



ESD SUCTION CUP & SUCTION TIP

ATTEST PTE LTD is the supplier of ESD CLASS SUCTION CUP and SUCTION TIP .

We provide wide range of material selection such as : NBR, BSR, Extreme BSR, VITON , Antistatic, Class 1 and Class ZERO ESD specification and many more. ATTEST offers complete key mode from suction cup design, fabrication of new tooling mold , raw material blending and mixing , post mould and shape moldings process.

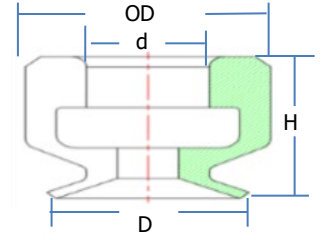
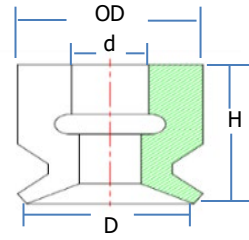
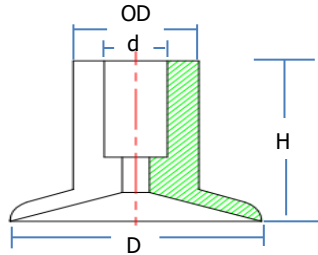
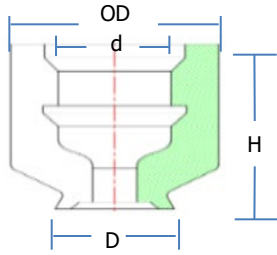
The product is homogeneous molded within the rubber/silicon mixture before the shape molding process. We are able to control and guarantee a steady resistivity of 10^6 to 10^8 Ohm , which would be in the tightest range of ESD class 0 specifications and does not vary with time and usage.

ATTEST can also supply suction cups to the desired sizes , material, colors, operating temperature and hardness according to our customers need.

Products from ATTEST are widely used in all equipment within the semiconductor industry, from die picking (capability up to 0.1 mm vacuum through hole) to all the pick and place handling ,test and finishing equipment.



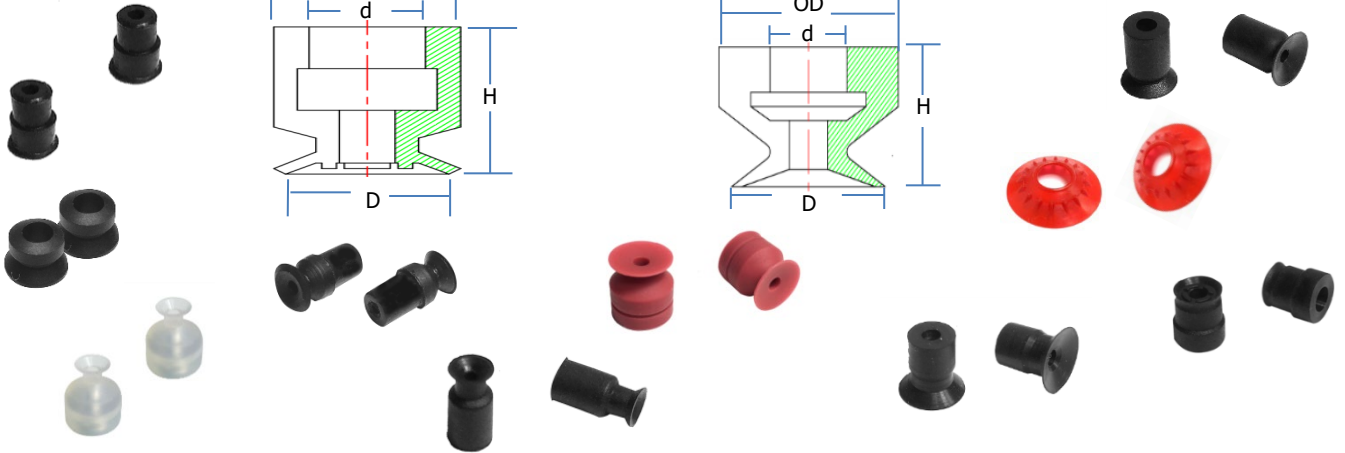
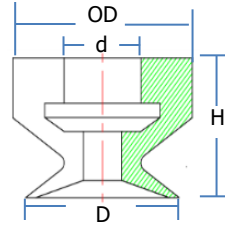
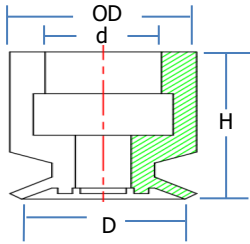
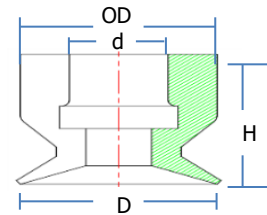
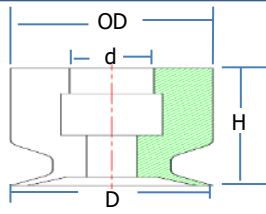
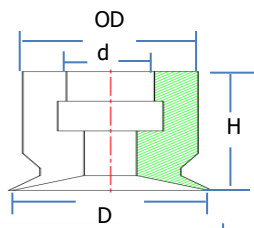
Flat Vacuum Cup Series



Model	OD	d	H	D
ESC01-10	9.0mm	5.0mm	13.2mm	10.0mm
ESC02-2.5	3.5mm	2.5mm	3.4mm	2.4mm
ESC02-2.5MCT	3.5mm	1.9mm	3.4mm	2.25mm
ESC02-3	3.5mm	2.4mm	3.4mm	3.0mm
ESC02-3.5	3.5mm	2.5mm	3.5mm	3.5mm
ESC02-3L	2.9mm	1.6mm	4.9mm	2.4mm
ESC03-1.5	7.0mm	4.8mm	12.0mm	1.5mm
ESC03-2	7.0mm	4.8mm	12.0mm	2.0mm
ESC03-2FLAT	7.0mm	4.85mm	14.0mm	2.0mm
ESC03-2.5LN	7.0mm	4.85mm	12.0mm	2.5mm
ESC03-3	7.0mm	4.8mm	12.0mm	3.0mm
ESC03-3LN	7.0mm	4.8mm	12.0mm	3.0mm
ESC03-3FLAT	7.0mm	4.85mm	14.0mm	3.0mm
ESC03-4	7.0mm	4.8mm	12.0mm	4.0mm
ESC03-4A	7.0mm	4.8mm	12.0mm	4.0mm
ESC03-4LN	7.0mm	4.8mm	12.0mm	4.0mm
ESC03-5	7.0mm	4.8mm	12.0mm	5.0mm
ESC03-6	7.0mm	5.0mm	12.0mm	6.0mm
ESC03-7	7.0mm	5.0mm	12.0mm	7.0mm
ESC03-8	7.0mm	4.8mm	12.0mm	8.0mm
ESC03-18	7.0mm	4.8mm	12.0mm	18.0mm
ESC04-10	10.0mm	5.0mm	7.9mm	9.9mm
ESC05-4	4.0mm	2.8mm	7.6mm	4.0mm
ESC05-6	5.0mm	2.1mm	6.6mm	5.9mm
ESC05-7	5.0mm	2.1mm	6.7mm	6.8mm
ESC05-8.5	5.0mm	2.1mm	6.9mm	8.4mm
ESC05-8.6	8.6mm	5.4mm	11.4mm	8.6mm
ESC05-9	5.0mm	2.0mm	7.0mm	9.0mm
ESC05-11	9.0mm	3.9mm	10.5mm	10.0mm
ESC05-15	8.0mm	3.6mm	11.0mm	15.5mm
ESC05-16.5	9.14mm	3.81mm	11.5mm	16.5mm
ESC05-24S	10.9mm	5.08mm	8.8mm	24.0mm
ESC06-2	6.0mm	3.0mm	7.0mm	2.0mm
ESC06-3.9/TH	4.5mm	2.9mm	7.0mm	3.9mm
ESC06-6	6.0mm	2.7mm	5.0mm	6.0mm
ESC06-6.5	4.1mm	1.5mm	7.0mm	6.5mm

Model	OD	d	H	D
ESC06-8	8.0mm	4.0mm	7.0mm	8.0mm
ESC08-2	7.5mm	4.0mm	6.5mm	2.0mm
ESC08-5	7.5mm	4.0mm	6.5mm	5.0mm
ESC08-6	7.5mm	4.0mm	6.5mm	6.0mm
ESC08-6B	8.0mm	4.0mm	7.0mm	6.0mm
ESC08-8	8.0mm	4.0mm	7.0mm	8.0mm
ESC08-10	8.0mm	4.0mm	7.0mm	10.0mm
ESC08-10 SPIKES	9.0mm	4.0mm	7.3mm	10.61mm
ESC08-15	9.0mm	4.0mm	8.0mm	15.0mm
ESC09-1.5	4.0mm	2.0mm	4.0mm	1.5mm
ESC09-2	4.0mm	2.0mm	4.0mm	2.0mm
ESC09-3.5	4.0mm	2.0mm	4.0mm	3.5mm
ESC09-4	4.0mm	2.0mm	4.0mm	4.0mm
ESC09-3A	5.0mm	2.0mm	4.5mm	2.6mm
ESC10-6	6.0mm	2.8mm	6.0mm	6.0mm
ESC10-8	6.0mm	2.8mm	6.0mm	8.0mm
ESC11-4	7.0mm	3.5mm	7.7mm	4.0mm
ESC11-8	7.0mm	3.5mm	7.7mm	8.0mm
ESC13-2	1.8mm	1.2mm	2.7mm	2.0mm
ESC20-3	6.0mm	2.5mm	6.5mm	3.0mm
ESC20-4	6.0mm	2.5mm	6.8mm	4.0mm
ESC20-5	6.0mm	2.5mm	7.0mm	5.0mm
ESC20-6	6.0mm	2.5mm	6.5mm	6.0mm
ESC20-6A	5.0mm	2.5mm	7.0mm	5.4mm
ESC21-3	3.2mm	1.1mm	7.8mm	2.7mm
ESC21-3.5	3.3mm	1.2mm	7.9mm	3.6mm
ESC21-3.6	3.2mm	2.0mm	7.9mm	3.6mm
ESC21-5	4.0mm	2.0mm	9.5mm	5.0mm
ESC22-2.4	2.4mm	1.0mm	5.0mm	7.0mm
ESC23-9.5	3.2mm	1.5mm	6.3mm	9.5mm
ESC24-6	2.5mm	1.2mm	5.0mm	6.0mm
ESC25-10	9.0mm	4.5mm	12.0mm	10.0mm
ESC25-16	9.0mm	4.5mm	12.0mm	16.0mm
ESC25-26	9.9mm	6.0mm	14.0mm	26.0mm
ESC30-5.5	6.2mm	2.0mm	5.6mm	5.5mm

