

Wafer Handling Tools – Vacuum Wands

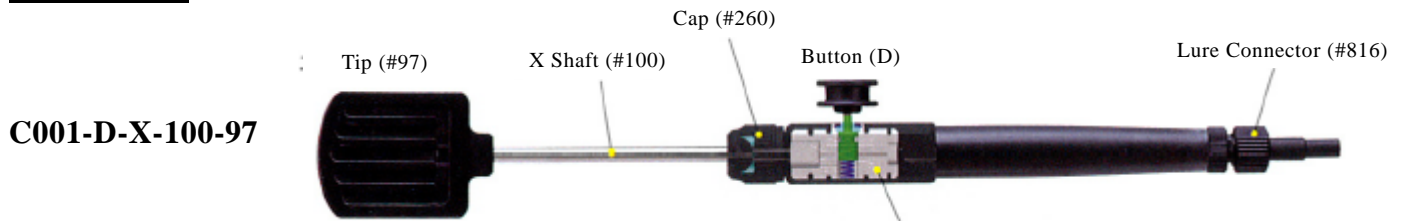
C Series

The material of the body is Nylon blended carbon fiber. The valve part is made of fluorocarbon resin and coated with Nylon blended carbon fiber by unique molding method to keep airtight. (Patented)

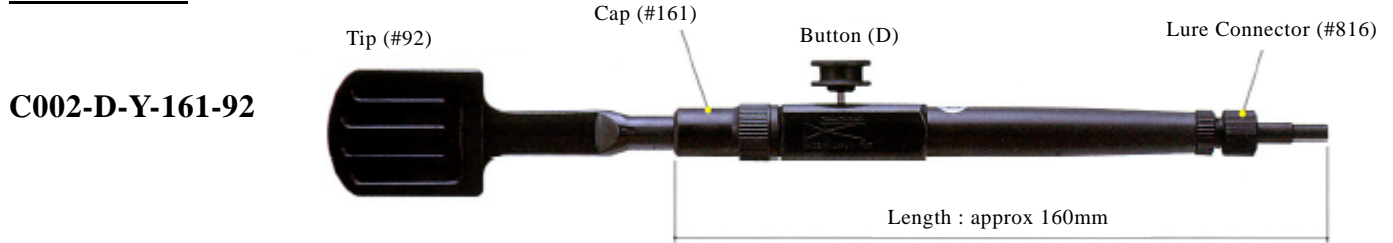
The resistivity of the conductive nylon lure connector is 10^{5-7} .

Tip is made of PEEK blended carbon fiber.

