

Section 12

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Somfy Motor Specification And Effective Lifting Capacities

Simu DC Motor Specification And Effective Lifting Capacities													
Motor Type	Nominal Torque (in-lb.)	Speed (rpm)	Electrical Rating (DC Motors)		Limit Switch Capacity	Weight* (lb.)	Motor Diameter (inches)	Effective Lifting Capacities For Various Axle Sizes With Safety Margin					
			Ampere	Watt				Octagonal 40 mm			Octagonal 60 mm		
								30%	40%	50%	30%	40%	50%
510R2	88	14	0.7 A	80 W	46	3.80	1.85	45	39	32	41	35	29
515A2	132	20	1.1 A	130 W	46	4.30	1.85	68	58	49	62	53	44
520R2	176	14	1.1 A	130 W	46	4.30	1.85	91	77	65	82	70	59
525A2	220	20	1.6 A	180 W	46	4.74	1.85	114	97	81	103	88	73
530R2	264	14	1.5 A	170 W	46	4.74	1.85	136	117	97	123	106	88
535A2	308	20	2.1 A	250 W	46	5.62	1.85	159	136	114	144	123	103
540R2	352	14	1.8 A	210 W	46	5.62	1.85	182	156	130	164	141	117
550R2	440	14	2.1 A	250 W	46	5.62	1.85	227	195	162	205	176	147
660R2	530	14	2.5 A	285 W	35	8.90	2.36				247	212	177
680R2	700	14	3.4 A	390 W	35	9.50	2.36				327	280	233
6100R2	880	14	3.8 A	430 W	35	10.30	2.36				411	352	293
525A2 RTS	220	20	1.6 A	180 W	250	4.73	1.85	114	97	81	103	88	73
530R2 RTS	264	14	1.5 A	170 W	250	4.73	1.85	136	117	97	123	106	88
535A2 RTS	308	20	2.1 A	240 W	250	6.10	1.85	159	136	114	144	123	103
540R2 RTS	352	14	1.8 A	210 W	250	5.61	1.85	182	156	130	164	141	117
550R2 RTS	440	14	2.1 A	240 W	250	5.61	1.85	227	195	162	205	176	147
660R2 RTS	530	14	2.5 A	285 W	250	8.9	2.36				247	212	177
680R2 RTS	700	14	3.4 A	390 W	250	9.5	2.36				327	280	233
6100R2 RTS	880	14	3.8 A	430 W	250	10.3	2.36				411	352	293
525A2 CMO	220	20	1.6 A	180 W	34	7.14	1.85	114	97	81	103	88	73
530R2 CMO	264	14	1.5 A	170 W	34	7.14	1.85	136	117	97	123	106	88
535A2 CMO	308	20	2.1 A	250 W	34	7.69	1.85	159	136	114	144	123	103
540R2 CMO	352	14	1.8 A	210 W	34	7.69	1.85	182	156	130	164	141	117
550R2 CMO	440	14	2.1 A	250 W	34	7.69	1.85	227	195	162	205	176	147
660R2 CMO	530	14	2.5 A	285 W	34	11.4	2.36				247	212	177
680R2 CMO	700	14	3.4 A	390 W	34	12	2.36				327	280	233
6100R2 CMO	880	14	3.8 A	430 W	34	13.3	2.36				411	352	293
525A2 RTS CMO	220	20	1.6 A	180 W	34	7.6	1.85	114	97	81	103	88	73
530R2 RTS CMO	264	14	1.5 A	170 W	34	7.12	1.85	136	117	97	123	106	88
535A2 RTS CMO	308	20	2.1 A	250 W	34	8.06	1.85	159	136	114	144	123	103
540R2 RTS CMO	352	14	1.8 A	210 W	34	7.72	1.85	182	156	130	164	141	117
550R2 RTS CMO	440	14	2.1 A	250 W	34	7.79	1.85	227	195	162	205	176	147

Rollac recommends the use of the following margins of safety in the lifting capacities:

- 1.) For awnings use: 30%
- 2.) For rolling shutters use: 40%
- 3.) Any shutter over nine (9) feet in height add a 10% safety margin for every three (3) feet of height added
- 4.) For use of one motor for multiple curtains add an additional 15% safety margin for each additional curtain.
- 5.) Add an additional 15% to the effective load for shutters using end retention.

Please call your Rollac representative for details on how to determine the right motor for your application.

* Weights for motors are approximate shipping weights.

Simu Motor Specification And Effective Lifting Capacities

Simu DC Motor Specification And Effective Lifting Capacities													
Motor Type	Nominal Torque (in-lb.)	Speed (rpm)	Electrical Rating (DC Motors)		Limit Switch Capacity	Weight* (lb.)	Motor Diameter (inches)	Effective Lifting Capacities For Various Axle Sizes With Safety Margin					
			Ampere	Watt				Octagonal 40 mm			Octagonal 60 mm		
								30%	40%	50%	30%	40%	50%
510/12	88	12	0.7	80	28	8.00	2	45	38	32	41	35	29
515/18	132	18	1.1	130	28	8.00	2	68	58	48	61	52	44
520/12	176	12	1.1	130	28	8.00	2	90	77	64	82	70	58
525/18	220	18	1.6	180	28	8.00	2	114	97	81	102	87	73
530/12	264	12	1.5	170	28	8.00	2	137	117	98	123	105	88
535/18	308	18	2.1	250	28	8.00	2	159	136	113	143	123	102
540/12	352	12	1.8	210	28	8.00	2	182	155	130	164	140	117
550/12	440	12	2.1	210	28	8.00	2	227	194	162	205	175	146
660/14	530	14	2.5	285	22	12.00	2.5				247	212	176
680/14	704	14	3.4	390	22	12.00	2.5				328	281	234
6100/14	880	14	3.8	430	22	12.00	2.5				410	352	293
505/35 HZ	44	35	1	110	3 min	9.00	2	30	25	21	27	23	19
510/35 HZ	88	35	1.3	150	3 min	9.00	2	49	42	35	45	38	32
515/18 HZ	132	18	1.1	130	3 min	9.00	2	68	58	48	61	52	44
525/18 HZ	220	18	1.6	180	3 min	9.00	2	114	97	81	102	87	73
530/12 HZ	264	12	1.5	170	3 min	9.00	2	137	117	98	123	105	88
550/12 HZ	440	12	2.1	250	3 min	9.00	2	227	194	162	205	175	146
660/14 HZ	530	14	2.5	285	3 min	12.00	2.5				247	212	176
680/14 HZ	704	14	3.4	390	3 min	12.00	2.5				328	281	234
6100/14 HZ	880	14	3.8	430	3min	12.00	2.5				410	352	293
510/12 DMI	88	12	0.7	80	28	9.00	2	45	38	32	41	35	29
515/18 DMI	132	18	1.1	130	28	9.00	2	68	58	48	61	52	44
520/12 DMI	176	12	1.1	130	28	9.00	2	90	77	64	82	70	58
525/18 DMI	220	18	1.6	180	28	9.00	2	114	97	81	102	87	73
530/12 DMI	264	12	1.5	170	28	9.00	2	137	117	98	123	105	88
535/18 DMI	308	18	2.1	250	28	9.00	2	159	136	113	143	123	102
540/12 DMI	352	12	1.8	210	28	9.00	2	182	155	130	164	140	117
550/12 DMI	440	12	2.1	210	28	9.00	2	227	194	162	205	175	146
660/12 DMI	530	14	2.5	285	28	14.00	2.5				247	212	176
680/12 DMI	704	14	3.4	390	28	14.00	2.5				328	281	234
6100/12 DMI	880	14	3.8	430	28	14.00	2.5				410	352	293
515/18 DMI HZ	132	18	1.3	130	28	10.00	2	68	58	48	61	52	44
525/18 DMI HZ	220	18	1.6	180	28	10.00	2	114	97	81	102	87	73
530/12 DMI HZ	264	12	1.5	170	28	10.00	2	137	117	98	123	105	88
535/18 DMI HZ	308	18	2.1	250	28	10.00	2	159	136	113	143	123	102
550/12 DMI HZ	440	12	2.1	250	28	10.00	2	227	194	162	205	175	146
660/14 DMI HZ	530	14	2.5	285	28	15.00	2.5				247	212	176
680/14 DMI HZ	704	14	3.4	390	28	15.00	2.5				328	281	234
6100/14 DMI HZ	880	14	3.8	430	28	15.00	2.5				410	352	293
T8 Motor	1750	10	5.1	600	13	50.00	3.7	Use with 100 mm Axle.					
T8 DMI Motor	1750	10	5.1	600	13	55.00	3.7	Use with 100 mm Axle.					

Motor Specifications

Simu DC Motor Specification And Effective Lifting Capacities													
Motor Type	"Nominal Torque (in-lb.)"	Speed (rpm)	Electrical Rating (DC Motors)		Limit Switch Capacity	Weight* (lb.)	Motor Diameter (inches)	Effective Lifting Capacities For Various Axle Sizes With Safety Margin					
			Ampere	Watt				Octagonal 40 mm			Octagonal 60 mm		
								30%	40%	50%	30%	40%	50%
515/15 - 12V	132	15	12V / 5.1	60	30	8	2				68	58	48
535/7 - 12V	305	6	12V / 4.6	54	30	8	2				159	136	113
515/15 - 24V	132	15	24V / 2.4	60	30	8	2				68	58	48
T3.5 AutoSun 10Nm 12 rpm 12V	88	12	12V / 2.6	32	56	6	1.57	70	60	50			

Somfy Small Motor Specification Chart													
Motor Type	"Nominal Torque (in-lb.)"	Speed (rpm)	Electrical Rating (DC Motors)		Limit Switch Capacity	Weight* (lb.)	Motor Diameter (inches)	Effective Lifting Capacities For Various Axle Sizes With Safety Margin					
			Ampere	Watt				Octagonal 60 mm			Octagonal 70 mm		
								30%	40%	50%	30%	40%	50%
409R2	79	16	1.2 A	135 W	40	2.38	1.5	70	60	50			
412R2	105	8	1.2 A	135 W	40	2.38	1.5	92	79	66			

Rollac Motor Specification Chart													
Motor Type	"Nominal Torque (in-lb.)"	Speed (rpm)	Electrical Rating (DC Motors)		Limit Switch Capacity	Weight* (lb.)	Motor Diameter (inches)	Effective Lifting Capacities For Various Axle Sizes With Safety Margin					
			Ampere	Watt				Octagonal 60 mm			Octagonal 70 mm		
								30%	40%	50%	30%	40%	50%
50 Nm Standard**	440	13	2.2	235	22	5	1.8	227	194	162	205	175	146
100 Nm Standard**	880	11	2.94	340	22	12	2.4				410	352	293
50 Nm Radio Control**	440	13	2.2	235	22	7	1.8	227	194	162	205	175	146
100 Nm Radio Control**	880	11	2.94	340	22	13	2.4				410	352	293
50 Nm Manual Override	440	13	2.2	235	22	7	1.8	227	194	162	205	175	146
100 Nm Manual Override	880	11	2.94	340	22	14	2.4				410	352	293
50 Nm Radio Control Manual Override	440	13	2.2	235	22	9	1.8	227	194	162	205	175	146
100 Nm Radio Control Manual Override	880	11	2.94	340	22	15	2.4				410	352	293

Rollac recommends the use of the following margins of safety in the lifting capacities:

- 1.) For awnings use: 30%
- 2.) For rolling shutters use: 40%
- 3.) Any shutter over nine (9) feet in height add a 10% safety margin for every three (3) feet of height added
- 4.) For use of one motor for multiple curtains add an additional 15% safety margin for each additional curtain.
- 5.) Add an additional 15% to the effective load for shutters using end retention.

Please call your Rollac representative for details on how to determine the right motor for your application.

* Weights for Motors are approximate shipping weights.

