

The most efficient means of handling wafers

VACUUM HANDLING TOOLS

- Vacuum wands
- Accessories

Fluoro Mechanic Co., Ltd.

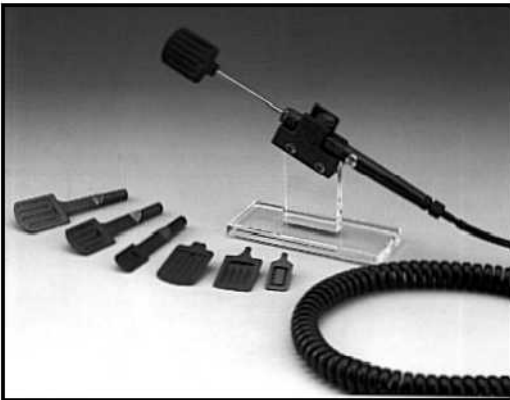
A collection of vacuum handling tools for wafers, including various wands and accessories, arranged on a circular tray. The tools are shown in a variety of colors (white, black, and grey) and shapes, designed for precise handling of wafers. The background is a dark, textured surface.

Vacuum wands

Features

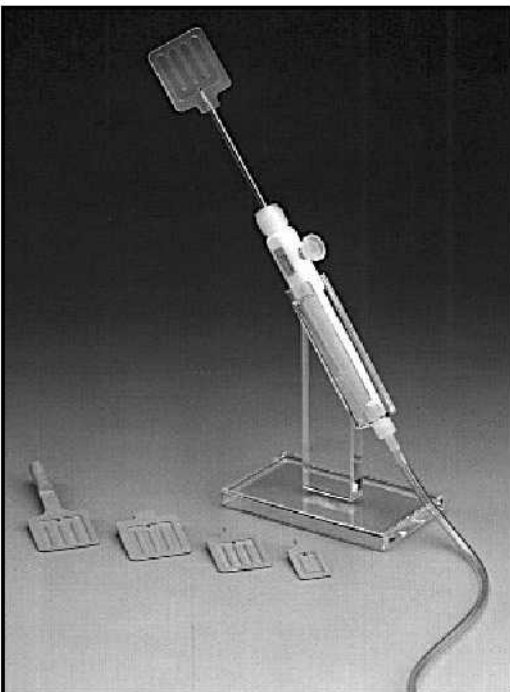
- The unique valve* ensures reliable suction and instantaneous release of a wafer.
- The well-polished inner wall of the valve minimizes particle generation.
- The optically polished wafer tip provides excellent adhesion to a wafer.
- The wand body can be easily detached from the tubing.

C series for ESD protection



- The conductive nylon body reduces electrostatic effects towards a wafer.
- The wafer tip is made of conductive polyetheretherketone (PEEK).
- A resistance of 10^6 – 10^8 Ohms provides optimum static protection.

F series for low particle emission



- Wand body of polytetrafluoroethylene (PTFE) for chemical resistance.
- A large selection of wafer tips is available in PCTFE, PEEK and Vespel (for high temperature applications).

*US patent 4767142, Japanese patents 1698352 and 1885465.

Body

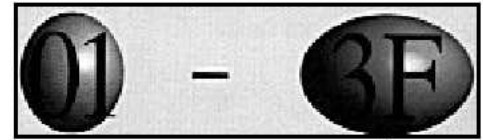


C: C series
F: F series

Valve

Connection

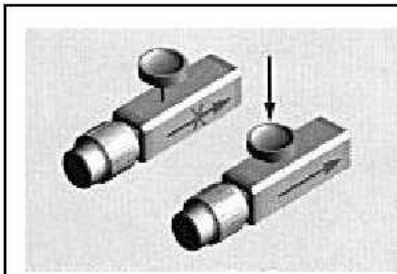
Tip



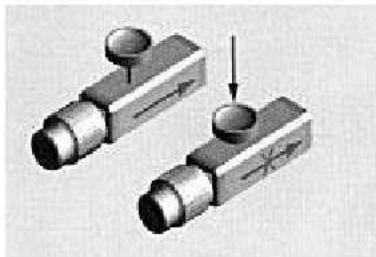
Tip material

3F: PCTFE (polychlorotrifluorethylene)
CP: conductive PEEK (polyetheretherketone)
PK: PEEK (polyetheretherketone)
VP: Vespel® (polyimide)
SS: SUS (stainless steel)
PPS: polyphenylene sulphide