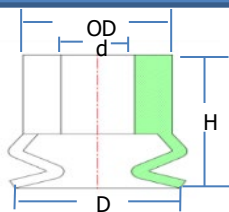
Flat Vacuum Cup Series



Model	OD	d	H	D
ESC31-6	12.2mm	5.3mm	11.5mm	6.1mm
ESC31-10	12.5mm	5.5mm	11.1mm	10.0mm
ESC31S-11.5	12.5mm	5.2mm	9.7mm	11.6mm
ESC33-4	12.0mm	5.0mm	12.5mm	4.0mm
ESC33-6	12.0mm	5.0mm	12.5mm	6.0mm
ESC33-6LN	12.0mm	5.0mm	13.5mm	6.0mm
ESC33-8	12.0mm	5.0mm	13.5mm	8.0mm
ESC33-10	12.0mm	5.0mm	13.0mm	10.0mm
ESC33-15	12.0mm	5.0mm	13.0mm	15.0mm
ESC34-20	13.0mm	4.5mm	16.0mm	19.5mm
ESC34-30	14.0mm	4.5mm	16.0mm	30.0mm
ESC36-7	9.0mm	5.0mm	6.0mm	7.0mm
ESC36-8	9.0mm	5.0mm	6.0mm	8.0mm
ESC37-6	15.0mm	9.0mm	12.0mm	6.2mm
ESC37-10	15.0mm	9.0mm	12.0mm	10.0mm
ESC37-13	15.0mm	9.0mm	11.3mm	12.5mm
ESC37-15	15.0mm	9.0mm	12.0mm	15.0mm
ESC38-15	16.0mm	7.5mm	16.0mm	15.0mm
ESC42-5S	5.6mm	2.8mm	6.0mm	4.6mm
ESC42-6	3.0mm	1.5mm	5.0mm	6.0mm
ESC43-2	5.0mm	2.0mm	4.6mm	2.0mm
ESC43-3.5	5.0mm	2.0mm	4.6mm	3.5mm
ESC43-4V	5.0mm	2.0mm	5.2mm	4.2mm
ESC43-6	5.0mm	2.0mm	5.0mm	6.0mm
ESC45-1.5	7.9mm	4.6mm	19.3mm	2.4mm
ESC45-3	7.9mm	5.6mm	19.3mm	4.0mm
ESC46-6	6.0mm	3.0mm	7.0mm	6.0mm
ESC48-6	6.0mm	3.0mm	4.0mm	6.0mm
ESC48-6A	6.0mm	3.0mm	5.0mm	6.0mm
ESC49-7.5	5.7mm	3.0mm	6.0mm	7.6mm
ESC50-8	6.0mm	2.5mm	12.0mm	8.0mm
ESC52S-3.5	4.0mm	2.5mm	5.3mm	3.5mm
ESC53-1.7	4.47mm	2.52mm	5.8mm	1.7mm
ESC53-5.8	5.0mm	2.5mm	8.0mm	5.8mm
ESC53-6	6.0mm	2.5mm	7.0mm	6.0mm
ESC53-6.5	5.0mm	2.3mm	8.0mm	6.5mm

Model	OD	d	H	D
ESC55-4.5	6.0mm	3.0mm	6.9mm	4.8mm
ESC55-6.5	6.0mm	2.6mm	5.6mm	6.5mm
ESC55-7	6.0mm	2.6mm	5.6mm	7.0mm
ESC55-8	6.2mm	3.0mm	6.8mm	8.0mm
ESC55-14	7.1mm	3.5mm	11.7mm	14.0mm
ESC55-17	7.1mm	3.5mm	11.7mm	17.0mm
ESC56-36	23.0mm	16.7mm	11.3mm	35.5mm
ESC58-5	5.0mm	2.2mm	5.0mm	5.0mm
ESC59-2	1.9mm	0.8mm	3.6mm	2.0mm
ESC60-8	7.0mm	4.0mm	5.6mm	8.2mm
ESC61-6	4.0mm	1.5mm	12.0mm	6.0mm
ESC62-10	6.6mm	2.8mm	6.9mm	10.3mm
ESC62-13	8.2mm	2.8mm	6.9mm	12.7mm
ESC65-15	7.5mm	3.5mm	3.0mm	15.0mm
ESC65-15A	8.0mm	3.0mm	3.0mm	15.0mm
ESC65-20	10.0mm	5.0mm	4.0mm	20.0mm
ESC66-24	14.5mm	10.2mm	10.3mm	24.4mm
ESC69-3.5X2.5	3.5X2.5mm	2.5X1.0mm	4.0mm	3.5X2.5mm
ESC69-3	2.9mm	1.5mm	6.0mm	2.9mm
ESC70-3.5X7	3.3mm	1.5mm	4.5mm	3.5X7
ESC72-5	4.0mm	2.0mm	5.3mm	5.0mm
ESC75-10	9.5mm	5.4mm	2.4mm	10.5mm
ESC82-3	4.0mm	1.1mm	4.0mm	3.0mm
ESC82-3.5	4.0mm	1.2mm	4.0mm	3.5mm
ESC82-5	5.8mm	3.5mm	3.8mm	5.0mm
ESC82-7.5	6.0mm	2.6mm	3.8mm	7.5mm
ESC83-18	6.0mm	1.5mm	7.5mm	18.3mm
ESC84-10	10.0mm	4.0mm	8.0mm	10.0mm
ESC84-14	10.0mm	4.0mm	9.3mm	14.0mm
ESC85-10	10.0mm	7.4mm	3.3mm	10.0mm
ESC90-6.5X20	20X6.5	10X4	7.0mm	6.5X20
ESC99-6	7.0mm	3.0mm	4.0mm	6.0mm
ESC99S-35	15.2mm	12.0mm	8.0mm	35.0mm
ESC101-6	6.0mm	2.5mm	7.0mm	6.0mm
ESC102-3	3.0mm	0.6mm	3.7mm	2.8mm
ESC105-8.6(M)	10.0mm	3.0mm	5.0mm	8.6mm

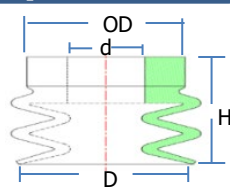
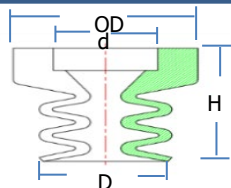
Single Bellows Vacuum Cup Series



Model	OD	d	H	D
ESC03B-6	7.0mm	4.8mm	12.5mm	6.0mm
ESC03B-8	7.0mm	4.8mm	12.5mm	8.0mm
ESC05B-4	6.0mm	3.0mm	16.0mm	4.0mm
ESC05B-5	4.5mm	2.0mm	9.2mm	5.0mm
ESC05B-7	7.0mm	3.0mm	15.8mm	7.0mm
ESC05B-9(M)	7.4mm	4.9mm	7.0mm	9.0mm
ESC05B-9L(M)	8.0mm	4.0mm	13.7mm	9.0mm
ESC05B-10	9.2mm	5.0mm	16.2mm	10.0mm
ESC05B-10.5(M)	10.0mm	4.5mm	16.0mm	10.5mm
ESC05B-10.5S(M)	10.0mm	4.5mm	13.7mm	10.5mm
ESC05B-8.5L(M)	8.0mm	4.0mm	16.0mm	8.5mm
ESC05B-9.8	9.0mm	4.24mm	8.53mm	9.8mm
ESC05B-12	9.1mm	4.0mm	19.0mm	12.0mm
ESC05B-15	9.1mm	3.8mm	20.5mm	15.0mm
ESC05-16.5	9.1mm	3.8mm	11.5mm	16.5mm
ESC07B-7	6.0mm	4.0mm	10.2mm	7.2mm
ESC08B-8	8.0mm	4.0mm	9.0mm	8.0mm
ESC08B-10	10.7mm	4.6mm	9.5mm	10.0mm
ESC08B-15S	12.0mm	4.6mm	11.0mm	15.0mm
ESC08B-16	11.0mm	4.6mm	11.0mm	16.0mm
ESC19B-5.5S(M)	7.0mm	4.0mm	5.2mm	5.5mm
ESC19B-6	7.5mm	4.0mm	9.0mm	6.0mm
ESC19B-6.35	7.5mm	3.3mm	8.9mm	6.35mm
ESC19B-7	8.0mm	4.0mm	8.0mm	7.0mm
ESC28B-4	4.0mm	1.3mm	8.0mm	4.0mm
ESC30B-6.5	6.5mm	4.0mm	6.2mm	6.0mm

