

PROTEKTIVE PAK

DESCO INDUSTRIES INC

13520 MONTE VISTA AVENUE, CHINO, CA 91710 • PHONE (909) 902-9370 • ProtektivePak.com

QUALIFICATION REPORT – ANSI/ESD S20.20 CORRUGATED IN-PLANT HANDLER

ANSI/ESD S20.20	PROTEKTIVE PAK Test Results	Test Methods
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Surface Resistance (ohms), 48-72 hours conditioning, N=6 specimens, 100V

@ 12% RH, 23°C	$\geq 1.0 \times 10^4$ to $< 1.0 \times 10^{11}$	See Table 1	ANSI/ESD STM11.11
@ 50% RH, 23°C	$\geq 1.0 \times 10^4$ to $< 1.0 \times 10^{11}$	See Table 1	ANSI/ESD STM11.11

Test Equipment (Calibration records and test results are located at the corporate lab (Sanford, NC)):

For Test Method ANSI/ESD STM11.11:

- ETS Controlled Environment Chamber (Model 5532)
- SCS Surface Resistance Meter (Model 770761)
- SCS Concentric Ring Probe (Model 770007)

Table 1: Test Results:

Test Date: 2024-04-09

Surface Resistance (ohms), 48-72 hours of conditioning

Specimen	Testing at 12% RH, 23°C	Testing at 50% RH, 23°C
1	8.60×10^5	6.36×10^5
2	8.48×10^5	1.30×10^6
3	4.55×10^5	1.70×10^6
4	1.00×10^6	1.55×10^6
5	7.55×10^5	1.25×10^6
6	8.72×10^5	2.01×10^6
Min Ind=	4.55×10^5	6.36×10^5
Max Ind=	1.00×10^6	2.01×10^6
Mean of Ind=	7.98×10^5	1.41×10^6
Std Dev Ind =	1.86×10^5	4.69×10^5

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The qualification report is applicable to below Corrugated In-Plant Handler Sizes:

37509 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37233**/****	2-1/2 x 2-1/4 x 3/4	64 x 57 x 19	60
37229**/****	2-1/2 x 2-1/4 x 1-3/4	64 x 57 x 44	30
37232**/****	2-1/2 x 4-3/4 x 3/4	64 x 121 x 19	30
37228**/****	2-1/2 x 4-3/4 x 1-3/4	64 x 121 x 44	15
37231**/****	2-1/2 x 7-1/4 x 3/4	64 x 184 x 19	20
37227**/****	2-1/2 x 7-1/4 x 1-3/4	64 x 184 x 44	10
37230**/****	2-1/2 x 14-3/4 x 3/4	64 x 375 x 19	10
37226**/****	2-1/2 x 14-3/4 x 1-3/4	64 x 375 x 44	5
Box Inside Dimensions: 17" x 9-7/8" x 2-1/2" / 432 x 251 x 64 MM			

37508 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37225**/****	3-1/2 x 2-1/4 x 3/4	89 x 57 x 19	60
37221**/****	3-1/2 x 2-1/4 x 1-3/4	89 x 57 x 44	30
37224**/****	3-1/2 x 4-3/4 x 3/4	89 x 121 x 19	30
37220**/****	3-1/2 x 4-3/4 x 1-3/4	89 x 121 x 44	15
37223**/****	3-1/2 x 7-1/4 x 3/4	89 x 184 x 19	20
37219**/****	3-1/2 x 7-1/4 x 1-3/4	89 x 184 x 44	10
37222**/****	3-1/2 x 14-3/4 x 3/4	89 x 375 x 19	10
37218**/****	3-1/2 x 14-3/4 x 1-3/4	89 x 375 x 44	5
Box Inside Dimensions: 16-7/8" x 10" x 3-1/2" / 429 x 254 x 89 MM			