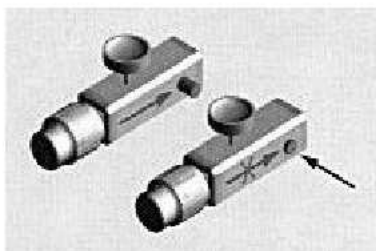
Vespel® and Teflon® are registered trademarks of DuPont K.K.



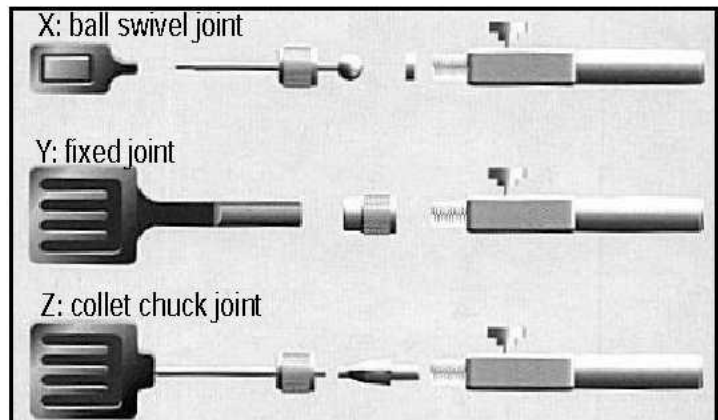
1: NC (normally closed)
Push the button to pick up the wafer.



2: NO (normally open)
Push the button to release the wafer.



3: NO/S (normally open with on/off switch)
Push the button to release the wafer. The switch maintains the system vacuum when not in use.



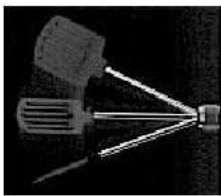
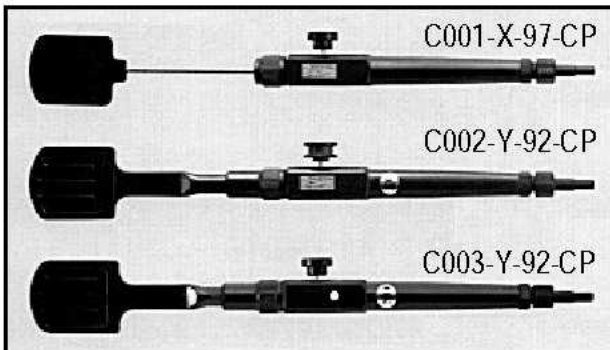
Size