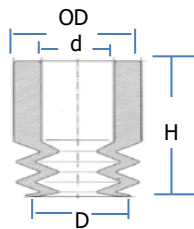
Model	OD	d	H	D
ESC32B-3.5	4.0mm	2.5mm	8.0mm	3.5mm
ESC32B-5.2(M)	7.0mm	3.8mm	11.0mm	5.2mm
ESC35-6.5	3.8mm	1.5mm	12.0mm	6.5mm
ESC41B-3.5	7.2mm	3.7mm	9.0mm	3.5mm
ESC53B-6	6.0mm	2.3mm	10.0mm	6.0mm
ESC54B-4	4.0mm	1.3mm	7.8mm	4.0mm
ESC54B-6	4.0mm	1.5mm	8.2mm	6.0mm
ESC54B-8	4.0mm	1.5mm	8.8mm	8.0mm
ESC57B-6.2S(M)	7.5mm	4.9mm	7.0mm	6.2mm
ESC57B-8.2(M)	7.5mm	4.9mm	7.0mm	8.2mm
ESC57B-8.5(M)	7.5mm	4.9mm	7.0mm	8.5mm
ESC64B-20	15.2mm	6.0mm	13.2mm	20.0mm
ESC67B-4.5	3.2mm	1.6mm	7.5mm	4.5mm
ESC73B-4	12.0mm	5.0mm	15.0mm	4.0mm
ESC73B-6	12.0mm	5.0mm	15.0mm	6.1mm
ESC73B-10	12.0mm	5.0mm	15.5mm	10.0mm
ESC76B-3(M)	3.0mm	1.8mm	5.0mm	3.0mm
ESC76B-3.8(M)	3.2mm	1.8mm	5.1mm	3.8mm
ESC84B-10	10.0mm	4.0mm	16.0mm	10.0mm
ESC90B-6	8.0mm	3.8mm	8.0mm	6.0mm
ESC91B-10	11.0mm	4.5mm	9.5mm	10.0mm
ESC96B-10	11.0mm	4.5mm	9.5mm	10.0mm
ESC97B-10	8.5mm	3.8mm	13.5mm	10.5mm
ESC100B-2.7	3.7mm	2.2mm	4.5mm	2.7mm
ESC104B-4	4.4mm	2.1mm	5.9mm	4.2mm
ESC105B-4	4.2mm	2.3mm	5.5mm	4.2mm

Double Bellows Vacuum Cup Series



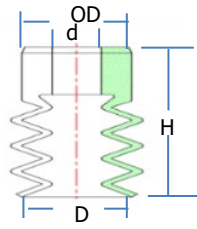
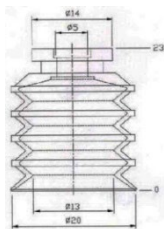
Model	OD	d	H	D
ESC37B-10	15.0mm	9.0mm	21.0mm	10.0mm
ESC37B-16	15.0mm	9.0mm	21.0mm	15.5mm
ESC39B-10	12.0mm	5.0mm	17.0mm	10.3mm
ESC57B-11A	10.0mm	4.9mm	14.0mm	11.0mm
ESC57B-6	9.0mm	5.0mm	13.7mm	6.0mm
ESC57B-6SS	9.0mm	5.0mm	8.0mm	6.0mm
ESC57B-6A	9.0mm	5.0mm	14.0mm	6.0mm
ESC57BS-6	9.0mm	5.0mm	8.5mm	6.5mm
ESC57B-6.5S	8.7mm	4.9mm	9.6mm	6.5mm
ESC57B-6.5S/1060(M)	8.7mm	4.9mm	10.6mm	6.5mm
ESC57B-6S-VI	9.2mm	5.2mm	8.7mm	6.6mm
ESC57B-6.4	9.0mm	5.0mm	14.1mm	6.4mm
ESC57B-11	9.8mm	4.5mm	14.0mm	11.3mm
ESC57B-11/1420	10.0mm	4.9mm	14.2mm	11.0mm
ESC57B-11B	10.0mm	4.5mm	15.1mm	11.0mm
ESC74B-3	7.0mm	3.9mm	14.5mm	3.7mm

Double Bellows Long Body Vacuum Cup Series



Model	OD	d	H	D
ESC57B-6S	9.0mm	5.0mm	9.5mm	6.0mm
ESC57B-6.5/1420	8.7mm	4.9mm	14.2mm	6.5mm
ESC57B-6.5(M)	8.7mm	4.9mm	14.0mm	6.5mm
ESC57B-6.5S(M)	8.7mm	4.9mm	9.6mm	6.5mm
ESC57B-6.5SS(M)	8.7mm	4.9mm	8.6mm	6.5mm
ESC57B-6.5/1500	8.7mm	4.9mm	15.0mm	6.5mm
ESC68B-2.5	2.8mm	1.4mm	10.0mm	6.5mm
ESC100B-3.2	4.0mm	2.2mm	5.4mm	3.2mm

Multiple Bellows Vacuum Cup Series



Model	OD	d	H	D
ESC68B-3.1(M)	2.9mm	1.2mm	10.0mm	3.1mm
ESC68B-3.3(M)	2.9mm	1.2mm	10.0mm	3.3mm
ESC71B-20	14.0mm	6.0mm	23.0mm	20.0mm



Homogeneous Moulded ESD Mat

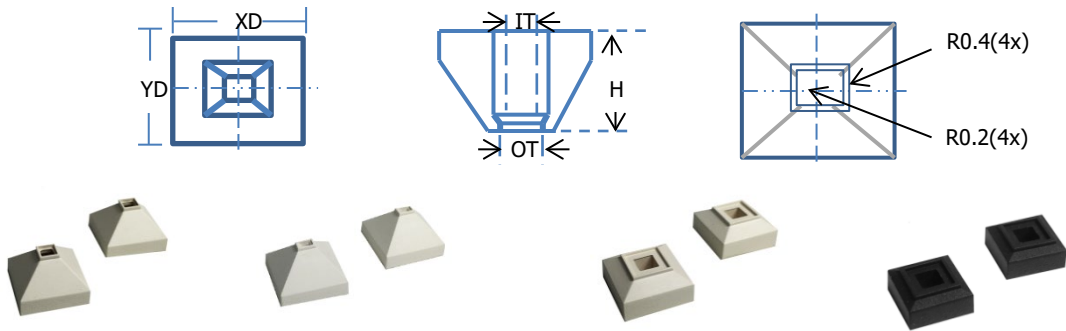
Model	X Axis	Y Axis	Thickness	Operating Temperature	Resistivity	Hardness	Material
ERM-050	400 mm	400 mm	0.5 mm	-ve 60 to +ve 250	$10^5 - 10^9$	JISA 40-75(BSR) JISA 60-75(NBR) JISA 60-75(EPDM) JISA 65-70(FKM VITON)	BSR SILICON, NBR , FKM VITON, EPDM
ERM-100	400 mm	400 mm	1.0 mm	-ve 60 to +ve 250	$10^5 - 10^9$	JISA 40-75(BSR) JISA 60-75(NBR) JISA 60-75(EPDM) JISA 65-70(FKM VITON)	BSR SILICON, NBR , FKM VITON, EPDM
ERM-300	400 mm	400 mm	3.0 mm	-ve 60 to +ve 250	$10^5 - 10^9$	JISA 40-75(BSR) JISA 60-75(NBR) JISA 60-75(EPDM) JISA 65-70(FKM VITON)	BSR SILICON, NBR , FKM VITON, EPDM

Homogeneous Moulded ESD Tube



Model	ID	OD	Operating Temp.	Resistivity Level	Material	Hardness
ESRT4X6MM	4mm	6mm	(-60 to +250 °C)	10 ⁵ - 10 ⁹	BSR SILICON	JISA 50-75
ESRT2X4MM	2mm	4mm	(-60 to +250 °C)	10 ⁵ - 10 ⁹	BSR SILICON	JISA 50-75

Hanmi Pick Up Tip Series – with lip



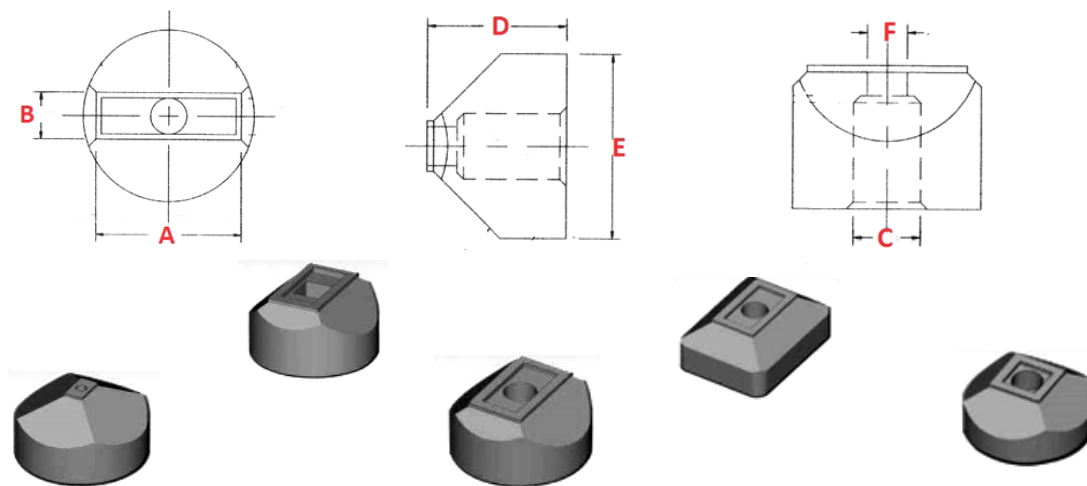
Model (WITH LIP TYPE)	XD	YD	IT	OT	H
ART6X6 CODE-IPBK	10.0mm	10.0mm	4.0mm	4.8mm	6.5mm
ART8X8 CODE-IP	13.0mm	13.0mm	6.2mm	7.2mm	6.5mm
ART9X9 CODE-HMM	14.0mm	14.0mm	3.8mm	7.5mm	6.7mm
AHAN5X5WL	10.0mm	10.0mm	2.1mm	2.7mm	6.7mm
AHAN3X3WL	10.0mm	10.0mm	1.5mm	2.1mm	6.7mm
ART-TIP8-B10-H3.45	10.0mm	10.0mm	3.75mm	7.0mm	3.4mm
ART-TIP5-B7.3-H3.5	7.0mm	7.0mm	2.5mm	4.0mm	3.4mm
AHAN2X3WL00-ESDXX	10.0mm	10.0mm	4.0mm	2X3	6.7mm
ART-H14X14	16.0mm	16.0mm	6.16mm	7.0mm	6.68mm
ART-H12X12	14.0mm	14.0mm	11.16mm	12.0mm	6.68mm