37501 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37165**/****	5-3/8 x 2-1/4 x 3/4	137 x 57 x 19	60
37161**/****	5-3/8 x 2-1/4 x 1-3/4	137 x 57 x 44	30
37164**/****	5-3/8 x 4-3/4 x 3/4	137 x 121 x 19	30
37160**/****	5-3/8 x 4-3/4 x 1-3/4	137 x 121 x 44	15
37163**/****	5-3/8 x 7-1/4 x 3/4	137 x 184 x 19	20
37159**/****	5-3/8 x 7-1/4 x 1-3/4	137 x 184 x 44	10
37162**/****	5-3/8 x 14-3/4 x 3/4	137 x 375 x 19	10
37158**/****	5-3/8 x 14-3/4 x 1-3/4	137 x 375 x 44	5
Box Inside Dimensions: 16-7/8" x 10" x 5-3/8" / 429 x 254 x 137 MM			

37506 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37211	5-7/8 x 4 x 1-1/4	149 x 102 x 32	40
37207	5-7/8 x 4 x 2-3/4	149 x 102 x 70	20
37210	5-7/8 x 5-3/8 x 1-1/4	149 x 137 x 32	30
37206	5-7/8 x 5-3/8 x 2-3/4	149 x 137 x 70	15
37203*	5-7/8 x 6-1/4 x 1-1/4	149 x 159 x 32	24
37202*	5-7/8 x 6-1/4 x 1-5/8	149 x 159 x 42	20
37201*	5-7/8 x 6-1/4 x 2-7/8	149 x 159 x 73	12
37200*	5-7/8 x 6-1/4 x 3-5/8	149 x 159 x 92	10
37213	5-7/8 x 8-1/8 x 1	149 x 210 x 25	24
37209	5-7/8 x 8-1/8 x 1-1/4	149 x 210 x 32	20
37205	5-7/8 x 8-1/8 x 2-3/4	149 x 210 x 70	10
37199*	5-7/8 x 12-3/4 x 1-1/4	149 x 324 x 32	12
37198*	5-7/8 x 12-3/4 x 1-5/8	149 x 324 x 42	10
37197*	5-7/8 x 12-3/4 x 2-7/8	149 x 324 x 73	6
37196*	5-7/8 x 12-3/4 x 3-5/8	149 x 324 x 92	5
37212	5-7/8 x 16-5/8 x 1	149 x 422 x 25	12
37208	5-7/8 x 16-5/8 x 1-1/4	149 x 422 x 32	10
37204	5-7/8 x 16-5/8 x 2-3/4	149 x 422 x 70	5
Box Inside Dimensions: 18-5/8" x 15" x 5-7/8" / 473 x 381 x 149 MM			

37516 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37293	6 x 4-3/4 x 1	152 x 121 x 25	40
37289	6 x 4-3/4 x 2-1/4	152 x 121 x 57	20
37285*	6 x 5-3/16 x 1-5/8	152 x 132 x 41	24
37284*	6 x 5-3/16 x 3-5/8	152 x 132 x 92	12
37292	6 x 6-1/2 x 1	152 x 165 x 25	30
37288	6 x 6-1/2 x 2-1/4	152 x 165 x 57	15
37291	6 x 10 x 1	152 x 254 x 25	20
37287	6 x 10 x 2-1/4	152 x 254 x 57	10
37283*	6 x 10-3/4 x 1-5/8	152 x 273 x 41	12
37282*	6 x 10-3/4 x 3-5/8	152 x 273 x 92	6
37290	6 x 20-1/8 x 1	152 x 511 x 25	10
37286	6 x 20-1/8 x 2-1/4	152 x 511 x 57	5
Box Inside Dimensions: 22-7/8" x 12-7/8" x 6" / 581 x 327 x 152 MM			

37500 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37157****	7-1/4 x 2-1/4 x 3/4	184 x 57 x 19	60
37153****	7-1/4 x 2-1/4 x 1-3/4	184 x 57 x 44	30
37156****	7-1/4 x 4-3/4 x 3/4	184 x 121 x 19	30
37152****	7-1/4 x 4-3/4 x 1-3/4	184 x 121 x 44	15
37155****	7-1/4 x 7-1/4 x 3/4	184 x 184 x 19	20
37151****	7-1/4 x 7-1/4 x 1-3/4	184 x 184 x 44	10
37154****	7-1/4 x 14-3/4 x 3/4	184 x 375 x 19	10
37150****	7-1/4 x 14-3/4 x 1-3/4	184 x 375 x 44	5
Box Inside Dimensions: 17" x 9-7/8" x 7-1/4" / 432 x 251 x 184 MM			

