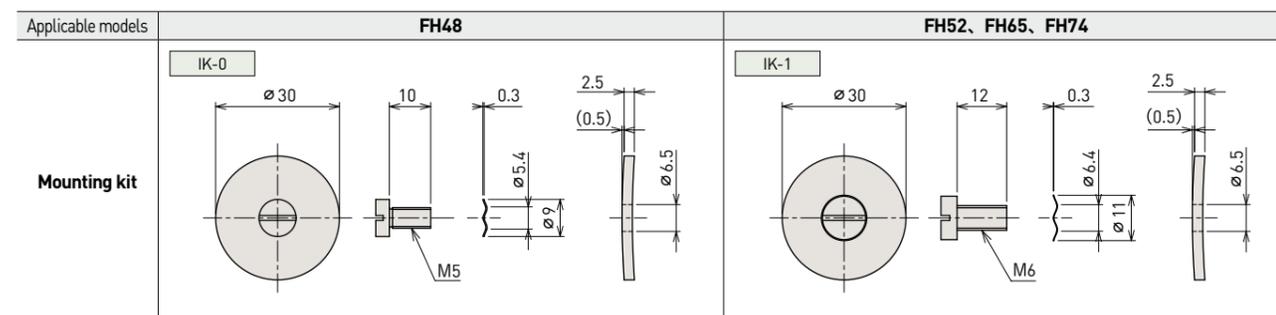
Fixed Vacuum Capacitors

- ①: Peak test voltage (kV)
- ②: Capacitance (x100pF)
- ③: Design identification symbol  
 H Alumina Al2O3 94~98%  
 HA Alumina Al2O3 98%~ (Apply FH52 only)
- ④: Diameter (mm)
- ⑤: Symbol (Series)  
 C Copper ring electrode  
 WR Copper spiral electrode
- ⑥: Mounting kit (Options)  
 IK-0  
 IK-1

### Optional

#### ● Mounting kit

Screws and washer sets commonly used in installation. Installation kits are sold separately.



### Type

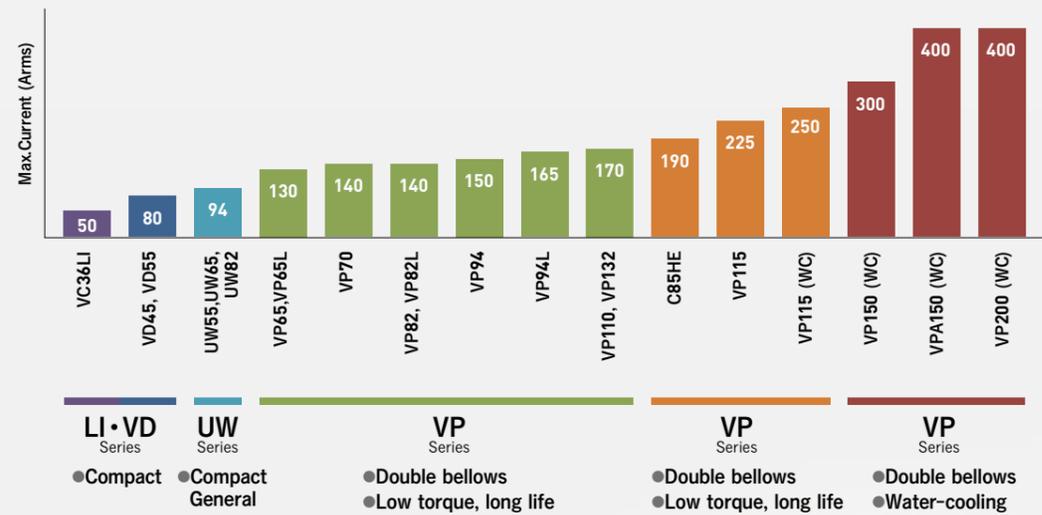
Type	SCF-300.25H48C	Capacitance (pF) ※3	Voltage (kVp) ※1		Current (Arms)			Mounting Dimensions (mm)	Weight (kg)	Options (Mounting kit)
			RF Working	Peak Test	13.56MHz	40MHz	60MHz			
FH48	SCF-300.1H48C ※2	10	18	30	10	31	47	L 73 × φ48	~0.5	IK-0
	SCF-300.2H48C ※2	20	18	30	21	63	95			
	SCF-300.25H48C ※2	25	18	30	27	79	99			
	SCF-300.5H48C ※2	50	18	30	54	110	99			
	SCF-350.5H48C ※2	50	21	35	63	110	99			
	SCF-300.75H48C ※2	75	18	30	81	110	99			
	SCF-350.9H48C ※2	90	21	35	113	110	99			
	SCF-301H48C ※2	100	18	30	108	110	99			
	SCF-351H48C ※2	100	21	35	126	110	99			
	SCF-251.25H48C ※2	125	15	25	112	110	99			
	SCF-251.5H48C ※2	150	15	25	135	110	99			
	SCF-301.5H48C ※4	150	18	30	145	110	99			
	SCF-251.75H48C ※4	175	15	25	145	110	99			
	SCF-252H48C ※4	200	15	25	145	110	99			
FHA52	SCF-200.56HA52WR ※2	56	12	20	40	99	89	L52 × φ 52.4	~0.6	IK-1
	SCF-200.62HA52WR ※2	62	12	20	44	99	89			
FH52	SCF-151H52WR ※2	100	9	15	54	99	89	L52 × φ 52.4	~0.6	IK-1
	SCF-201H52WR ※2	100	12	20	72	99	89			
	SCF-151.5H52WR ※2	150	9	15	81	99	89			
	SCF-152H52WR ※2	200	9	15	108	99	89			
	SCF-202H52WR ※4	200	12	20	130	99	89			
	SCF-152.1H52WR ※2	210	9	15	113	99	89			
	SCF-152.5H52WR ※4	250	9	15	130	99	89			
	SCF-153H52WR ※4	300	9	15	130	99	89			
	SCF-153.5H52WR ※4	350	9	15	130	99	89			
	SCF-153.7H52WR ※4	370	9	15	130	99	89			
	SCF-124H52WR ※4	400	7.2	12	130	99	89			
	SCF-124.5H52WR ※4	450	7.2	12	130	99	89			
	SCF-125H52WR ※4	500	7.2	12	130	99	89			
	SCF-155H52WR ※4	500	9	15	130	99	89			
	SCF-105.5H52WR ※4	550	6	10	130	99	89			
	SCF-56H52WR ※2	600	3	5	108	99	89			
	SCF-106H52WR ※4	600	6	10	130	99	89			
	SCF-126H52WR ※4	600	7.2	12	130	99	89			
	SCF-106.5H52WR ※4	650	6	10	130	99	89			
	SCF-107H52WR ※4	700	6	10	130	99	89			
	SCF-107.5H52WR ※4	750	6	10	130	99	89			
	SCF-510H52WR ※4	1000	3	5	130	99	89			
	SCF-810H52WR ※4	1000	4.8	8	130	99	89			
	SCF-512.5H52WR ※4	1250	3	5	130	99	89			
SCF-315H52WR ※4	1500	1.8	3	130	99	89				
SCF-515H52WR ※4	1500	3	5	130	99	89				
SCF-317.5H52WR ※4	1750	1.8	3	130	99	89				
SCF-320H52WR ※4	2000	1.8	3	130	99	89				
FH65	SCF-350.25H65C ※2	25	21	35	31	93	118	L 87 × φ 65	~0.8	IK-1
	SCF-350.5H65C ※2	50	21	35	63	131	118			
	SCF-351H65C ※2	100	21	35	126	131	118			
	SCF-351.5H65C ※4	150	21	35	172	131	118			
	SCF-351.75H65C ※4	175	21	35	172	131	118			
	SCF-352H65C ※4	200	21	35	172	131	118			
	SCF-352.5H65C ※4	250	21	35	172	131	118			
	SCF-253H65C ※4	300	15	25	172	131	118			
	SCF-253.5H65C ※4	350	15	25	172	131	118			
	SCF-205H74WR ※4	500	12	20	140	106	96			
	SCF-157.5H74WR ※4	750	9	15	140	106	96			
	SCF-1010H74WR ※4	1000	6	10	140	106	96			
FH74	SCF-520H74WR ※4	2000	3	5	121	92	83	L 52 × φ 74	~0.8	IK-1
	SCF-530H74WR ※4	3000	3	5	121	92	83			
	SCF-340H74WR ※4	4000	1.8	3	121	92	83			