Hanmi Pick Up Tip Series – without lip



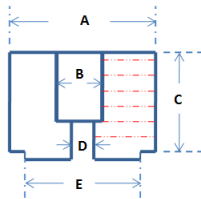
Model (WITHOUT LIP TYPE)	XD	YD	IT	OT	H
ART4X4 CODE-DT	10.0mm	10.0mm	2.2mm	3.0mm	6.5mm
ART6X6 CODE-DT	12.5mm	12.5mm	4.6mm	5.2mm	6.4mm
ART3X3 CODE-HMM	10.0mm	10.0mm	1.5mm	2.1mm	6.7mm
ART4X4 CODE-HMM	10.0mm	10.0mm	3.8mm	3.0mm	6.5mm
ART5X5 CODE-HMM	10.0mm	10.0mm	2.1mm	2.7mm	6.7mm
ART7X7 CODE-HMM	10.0mm	10.0mm	3.7mm	4.8mm	6.8mm
AWRT-T2.4XB8-H6.65	8.0mm	8.0mm	1.2mm	2.4mm	7.0mm
ART2X2-4 SYMMETRY	10.0mm	10.0mm	1.1mm	1.9mm	8.0mm
ART3X3-4 SYMMETRY	10.0mm	10.0mm	1.3mm	2.5mm	8.2mm
ART4X4-4 SYMMETRY	12.0mm	12.0mm	2.0mm	3.85mm	8.25mm
ART3X3-4X4 TI ROCO	10.0mm	10.0mm	1.7mm	2.5mm	7.0mm
ART-T2.40XB8XH6.65MM	8.0mm	8.0mm	3.9mm	2.4mm	7.0mm
AHAN2X3WOL00-ESD	10.0mm	10.0mm	4.0mm	2X3	6.7mm
AHAN10X10FLAT	12.0mm	12.0mm	10.0mm	10.0mm	3.3mm

Die Pick Up Tip Series

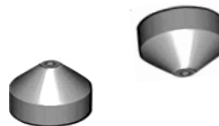
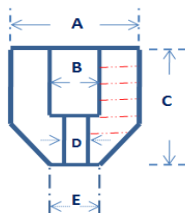


PART NUMBER	A	B	C	D	E	F
ART-T6-B9-H3.3	9.00mm	2.50mm	3.30mm	1.50mm	6.15mm	0.18mm
ART-T1.48-B2.8-H3.3-R1	2.80mm	1.50mm	3.30mm	0.94mm	1.48mm	-
ART-TR5.1-B6.6-H2.5	6.52mm	3.17mm	2.50mm	3.17mm	5.10mm	-
ART-T1.9X1.12-B4.3-H3.3	4.30mm	1.50mm	3.30mm	0.80mm	1.9X1.12mm	0.20mm
ART-T7-B7-H3.6	7.00mm	2.50mm	3.60mm	2.00mm	7.00mm	0.20mm
ART-T2.4X2.4XB5X5-H3.6	5.00mm	2.50mm	3.60mm	1.50mm	2.40mm	0.12mm
ART-TR4-BR4-H3.3	4.00mm	1.50mm	3.30mm	1.00mm	4.00mm	-
ART-TR2.4-BR3-H3.3	3.00mm	1.50mm	3.30mm	1.00mm	2.40mm	-
ART-TR3.6-BR3.6-H3.3	3.60mm	1.50mm	3.30mm	1.00mm	3.6mm	0.25mm
ART-T1.8X0.9-B2.8-H3.3	2.80mm	1.50mm	3.30mm	0.60mm	1.80X0.90mm	-
ART-T3.6XB3.6XH3.3-SOIC150	3.60mm	1.50mm	3.30mm	1.80mm	3.60mm	0.25mm
ART-T2.03X1.12-B4-H3.3	4.03mm	1.50mm	3.30mm	0.82mm	2.03X1.78mm	0.25mm
ART-T2.4-B5.5-H3.3	5.60mm	2.50mm	3.30mm	0.90mm	2.40mm	0.14mm
ART-TR2.2-B4.6-H4	4.60mm	2.40mm	4.00mm	0.80mm	2.20mm	-
ART-TR4.2-B4.2-H3.3	4.20mm	2.40mm	4.00mm	1.00mm	3.80mm	-
ART-TR5.5-B5.5-H10	5.50mm	2.60mm	10.00mm	2.00mm	5.50mm	-
ART-TR2-BR8-H7	8.00mm	3.90mm	7.00mm	1.20mm	2.00mm	0.30mm
ART-T1.0-B4-H3.34-(R3-02)	4.00mm	1.70mm	3.34mm	0.46mm	1.00mm	-
ART-T1.50-B4-H3.31(R3-04)	4.00mm	1.56mm	3.31mm	0.67mm	1.50mm	0.13mm
ART-T1.70-B4-H3.33(R3-05)	4.00mm	1.60mm	3.33mm	0.70mm	1.70mm	0.20mm
ART-T2.02-B4-H3.33(R3-06)	4.00mm	1.60mm	3.33mm	1.00mm	2.02mm	-
ART-T3.20-B4.0-H3.33(R3-10)	4.00mm	1.53mm	3.33mm	0.90mm	3.20mm	-
ART-T2.50-B4-H3.30(R3-08)	4.00mm	1.55mm	3.33mm	1.00mm	2.50mm	-
ART-T4.1-BR7-H7	7.00mm	3.30mm	7.00mm	2.00mm	4.10mm	1.00mm
ART-T1.90-B4-H3.25	4.00mm	1.49mm	3.25mm	0.70mm	1.92mm	0.22mm
ART-T5.5X3.5-B6.9-H3.3	7.00mm	2.50mm	3.30mm	2.00mm	5.50X3.50mm	0.12mm
ART-TR2.5-B3.8-H2.9	3.80mm	1.95mm	2.88mm	1.65mm	2.50mm	0.53mm
ART-T4.5-B6.9-H3.3	6.90mm	2.50mm	3.30mm	1.40mm	4.50mm	0.12mm
ART-T0.5-B2.5-H3.5	2.60mm	1.10mm	3.28mm	0.35mm	0.50mm	-
ART-T2.4-B8-H6.65	8.00mm	3.92mm	7.00mm	1.20mm	2.40mm	-
ART-T8-B10-H3.45	10.00mm	3.75mm	3.38mm	3.75mm	8.02mm	0.52mm
ART-1.0X1.0MM	4.00mm	1.60mm	3.30mm	0.40mm	1.00mm	-

Die Pick Up Tip Series



Model	A	B	C	D	E
ANX32/RT01	4.7mm	1.5mm	3.8mm	0.1mm	3.6mm
ANX32/RT02	4.7mm	1.5mm	3.8mm	0.2mm	3.6mm
ANX32/RT03	4.7mm	1.5mm	3.8mm	0.3mm	3.6mm
ANX32/RT04	4.7mm	1.5mm	3.8mm	0.4mm	3.6mm
ANX32/RT05	4.7mm	1.5mm	3.8mm	0.5mm	3.6mm
ANX32/RT06	4.7mm	1.5mm	3.8mm	0.6mm	3.6mm
ANX32/RT07	4.7mm	1.5mm	3.8mm	0.7mm	3.6mm
ANX32/RT08	4.7mm	1.5mm	3.8mm	0.8mm	3.6mm
ANX32/RT09	4.7mm	1.5mm	3.8mm	0.9mm	3.6mm
ANX32/RT10	4.7mm	1.5mm	3.8mm	1.0mm	3.6mm