37512 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37251	8-3/4 4-5/8 1	222 x 117 x 25	30
37248	8-3/4 4-5/8 2-3/8	222 x 117 x 60	15
37250	8-3/4 7-1/8 1	222 x 181 x 25	20
37247	8-3/4 7-1/8 2-3/8	222 x 181 x 60	10
37249	8-3/4 14-5/8 1	222 x 371 x 25	10
37246	8-3/4 14-5/8 2-3/8	222 x 371 x 60	5
Box Inside Dimensions: 17" x 13" x 8-3/4" / 432 x 327 x 222 MM			

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37517 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37305	8 x 4-3/4 x 1	203 x 121 x 25	40
37301	8 x 4-3/4 x 2-1/4	203 x 121 x 57	20
37297*	8 x 5-3/16 x 1-5/8	203 x 132 x 41	24
37296*	8 x 5-3/16 x 3-5/8	203 x 132 x 92	12
37304	8 x 6-1/2 x 1	203 x 165 x 25	30
37300	8 x 6-1/2 x 2-1/4	203 x 165 x 57	15
37303	8 x 10 x 1	203 x 254 x 25	20
37299	8 x 10 x 2-1/4	203 x 254 x 57	10
37295*	8 x 10-3/4 x 1-5/8	203 x 273 x 41	12
37294*	8 x 10-3/4 x 3-5/8	203 x 273 x 92	6
37302	8 x 20-1/8 x 1	203 x 511 x 25	10
37298	8 x 20-1/8 x 2-1/4	203 x 511 x 57	5

Box Inside Dimensions: 22-7/8" x 12-7/8" x 8" / 581 x 327 x 203 MM

37524 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37344	10 x 4 x 1-1/4	254 x 102 x 32	40
37340	10 x 4 x 2-3/4	254 x 102 x 70	20
37343	10 x 5-3/8 x 1-1/4	254 x 137 x 32	30
37339	10 x 5-3/8 x 2-3/4	254 x 137 x 70	15
37336*	10 x 6-1/4 x 1-1/4	254 x 159 x 32	24
37335*	10 x 6-1/4 x 1-5/8	254 x 159 x 42	20
37334*	10 x 6-1/4 x 2-7/8	254 x 159 x 73	12
37333*	10 x 6-1/4 x 3-5/8	254 x 159 x 92	10
37346	10 x 8-1/8 x 1	254 x 210 x 25	24
37342	10 x 8-1/8 x 1-1/4	254 x 210 x 32	20
37338	10 x 8-1/8 x 2-3/4	254 x 210 x 70	10
37332*	10 x 12-3/4 x 1-1/4	254 x 324 x 32	12
37331*	10 x 12-3/4 x 1-5/8	254 x 324 x 42	10
37330*	10 x 12-3/4 x 2-7/8	254 x 324 x 73	6
37329*	10 x 12-3/4 x 3-5/8	254 x 324 x 92	5
37345	10 x 16-5/8 x 1	254 x 422 x 25	12
37341	10 x 16-5/8 x 1-1/4	254 x 422 x 32	10
37337	10 x 16-5/8 x 2-3/4	254 x 422 x 70	5