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 ※2: Max current values assume base sink/convection cooling.  
 ※3: Capacitance tolerance: below 50 pF : ±10%, above 50 pF : ±5%  
 ※4: Water cooling adds 50W thermal capacity.

# Variable Vacuum Capacitors

<b>VC-36LI</b> Series	up to 50 Arms	.....	<b>P.10</b>
<b>VD</b> Series	up to 80 Arms	.....	<b>P.10</b>
<b>UW</b> Series	up to 94 Arms	.....	<b>P.11</b>
<b>VP</b> Series	up to 400 Arms	.....	<b>P.13</b>
<b>VC-85HE</b> Series	up to 190 Arms	.....	<b>P.17</b>
<b>VC-82PO</b> Series	up to 130 Arms	.....	<b>P.18</b>

## Maximum current and series



## VC-36LI Series up to 50 Arms (13.56MHz)

Designed for low-power applications

Features

- Compact design

Motor Specifications

Item	VC-36LID
Torque	≤ 0.15Nm (≤ 15Ncm)
Turns	11.1 (±0.5) Turns
Motor axis diameter	φ 5mm



36LID

Type

Type	Part Number	Capacitance (pF)		Voltage (kVp)*1		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options (Mounting kit)
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
<b>VC-36LI</b>	<b>SCV-50.5C36LID</b> ※4	6	50	3	5	9	6	6	90.6	72.1	φ36	~0.3	IK-7

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※4: Water cooling adds 30W thermal capacity.

## VD Series up to 80 Arms (13.56MHz)

Designed for low-power applications

Features

- Compact design

Motor Specifications

Item	VD
Torque	≤ 0.15Nm (≤ 15Ncm)
Turns	10 (±0.5) Turns
Motor axis diameter	φ 5mm



VD55



VD45

Type

Type	Part Number	Capacitance (pF)		Voltage (kVp)*1		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options (Mounting kit)
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
<b>VD45</b>	<b>SCV-56.5D45W</b> ※4	15	650	3	5	70	53	48	115	96.5	φ45	~0.4	IK-6
	<b>SCV-154.5D55W</b> ※4	45	450	9	15	80	61	55					
	<b>SCV-55D55W</b> ※4	35	500	3	5	40	30	27					
<b>VD55</b>	<b>SCV-85D55W</b> ※4	35	500	4.8	8	80	61	55	115	96.5	φ55	~0.6	—
	<b>SCV-110D55W</b> ※4	40	1000	0.6	1	36	30	27					
	<b>SCV-410D55W</b> ※4	40	1000	2.4	4	80	61	55					
	<b>SCV-115D55W</b> ※4	45	1500	0.6	1	40	30	27					
	<b>SCV-315D55W</b> ※4	45	1500	1.8	3	80	61	55					

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※4: Water cooling adds 30W thermal capacity.