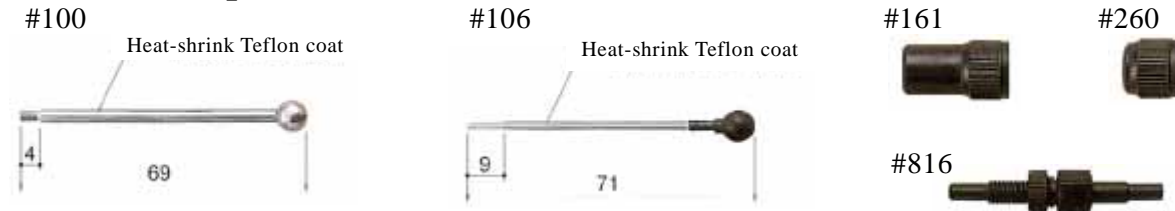
X Connection



Y Connection



Shaft and Cap



100 : swivel shaft for X connection, tip screw-on type

106 : conductive swivel shaft for X connection, tip push-on type

161 : conductive cap for Y connection

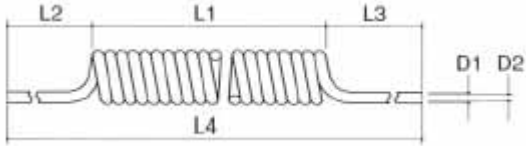
260 : conductive cap for X connection

816 : conductive lure connector

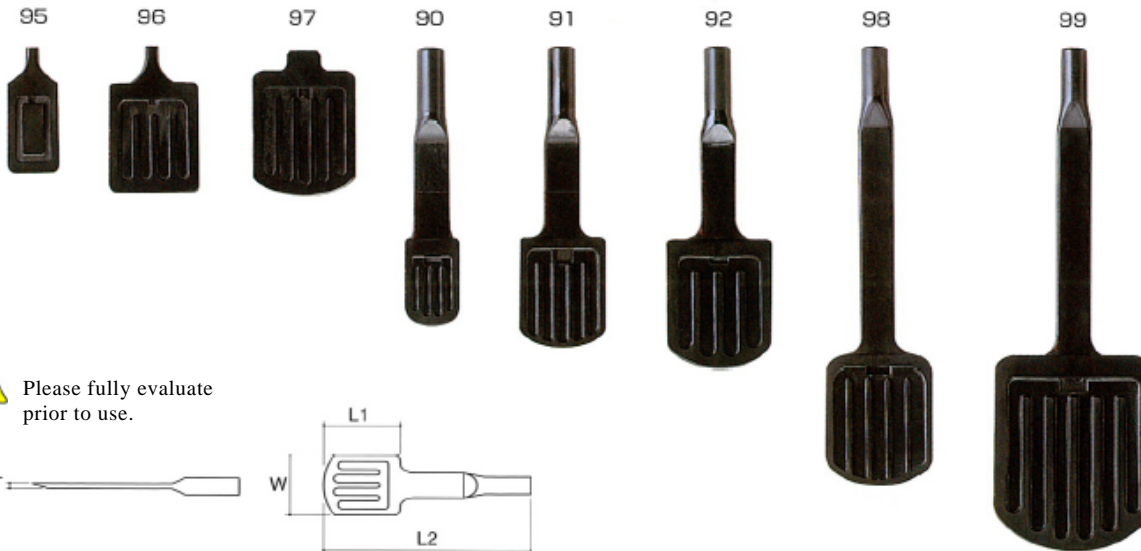
No.	Material	Compatible Tip Code										Connection	
		90	91	92	95	96	97	98	99	64	67	X	Y
100	SUS												
106	SUS + cond. Nylon												
161	conductive Nylon												
260	conductive Nylon												
816	conductive Nylon												

Conductive Spiral Tube

No.	Material	Size (mm)						Weight (g)
		D1	D2	L1	L2	L3	L4	
851-L	Conductive polyurethane elastomer	6	4	500	400	1000	1900	118
851-M		5	3	500	400	1000	1900	84



Conductive PEEK Tip



⚠ Please fully evaluate prior to use.

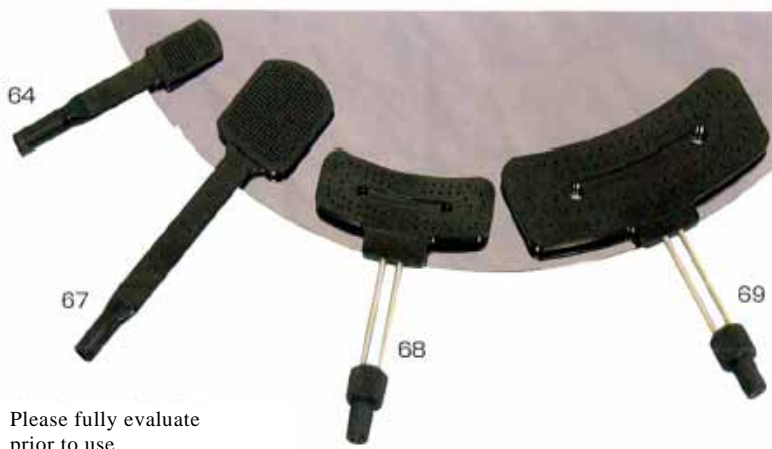
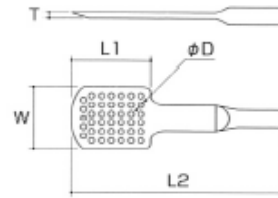
No.	Description	Shaft		Cap		Size (mm)			
		100	106	161	260	T	W	L1	L2
90	5" for Y connection					2.7	16	26	82
91	6" for Y connection					3	26	33	89
92	8" for Y connection					3	32	39	95
95	5" for X connection					2.7	15	27	37
96	6" for X connection					3	27	32	43
97	8" for X connection					3.7	31	37	43
98	8" for Y connection					3.5	31	39	129
99	12" for Y connection					3.5	48	58	148


Conductive PEEK Porous Tip

Ideal for reducing stress in handling of compound semiconductor or thin wafer.
Made of PEEK + CNT