** Limited Availability

Maximum Rail Heights

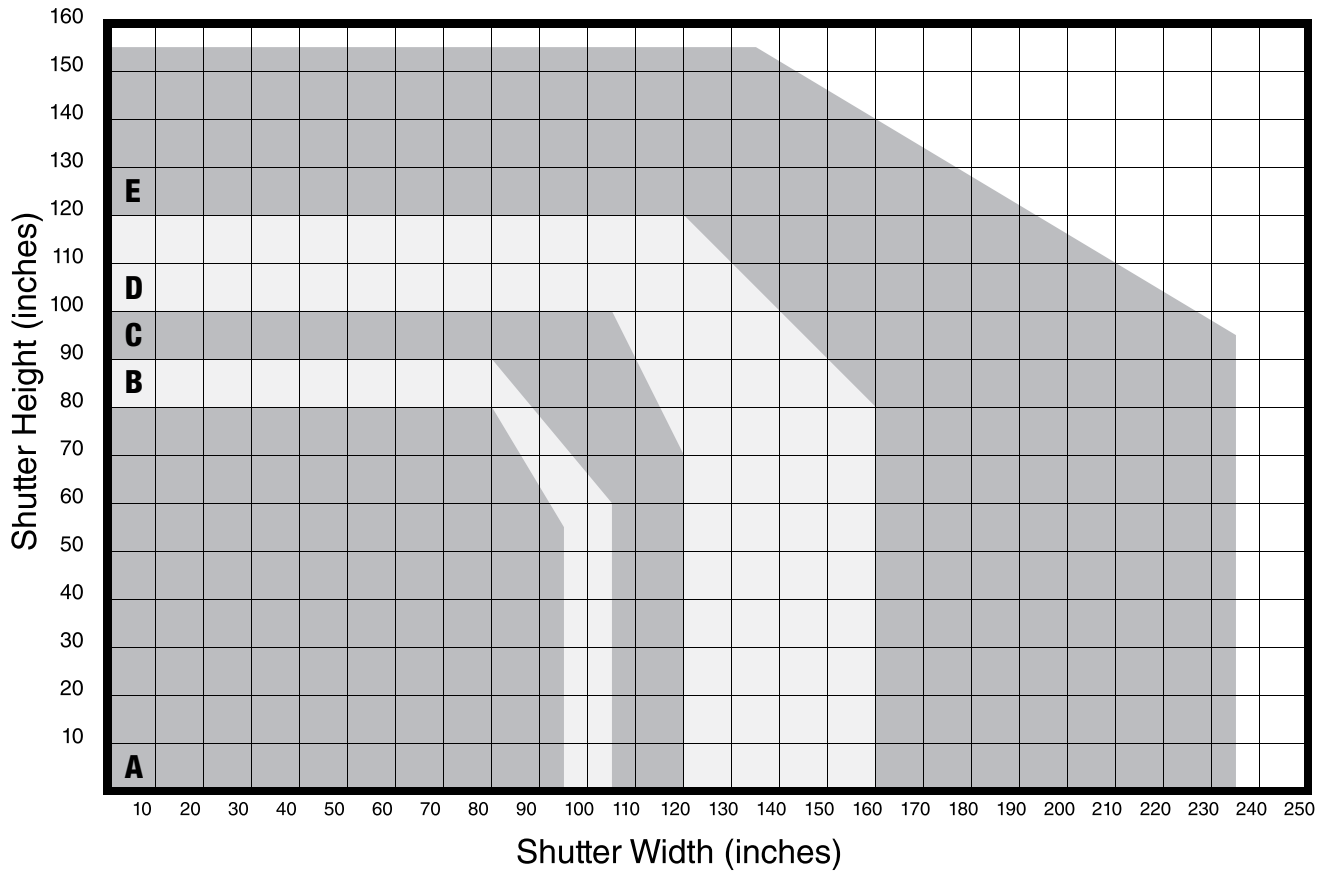
Slat	Tube	Box Cover - Housing Size											Rail	Profile Characteristics											
		4"	5"	5.5"	6"	6.5"	7"	8"	9"	10"	12"	14"		Rail Types	Profile Heights	Profile Width	Profile Weight lbs/sqft	Wall Gauge							
Slat Type	Oct. Tube	100 mm	125 mm	137 mm	150 mm	165 mm	180 mm	205 mm	230 mm	250 mm	300 mm	350 mm	Maximum Rail Height												
PVC Slats																									
GULF Mini	40mm	11"	24"	34"	43"	55"	75"	101"	128"	170"	230"	Mini "A" and "U"	40mm	8mm	0.688	0.80mm									
	60mm	7"	19"	28"	40"	51"	67"	98"	122"	165"	223"		1.57"	0.31"	0.031"										
	70mm												66"	88"	122"	150"	220"								
Z-55 Maxi	60mm												31"	50"	70"	88"	135"	Mini "A"	55mm	14mm	0.944 ⁵⁾	1.0mm			
	70mm												20"	31"	50"	70"	94"	128"	and "U"	2.16"	0.53"	1.978 ^{6,4)}	0.040"		
Aluminum Foam Filled Slats																									
CD90 Mini	40mm	18"	39"	51"	66"	83"	99"	136"	175"	221"	328"	Mini "A" and "U"	33mm	7mm	0.665	0.36mm									
	60mm	9"	31"	42"	61"	74"	97"	136"	175"	214"	313"		1.30"	0.28"	0.014"										
	70mm												92"	128"	169"	213"	308"								
A150 Mini	40mm	7"	24"	30"	48"	58"	67"	103"	128"	173"	228"	Mini "A" and "U"	40mm	9mm	0.9 ⁷⁾	0.43mm									
	60mm	6"	18"	28"	40"	55"	64"	96"	120"	169"	241"		1.57"	0.35"	1.12 ⁸⁾	0.017"									
	70mm												64"	96"	117"	169"	241"								
ROLLAC E150	40mm												48"	58"	67"	103"	128"	173"	Mini	40mm	9mm	0.8	0.3mm		
	60mm												40"	55"	64"	96"	120"	169"		1.57"	0.35"	0.012"			
	70mm												64"	96"	117"	169"	241"								
A200 Maxi	60mm	10"	18"	20"	32"	38"	59"	73"	100"	153"	Mini "A" and "U"	55mm	14mm	1.045 ⁷⁾	0.49mm										
	70mm												40"	55"	75"	100"	153"	2.17"	0.55"	1.556 ⁸⁾	0.020"				
Apex A55 End Retention	60mm												22"	30"	42"	63"	84"	111"	152"	226"	Maxi End Retention	55mm	13.5mm	1.8	1.19mm
	70mm												42"	59"	80"	100"	152"	226"	2.17"	0.53"		.047"			
	100mm												69"	87"	137"	204"									
Apex A55 Non Retained	60mm	10"	18"	20"	32"	38"	59"	73"	100"	153"	Maxi	55mm	13.5mm	1.8	1.19mm										
	70mm												40"	55"	75"	100"	153"	2.17"	0.53"	.047"					
A240 ²⁾ Maxi	60mm												30"	40"	50"	66"	91"	114"	172"	Mini "A"	60mm	14mm	0.8	0.36mm	
	70mm												30"	40"	50"	66"	91"	114"	172"	and "U"	2.36"	0.55"	1	0.014"	
R077 ²⁾ Maxi	70mm												68"	116"	D200	77mm	19mm	1.173	0.60mm						
																D203	3.03"	0.75"	1.173	0.024"					
Aluminum Foam Filled Slats																									
RLL3 Mini	40mm	9"	21"	24"	36"	43"	53"	71"	108"	133"	201"	Mini "A" and "U"	39mm	9.5mm	2.088	1.40mm									
	60mm	6"	18"	22"	29"	43"	60"	79"	101"	149"	201"		1.77"	0.34"	0.055"										
	70mm												48"	82"	105"	130"	185"								
RLL55X End Retention	60mm												42"	63"	84"	111"	152"	226"	Maxi End Retention	55mm	13.5mm	2.088	1.19mm		
	70mm												42"	59"	80"	100"	152"	226"		2.17"	0.53"	.047"			
	100mm												69"	87"	137"	204"									
RLL55X Non Retained	60mm	10"	18"	20"	32"	38"	59"	73"	100"	153"	Maxi	55mm	13.5mm	1.8	1.19mm										
	70mm												40"	55"	75"	100"	153"	2.17"	0.53"	.047"					
RLL4 Maxi	60mm												6"	17"	19"	32"	49"	69"	91"	124"	Mini "A"	58.5mm	14mm	2.139	1.53mm
	70mm												34"	54"	60"	80"	126"	and "U"	2.30"	0.55"	0.060"				
R080 ⁹⁾ Maxi	70mm												45"	74"	D200	100mm	25mm	1.98	1.20mm						
	130mm												45"	74"		D203	3.94"	0.98"	0.047"						
RLL59 Single Wall	60mm												48"	76"	113"	160"	216"	Maxi Non End Retention	59mm	13.5mm	1.8	1.19mm			
	70mm												102"	129"	189"	2.39"	0.53"		.047"						
	70mm/Ring																								
Lexan Slat with Connector																									
Lexan ¹⁾ 10)	60mm												35"	52"	65"	90"	135"	166"	252"	Mini "A"	70mm	13.5mm	1.09	2.46mm	
																					2.75"	0.53"	0.097"		

- 1) Limited Availability
- 2) Recommended with 80 mm adapter rings #4560 or #4565
- 3) Approximate rail heights, box size may vary with width of shutter due to axle deflection
- 4) Also available in light-weight 1.556 lb/sqft.
- 5) Slats only
- 6) Slats with Rebar
- 7) Slats with regular foam
- 8) Slats with hard foam
- 9) 70mm / 1.5mm axle with 130mm adapter rings #4570
- 10) With "spider" slat hanger #1354

Recoil Box, Gear, and Counter Balance Spring Specifications

Stock Number	Description	Lifting Capacities for Various Axle Sizes with Safety Margins /lb.			Normal Torque (in.-lb.)
		Octagonal 40 mm	Octagonal 60 mm	Octagonal 70 mm	
Recoil Box Specifications					
7415-RBOX-06-PL	Mini recoil box, swivel type, white	25	20		
7416-RBOX-22-PL	Mini recoil box, swivel type, brown	25	20		
Strap-Crank Specifications					
7520-RBOX-06-PL*	Mini tape crank box, 1:3 reduction, white with #7530 crank-handle (130mm, rigid handle)	64	52		
7520-RBOX-06-PL*	Mini tape crank box, 1:3 reduction, white with #7534 crank-handle (140mm, spring loaded handle)	69	55		
7520-RBOX-06-PL*	Mini tape crank box, 1:3 reduction, white with #7531 crank-handle (170mm, rigid handle)	77	62		
7520-RBOX-06-PL*	Mini tape crank box, 1:3 reduction, white with #7535/#7536 crank-handle (180mm, spring loaded handle)	81	65		
*This item is also available in brown (stock no. 7522-RBOX-22-PL)					
Gear Specifications					
6010-GEAR-00-ST	S-gear with a 1:13 ratio and eye for crank handle		109	100	238
6011-GEAR-00-PL	1:5 ACE Gear (Plastic) f/8mm Square Universal Shaft w/Hole f/15mm Octagonal Sleeve Connector		35		70
6011-GEAR-00-ST	1:5 ACE Gear (ZAMAC) f/8mm Square Universal Shaft w/Hole f/15mm Octagonal Sleeve Connector		35		70
6012-GEAR-00-PL	1:8 ACE Gear (Plastic) f/8mm Square Universal Shaft w/Hole f/15mm Octagonal Sleeve Connector		49		105
6012-GEAR-00-ST	1:8 ACE Gear (ZAMAC) f/8mm Square Universal Shaft w/Hole f/15mm Octagonal Sleeve Connector		49		105
6016-GEAR-00-PL	1:8 ZAMAC Gear f/7mm Hexagonal Universal Shaft w/Hole f/15mm Octagonal Sleeve Connector		49		105
6018-GEAR-00-ZA	1:11 ZAMAC Gear f/8mm Square Universal Shaft w/Hole f/19mm Octagonal Sleeve Connector		71	60	158
6019-GEAR-00-ZA	1:11 ZAMAC Gear f/7mm Hexagonal Universal Shaft w/Hole f/19mm Octagonal Sleeve Connector		71	60	158
6020-GEAR-00-PL	1:11 Plastic Gear f/7mm Hexagonal Universal Shaft w/Hole f/19mm Octagonal Sleeve Connector		71	60	158
6021-GEAR-00-ZA	1:11 Crownsteel ZAMAC Gear f/8mm Square Universal Shaft w/Hole f/19mm Octagonal Sleeve Connector		71	60	158
6022-GEAR-00-ST	1:11 Plastic Gear f/Crownsteel 8mm Square Universal Shaft w/Hole f/19mm Octagonal Sleeve Connector		71	60	158
Gear Specifications					
9655-ACCE-14-ST	78mm Awn.Tube 28kg/L=1600mm GA=4.0mm	use for 78 mm round tube			
9615-ACCE-14-ST	Assist Spring for 60mm (20kg/L-740mm a-4.4mm) with 1:11 Gear up to 100 lbs curtain weight recommended.		44		
9625-ACCE-14-ST	Assist Spring for 70mm Octagonal Tube 30kg/L-980mm GA=5.0mm with 1:11 Gear up to 110 lbs curtain weight recommended.			66	
Counter Balance Specifications* (weights are estimated weights. Please consider safety margins for weight and turns!)					
9610-ACCE-14-ST	40mm Oct. Tube 24kg/L= 830mm GA=3.0mm	52			18
9616-ACCE-14-ST	60mm Oct Tube 15KG/L= 650mm GA=3.5mm		33		10
9622-ACCE-14-ST	60mm Oct Tube 24Kg, L=860, GA=4.0mm Coils=160		52		12
9619-ACCE-14-ST	60mm Oct Tube 34Kg/L= 940mm GA=4.5mm		74		12
9618-ACCE-14-ST	70mm Oct Tube 32kg/L= 940mm GA= 4.5mm			70	13
9624-ACCE-14-ST	70mm Oct Tube 45Kg L=1130 GA=5.0mm Coils=180			99	12
9623-ACCE-14-ST	70mm Oct Tube 56Kg L=940 GA=5.0mm Coils=140			123	13
9621-ACCE-14-ST	70mm Oct Tube 75Kg/L= 1270 GA= 5.5mm			165	13
9626-ACCE-14-ST	70mm Oct Tube 100KG L=1030 GA=6.0mm Coils=133			220	10