Designed for low-power applications

Features

- **Low-loss / high-strength bellows**  
Copper-coated stainless steel increases current-handling capability.
- **Wide tuning range**  
Capacitance from 3 pF to 2,000 pF
- **High purity alumina ceramics**  
Low-loss ceramics (UWA55 type)
- **High durability screw actuator technology**  
Diamond-like carbon (DLC) coating extends life and reduces friction
- **Ball screw actuators**  
Meiden has adopted ball screws for variable capacitors to overcome overload conditions such as high speed/ high acceleration reverse matching, same range continuous operation, micro-motion and hunting oscillation. They provide vastly superior life expectancy, exhibiting near-zero friction for high-speed and high acceleration / deceleration functions.  
The UW series is available with small ball screw profiles to meet size constraints and extend life.



Motor Specifications

Item	UW-C	UW-B (Ball Screw)
Torque	≤0.18Nm (≤18Ncm)	≤0.15Nm (≤15Ncm)
Turns	10.5(±0.2) Turns	9.5( $\pm\frac{0.2}{9}$ ) Turns
Motor axis diameter	φ6.35mm	φ12.7mm

UW Series Product Types

**SCV-□□□□□H□□UW-□ (□)**

Variable Vacuum Capacitors

- |                           |                             |                                 |
|---------------------------|-----------------------------|---------------------------------|
| ①: Peak test voltage (kV) | ②: Capacitance (x100pF)     | ③: Design identification symbol |
| ④: Diameter (mm)          | ⑤: Symbol (Series)          | ⑥: Types of screw               |
|                           | ⑦: Types of shaft (Options) |                                 |
- H** Alumina Al<sub>2</sub>O<sub>3</sub> 94~98%  
**FH** Minimum non-linear region (2 turns)  
**HA** For high frequencies Alumina Al<sub>2</sub>O<sub>3</sub> 98%~ Non-linear region (4 turns)
- UW** Flat mounting surface  
**UWD** Fixed side 4-point mounting  
**-C** DLC coating  
**-B3** Ball screw  
**Blank** Standard  
**(xx)** See options

Type

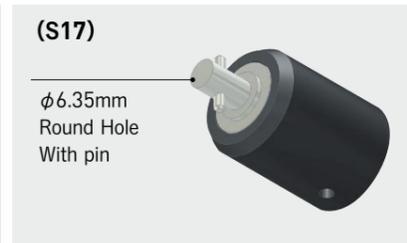
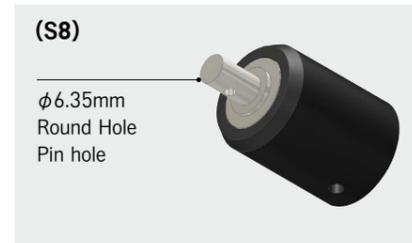
Type	Part Number	Capacitance (pF)		Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options
		Min.	Max.	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
UW55	SCV-150.6HA55UW-C <sup>※4</sup>	3	60	9	15	32	71	64	133.5	90.6	φ55	~0.7	-B3
	SCV-150.75HA55UW-C <sup>※4</sup>	5	75	9	15	40	71	64					
	SCV-200.5H55UW-C <sup>※4</sup>	6	50	12	20	27	71	64					
	SCV-151H55UW-C <sup>※4</sup>	10	100	9	15	54	71	64					
	SCV-151.5FH55UW-C <sup>※4</sup>	7	150	9	15	81	71	64					
	SCV-152.5H55UW-C <sup>※4</sup>	25	250	9	15	94	71	64					
	SCV-83.5FH55UW-C <sup>※4</sup>	7	350	4.8	8	94	71	64					
	SCV-55FH55UW-C <sup>※4</sup>	7	500	3	5	90	71	64					
	SCV-85H55UW-C <sup>※4</sup>	35	500	4.8	8	94	71	64					
	SCV-310H55UW-C <sup>※4</sup>	35	1000	1.8	3	94	71	64					
UW65	SCV-510H55UW-C <sup>※4</sup>	35	1000	3	5	94	71	64	133.5	90.6	φ65	~0.9	-B3
	SCV-415H55UW-C <sup>※4</sup>	150	1500	2.4	4	94	71	64					
	SCV-125H65UW-C <sup>※4</sup>	50	500	7.2	12	94	71	64					
	SCV-155H65UW-C <sup>※4</sup>	50	500	9	15	94	71	64					
	SCV-810H65UW-C <sup>※4</sup>	100	1000	4.8	8	94	71	64					
	SCV-1010H65UW-C <sup>※4</sup>	100	1000	6	10	94	71	64					
UW82	SCV-415H65UW-C <sup>※4</sup>	150	1500	2.4	4	94	71	64	133.5	90.6	φ82	~1.3	-B3
	SCV-515H65UW-C <sup>※4</sup>	150	1500	3	5	94	71	64					
	SCV-320H65UW-C <sup>※4</sup>	200	2000	1.8	3	94	71	64					
	SCV-158FH82UW-C <sup>※4</sup>	50	800	9	15	94	71	64					
	SCV-1014H82UW-C <sup>※4</sup>	140	1400	6	10	94	71	64					
	SCV-815H82UW-C <sup>※4</sup>	150	1500	4.8	8	94	71	64					

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※4: Water cooling adds 30W thermal capacity.