C series

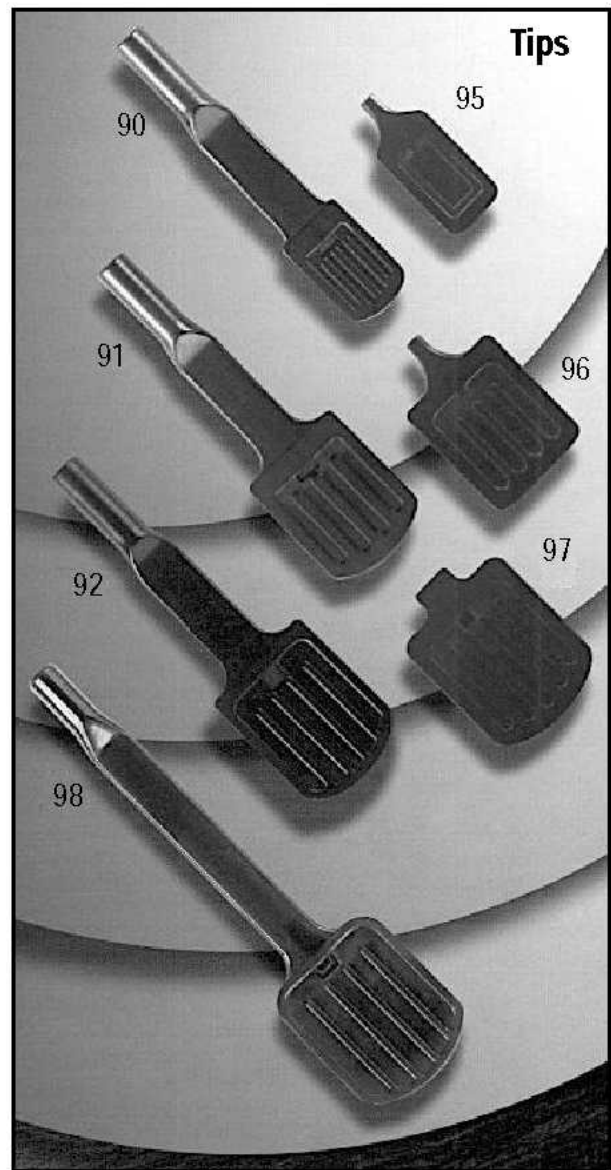
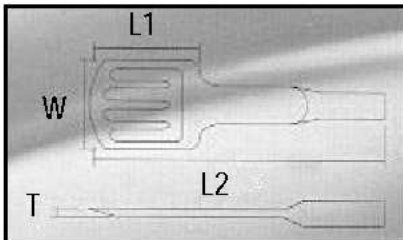
- The conductive nylon covered body reduces electrostatic effects towards a wafer.
- The wafer tip is made of conductive PEEK.
- The resistance of 10^6 – 10^8 Ohms provides optimum static protection.

C series bodies



X connection

C series tips



Tips

Selection chart

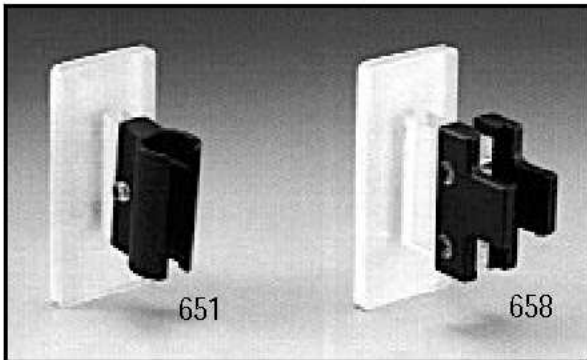
X, available

Model	Material	Wafer				Size (mm)			
		5"	6"	8"	12"	T	W	L1	L2
90-CP	Conductive PEEK	X				2.3	16	26	82
91-CP			X			2.3	26	33	89
92-CP				X		2.5	32	39	95
95-CP		X				2.7	15	28	37
96-CP			X			2.7	27	32	42
97-CP				X		3.6	31	37	43
98-CP				X		3.0	32	39	128
99-CP					X	4.0	48	58	141

Tip	Body					
	C001-X	C002-X	C003-X	C001-Y	C002-Y	C003-Y
90-CP				X	X	X
91-CP				X	X	X
92-CP				X	X	X
95-CP	X	X	X			
96-CP	X	X	X			
97-CP	X	X	X			
98-CP				X	X	X
99-CP				X	X	X