Tube Size Chart



A

4000-TUBE-00-ST
4003-TUBE-00-ST
4004-TUBE-00-ST

B

4010-TUBE-00-ST

C

4014-TUBE-00-ST
4020-TUBE-00-AL
4025-TUBE-00-AL

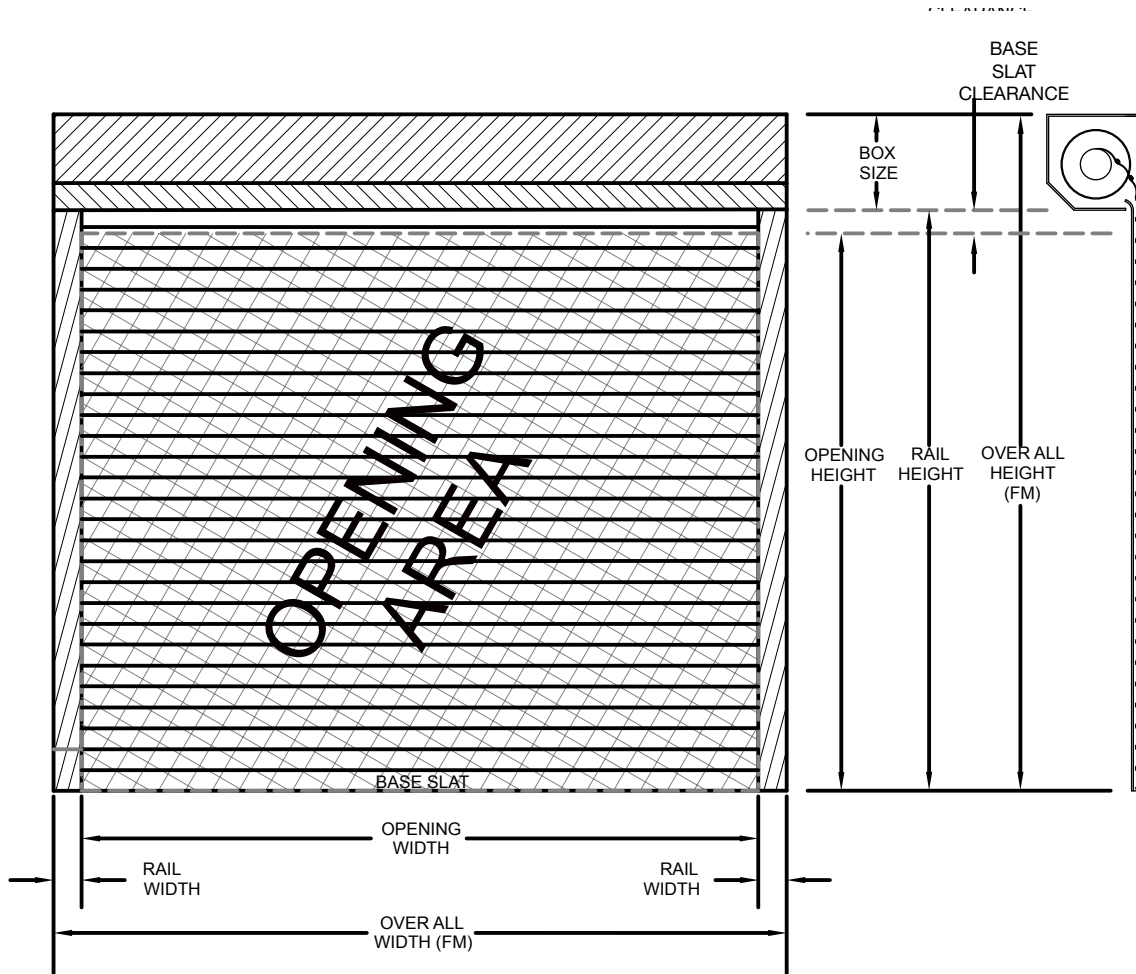
D

4000-TUBE-00-ST
4003-TUBE-00-ST
4004-TUBE-00-ST

E

4048-TUBE-00-ST

Rolling Shutter Measurement Terms



Housing Size:

The dimension of the housing in which the curtain rolls into.

Rail Height:

Height of the guide rail.

Rail Height and Housing Size

Rail Height and Housing size are two dependant measurements. The taller the rail, the larger the housing size. For detailed information on rail height and housing size refer to sheet 12.4 or Rollac Shutter Spec Sheets available at www.rollac.com

Opening height

The actual dimension of unobstructed view or the dimension through which an object can clear.

Base Slat Clearance

The base slat is a special bottom profile of the curtain and remains in the guide rails when the shutter is retracted. Typically, the remaining height of the base slat in the guide rails measures 2 – 3 inches.

Opening Height and Rail Height

Typically the opening height can be determined by the rail height and vice versa. Add the base slat clearance to the opening height to get the rail height. Alternatively, deduct the base slat clearance from the rail height to get the opening height.

Opening Width

The opening width determines the width of the opening of the shutter.

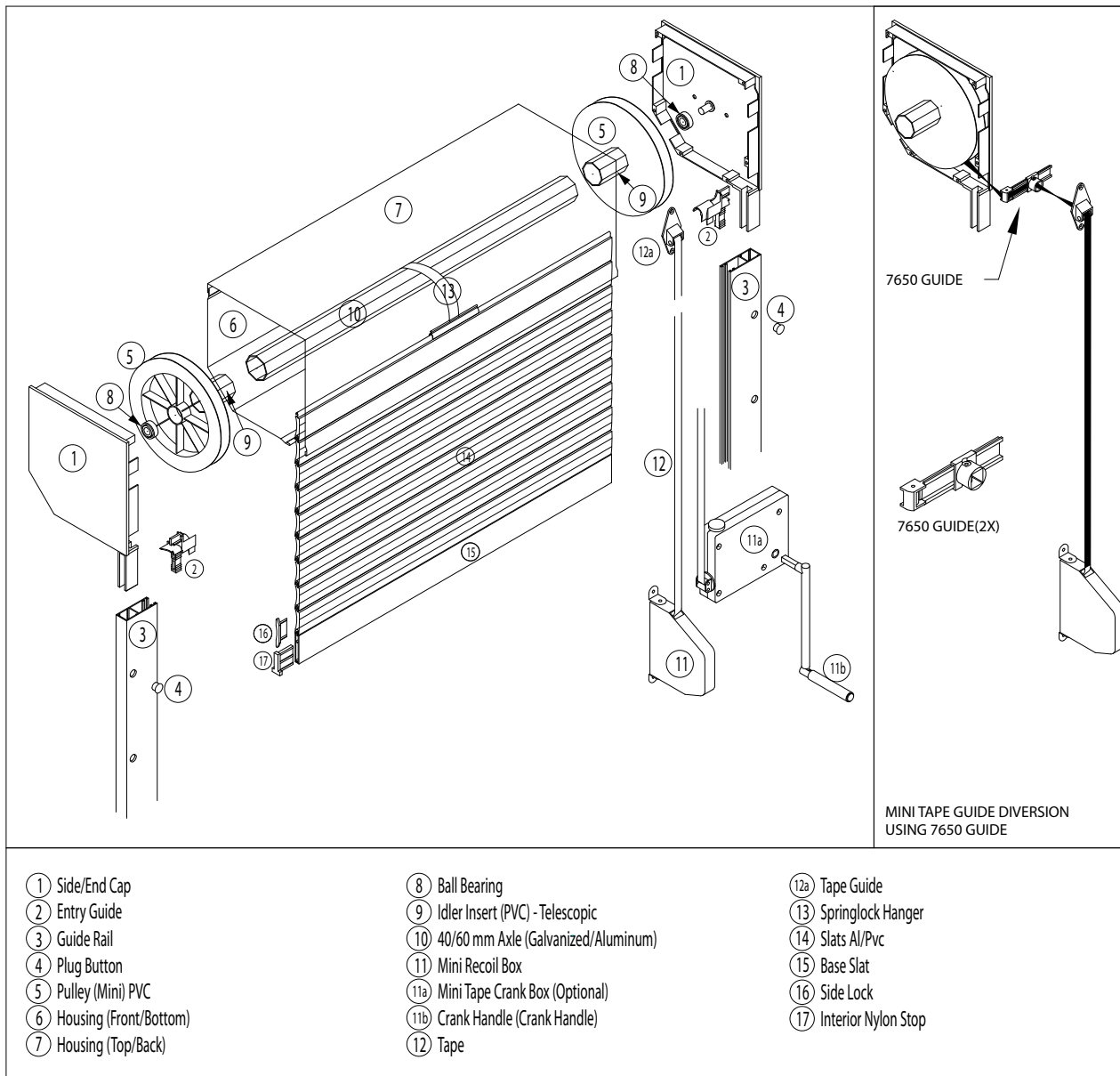
Rails

Size of the guide rails on each side. The dimensions for the guide rails depends on the rolling shutter profile.

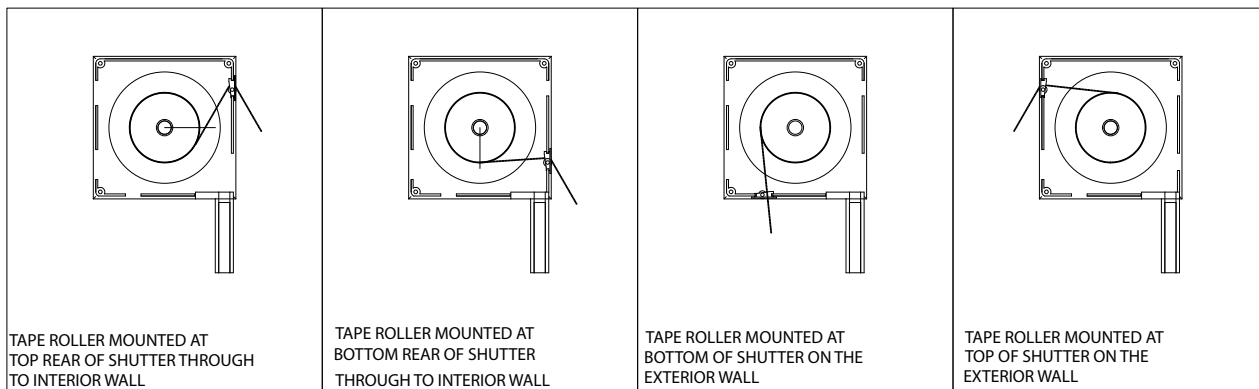
Total Width

The total width of the shutter.