⑥: Types of screw



⑦: Types of shaft (Options)



Designed for medium/ high-power applications

Features

- **Double bellows with special copper alloy**  
Designed for high current applications, the dual bellows system provides the highest current capacity and extended durability while exhibiting low actuation torque.
- **Reinforced actuator screw system**  
Coated with long-life diamond-like carbon (DLC)



Optional

- **Ball screw actuators**

VP Series Product Types

SCV-□□□□□P□□L-□ (□)

Vacuum Variable Capacitors

- ①: Peak test voltage (kV)
- ②: Capacitance (x100pF)
- ③: Symbol (Series)  
P Normal current  
PA Large current  
H VH-B Series
- ④: Diameter (mm)
- ⑤: Design identification symbol  
Blank Concentric electrodes  
L Mounting length 95mm (115 mm for normal specifications)  
W Swirl electrode  
DW Minimum non-linear region (2.8 turns)  
FW Minimum non-linear region (5.5 turns)

- ⑥: Types of screw  
Blank Standard (DLC coating)  
-B2 Ball Screw (VH-B Series)  
-B4 Ball Screw (VP150, VP200 types)
- ⑦: Types of shaft (Options)  
Blank Two flat + slit  
(xx) See options

⑥: Types of screw      ⑦: Types of shaft (Options)



Motor Specifications

Item	Other than VP82L,VP94L	VP82L·VP94L	Other than VP82L-B,VP94L-B (Ball Screw)	VP82L-B,VP94L-B (Ball Screw)
Torque	≤ 0.18Nm (≤ 18Ncm)	≤ 0.18Nm (≤ 18Ncm)	≤ 0.12Nm (≤ 12Ncm)	≤ 0.12Nm (≤ 12Ncm)
Turns	14.3 (±0.2) Turns	10.8 (±0.2) Turns	14 (±0.5) Turns	10.5 (±0.5) Turns
Motor axis diameter	φ 6.35mm	φ 6.35mm	φ 12.7mm	φ 12.7mm

Type

Type	Part Number	Capacitance (pF)		Voltage (kVp) ※1		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options						
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter								
VP65	SCV-151P65 ※2	10	100	9	15	54	99	89	154	115	φ 65	~1.3	-B2 AWF-6 AWM-6						
	SCV-201P65 ※2	10	100	12	20	72	99	89											
	SCV-152P65C ※2	5.5	200	9	15	108	99	89											
	SCV-202P65 ※2	15	200	12	20	130	99	89											
	SCV-152.5P65 ※2	15	250	9	15	130	99	89											
	SCV-202.5P65 ※2	15	250	12	20	130	99	89											
	SCV-7.55P65FW ※2	8	500	4.5	7.5	130	99	89											
	SCV-125P65DW ※2	10	500	7.2	12	130	99	89											
	SCV-310P65FW ※2	6	1000	1.8	3	108	99	89											
	SCV-410P65W ※2	20	1000	2.4	4	130	98	89											
	SCV-510P65W ※2	20	1000	3	5	130	99	89											
	SCV-810P65W ※2	20	1000	4.8	8	130	99	89											
VP70	SCV-315P65DW ※2	10	1500	1.8	3	130	99	89	154	115	φ 70	~1.5	-B2 AWF-6 AWM-6						
	SCV-155P70W ※2	15	500	9	15	140	106	96											
	SCV-128P70W ※2	20	800	7.2	12	140	106	96											
VP70L	SCV-515P70W ※2	35	1500	3	5	140	106	96	125	95	φ 70	~1.2	-B2 AWF-6 AWM-6						
	SCV-49.5P70LW ※2	12	950	2.4	4	130	99	89											
VP82	SCV-85P70LW ※2	10	500	4.8	8	130	99	89	154	115	φ 82	~1.9							
	SCV-252P82 ※2	20	200	15	25	140	106	96											
	SCV-155P82W ※2	20	500	9	15	140	106	96											
	SCV-205P82W ※2	20	500	12	20	140	106	96											
	SCV-1010P82W ※2	25	1000	6	10	140	106	96											
VPA82	SCV-515P82W ※2	25	1500	3	5	140	106	96	152	112	φ 82	1.8							
	SCV-520P82W ※2	25	2000	3	5	140	106	96											
	SCV-302PA82 ※2	22	200	18	30	170	129	117											
	SCV-200.5P82L ※2	12	50	12	20	36	106	96											
	SCV-250.8P82L ※2	11	80	15	25	72	106	96											
	SCV-201P82L ※2	12	100	12	20	72	106	96											
	SCV-251P82L ※2	12	100	15	25	90	106	96											
	SCV-201.5P82L ※2	12	150	12	20	108	106	96											
	SCV-202P82L ※2	12	200	12	20	140	106	96											
	SCV-202.2P82L ※2	12	220	12	20	140	106	96											
	SCV-103.5P82LW ※2	15	350	6	10	126	106	96											
	SCV-84P82LW ※2	15	400	4.8	8	115	106	96											
VP94	SCV-202.5P94 ※2	25	250	12	20	150	114	103	154	115	φ 94	~2.1							
	SCV-205P94 ※2	25	500	12	20	150	114	103											
	SCV-158P94DW ※2	50	800	9	15	150	114	103											
	SCV-815P94 ※2	30	1500	4.8	8	150	114	103											
	SCV-520P94W ※2	30	2000	3	5	150	114	103											
	SCV-523P94W ※2	45	2300	3	5	150	114	103											
	SCV-251P94L ※2	14	100	15	25	90	125	113											
	SCV-271P94L ※2	14	100	16.2	27	97	125	113											
	SCV-202.2P94L ※2	14	220	12	20	159	125	113											
	SCV-153.5P94L ※2	15	350	9	15	165	125	113											
	VP94L														125	95	φ 94	~1.8	

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※2: Max current values assume base sink/convection cooling.