Box Inside Dimensions: 18-5/8" x 15" x 10" / 473 x 381 x 254 MM

37525 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37362	12 x 4 x 1-1/4	305 x 102 x 32	40
37358	12 x 4 x 2-3/4	305 x 102 x 70	20
37361	12 x 5-3/8 x 1-1/4	305 x 137 x 32	30
37357	12 x 5-3/8 x 2-3/4	305 x 137 x 70	15
37354*	12 x 6-1/4 x 1-1/4	305 x 159 x 32	24
37353*	12 x 6-1/4 x 1-5/8	305 x 159 x 42	20
37352*	12 x 6-1/4 x 2-7/8	305 x 159 x 73	12
37351*	12 x 6-1/4 x 3-5/8	305 x 159 x 92	10
37364	12 x 8-1/8 x 1	305 x 210 x 25	24
37360	12 x 8-1/8 x 1-1/4	305 x 210 x 32	20
37356	12 x 8-1/8 x 2-3/4	305 x 210 x 70	10
37350*	12 x 12-3/4 x 1-1/4	305 x 324 x 32	12
37349*	12 x 12-3/4 x 1-5/8	305 x 324 x 42	10
37348*	12 x 12-3/4 x 2-7/8	305 x 324 x 73	6
37347*	12 x 12-3/4 x 3-5/8	305 x 324 x 92	5
37363	12 x 16-5/8 x 1	305 x 422 x 25	12
37359	12 x 16-5/8 x 1-1/4	305 x 422 x 32	10
37355	12 x 16-5/8 x 2-3/4	305 x 422 x 70	5

Box Inside Dimensions: 18-5/8" x 15" x 12" / 473 x 381 x 305 MM

37527 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37398	8 x 4 x 1-1/4	203 x 102 x 32	40
37394	8 x 4 x 2-3/4	203 x 102 x 70	20
37397	8 x 5-3/8 x 1-1/4	203 x 137 x 32	30
37393	8 x 5-3/8 x 2-3/4	203 x 137 x 70	15
37390*	8 x 6-1/4 x 1-1/4	203 x 159 x 32	24
37389*	8 x 6-1/4 x 1-5/8	203 x 159 x 42	20
37388*	8 x 6-1/4 x 2-7/8	203 x 159 x 73	12
37387*	8 x 6-1/4 x 3-5/8	203 x 159 x 92	10
37400	8 x 8-1/8 x 1	203 x 210 x 25	24
37396	8 x 8-1/8 x 1-1/4	203 x 210 x 32	20
37392	8 x 8-1/8 x 2-3/4	203 x 210 x 70	10
37386*	8 x 12-3/4 x 1-1/4	203 x 324 x 32	12
37385*	8 x 12-3/4 x 1-5/8	203 x 324 x 42	10
37384*	8 x 12-3/4 x 2-7/8	203 x 324 x 73	6
37383*	8 x 12-3/4 x 3-5/8	203 x 324 x 92	5
37399	8 x 16-5/8 x 1	203 x 422 x 25	12
37395	8 x 16-5/8 x 1-1/4	203 x 422 x 32	10
37391	8 x 16-5/8 x 2-3/4	203 x 422 x 70	5

Box Inside Dimensions: 18-5/8" x 15" x 8" / 473 x 381 x 203 MM

37514 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37269	10 x 4-3/4 x 1	254 x 121 x 25	40
37265	10 x 4-3/4 x 2-1/4	254 x 121 x 57	20
37261*	10 x 5-3/16 x 1-5/8	254 x 132 x 41	24
37260*	10 x 5-3/16 x 3-5/8	254 x 132 x 92	12
37268	10 x 6-1/2 x 1	254 x 165 x 25	30
37264	10 x 6-1/2 x 2-1/4	254 x 165 x 57	15
37267	10 x 10 x 1	254 x 254 x 25	20
37263	10 x 10 x 2-1/4	254 x 254 x 57	10
37259*	10 x 10-3/4 x 1-5/8	254 x 273 x 41	12
37258*	10 x 10-3/4 x 3-5/8	254 x 273 x 92	6
37266	10 x 20-1/8 x 1	254 x 511 x 25	10
37262	10 x 20-1/8 x 2-1/4	254 x 511 x 57	5