Tape Operated Mini Rolling Shutter

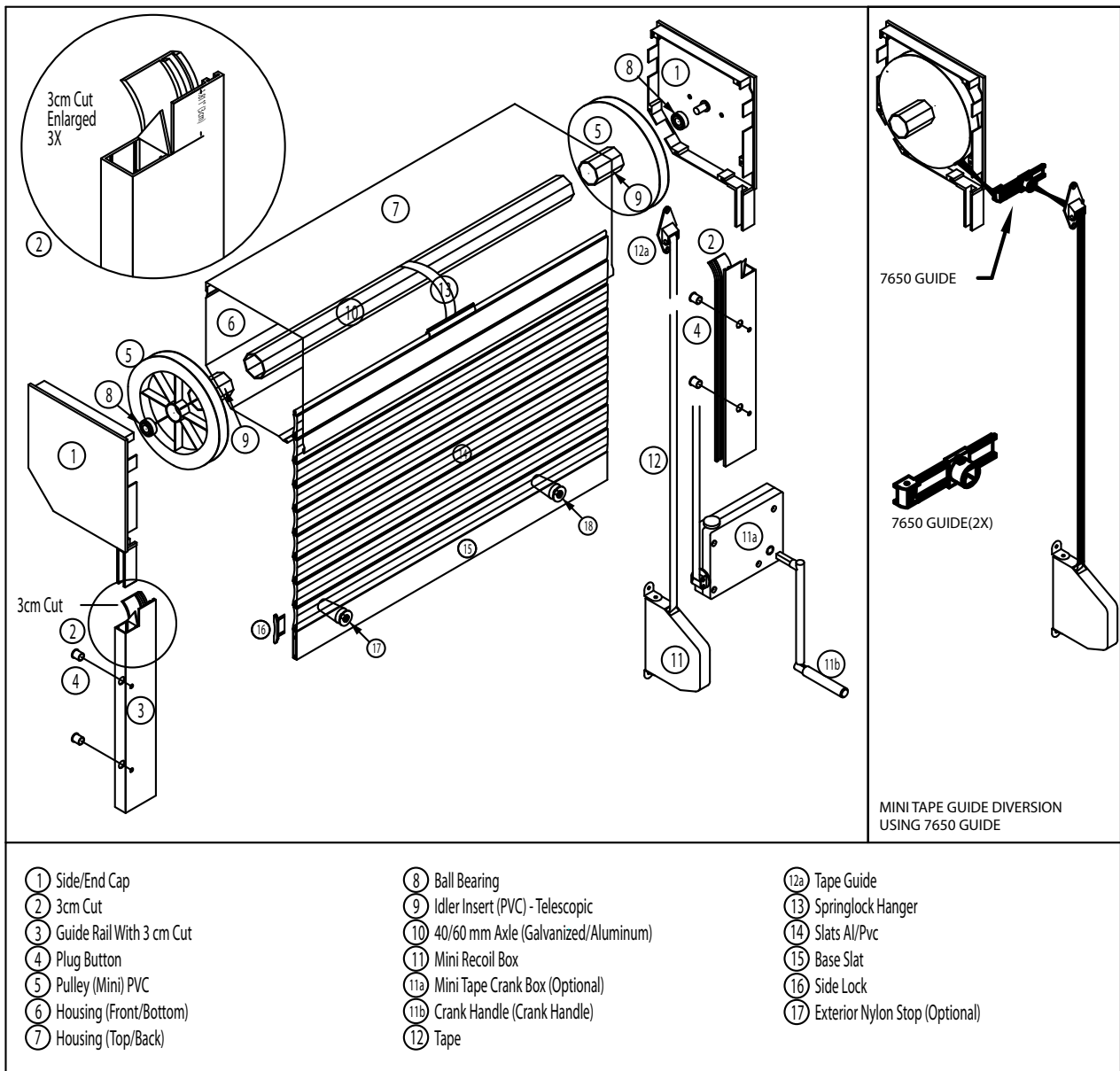


TAPE OPERATED ROLLING SHUTTER TAPE EXIT OPTIONS.

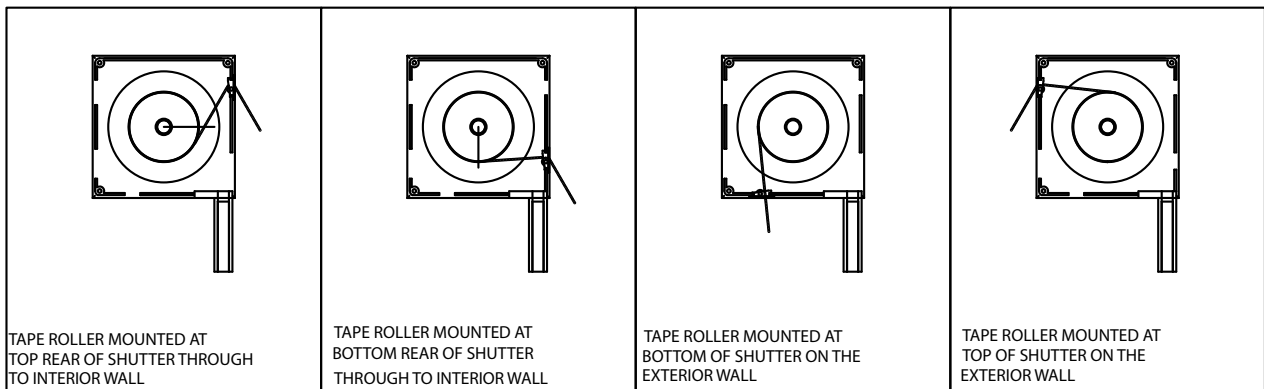


Copyright 2011 by Rollac Rolling Shutter
 Example Drawing- parts will vary with application..
 Call Rollac for details.

Tape Operated Maxi Rolling Shutter

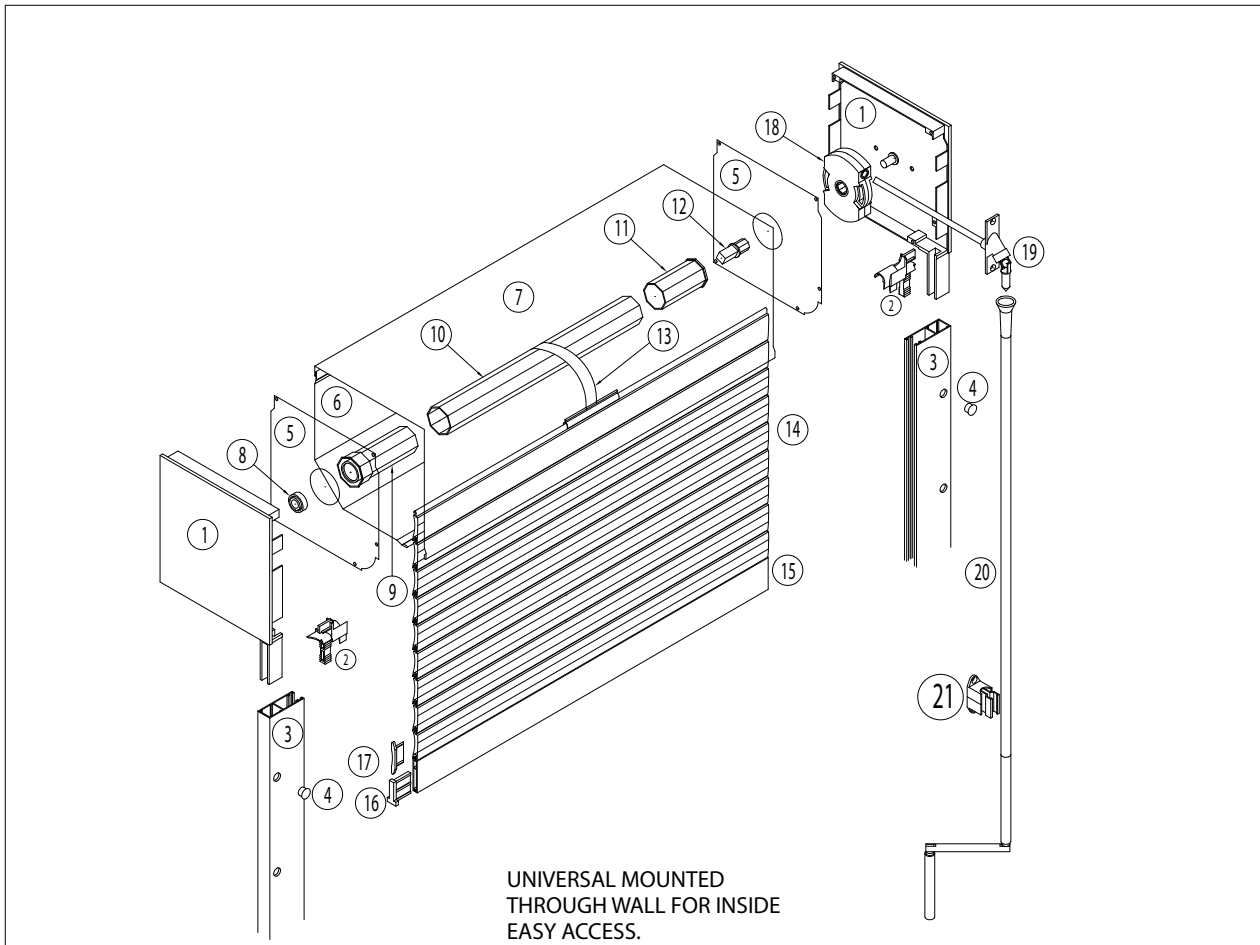


TAPE OPERATED ROLLING SHUTTER TAPE EXIT OPTIONS.



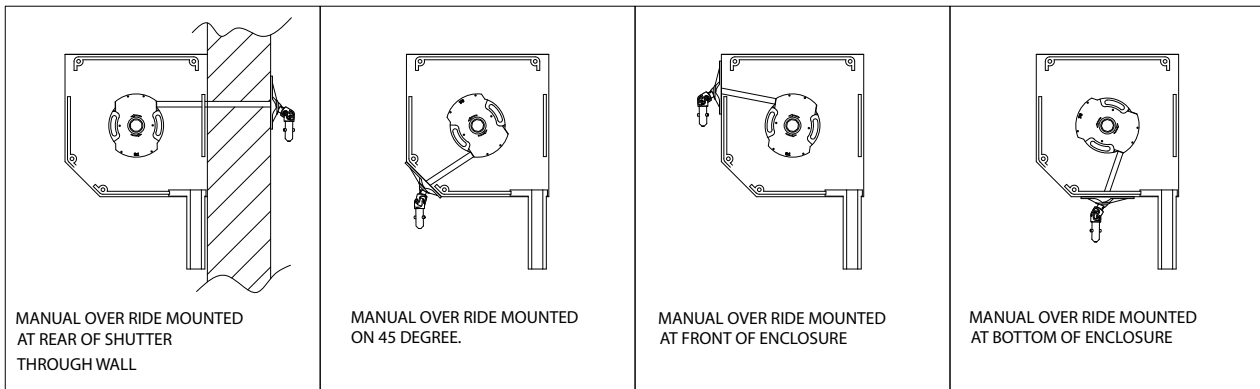
Copyright 2011 by Rollac Rolling Shutter
 Example Drawing- parts will vary with application.

Gear Operated Mini Rolling Shutter



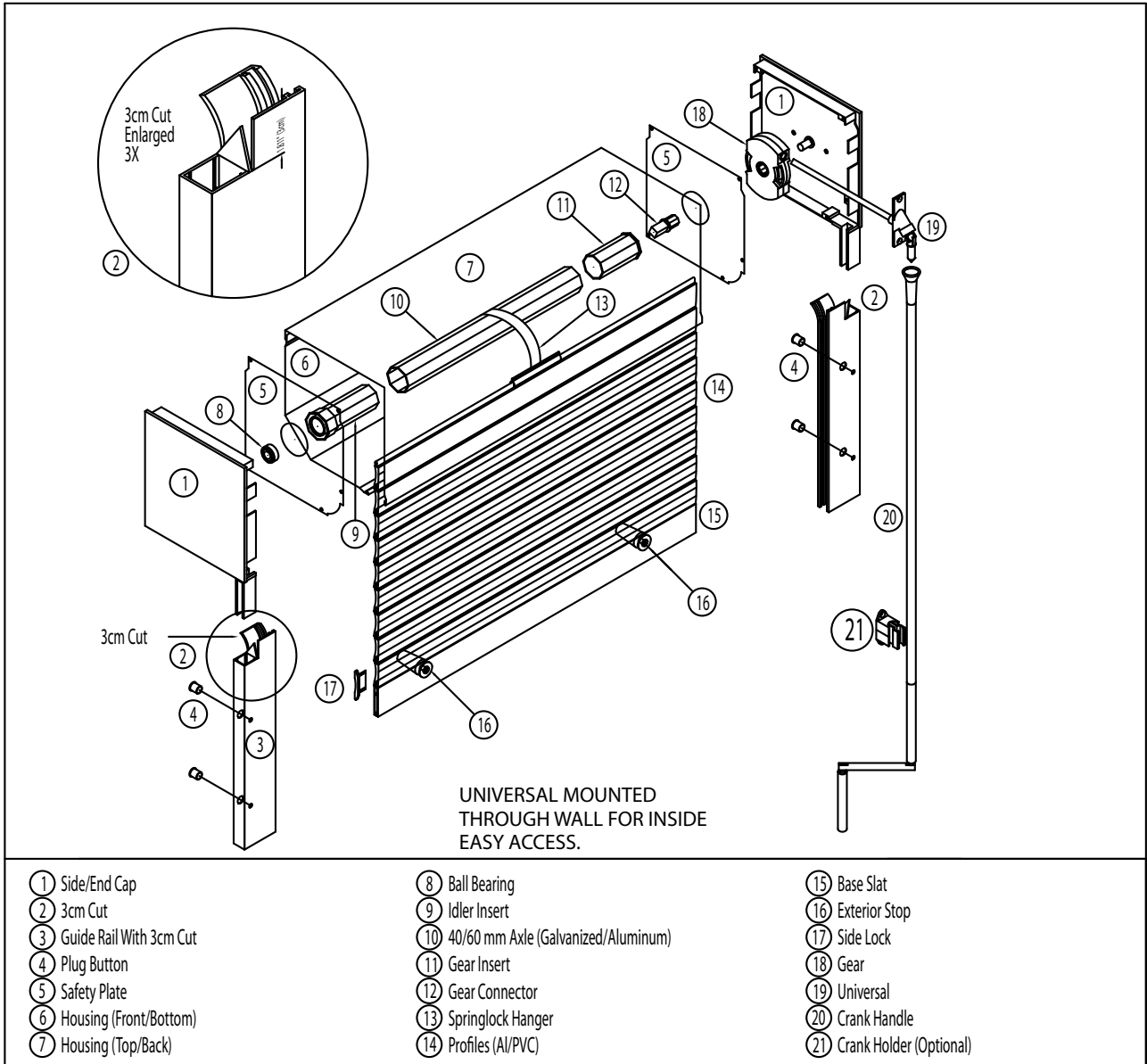
- | | | |
|--------------------------|---------------------------------------|---------------------------|
| ① Side/End Cap | ⑧ Ball Bearing | ⑮ Base Slat |
| ② Entry Guide | ⑨ Idler Insert | ⑯ Interior Stop |
| ③ Guide Rail | ⑩ 40/60 mm Axle (Galvanized/Aluminum) | ⑰ Side Lock |
| ④ Plug Button | ⑪ Gear Insert | ⑱ Universal |
| ⑤ Safety Plate | ⑫ Gear Connector | ⑳ Crank Handle |
| ⑥ Housing (Front/Bottom) | ⑬ Springlock Hanger | ㉑ Crank Holder (Optional) |
| ⑦ Housing (Top/Back) | ⑭ Profiles (Al/PVC) | |

GEAR OPERATED ROLLING SHUTTER UNIVERSAL EXIT OPTIONS.