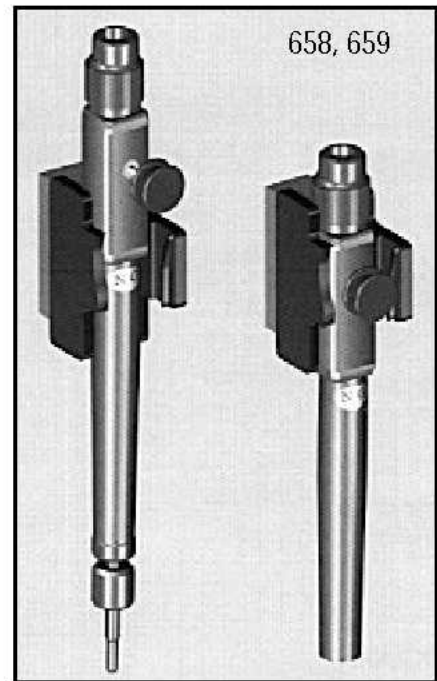
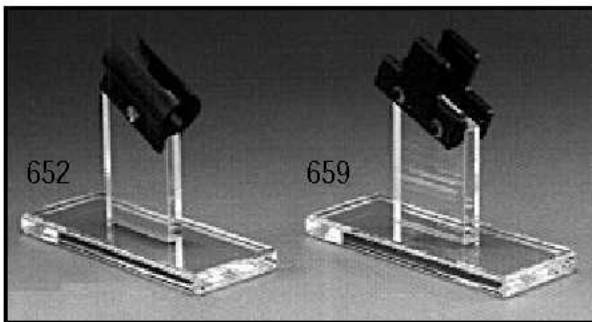
Stands

Stands for C series wands are moulded in acrylic resin. Available in vertical position (wall mounting) and horizontal position (table-top). The 658 and 659 types are designed for NO, normally open wands, and incorporate an auto-off feature which maintains system vacuum when the wand is not in use.



To be mounted on the wall with adhesive tape/screws.

For use in horizontal position

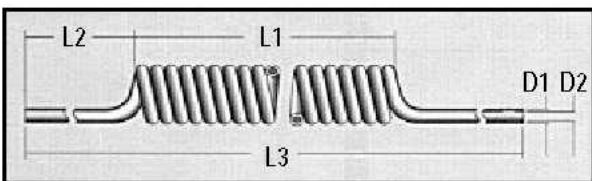


Model	Material	Body	
		C001	C002
651	Conductive nylon + acrylic resin	X	
652		X	
658*			X
659*			X

X, available

*Vacuum turns on when removed from the stand and shuts off when returned.

Tubing



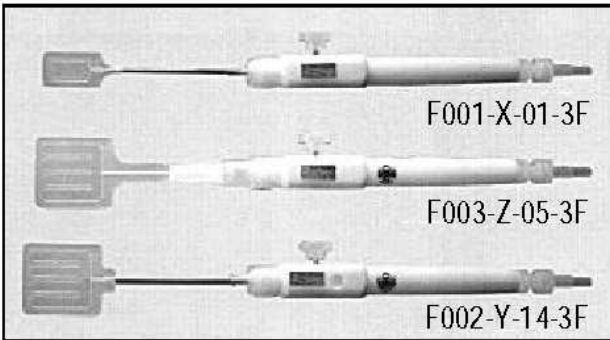
Model	Material	Size (mm)					Weight (g)
		D1	D2	L1	L2	L3	
851-L	Conductive polyurethane estermer	6	4	500	400	1900	118
851-M		5	3	500	400	1900	84