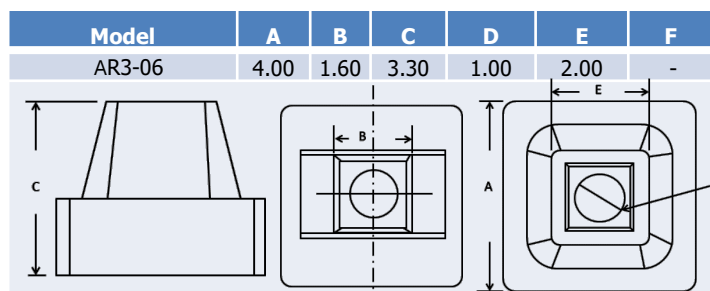
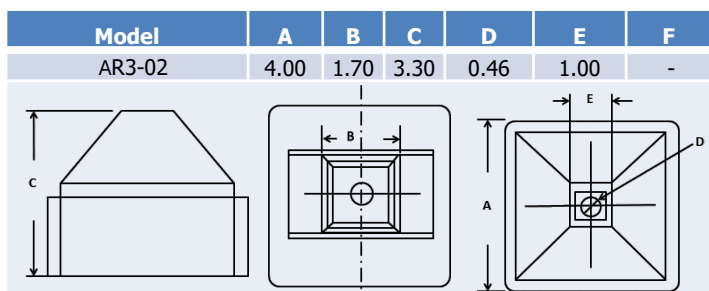
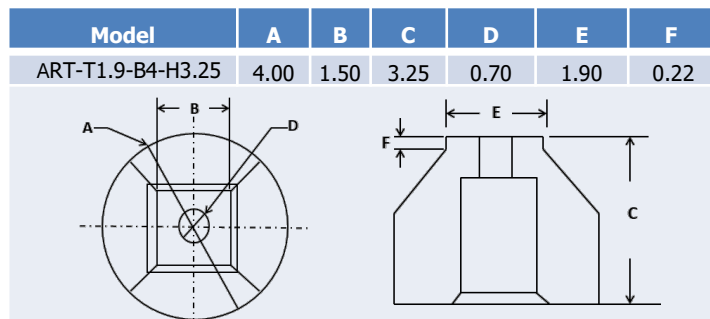
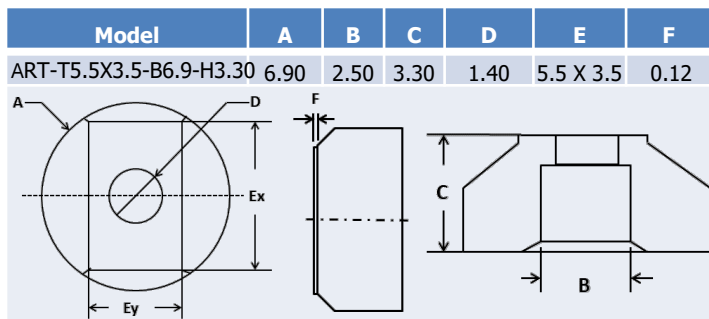
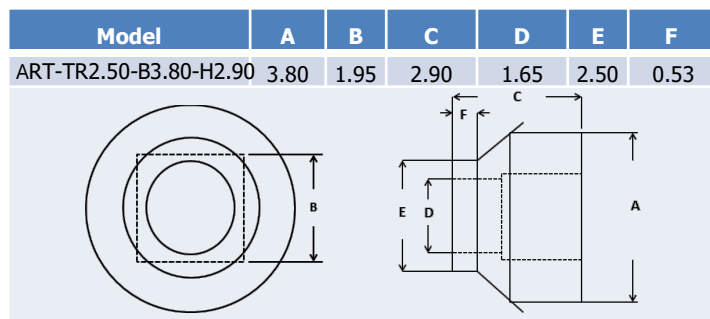
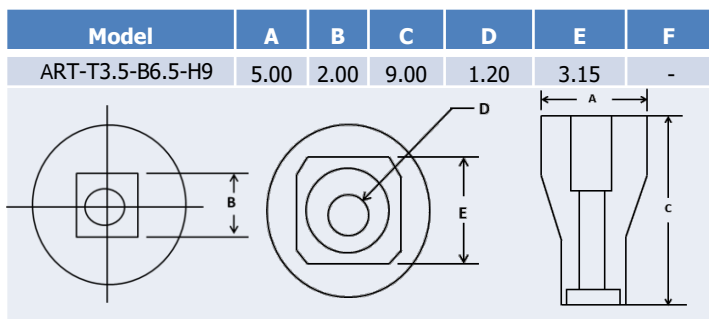
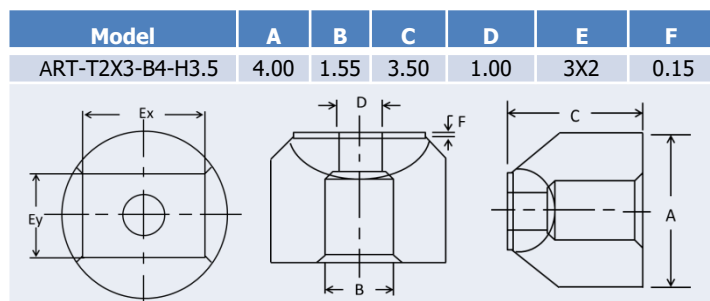
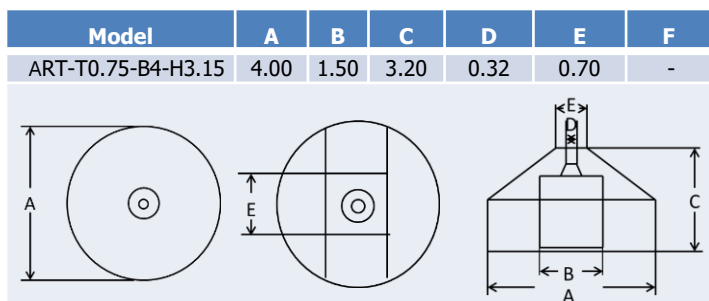
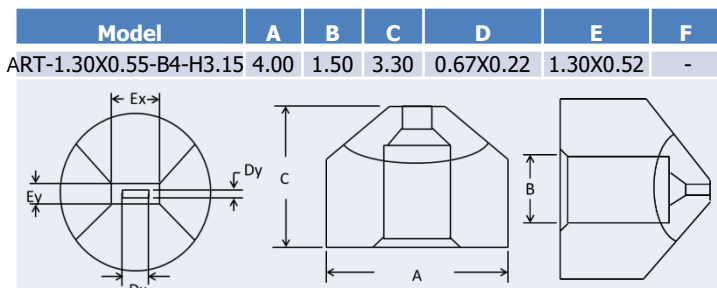
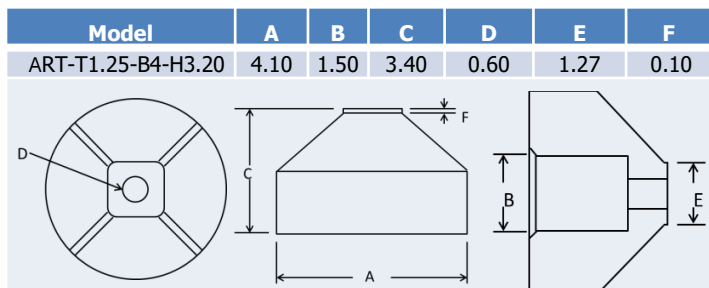
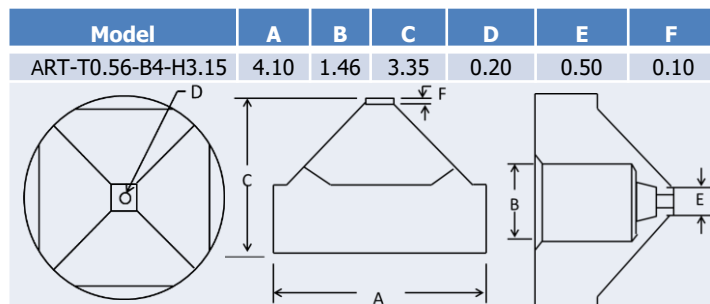
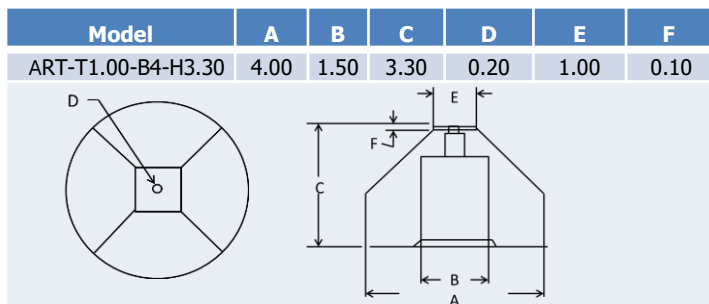


Model	A	B	C	D	E
ANX32/RTS01	4.3mm	1.5mm	3.2mm	0.1mm	1.3mm
ANX32/RTS02	4.3mm	1.5mm	3.2mm	0.2mm	1.3mm
ANX32/RTS03	4.3mm	1.5mm	3.2mm	0.3mm	1.3mm
ANX32/RTS04	4.3mm	1.5mm	3.2mm	0.4mm	1.3mm
ANX32/RTS05	4.3mm	1.5mm	3.2mm	0.5mm	1.3mm
ANX32/RTS06	4.3mm	1.5mm	3.2mm	0.6mm	1.3mm

Materials Specification Lists

MATERIAL CODE	MATERIAL NAME	HARDNESS JIS A	TEMPERATURE RANGE	SEMI CONDUCTIVE	ESD LEVEL	EXTREME ESD LEVEL	COLOR
NBR ESD	Nitrile Rubber	40-85 JIS A	(-25 to 150°C)	N/A	10 ⁵ - 10 ⁹	10 ⁶ - 10 ⁸	Black White
NBR Non ESD	Nitrile Rubber	40-85 JIS A	(-25 to 150°C)	N/A	>10 ⁹	N/A	Solid Colour (Variable Colours)
SIL ESD	Silicone Rubber	40-85 JIS A	(-50 to +200°C)	10 ³ - 10 ⁷	10 ⁵ - 10 ⁹	10 ⁶ - 10 ⁸	Black Dark Grey
SIL Non ESD	Silicone Rubber	40-85 JIS A	(-50 to +200°C)	N/A	>10 ⁹	N/A	Translucent (Variable Colours)
Extreme SIL ESD	Extreme Silicone Rubber	60-75 JIS A	(-65 to +250°C)	10 ³ - 10 ⁷	10 ⁵ - 10 ⁹	10 ⁶ - 10 ⁸	Black Dark Grey
Extreme SIL Non ESD	Extreme Silicone Rubber	50-60 JIS A	(-80 to +250°C)	N/A	>10 ⁹	N/A	Translucent (Variable Colours)
Fluoric Rubber	FKM	50-80 JIS A	(-25 to +250°C)	N/A	10 ⁵ - 10 ⁹	10 ⁶ - 10 ⁸	Black
EPDM	EPDM	50-90 JIS A	(-25 to +150°C)	N/A	10 ⁵ - 10 ⁹	BLACK	Black