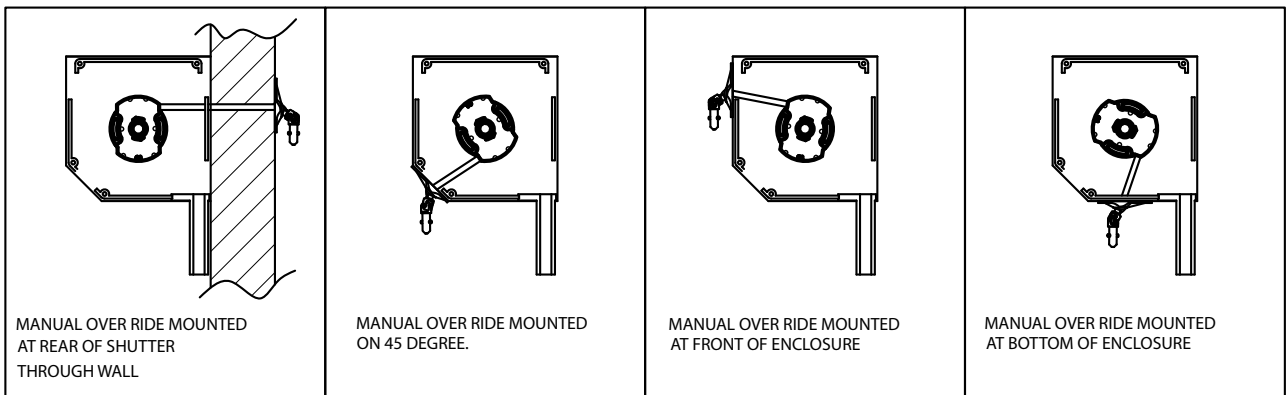


Copyright 2011 by Rollac Rolling Shutter
 Example Drawing- parts will vary with application.
 Call Rollac for details.

Gear Operated Maxi Rolling Shutter

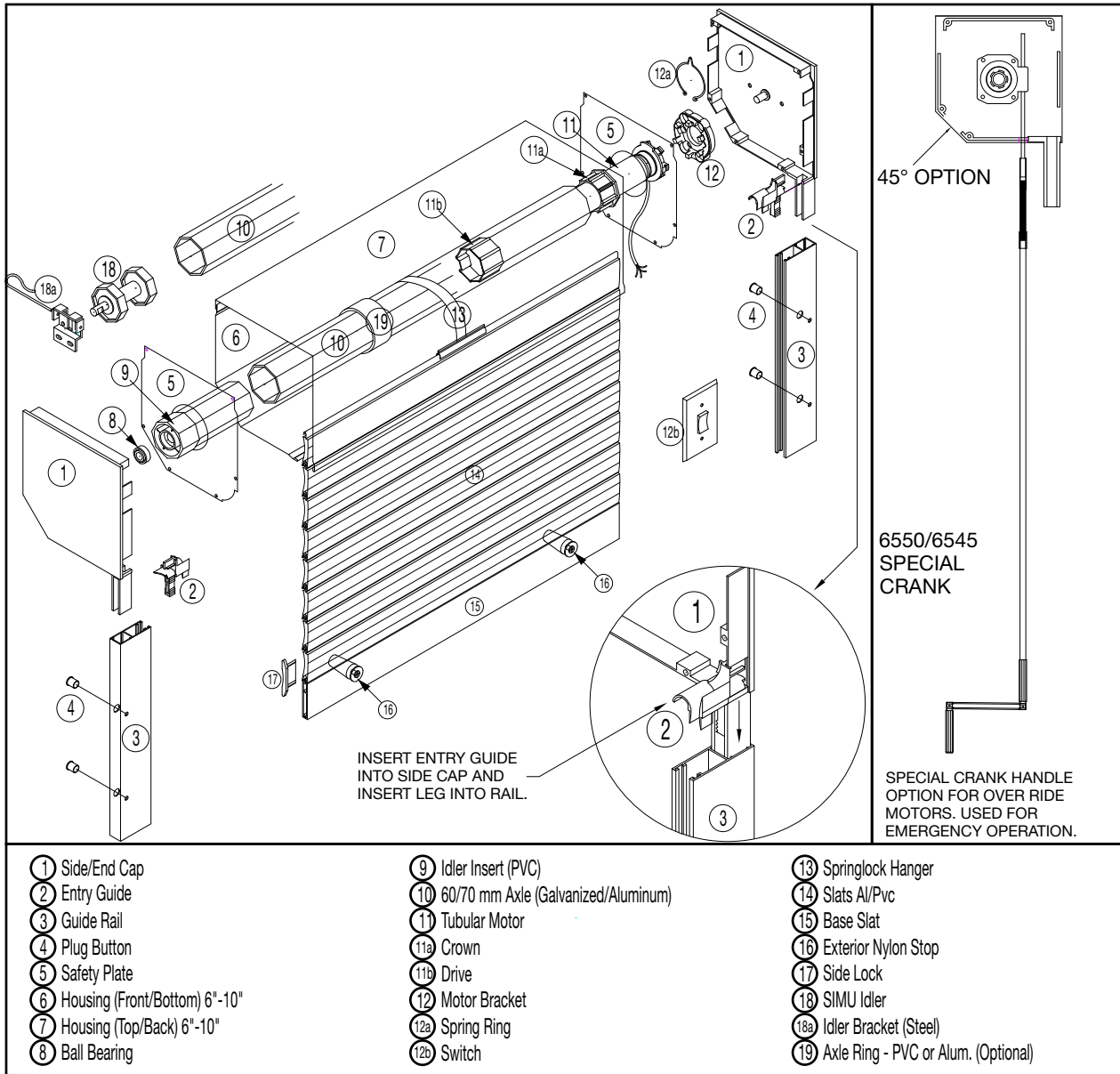


GEAR OPERATED ROLLING SHUTTER UNIVERSAL EXIT OPTIONS

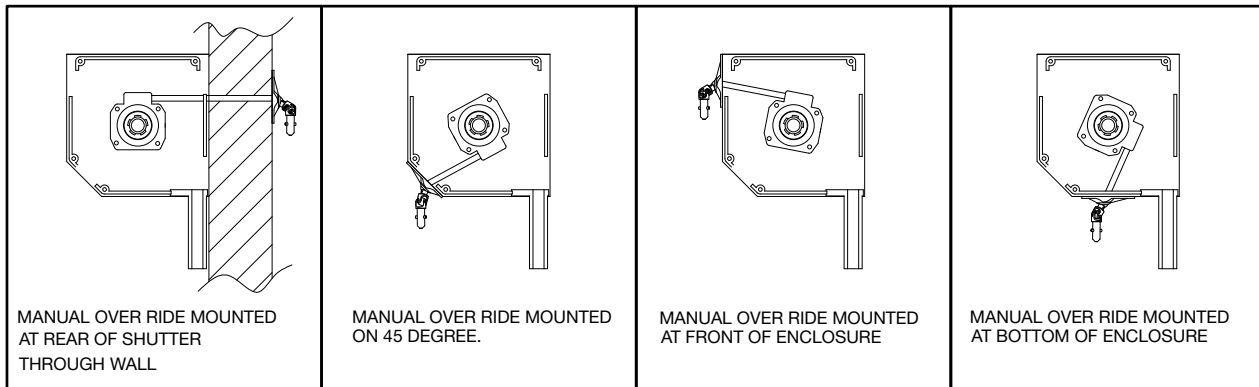


Copyright 2011 by Rollac Rolling Shutter
 Example Drawing- parts will vary with application.
 Call Rollac for details.

Gear Operated Mini Rolling Shutter

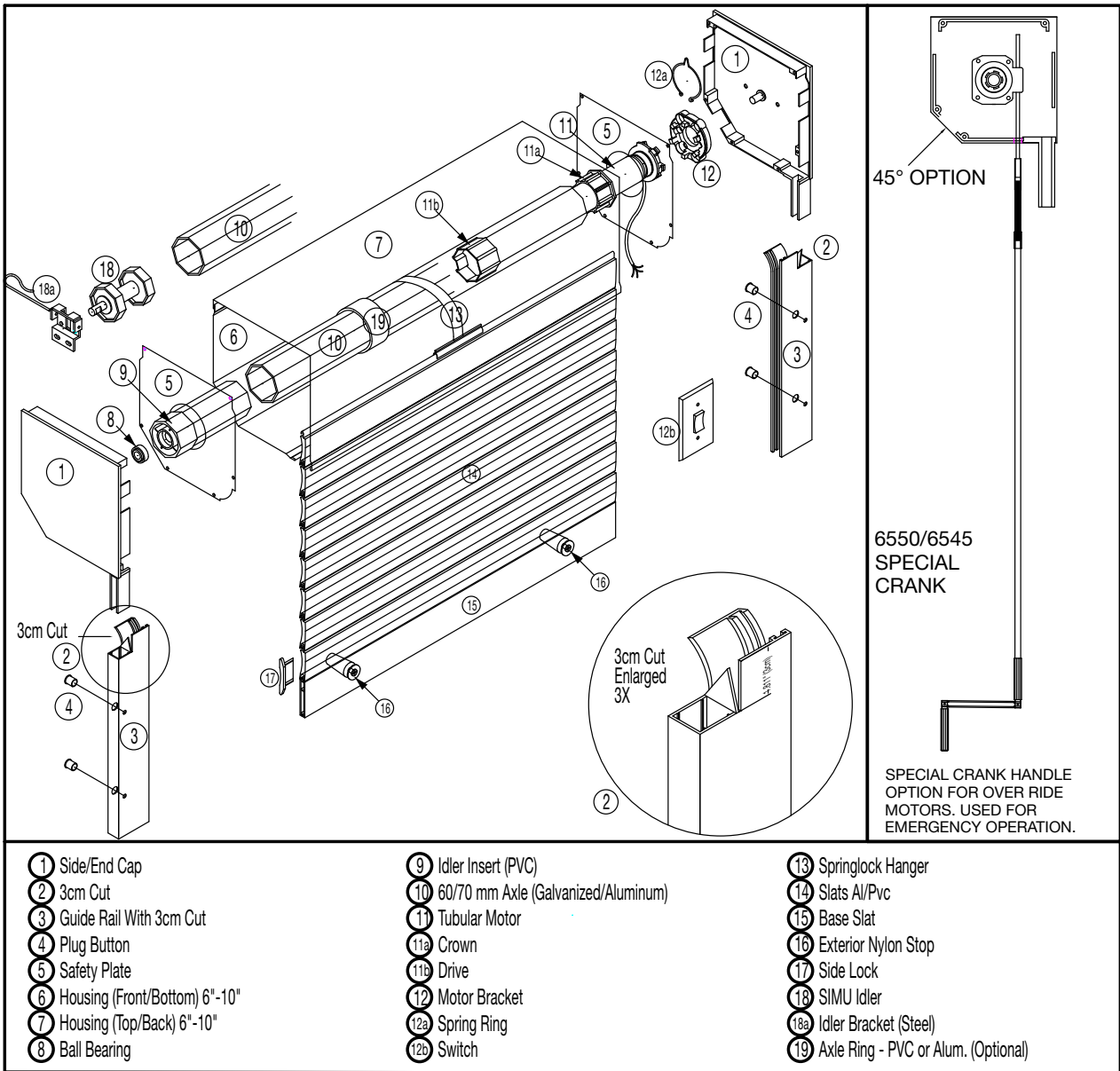


MOTORIZED ROLLING SHUTTER MANUAL OVERRIDE OPTIONS.