Type

Type	Part Number	Capacitance (pF)		Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options (Types of screw and water-cooling flanges)
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
VP110	SCV-301P110 <sup>※2</sup>	20	100	18	30	108	129	117	154	115	φ110	~2.8	-B2 AWM-4
	SCV-201.5P110C <sup>※2</sup>	11	150	12	20	108	129	117					
	SCV-251.5P110C <sup>※2</sup>	11	150	15	25	135	129	117					
	SCV-302P110 <sup>※2</sup>	25	200	18	30	170	129	117					
	SCV-202.5P110C <sup>※2</sup>	13	245	12	20	170	129	117					
	SCV-252.5P110C <sup>※2</sup>	13	245	15	25	170	129	117					
	SCV-253.5P110 <sup>※2</sup>	35	350	15	25	170	129	117					
	SCV-205P110 <sup>※2</sup>	40	500	12	20	170	129	117					
	SCV-255P110 <sup>※2</sup>	40	500	15	25	170	129	117					
	SCV-158P110FW <sup>※2</sup>	15	800	9	15	170	129	117					
	SCV-209P110W <sup>※2</sup>	50	900	12	20	170	129	117					
	SCV-1510P110W <sup>※2</sup>	40	1000	9	15	170	129	117					
	SCV-2210P110W <sup>※2</sup>	40	1000	13.2	22	170	129	117					
	SCV-1015P110W <sup>※2</sup>	40	1500	6	10	170	129	117					
	SCV-520P110 <sup>※2</sup>	40	2000	3	5	170	129	117					
	SCV-820P110W <sup>※2</sup>	40	2000	4.8	8	170	129	117					
SCV-325P110FW <sup>※2</sup>	15	2500	1.8	3	170	129	117						
SCV-340P110W <sup>※2</sup>	45	4000	1.8	3	170	129	117						
SCV-540P110W <sup>※2</sup>	45	4000	3	5	170	129	117						
VP132	SCV-2015P132W <sup>※2</sup>	60	1500	12	20	170	129	117	154	115	φ132	~3.8	-B2
	SCV-1022P132W <sup>※2</sup>	80	2200	6	10	170	129	117					

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※2: Max current values assume base sink/convection cooling.

Water-cooling flanges

Types	Bottom Side	Top Side (Actuator Side)
VP65 VP70	<p>AWF-6</p> <p>(Water flow rate : 1.0 l/min., Permissible hydraulic pressure : 1.0 MPa) Unit : mm</p>	<p>AWM-6</p> <p>(Water flow rate : 1.0 l/min., Permissible hydraulic pressure : 1.0 MPa) Unit : mm</p>
VP82 VP82L VP94L	<p>AWM-4</p> <p>(Water flow rate : 1.0 l/min., Permissible hydraulic pressure : 1.0 MPa) Unit : mm</p>	<p>AWM-5</p> <p>(Water flow rate : 1.0 l/min., Permissible hydraulic pressure : 1.0 MPa) Unit : mm</p>
VP94 VP110 VP132	<p>AWM-4 (Top and bottom sides in common)</p> <p>(Water flow rate : 1.0 l/min., Permissible hydraulic pressure : 1.0 MPa) Unit : mm</p>	

Designed for high withstand voltage and high current

Features

Double bellows with special copper alloy

Designed for high current applications, the dual bellows system provides the highest current capacity and extended durability while exhibiting low actuation torque.

Reinforced actuator screw system

Coated with long-life diamond-like carbon (DLC)



VPC115

Motor Specifications

Item	SCV-401PB115H-B3	SCVW-352.5PC115H
Torque	≤0.12Nm (≤12Ncm)	≤0.18Nm (≤18Ncm)
Turns	7.8 (±0.4) Turns	10.3 (±0.2) Turns
Motor axis diameter	φ12.7mm	φ6.35mm

Type

Type	Part Number	Capacitance (pF)		Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options
		Min.	Max	RF Working voltage	Peak Test voltage	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
VPB115	SCV-401PB115H-B3 <sup>※4</sup>	14	90	24	40	130	156	141	175	135	φ115	3.5	—
VPC115	SCVW-352.5PC115H <sup>※6</sup>	40	250	21	35	250	190	172	154	125	φ115	3.9	-B3

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".

※4: Water cooling adds 30W thermal capacity.

※6: The maximum allowable current value is for a 100W thermal cooling environment. (The body is standard and water-cooling.)

Designed for high-power applications

Features

Internal water-cooling bellows/ actuator structure, large aperture/ high-current copper alloy bellows

Low losses

Reinforced actuator screw system

Coated with long-life diamond-like carbon (DLC)



VPA150



VP150



VP200

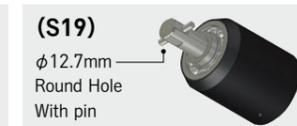
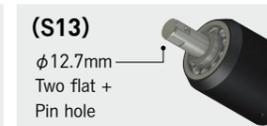
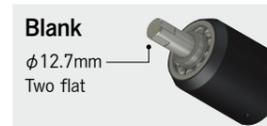
Motor Specifications

Item	VP150, VPA150, VP200
Torque	≤0.70Nm (≤70Ncm)
Turns	16.6 (±0.2) Turns
Motor axis diameter	φ12.7mm

Types of screw



Types of shaft (Options)



Type

Type	Part Number	Capacitance (pF)		Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
VP150	SCV-403.5P150 <sup>※6</sup>	20	350	24	40	300	228	206	265	165	φ150	~7.7	-B4
	SCV-405P150 <sup>※6</sup>	40	500	24	40	300	228	206					
	SCV-2010P150W <sup>※6</sup>	50	1000	12	20	300	228	206					
VPA150	SCV-1525P150W <sup>※6</sup>	40	2500	9	15	300	228	206	265	165	φ150	7.7	-B4
	SCV-1525PA150W <sup>※6</sup>	40	2500	9	15	400	305	275					
VP200	SCV-555P200 <sup>※6</sup>	40	500	33	55	400	305	275	265	165	φ200	13.1	-B4
	SCV-2020P200 <sup>※6</sup>	1000	2000	12	20	400	305	275					

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".

※6: The maximum allowable current value is for a 700W thermal cooling environment. (The body is standard and water-cooling.)