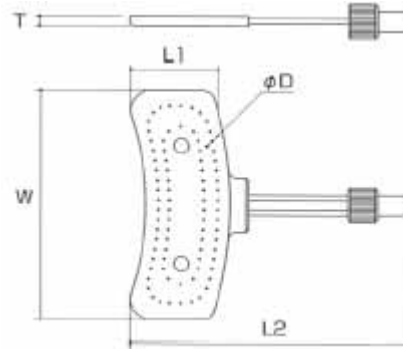
No.	Description	Cap	Size (mm)				
		161	T	W	L1	L2	D
64	3" - 5" for Y connection		2.7	16	26	82	0.8
67	6" - 8" for Y connection		3.5	31	39	129	0.8
68	8" for Y connection		4.0	62	23	100	0.6
69	12" for Y connection		4.5	93	35	110	0.6

#64, #67



 Please fully evaluate prior to use.

#68, #69



Ordering Information

For swivel type :

Body	Button	Connection	Shaft	Tip
C001	D	X	100	97
C001			106	95 or 96
C002			100	97
C002			106	95 or 96
C003			100	97
C003			106	95 or 96

For fixed type :

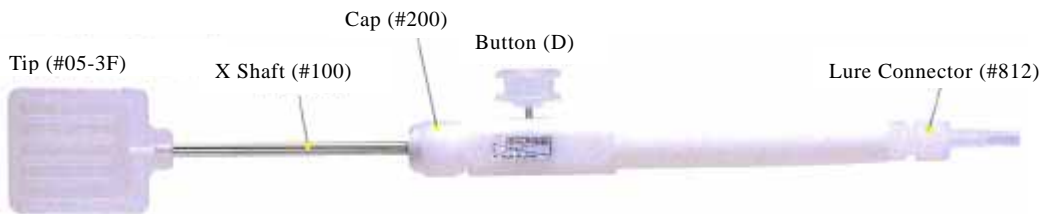
Body	Button	Connection	Tip
C001	D	Y	90, 91, 92, 98, 99, 64 or 67
C002			
C003			

F Series

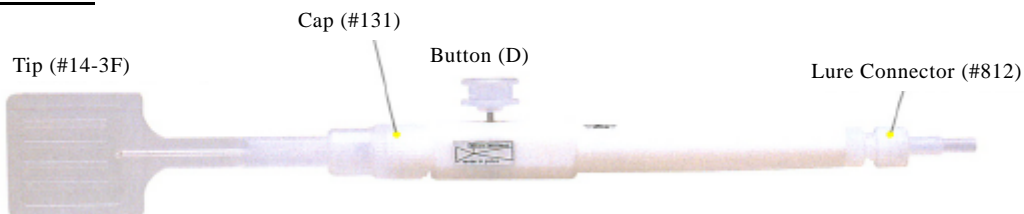
The material of the body is fluorocarbon resin (4F-PTFE/3F-PCTFE). Precise production process in accordance with each material offers airtightness, durability, and stable performance for long time.

Tips are made of 3F-PCTFE, PEEK, or Vespel, and heat-treated and mirror-finished after machining process.

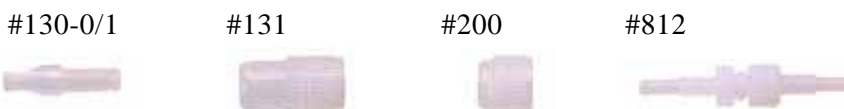
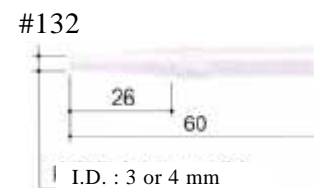
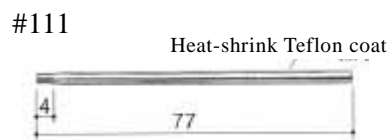
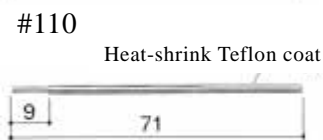
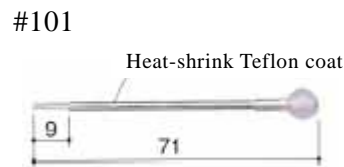
X Connection