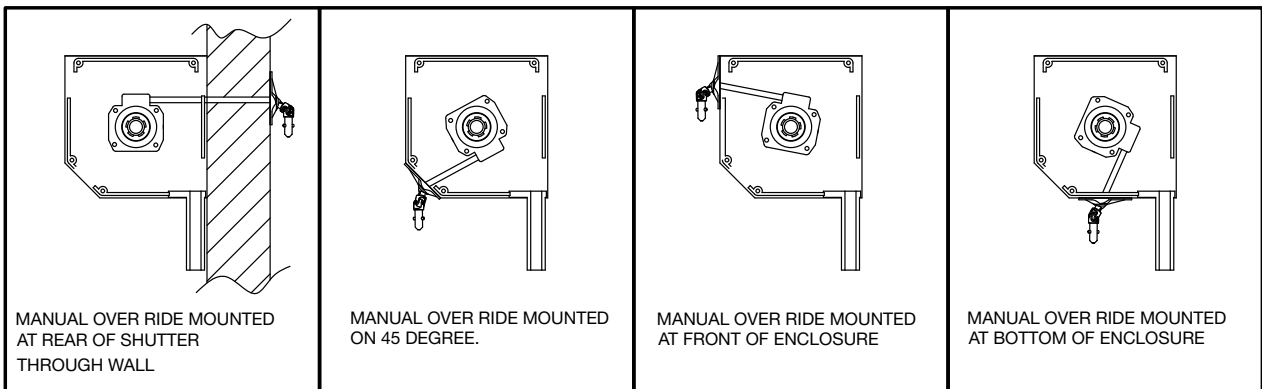


Copyright 2011 by Rollac Rolling Shutter
 Example Drawing- parts vary with application.
 Call Rollac for details.

Motor Operated Maxi Rolling Shutter

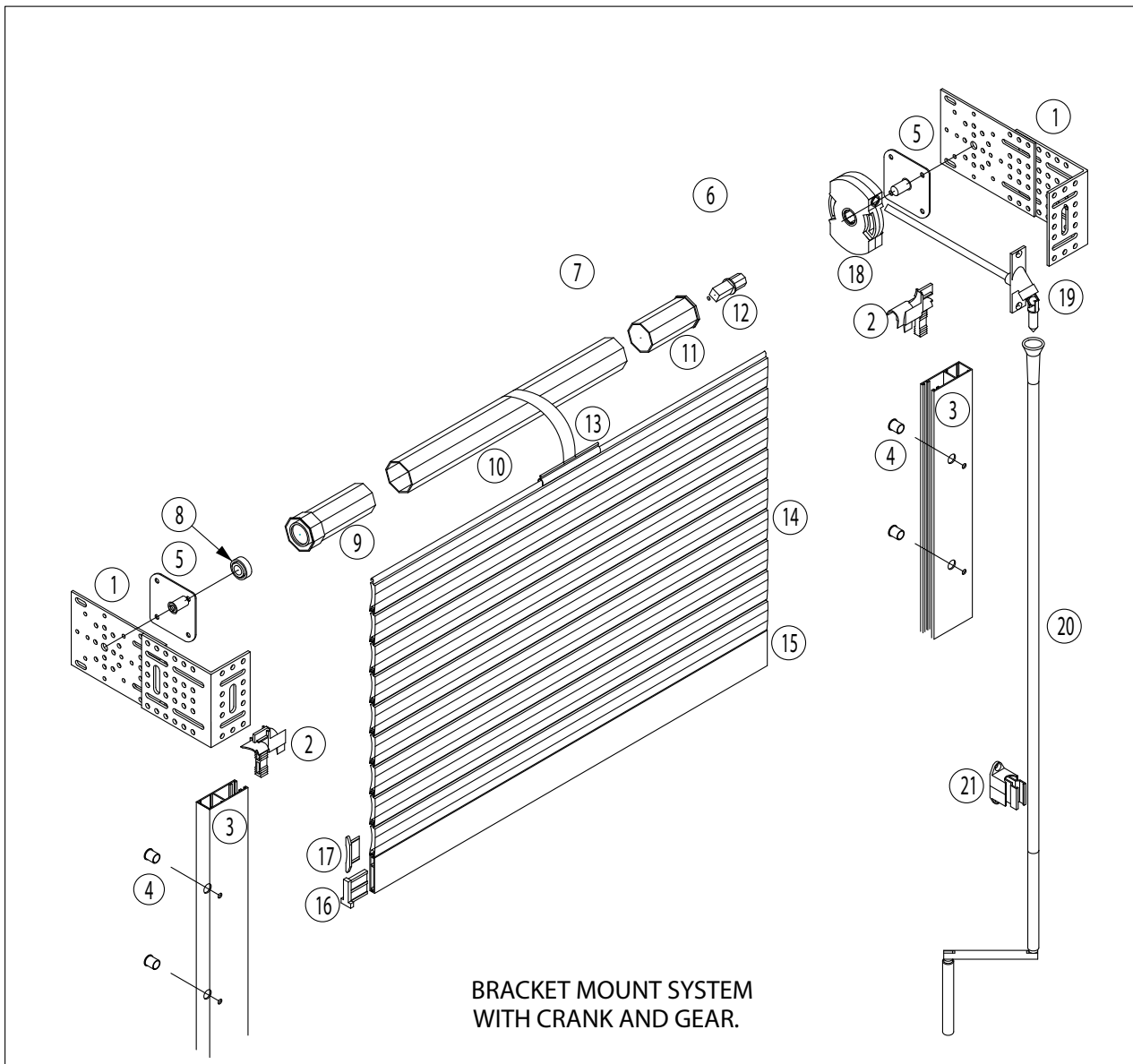


MOTORIZED ROLLING SHUTTER MANUAL OVERRIDE OPTIONS.



Copyright 2011 by Rollac Rolling Shutter
 Example Drawing- parts vary with application.
 Call Rollac for details.

Bracket Mounted Gear Operated Rolling Shutter



- ① Mounting Bracket with Extension
- ② Entry Guide
- ③ Guide Rail
- ④ Plug Button
- ⑤ Mounting Plate
- ⑥ Optional - Housing (Front/Bottom)
- ⑦ Optional - Housing (Top/Back)

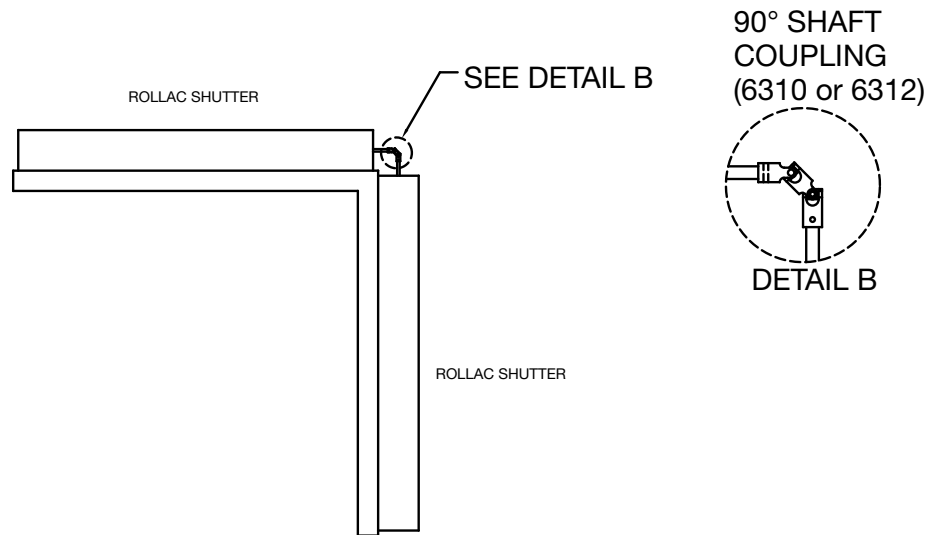
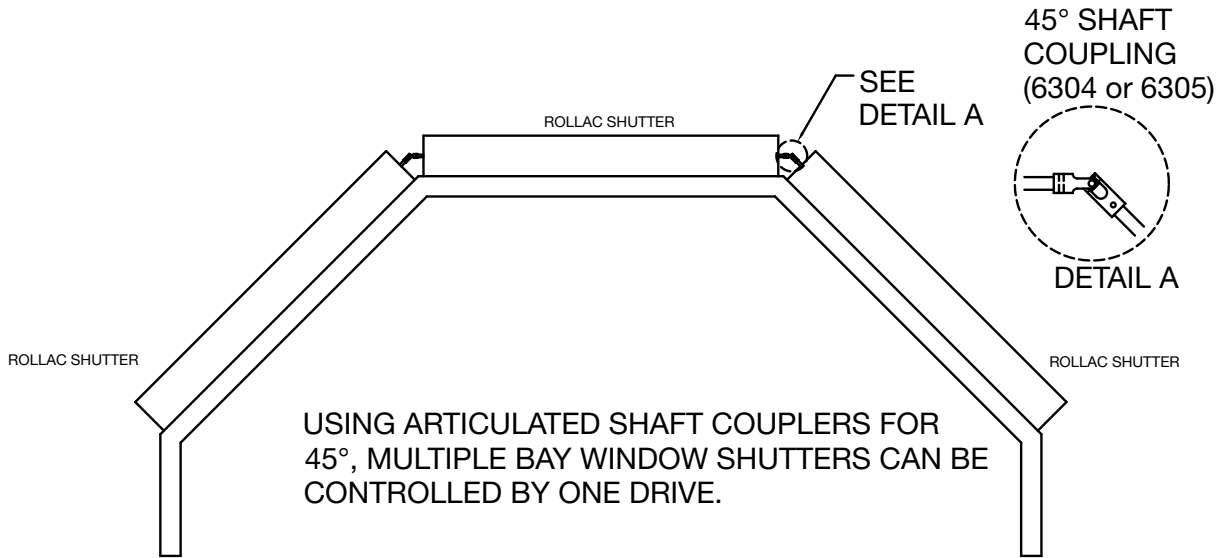
- ⑧ Ball Bearing
- ⑨ Idler Insert (PVC)
- ⑩ 60 mm Octagonal Axle
- ⑪ Gear Insert
- ⑫ Gear Connector
- ⑬ Springlock Hanger
- ⑭ A150 Slats

- ⑮ Base Slat
- ⑯ Interior Nylon Stop
- ⑰ Side Lock
- ⑱ Gear
- ⑲ Universal
- ⑳ Crank Handle
- ㉑ Crank Holder

Copyright 2011 by Rollac Rolling Shutter
 Example Drawing- parts vary with application.
 Call Rollac for details.

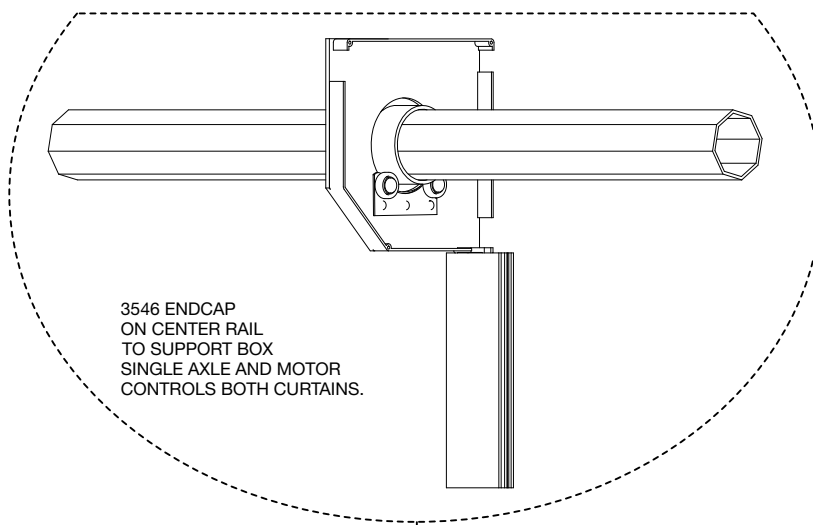
Multiple Shutters Around Corners

CAN BE CONTROLLED USING ONE DRIVE(MOTOR, TAPE OR GEAR UNITS).