NetMotion, Inc. 1-800-790-7837 sales@netmotion.com

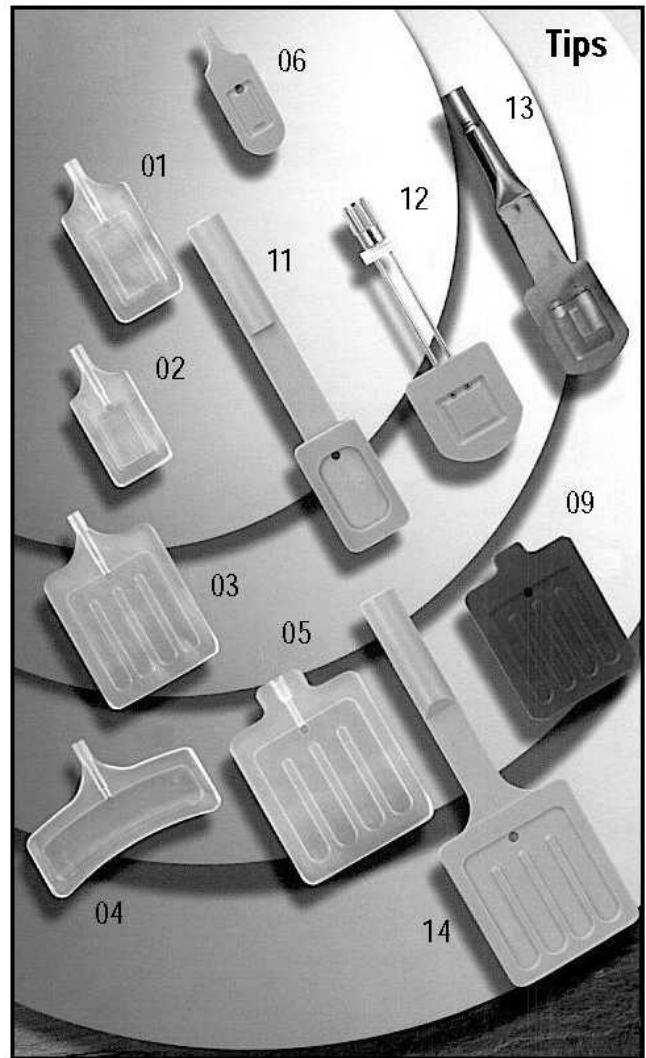
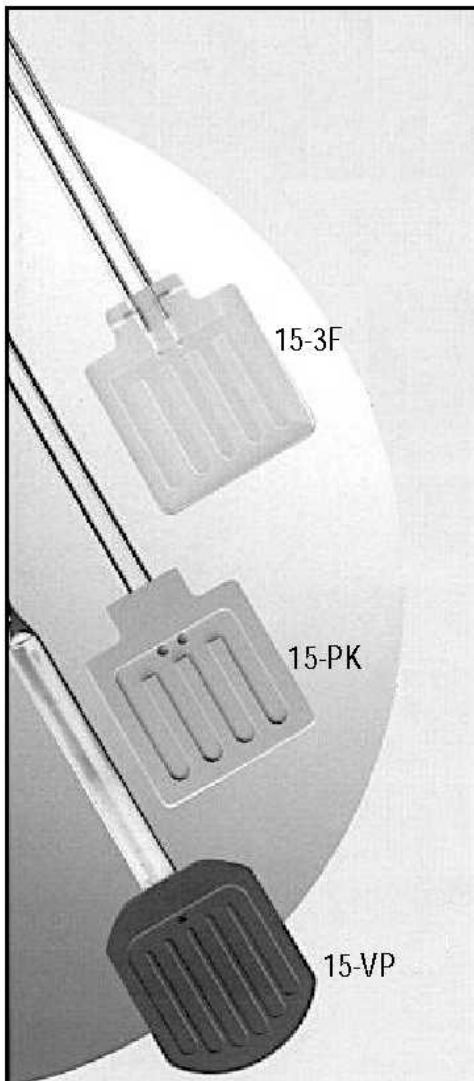
F series

- The body is made of PTFE for chemical resistance.
- A large selection of wafer tips is available in PCTFE, PEEK or Vespel (for high temp.).