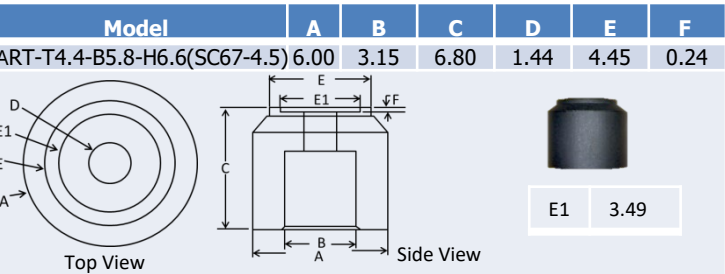
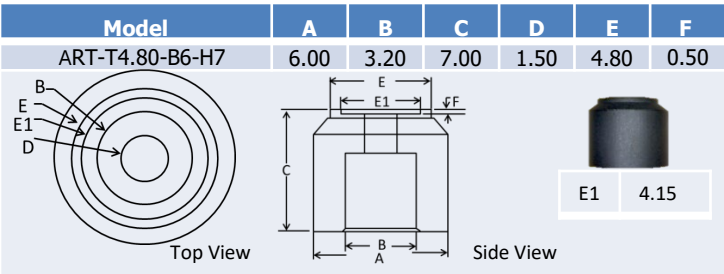
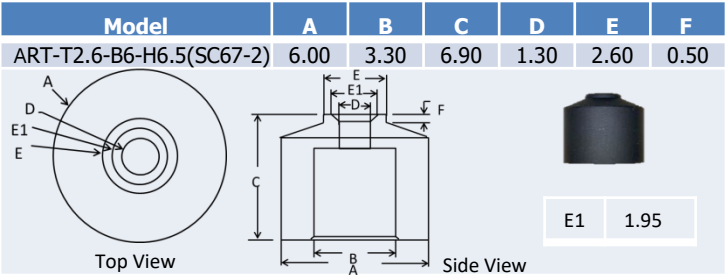
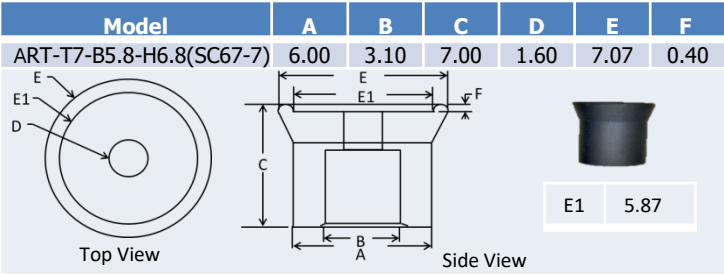
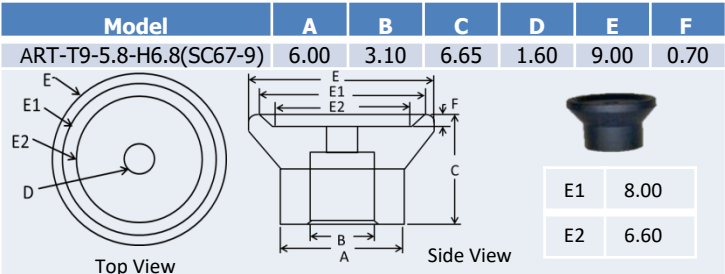
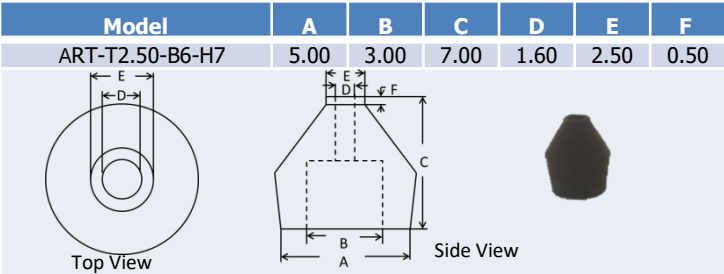
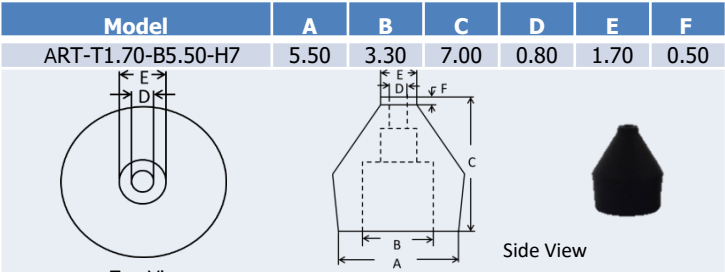
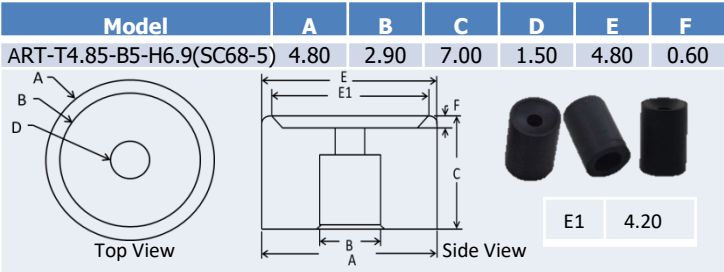
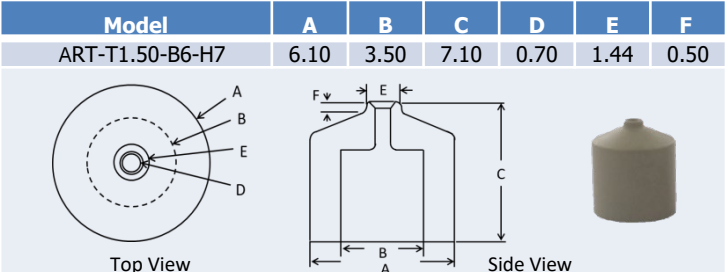
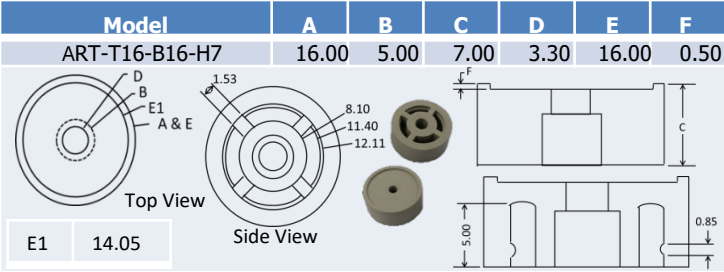
Die Pick Up Tip Series



Legend: A=Body Diameter; B=Shank Diameter; C=Height; D=Vacuum Through-Hole; E1=Tip Diameter Outer; E2=Tip Diameter Inner; F=Lip Height

** Product images are for illustrative purposes only **

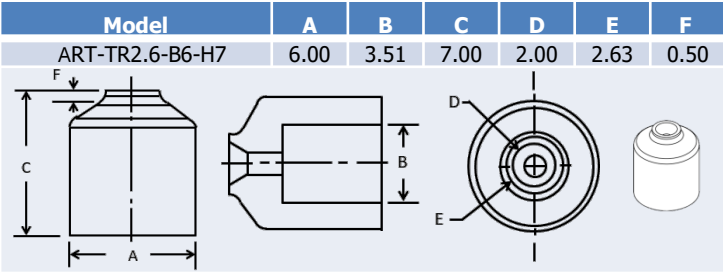
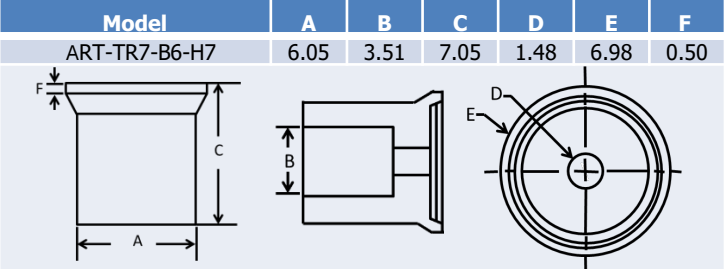
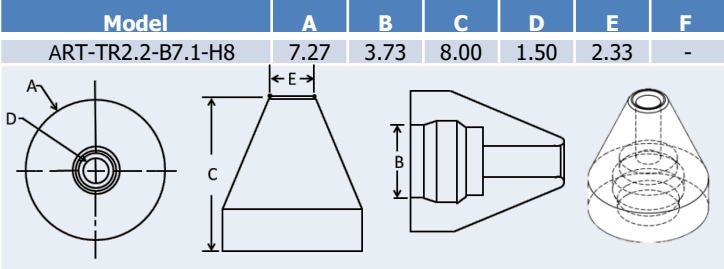
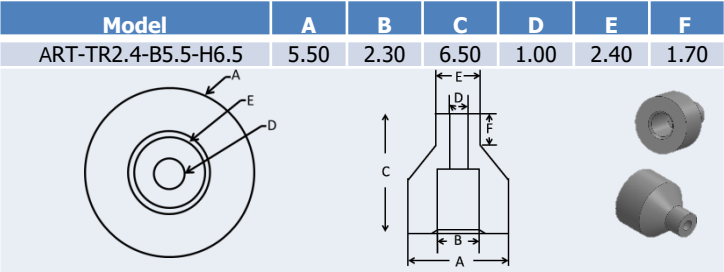
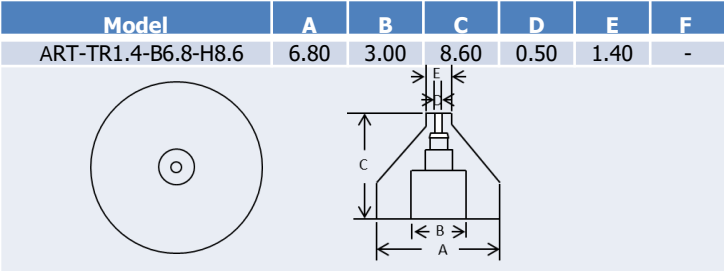
ICOS Series