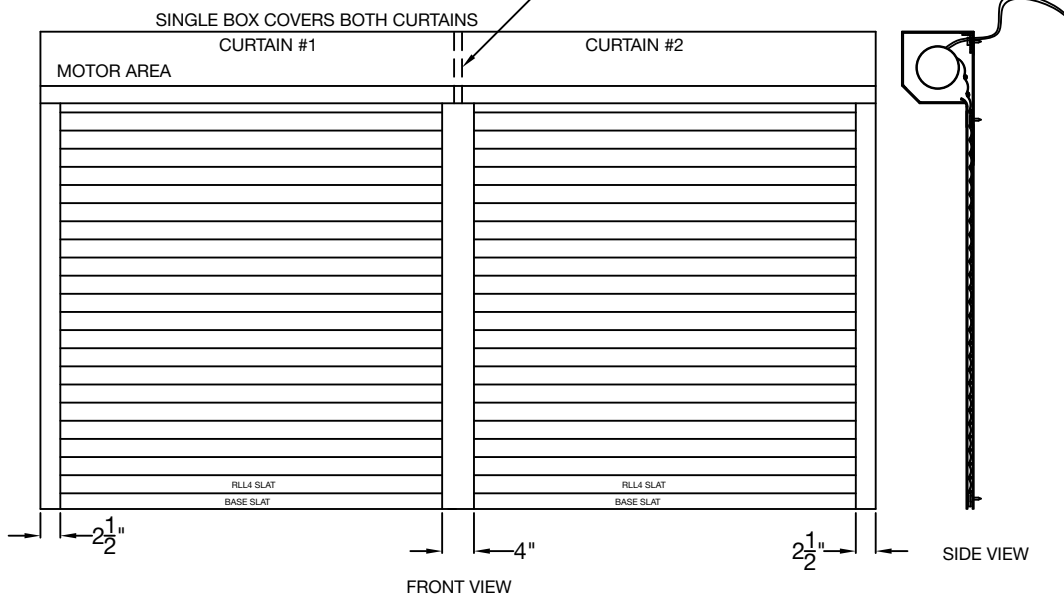


USING ARTICULATED 90°SHAFT COUPLERS, TWO SHUTTERS CAN BE MOUNTED AROUND CORNERS USING ONE DRIVE.

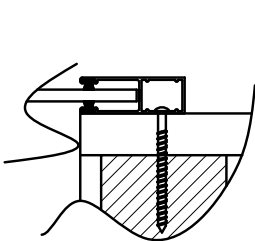
Split Units - 2 Curtains on a Single Axle



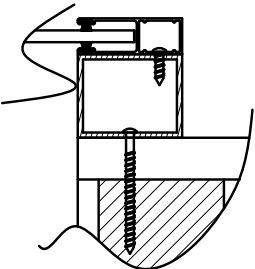
TOP VIEW SHOWING CURTAIN AND RAILS



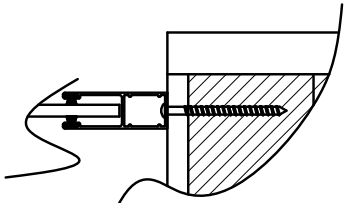
Rail Mounting Options



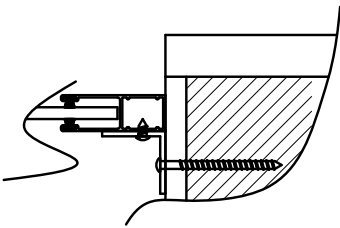
Flush Mount
"A" Type Rails



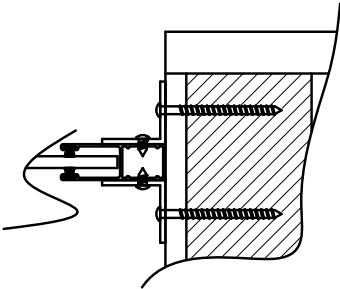
Build Out Mount
"A" Type Rails



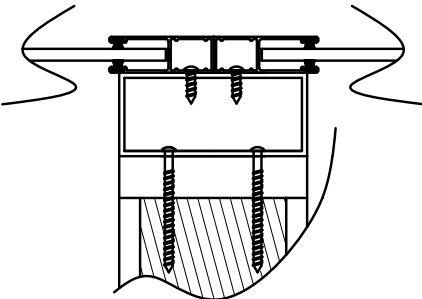
Inside Jamb
Throat Drill Mount
"A" Type Rails



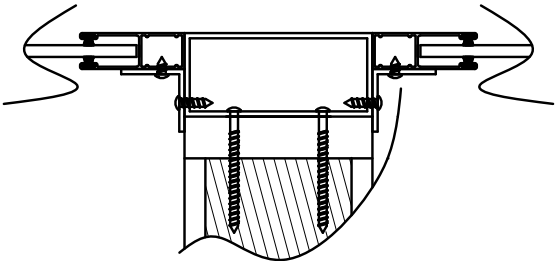
Inside Jamb
"A" Type Rails
Angle Attachment



Inside Jamb Mount
"A" Type Rails
Dual Angle Attachment

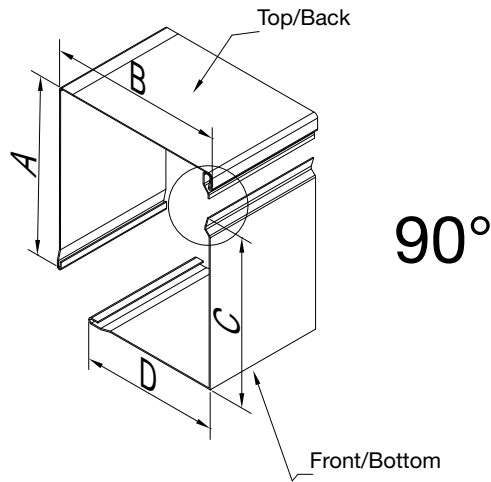


Build Out Mount
Two "A" Type Rails

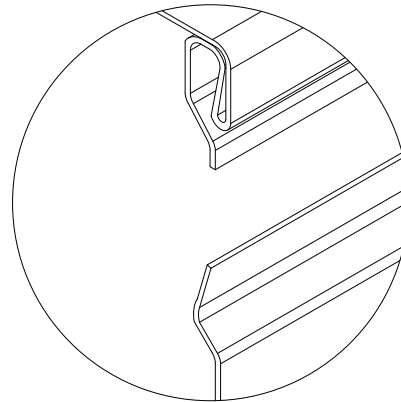


Mount Two "A" Type Rails
Flush On Build Out With Angles

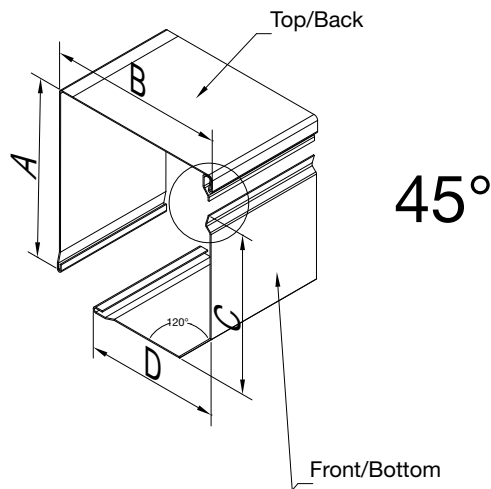
Actual Box Cover Dimensions 45° & 90°



90°



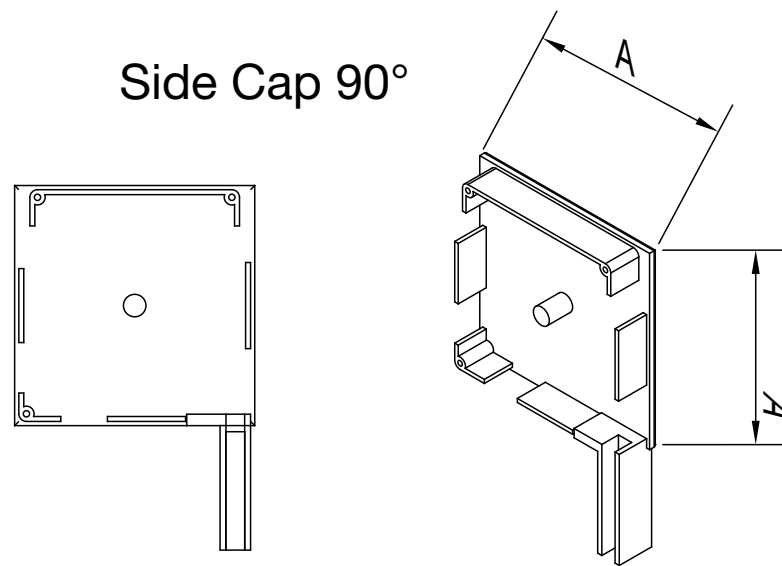
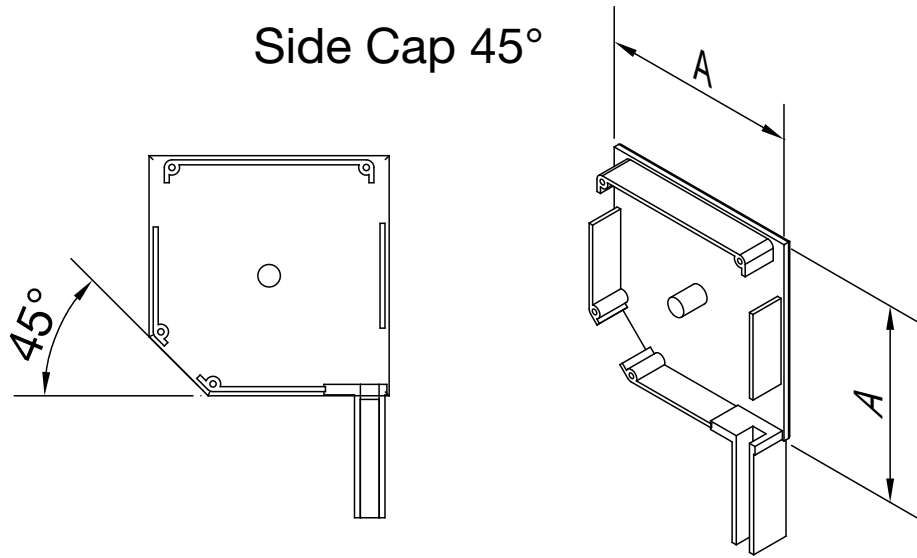
Detail View of Snap-in Box Covers



45°

Actual Dimensions of 45° & 90° Box Cover Components				
Box	A	B	C	D
4.0" (100mm)	4.055" (103mm)	3.937" (100mm)	3.543" (90mm)	2.874" (73mm)
5.0" (125mm)	5.039" (128mm)	4.921" (125mm)	4.528" (115mm)	3.858" (98mm)
5.5" (137mm)	5.472" (139mm)	5.394" (137mm)	5.000" (127mm)	4.094" (104mm)
6.0" (150mm)	6.024" (153mm)	5.905" (150mm)	5.512" (140mm)	4.448" (114mm)
6.5" (165mm)	6.575" (167mm)	6.496" (165mm)	6.102" (155mm)	5.118" (130mm)
7.0" (180mm)	7.204" (183mm)	7.087" (180mm)	6.693" (170mm)	5.669" (144mm)
8.0" (205mm)	8.150" (207mm)	8.071" (205mm)	7.677" (195mm)	6.457" (164mm)
9.0" (230mm)	9.055" (230mm)	9.016" (229mm)	8.858" (225mm)	7.559" (192mm)
10.0" (250mm)	10.039" (255mm)	9.843" (250mm)	9.567" (243mm)	8.307" (211mm)
12.0" (300mm)	12.008" (305mm)	11.811" (300mm)	11.535" (293mm)	10.276" (261mm)

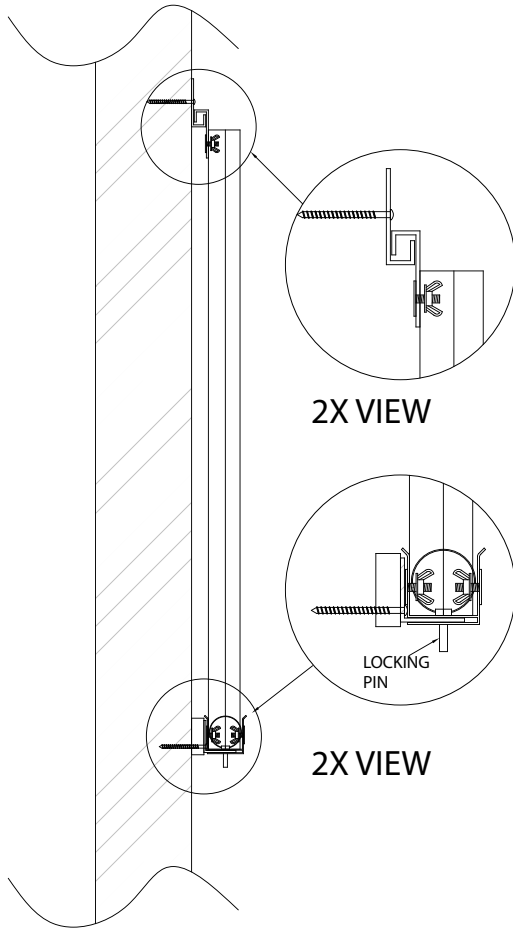
Actual Dimensions of 45/90 side caps



Box	Actual Size
4.0" (100mm)	3.74" (95mm)
5.0" (125mm)	4.72" (120mm)
5.5" (137mm)	5.20" (132mm)
6.0" (150mm)	5.71" (145mm)
6.5" (165mm)	6.30" (160mm)
7.0" (180mm)	6.89" (175mm)
8.0" (205mm)	7.87" (200mm)
9.0" (230mm)	8.86" (225mm)
10.0" (250mm)	9.65" (245mm)