Y Connection



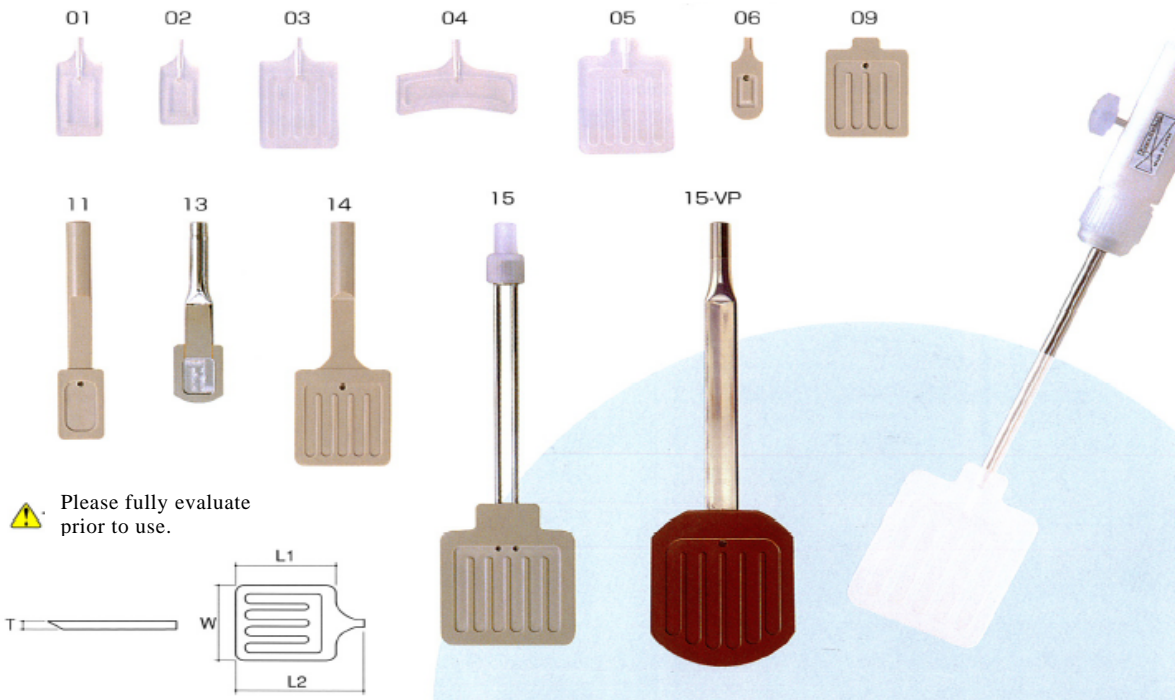
Shaft and Cap



- 100 : swivel shaft for X connection, tip screw-on type
- 101 : swivel shaft for X connection, tip push-on type
- 105 : swivel shaft for #13 tip for X connection
- 110 : shaft for Z connection, tip push-on type
- 111 : shaft for Z connection, tip screw-on type
- 130-0 : collet chuck (OD 2.3)
- 130-1 : collet chuck (OD 3.4)
- 131 : cap for Y connection
- 132 : quartz tip holder
- 200 : cap for X and Z connection
- 812 : lure connector

No.	Material	Compatible Tip Code											Connection			
		01	02	03	04	05	06	09	11	13	14	15	X	Y	Z	
100	SUS															
101	SUS + 3F															
105	Brass															
110	SUS															
111	SUS															
130-0	3F															
130-1	3F															
131	3F															
132	3F															
200	3F															
812	PFA															

Tip



- 01 : 6" for X and Z connection
- 02 : 5" for X and Z connection
- 03 : 6" for X and Z connection
- 04 : 6" for X and Z connection
- 05 : 8" for X and Z connection
- 06 : 4" for X and Z connection
- 09 : 6" for X and Z connection
- 11 : 6" for Y connection
- 13 : 5" for X connection (thin type)
- 14 : 8" for Y connection
- 15 : 12" for Y connection
- 15-VP : 12" for Y connection

No.	Material				X Shaft			Z Shaft		X/Z Cap	Y Cap	Size (mm)			
	3F	PK	VP	SS	100	101	105	110	111	200	131	T	W	L1	L2
01												2.7	15	26	35
02												2.7	13	21	30
03												2.7	26	31	40
04												2.7	40	17	25
05												3.8	31	35	41
06												2.6	10	21	30
09												3.8	26	31	37
11												3.4	15	25	76
13												1.0	16	21	63
14												3.1	31	34	86
15												3.5	47	55	162
15												3.0	51	61	180

Ordering Information

For swivel type :