# VC-82HE · 85HE Series up to 225 Arms (13.56MHz)

Designed for medium-power applications

## Features

- **Double bellows with special copper alloy**  
Designed for high current applications, double bellows system provides highest current capacity and extended durability while exhibiting low actuation torque
- **Reinforced actuator screw system**  
Coated with long-life diamond-like carbon (DLC)

## Optional

- **Ball screw actuators**



VC-82HE-B Optional Ball Screw



## Motor Specifications

Item	SCV-103.3C82HEW -AADG-J	SCV-202C82HE -AAFG-B	SCV-250.8C82HE -AADG-F	SCV-251C82HE-B3 (Ball Screw)	SCVW-252.5C85HE
Torque	≤0.18Nm (≤18Ncm)	≤0.18Nm (≤18Ncm)	≤0.18Nm (≤18Ncm)	≤0.15Nm (≤15Ncm)	≤0.18Nm (≤18Ncm)
Turns	12(±0.2) Turns	10.5(±0.2) Turns	13.5(±0.2) Turns	8(+0.5/-0) Turns	10.3(±0.2) Turns
Motor axis diameter	φ 12.7mm	φ 12.7mm	φ 12.7mm	φ 12.7mm	φ 6.35mm

## Type

Type	Part Number	Capacitance (pF)		Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
VC-82HE	SCV-250.8C82HE-AADG-F <sup>※4</sup>	10	80	15	25	72	106	96	132	101	φ 82	~1.5	-B3
	SCV-251C82HE-B3 <sup>※4</sup>	12	100	15	25	90	106	96					
	SCV-202C82HE-AAFG-B <sup>※4</sup>	12	200	12	20	140	106	96					
	SCV-103.3C82HEW-AADG-J <sup>※4</sup>	30	330	6	10	119	106	96					
VC-85HE	SCVW-252.5C85HE <sup>※6</sup>	12	250	15	25	225	171	155	141	101	φ 85	1.7	—

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※4: Water cooling adds 30W thermal capacity.  
 ※6: Max current values assume water cooling. (vacuum capacitor + water-cooled flange.)

# NEW VC-82PO Series up to 130 Arms (13.56MHz)

Designed for medium-power applications

## Features

- **Double bellows with special copper alloy**  
Designed for high current applications, double bellows system provides highest current capacity and extended durability while exhibiting low actuation torque
- **Reinforced actuator screw system**  
Coated with long-life diamond-like carbon (DLC)



## Motor Specifications

Item	SCV-510C82POW	SCV-155C82POW
Torque	≤0.18Nm (≤18Ncm)	≤0.18Nm (≤18Ncm)
Turns	17.5±(0.3) Turns	21.9(±0.3) Turns
Motor axis diameter	φ 6.35mm	φ 6.35mm

## Type

Type	Part Number	Capacitance (pF)		Voltage (kVp) <sup>※1</sup>		Current (Arms)			Mounting Dimensions (mm)			Weight (kg)	Options
		Min.	Max	RF Working	Peak Test	13.56MHz	40MHz	60MHz	Total Length	Mounting Length	Diameter		
VC-82PO	NEW SCV-155C82POW <sup>※4</sup>	50	500	9	15	130	99	89	141.5	109.5	φ 82	1.6	—
	NEW SCV-510C82POW <sup>※4</sup>	100	1000	3	5	130	99	89	129.6	98.1	φ 82	1.5	

※1: The unit of "Voltage (kVp)" is "0-peak" not "peak-peak".  
 ※4: Water cooling adds 30W thermal capacity.

# Motorized Vacuum Capacitors

Ease of setting capacitance means high capacitance accuracy.

Motorized Vacuum Capacitors



## Product Description

All the control systems necessary for capacitance control of variable vacuum capacitors have been modularized. By connecting to a host PC and performing communication control, control of complex impedance matching circuits can be achieved. This is the optimal product for incorporating into high-frequency plasma matching networks and RF power supply circuits.

## Features

### ● Easy to introduce

The capacitance of the variable vacuum capacitor can be easily set by connecting to a host PC and performing communication control. Models equipped with an incremental encoder also perform origin seeking automatically. Cumbersome motor control is not required, so development resources can be focused on high-frequency circuit design and matching programming.

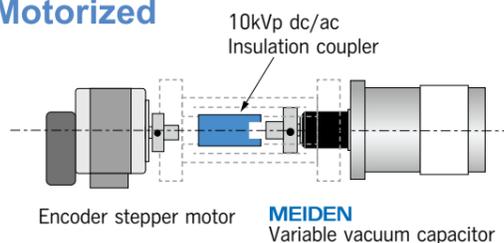
### ● Highly reliable

The order to detect accidental motor step-out, a weak point of stepper motors, and automatically restore the motor to accurate capacitance, an optical encoder is employed to constantly monitor the stepper motor operation.

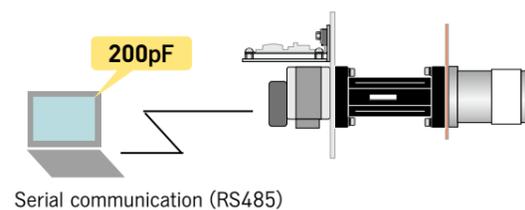
The connection between motor and variable vacuum capacitor has many conditions to be considered, such as structural robustness, high voltage tolerance, alignment accuracy, and heat resistance. That makes it a place where troubles often occur. Therefore, we have developed a strong outer shell (insulation tube) and a flexible insulation coupler to achieve the ideal connection.

For motor operation, the motor drive speed was set to 240 rpm, giving priority to reliability. Minimum capacitance to maximum capacitance can be set to approx. 3 seconds (UW series). During acceleration and deceleration, acceleration is optimally controlled to minimize stress on the vacuum capacitor.