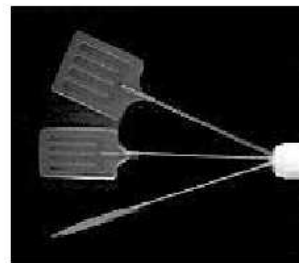
F series bodies



F series tips



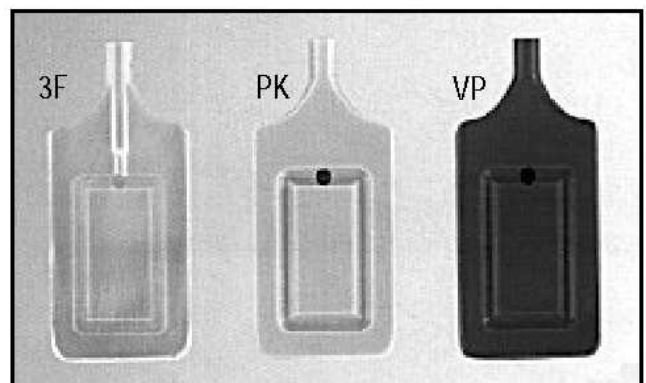
X connection



PCTFE

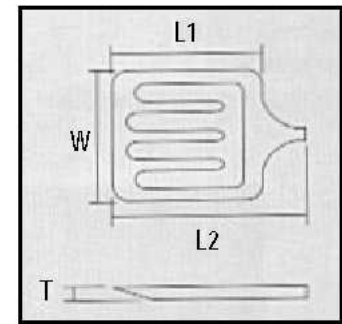
PEEK

Vespel



F series tips

Model	Material	Wafer					Size (mm)			
		4"	5"	6"	8"	12"	T	W	L1	L2
01-	3F/PK/VP			X			2.5	15	26	35
02-	3F/PK/VP		X				2.5	13	21	30
03-	3F/PK/VP			X			2.5	26	31	40
04-	3F/PK			X			2.5	40	18	25
05-	3F/PK/VP				X		3.7	31	34	41
06-	3F/PK/VP	X					2.5	10	21	30
09-	3F/PK/VP			X			3.7	26	30	35
11-	3F/PK			X			3.2	15	25	77
12-	3F/PK			X			1.7	20	22	60
13-	SS		X				0.9	16	21	63
14-	3F/PK				X		2.6	31	34	86
15-	3F					X	3.4	47	55	162
15-	PK					X	3.0	47	55	162
15-	VP					X	3.0	51	61	180



X, available

Selection chart

Tip	Material	Body								
		F001-X	F002-X	F003-X	F001-Y	F002-Y	F003-Y	F001-Z	F002-Z	F003-Z
01-	3F/PK/VP	X	X	X				X	X	X
02-	3F/PK/VP	X	X	X				X	X	X
03-	3F/PK/VP	X	X	X				X	X	X
04-	3F/PK	X	X	X				X	X	X
05-	3F/PK/VP	X	X	X				X	X	X
06-	3F/PK/VP	X	X	X				X	X	X
09-	3F/PK/VP	X	X	X				X	X	X
11-	3F/PK				X	X	X			
12-	3F/PK	X	X	X						
13-	SS	X	X	X						
14-	3F/PK				X	X	X			
15-	3F/PK/VP				X	X	X			

Stands

Stands are designed to hold the wand in a safe, ready-to-use position. Moulded in acrylic resin, they are available for wall (vertical position: 651, 658) or table-top (horizontal position: 652, 659) use. See illustrations on page 5.

Model	Material	Body	
		F001	F002
651	Conductive nylon + acrylic resin	X	
652		X	
658*			X
659*			X

X, available

*Vacuum turns on when removed from the stand and shuts off when returned.

Accessories

(For stands and tubing see page 5 and above)

Condition tester - 901

- Leaks (indicating the wand tip requires replacing) are detected by measuring the vacuum level.
- The testing surface is made of PPS.
- Dimensions (mm): D, 120; W, 60; H, 45.
- Weight: 350 g.



Vacuum pumps

- Oil-free for clean-room use.
- Long-term high reliability.
- Designed to minimise noise generation.

Specifications

Model	FV-30	FV-60
Pumping power (l/min)	2.5	2.5
Ultimate pressure (mm Hg)	300	600
Power consumption (W)	5	10
Dimensions (mm) (D x W x H)	132 x 76 x 67	140 x 80 x 140
Weight (g)	800	1900

FV-30



FV-60



Static-dissipative grounding kit