Body	Button	Connection	Shaft	Tip
F001	D	X	100	05 or 09
F001			101	01, 02, 03, 04 or 06
F001			105	13
F002			100	05 or 09
F002			101	01, 02, 03, 04 or 06
F002			105	13
F003			100	05 or 09
F003			101	01, 02, 03, 04 or 06
F003			105	13

For fixed type :

Body	Button	Connection	Tip
F001	D	Y	11, 14 or 15
F002			
F003			

For collet chuck type :

Body	Button	Connection	Shaft	Tip
F001	D	Z	110	01, 02, 03, 04 or 06
F001			111	05 or 09
F002			110	01, 02, 03, 04 or 06
F002			111	05 or 09
F003			110	01, 02, 03, 04 or 06
F003			111	05 or 09

Conductive Nylon Stand

Wall-mount type



#677



#679

Table-top type



#678



#680

No.	Description	Body Code		
		001	002	003
677	Stand, wall mount, with adhesive tape			
678	Stand, table-top			
679	Stand, wall mount, with adhesive tape, for C002 & F002			
680	Stand, table-top, for C002 & F002			

Acrylic Stand

Wall-mount type



#651



#658

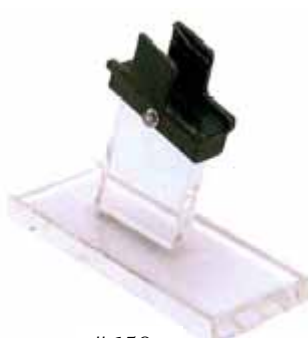


#601

Table-top type



#652



#659



#602

No.	Description	Body Code		
		001	002	003
651	Stand, wall mount, with adhesive tape			
652	Stand, table-top			
658	Stand, wall mount, with adhesive tape, for C002 & F002			
659	Stand, table-top, for C002 & F002			
601	Stand, wall mount, with adhesive tape			
602	Stand, table-top			

Holder part of 651, 652, 658 and 659 is made of conductive nylon.

Material of 601 and 602 is acrylic.

In case of 679, 680, 658 and 659, inserting C002 body into stand depresses button, shuts off and prevents waste of air.

Information of materials

Material	Properties
4F (PTFE) (polytetrafluoroethylene)	Superior in chemical resistance, heat resistance and lubricity
3F (PCTFE) (polychlorotrifluoroethylene)	Less heat resistance and chemical resistance than PTFE, Superior in mechanical strength
PEEK (polyetheretherketone)	Superior in chemical resistance, heat resistance and mechanical strength, Attacked by concentrated sulfuric acid
VP (DuPont's Vespel, polyimide)	Highest heat resistance in all resins, Affected by alkali
conductive nylon	Nylon 6 blended carbon fiber offers conductivity and tenacity, Affected by alkali
conductive PEEK	PEEK blended carbon fiber, Superior in chemical resistance, Heat resistance and mechanical strength, Attacked by concentrated sulfuric acid
PFA	Fluorocarbon resin having good moldability and comparable properties to PTFE and PCTFE
SS	Stainless Steel (304)

FV Series Compact Diaphragm Vacuum Pump

Diaphragm depressurizing system makes body compact and high vacuum pressure available.

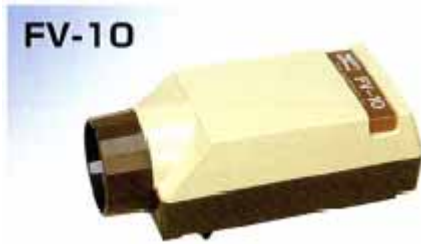
Long life allowing to use to theoretical value of durability of diaphragm.

Air intake and exhaust through HEPA filter allows to use in cleanroom.

FV-10 does not have HEPA filter.

Airtight body offers very quiet operation.

Provides superior performance in reliability, life and power consumption.



Specification

Type	Small die/object	Versatile	High vacuum	High flow
Part No.	FV-10	FV-30	FV-60	FV-XP
Rated voltage	100VAC			
Power consumption	5.0W		10.0W	
Suction pressure	< -15kPa	< -50kPa	< -85kPa	< -60kPa
Flow rate	2.8L/min	2.5L/min	2.5L/min	5.0L/min
Size	155x72x54mm	137x88x85mm	137x88x133mm	
Weight	600g	800g	1250g	
Durability	> 9000hrs			
Operation temperature	Max. 40°C			