Box Inside Dimensions: 22-7/8" x 12-7/8" x 10" / 581 x 327 x 254 MM

37504 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37191	12-5/8 x 4-3/4 x 1	321 x 121 x 25	40
37187	12-5/8 x 4-3/4 x 2-1/4	321 x 121 x 57	20
37183*	12-5/8 x 5-3/16 x 1-5/8	321 x 132 x 41	24
37182*	12-5/8 x 5-3/16 x 3-5/8	321 x 132 x 92	12
37190	12-5/8 x 6-1/2 x 1	321 x 165 x 25	30
37186	12-5/8 x 6-1/2 x 2-1/4	321 x 165 x 57	15
37189	12-5/8 x 10 x 1	321 x 254 x 25	20
37185	12-5/8 x 10 x 2-1/4	321 x 254 x 57	10
37180*	12-5/8 x 10-3/4 x 1-5/8	321 x 273 x 41	12
37181*	12-5/8 x 10-3/4 x 3-5/8	321 x 273 x 92	6
37188	12-5/8 x 20-1/8 x 1	321 x 511 x 25	10
37184	12-5/8 x 20-1/8 x 2-1/4	321 x 511 x 57	5

Box Inside Dimensions: 22-7/8" x 12-7/8" x 12-5/8" / 581 x 327 x 321 MM

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37526 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37380	14 x 4 x 1-1/4	356 x 102 x 32	40
37376	14 x 4 x 2-3/4	356 x 102 x 70	20
37379	14 x 5-3/8 x 1-1/4	356 x 137 x 32	30
37375	14 x 5-3/8 x 2-3/4	356 x 137 x 70	15
37372*	14 x 6-1/4 x 1-1/4	356 x 159 x 32	24
37371*	14 x 6-1/4 x 1-5/8	356 x 159 x 42	20
37370*	14 x 6-1/4 x 2-7/8	356 x 159 x 73	12
37369*	14 x 6-1/4 x 3-5/8	356 x 159 x 92	10
37382	14 x 8-1/8 x 1	356 x 210 x 25	24
37378	14 x 8-1/8 x 1-1/4	356 x 210 x 32	20
37374	14 x 8-1/8 x 2-3/4	356 x 210 x 70	10
37368*	14 x 12-3/4 x 1-1/4	356 x 324 x 32	12
37367*	14 x 12-3/4 x 1-5/8	356 x 324 x 42	10
37366*	14 x 12-3/4 x 2-7/8	356 x 324 x 73	6
37365*	14 x 12-3/4 x 3-5/8	356 x 324 x 92	5
37381	14 x 16-5/8 x 1	356 x 422 x 25	12
37377	14 x 16-5/8 x 1-1/4	356 x 422 x 32	10
37373	14 x 16-5/8 x 2-3/4	356 x 422 x 70	5
Box Inside Dimensions: 18-5/8" x 15" x 14" / 473 x 381 x 356 MM			

37515 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37281	15-1/4 x 4-3/4 x 1	387 x 121 x 25	40
37277	15-1/4 x 4-3/4 x 2-1/4	387 x 121 x 57	20
37273*	15-1/4 x 5-3/16 x 1-5/8	387 x 132 x 41	24
37272*	15-1/4 x 5-3/16 x 3-5/8	387 x 132 x 92	12
37280	15-1/4 x 6-1/2 x 1	387 x 165 x 25	30
37276	15-1/4 x 6-1/2 x 2-1/4	387 x 165 x 57	15
37279	15-1/4 x 10 x 1	387 x 254 x 25	20
37275	15-1/4 x 10 x 2-1/4	387 x 254 x 57	10
37271*	15-1/4 x 10-3/4 x 1-5/8	387 x 273 x 41	12
37270*	15-1/4 x 10-3/4 x 3-5/8	387 x 273 x 92	6
37278	15-1/4 x 20-1/8 x 1	387 x 511 x 25	10
37274	15-1/4 x 20-1/8 x 2-1/4	387 x 511 x 57	5
Box Inside Dimensions: 22-7/8" x 12-7/8" x 15-1/4" / 581 x 327 x 387 MM			

37505 Series	Cell Size - L x W x D		# of Cell per Box
	(Inches)	(MM)	
37192	18-3/4 x 16-1/4 x 2-1/4	476 x 413 x 57	5
Box Inside Dimensions: 18-3/8" x 12-3/8" x 18-3/4" / 467 x 309 x 476 MM			

* ESD Handles included
** ESD Handles not available
*** Wire Frame not available
Foam Pad available for all In-plant Handlers