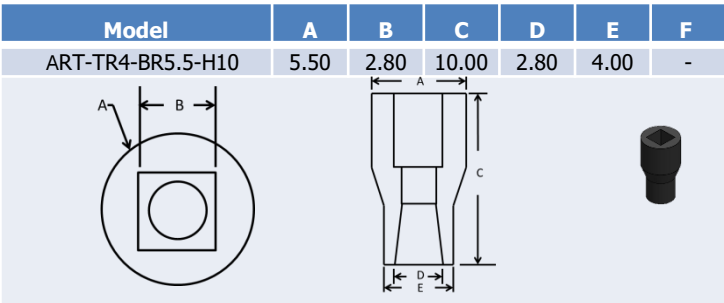
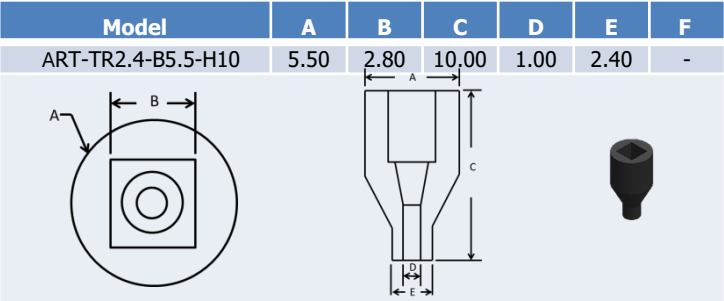
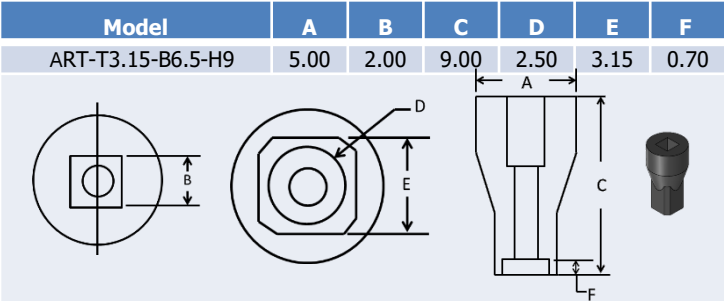
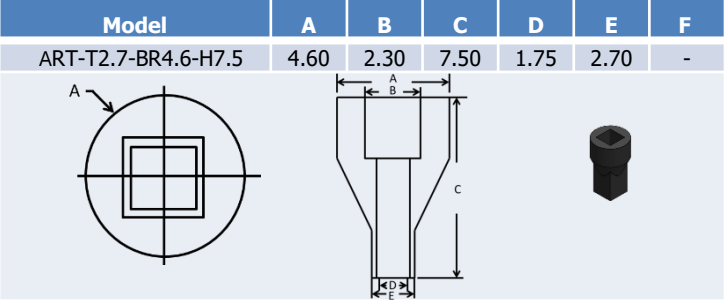
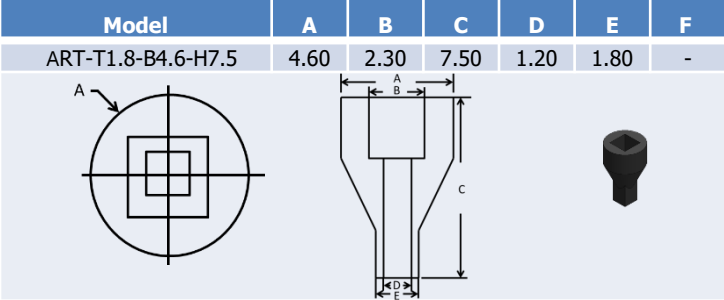
Legend: A=Body Diameter; B=Shank Diameter; C=Height; D=Vacuum Through-Hole; E1=Tip Diameter Outer; E2=Tip Diameter Inner; F=Lip Height

** Product images are for illustrative purposes only

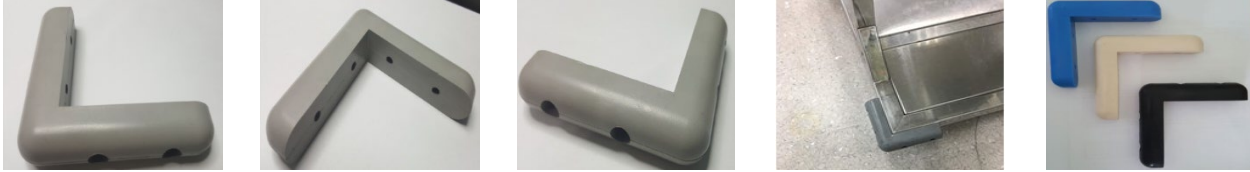
ICOS Series



SRM Pick Up Tip Series



ESD TROLLEY L-BUMPER GUARD



Part Number	OD	ID	Thickness	Colour	Hardness	Resistivity	ESD Stage	Operating Temp.	Material
ETR/L-BP-BKBSR(ESD)	103mm	21.5mm	24.8mm	Black	40-85JIS A	$10^5 - 10^9$	100% Full Moulded	-50'c to 200'c	BSR Silicon
ETR/L-BP-WHNBR(ESD) ETR/L-BP-GYNBR(ESD) ETR/L-BP-BKNBR(ESD)	103mm	21.5mm	24.8mm	Milky White Grey Black	60-70JIS A	$10^5 - 10^9$	100% Full Moulded	-25'c to 180'c	NBR
ETR/L-BP-BKNBR ETR/L-BP-GYNBR ETR/L-BP-BLNB	103mm	21.5mm	24.8mm	Black Grey Blue	40-85JIS A	-	100% Full Moulded	-50'c to 200'c	BSR Silicon

ESD TROLLEY ROUND BUMPER-ROUND POLE



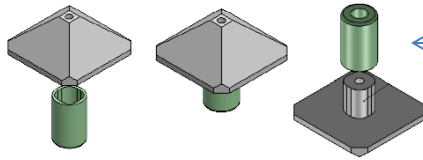
Part Number	OD	ID	Thickness	Colour	Hardness	Resistivity	ESD Stage	Operating Temp.	Material
ETR/RB-01BKBSR(ESD)R	87mm	25mm	20mm	Black	40-85JIS A	$10^5 - 10^9$	100% Full Moulded	-50'c to 200'c	BSR Silicon
ETR/RB-01WHNBR(ESD)R ETR/RB-01GYNBR(ESD)R ETR/RB-01BKNBR(ESD)R	87mm	25mm	20mm	Milky White Grey Black	60-70JIS A	$10^5 - 10^9$	100% Full Moulded	-25'c to 180'c	NBR
ETR/RB-01BKBSRR ETR/RB-01GYBSRR ETR/RB-01BLBSRR	87mm	25mm	20mm	Black Grey Blue	40-85JIS A	-	100% Full Moulded	-50'c to 200'c	BSR Silicon

ESD TROLLEY ROUND BUMPER-SQUARE POLE



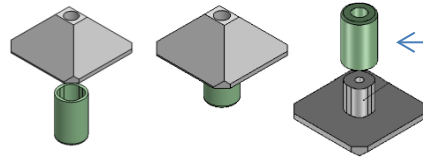
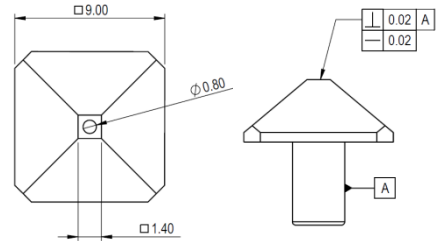
Part Number	OD	ID	Thickness	Colour	Hardness	Resistivity	ESD Stage	Operating Temp.	Material
ETR/RB-01BKBSR(ESD)SQ	87mm	26mm	20mm	Black	40-85JIS A	$10^5 - 10^9$	100% Full Moulded	-50'c to 200'c	BSR Silicon
ETR/RB-01WHNBR(ESD)SQ ETR/RB-01GYNBR(ESD)SQ ETR/RB-01BKNBR(ESD)SQ	87mm	26mm	20mm	Milky White Grey Black	60-70JIS A	$10^5 - 10^9$	100% Full Moulded	-25'c to 180'c	NBR
ETR/RB-01BKBSR(SQ) ETR/RB-01GYBSR(SQ) ETR/RB-01BLBSR(SQ)	87mm	26mm	20mm	Black Grey Blue	40-85JIS A	-	100% Full Moulded	-50'c to 200'c	BSR Silicon

ESD Plastic Pick Up Tip/Stainless Steel Shank Series



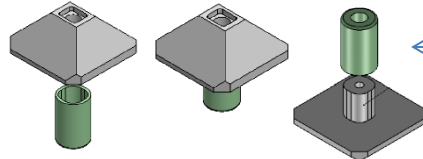
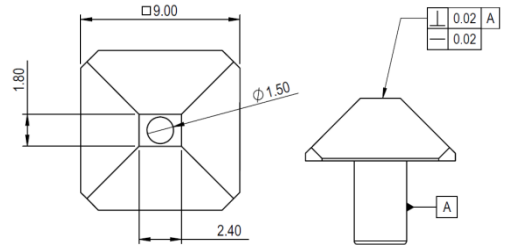
EF01-0016-ND-A
PNP 1.5X1.5

← Stainless Steel (Shank)
← ESD Plastic (Tip)



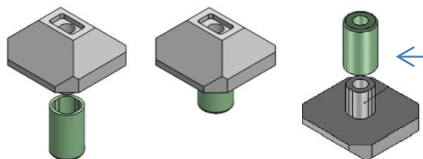
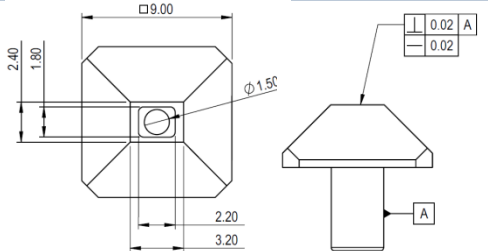
EF01-0017-ND-A
PNP 3X2

← Stainless Steel (Shank)
← ESD Plastic (Tip)



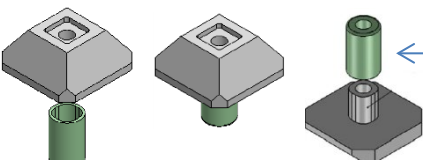
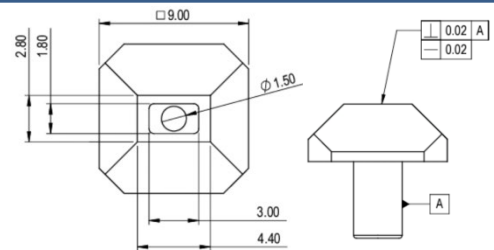
EF01-0026-ND-A
PNP 4X3

← Stainless Steel (Shank)
← ESD Plastic (Tip)