### +Motorized



### +Auto variable capacitor



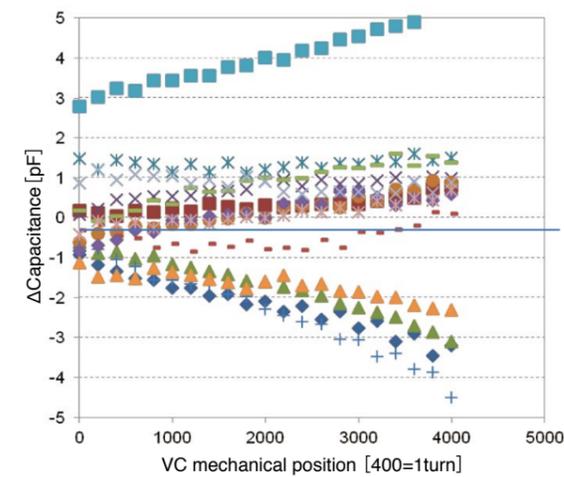
### ● Highly accurate

The capacitance setting accuracy of a typical variable capacitor is about  $\pm 5\%$  (due to the mechanical accuracy of the capacitor). Capacitance is measured for all auto-tuning vacuum capacitors, and the capacitance setting command is calibrated before shipment. Therefore, a capacitance setting accuracy of about  $\pm 0.5\%$  (typical value) can be achieved.

#### (1) Mechanical setting accuracy

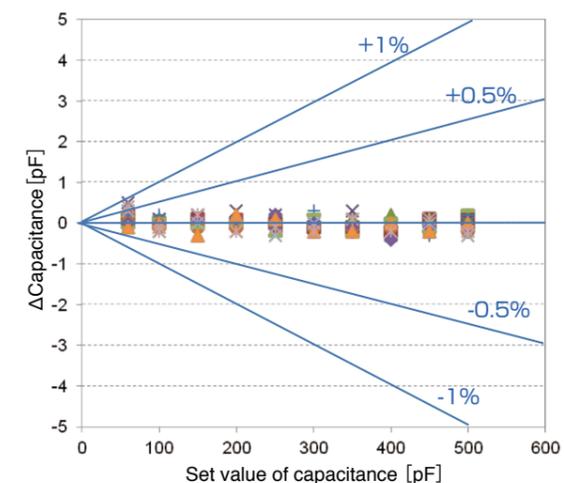
Example of measurement of screw-turn position and capacitance error for SCV-125H65UW

(Measurement of variation where N=14 units)



#### (2) Auto-tuning

Capacitance tolerance for auto-tuning vacuum capacitors

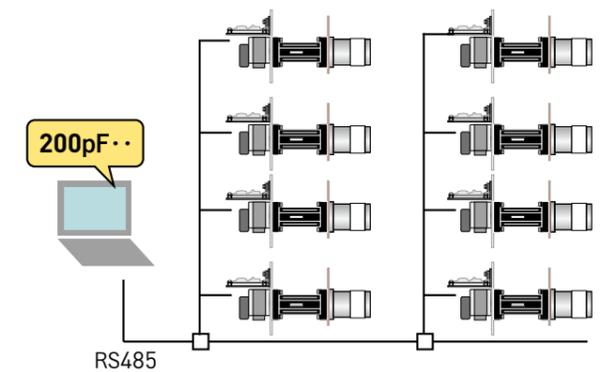


### ● Network building

You can build a network of motorized vacuum capacitors. The capacitance of each capacitor can be controlled by one serial line from one controller. RS-485 type can connect up to 16 units, and EtherCAT can theoretically connect up to 65,535 units.

### +Network

Build a network of vacuum capacitors (up to 16 units)



### ● Fast communication

A high-speed, high-efficiency industrial network system can be built thanks to EtherCAT support.

### +EtherCAT

Real-time communication

### ● Common Specifications

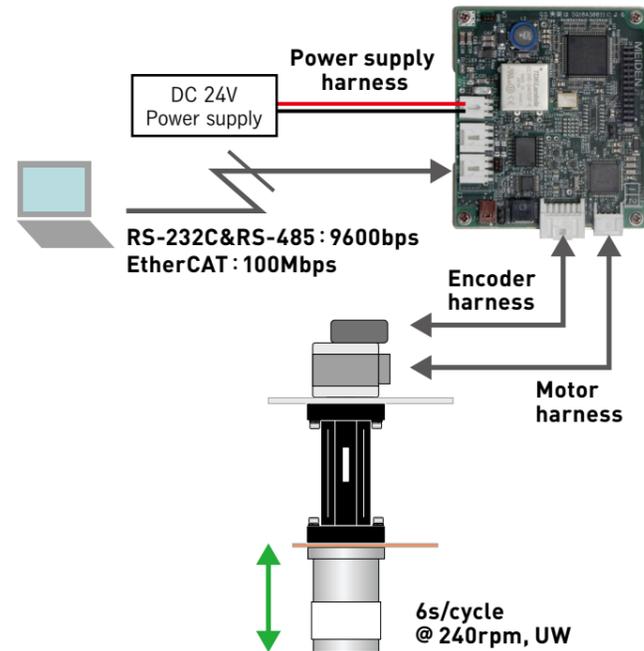
See below for common specifications of serial communications and motor control:

Power supply	DC 24V(1A)
Motor speed	240 rpm (max. 360 rpm)
Motor resolution	400 steps per revolution
Coupler withstand voltage	10kVp (AC)
Capacitance setting accuracy	$\pm 1\%$

● EtherCAT is a registered trademark of Beckhoff Automation GmbH.

# Specifications

Interface	Communication speed	Control method	Additional functions
EtherCAT	100Mbps	Incremental	Absolute function
RS-485	10Mbps	Incremental	Absolute function
RS-485	10Mbps	Incremental	—
RS-232C	20kbps	Incremental	—



# ⚠ Handling Precautions

## Quality assurance

If, within the warranty period of one year after delivery of the product, any defect or failure that is the fault of MEIDEN is found, we will replace or fix the returned vacuum capacitor free of charge. The replacement work shall be the responsibility of the customer. However, in special cases where one of the following applies (for example, when the returned capacitor is working properly), the customer may be billed an analysis and reporting fee, which is not covered by the warranty. In addition, the warranty is limited to the content above and does not cover any other damages (including damage to customer equipment, lost opportunities, lost profits, etc.) resulting from the product. If you wish to return the investigated product, please contact a sales representative in advance. If you fail to contact a sales representative, you will be responsible for payment of all shipping costs, including import duties.

## Vacuum capacitor analysis

If you wish to have your product investigated due to defect or failure, please fill out the Vacuum Capacitor Investigation Request Form at the end of this document and contact a MEIDEN sales representative. If you fail to contact a sales representative, you will be responsible for payment of all shipping costs, including import duties.

The standard investigation period is 10 business days after the receipt of the actual product. A sales representative will inform you of the investigation report submission date. Major investigation items are as follows.

Investigation	Fixed vacuum capacitor	Variable vacuum capacitor
General	<ul style="list-style-type: none"> <li>Exterior investigation</li> <li>Capacitance inspection</li> <li>Withstand voltage test</li> <li>X-ray investigation, etc. (non-destructive)</li> </ul>	<ul style="list-style-type: none"> <li>Exterior investigation</li> <li>Capacitance investigation</li> <li>Torque investigation</li> <li>Withstand voltage test</li> <li>X-ray investigation, etc. (non-destructive)</li> </ul>
Disassembly	<ul style="list-style-type: none"> <li>Electrode check</li> <li>Internal discoloration check</li> </ul>	<ul style="list-style-type: none"> <li>Electrode check</li> <li>Bellows check</li> <li>Internal discoloration check</li> </ul>

You will be responsible for payment of all shipping-related costs at time of return. Also, if the investigated product is not covered under the warranty conditions mentioned above, MEIDEN has right to charge an investigation fee.

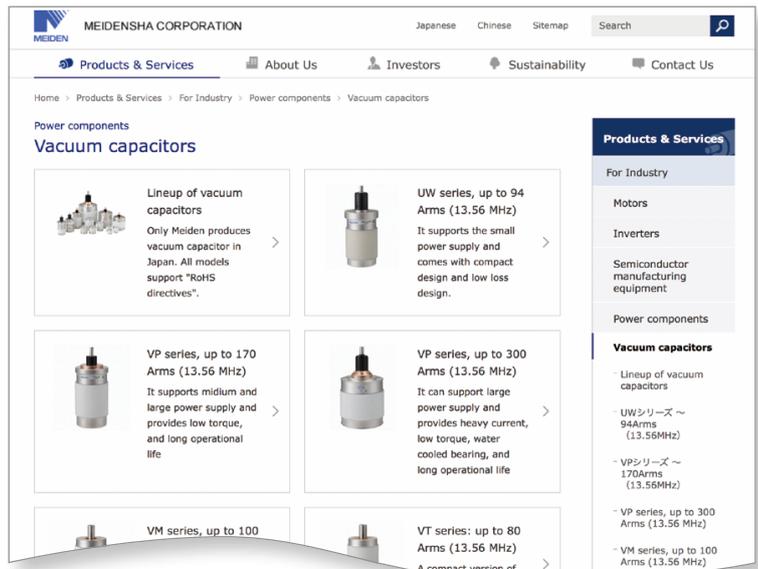
After receipt of the report, please inform us of how you would like us to handle the investigated product. If not informed, we will dispose it after six months of storage.

If any abnormality is found in the packing box or cushioning material when the vacuum capacitor is delivered, please contact a sales representative and submit a Vacuum Capacitor Investigation Request Form. When shipping vacuum capacitors with abnormal packaging or cushioning materials to MEIDEN as investigated products, please ship them in packages that maintain the packaging and cushioning materials in the same condition as when they were delivered.

# Meidensha.com: An Introduction to our Vacuum Capacitors

For more information, please visit our website:

<https://www.meidensha.com/vc>



All product and company names mentioned in the catalog are the trademarks and / or service marks of their respective owners.

See here for vacuum capacitor technical information.

<https://www.meidensha.com/vc-technical-data>



### Technical Information (Operational Precautions and Characteristic Explanations)

- 1. Withstand Voltage**  
 Withstand voltage is determined by the following three factors:  
 (1) Degree of vacuum  
 (2) Distance between electrodes (gap)  
 (3) Electrode conditioning  
 (1) Degree of vacuum  
 Withstand voltage remains constant if degree of vacuum is less than 0.1 Pa (See Figure 1).  

Figure 1.
- 2. Peak Test Voltage**  
 This refers to a limit value of dielectric breakdown voltage between electrodes (Figure 3. (1)). Before shipment, MEIDEN tests vacuum capacitors to confirm that no dielectric breakdown occurs when the rated voltage is applied for the specified time (one minute).  

Figure 3.
- 3. RF Working Voltage**  
 This refers to the rated voltage which can be applied continuously. The RF working voltage is set at 60% of the peak test voltage (Figure 3. (2)). An instant discharge can occur even below RF working voltage.



## MEIDENSHA CORPORATION

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[www.meidensha.com](http://www.meidensha.com)



### Safety Precautions

Prior to using our products, please read through the relevant instruction manuals and related materials.

In the case of applications in facilities where fatal injuries are anticipated as a result of product failure, malfunction, and/or misoperation, or where the occurrence of serious losses is predicted, it is recommended to take adequate measures separately by installing, for example, proper safety devices.

### Agents and distributors for our products

In regard to queries about these products, please contact the Industrial Component Business Unit specified below.

● Vacuum Device Sales Section Industrial Component Business Unit : ThinkPark Tower 2-1-1 Osaki, Shinagawa-ku, Tokyo 141-6029 Japan  
 Phone: +81-3-6420-7590, FAX: +81-3-5745-3058

■ Due to our commitment to continually improving the function and performance of our products, specifications are subject to change without prior notice.

■ The nameplates for marking the product types and logos shown in this catalog may differ from the actual ones.



BA80-3116M

As of Mar., 2025

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