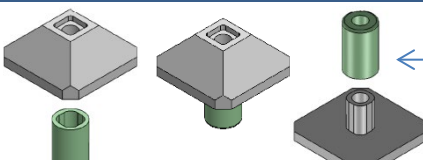
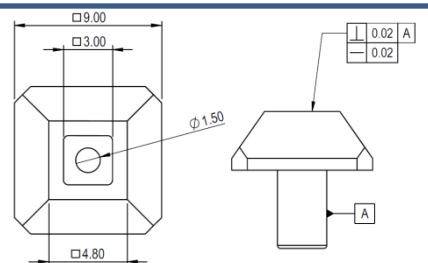
EF01-0027-ND-A
PNP 5X3.5

← Stainless Steel (Shank)
← ESD Plastic (Tip)



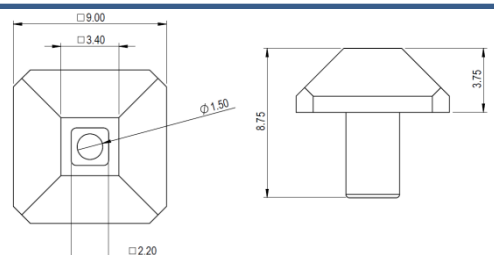
EF01-0018-ND-A
PNP 6X6

← Stainless Steel (Shank)
← ESD Plastic (Tip)

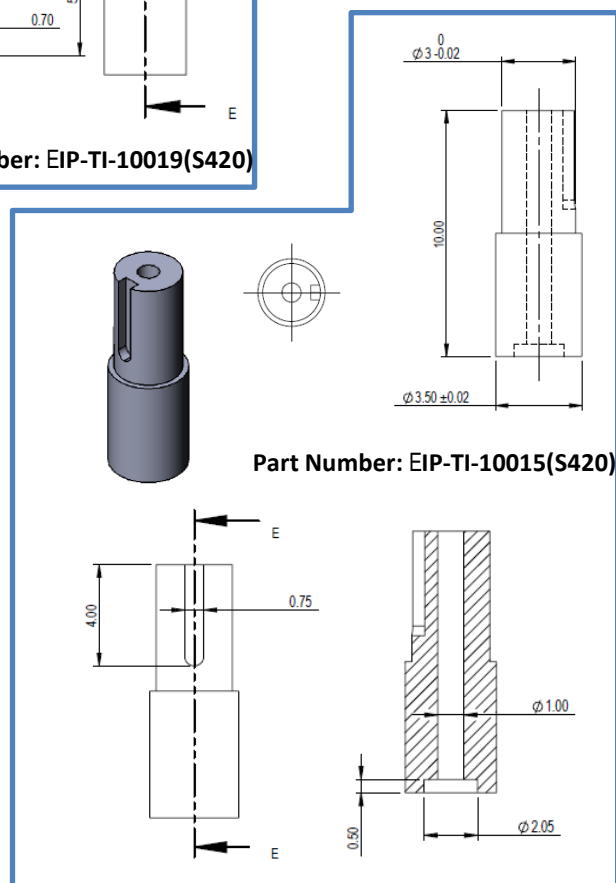
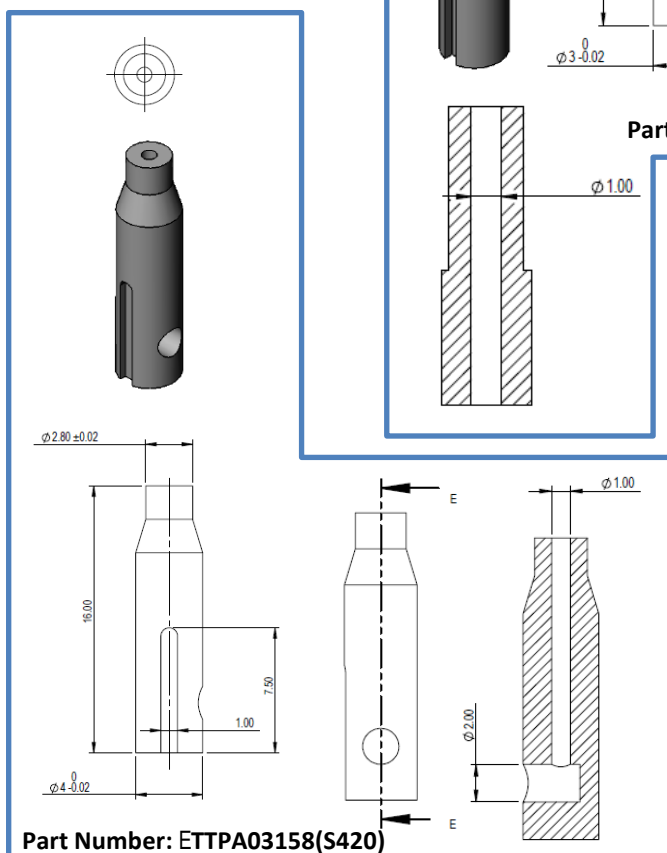
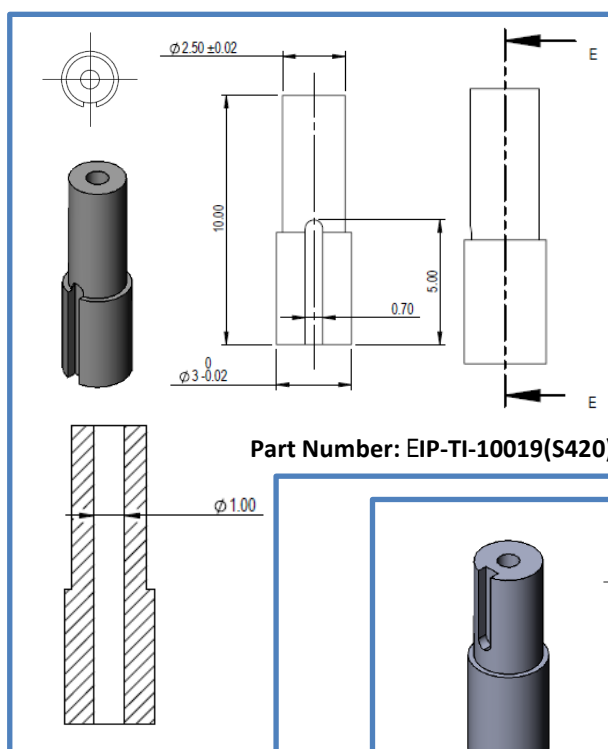
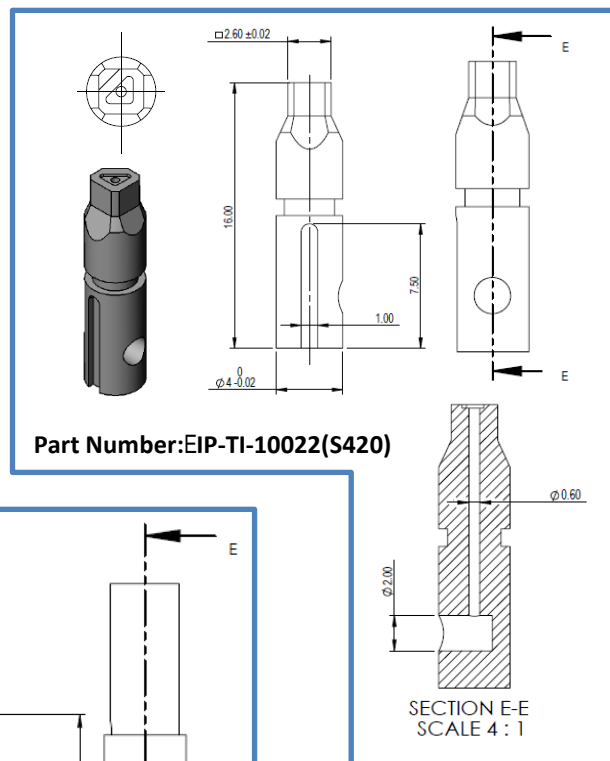
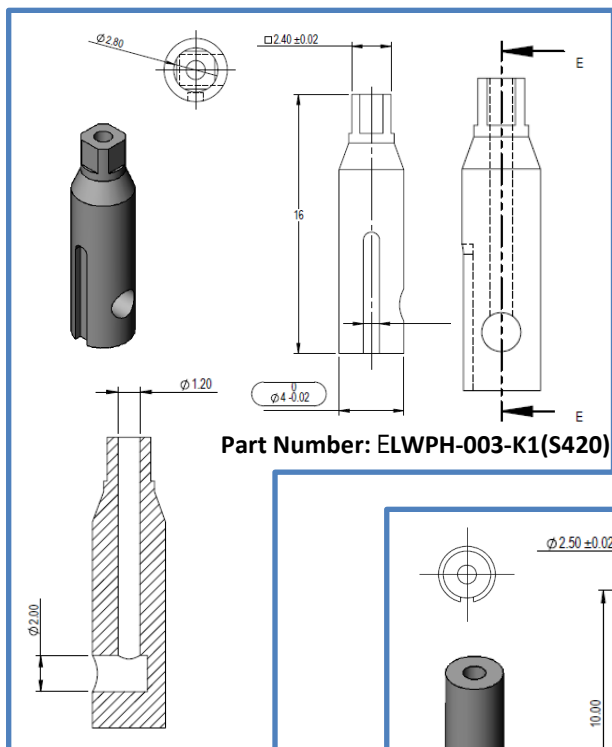


EF01-0011
PNP 4X4-5X5

← Stainless Steel (Shank)
← ESD Plastic (Tip)



ESD Plastic Pick Up Tip Series



Materials Specification Lists

MATERIAL CODE	ESD LEVEL	COLOR
POMSTAT	$10^6 - 10^9$	Light Beige
SEMITRON	$10^6 - 10^{12}$	Light Beige, Black, Khaki Grey
PEEK	$10^3 - 10^{13}$	Light Brown, Black
TORLON	$10^{13} - 10^{16}$	Black, Green, Dark Brown, Khaki Grey