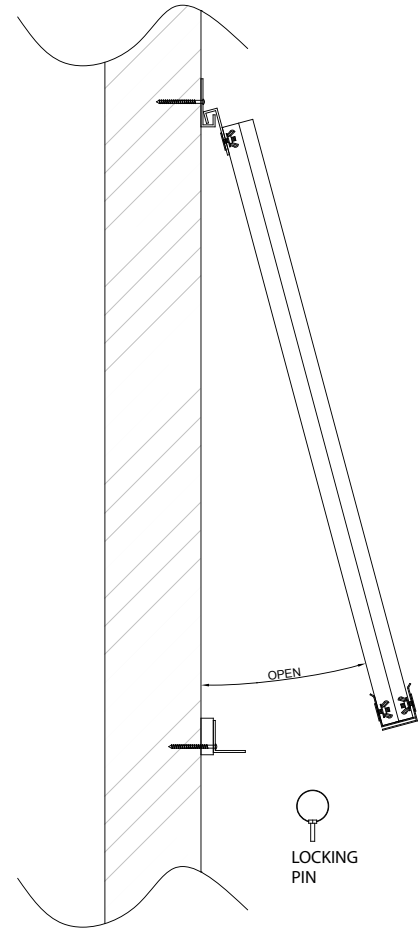
Egress Panel Installation

VERTICAL PANELS
WALL MOUNTED
EGRESS SYSTEM
CLOSED POSITION
WITH LOCKING PIN.



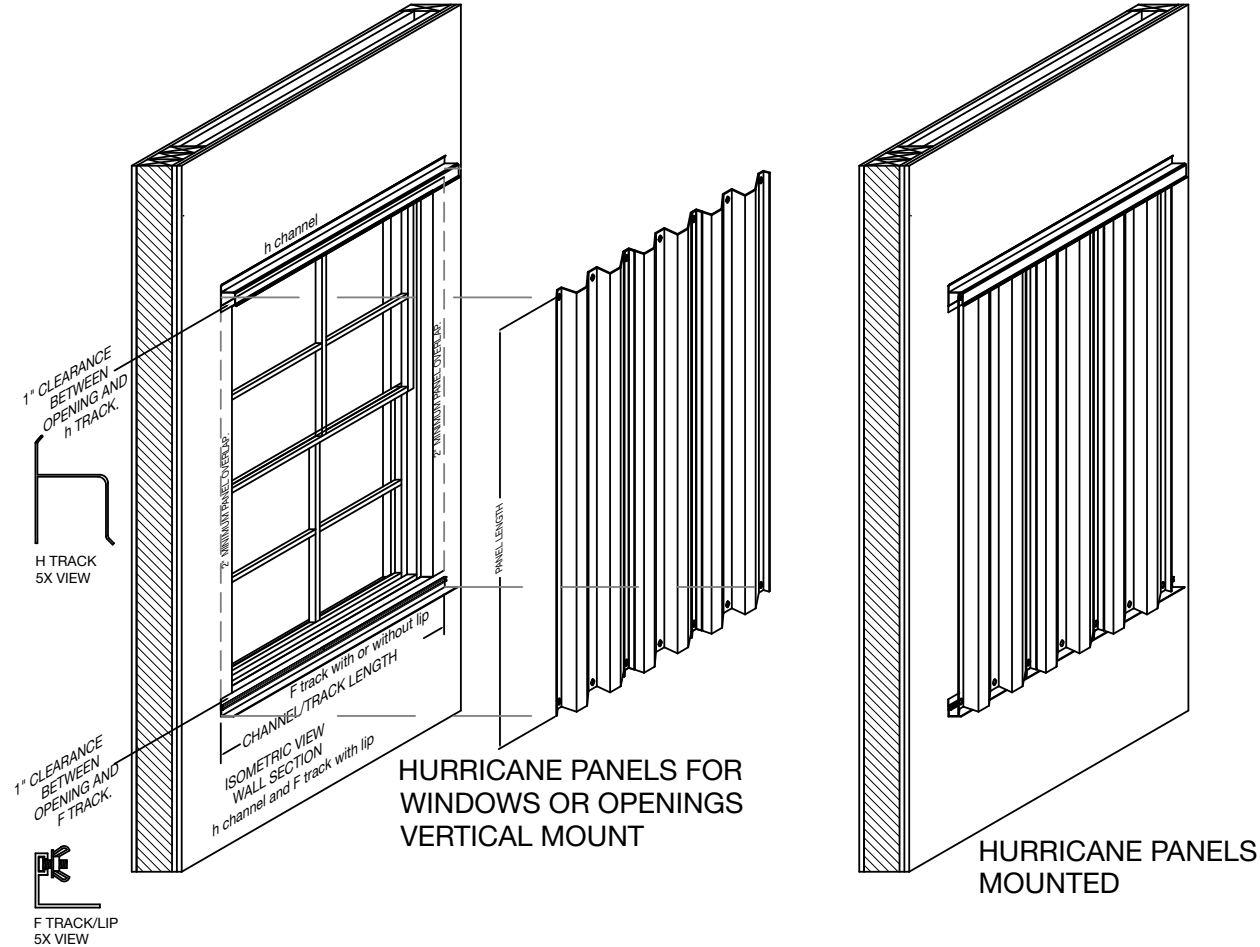
SIDE VIEW

VERTICAL PANELS
WALL MOUNTED
EGRESS SYSTEM
LOCKING PIN REMOVED
FOR EGRESS.



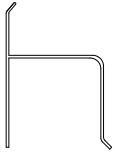
SIDE VIEW

Lexan Panels

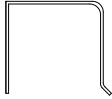


Storm Panel Mounting and Hardware

MOUNTING HARDWARE FOR LEXAN PANELS



H TRACK
5X VIEW



U TRACK
5X VIEW



F TRACK/LIP
5X VIEW



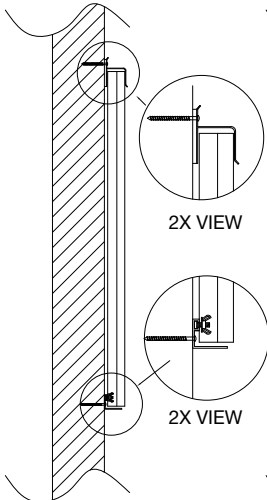
F TRACK
5X VIEW



T SLOT SCREW
WITH WINGNUT
5X VIEW

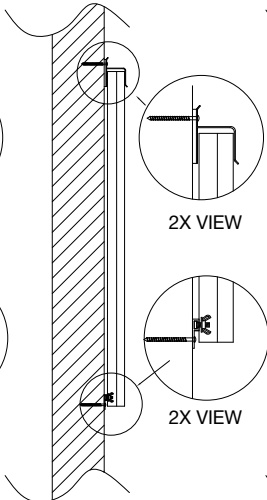
MOUNTING EXAMPLES FOR VERTICAL LEXAN PANELS

VERTICAL PANELS
WALL MOUNTED
UPPER - H TRACK
LOWER - F TRACK/LIP



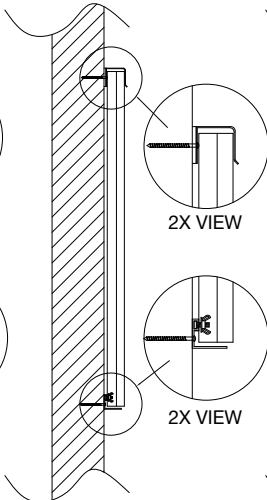
SIDE VIEW

VERTICAL PANELS
WALL MOUNTED
UPPER - H TRACK
LOWER - F TRACK



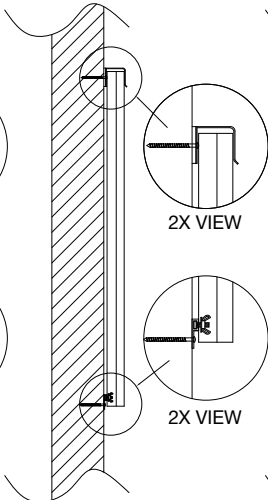
SIDE VIEW

VERTICAL PANELS
WALL MOUNTED
UPPER - U TRACK
LOWER - F TRACK/LIP



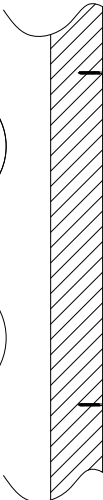
SIDE VIEW

VERTICAL PANELS
WALL MOUNTED
UPPER - U TRACK
LOWER - F TRACK



SIDE VIEW

VERTICAL PANELS
WALL MOUNTED
UPPER - F TRACK
LOWER - F TRACK



SIDE VIEW

2X VIEW

2X VIEW

2X VIEW

2X VIEW

2X VIEW

2X VIEW

2X VIEW

2X VIEW



CREDIT APPLICATION

Company Name: _____

Bank Reference: _____

Bank Address

Street: _____

City: _____ State: _____ ZIP: _____

Account Number: _____

SUPPLIER REFERENCES

Name: _____

Street: _____

City: _____ State: _____ ZIP: _____

Telephone: _____ Fax: _____

Name: _____

Street: _____

City: _____ State: _____ ZIP: _____

Telephone: _____ Fax: _____

Name: _____

Street: _____

City: _____ State: _____ ZIP: _____

Telephone: _____ Fax: _____

Signature: _____ Date: _____

By submitting this application, you have read and agree to the terms and conditions set forth by Rollac Shutter of Texas, Inc. which are available online at www.rollac.com or via mail by request.

SHUTTER ORDER FORM #1

Company: _____ Date: _____
 Ordered By: _____ P.O. # _____
 Shipping Address: _____ Ship Via: _____
 City / State / Zip: _____

Slat Type: _____ Slat Color: _____

Rebar Every: ①②③④

Light Slits:
 RLL-3 & RII-4 slats

SHUTTER#

Width: _____
 Height: _____

Operator:
 Recoil Box White Brown
 1:3 Crank White Brown
 Gear 2 Hole Universal 4 Hole Universal
 Motor Remote Control Override
 Switch: **Switch Color:**
 Toggle White Ivory
 Rocker White Ivory
 Paddle White Ivory
 Key switch Indoor Outdoor

Box Color:
 Cream White
 Dark Brown Bronze
 Grey Arcona Beige
 Light Beige

Includes Rails
 Includes Box

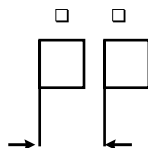
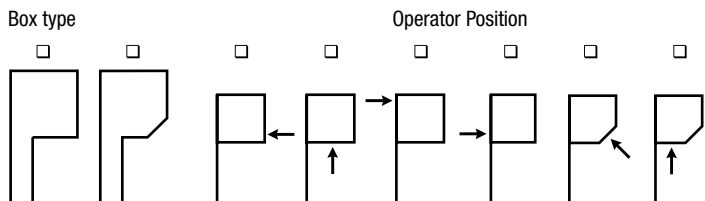
Opening Rail Height

Axle:
 Aluminum Steel

Operator Side viewed from back of box:
 Right
 Left

Sill:
 L Angle
 U Channel

Base Slat:
 Key Lock
 Slide Lock



Comments: _____

Slat Type: _____ Slat Color: _____

Rebar Every: ①②③④

Light Slits:
 RLL-3 & RII-4 slats

SHUTTER#

Width: _____
 Height: _____

Operator:
 Recoil Box White Brown
 1:3 Crank White Brown
 Gear 2 Hole Universal 4 Hole Universal
 Motor Remote Control Override
 Switch: **Switch Color:**
 Toggle White Ivory
 Rocker White Ivory
 Paddle White Ivory
 Key switch Indoor Outdoor

Box Color:
 Cream White
 Dark Brown Bronze
 Grey Arcona Beige
 Light Beige

Includes Rails
 Includes Box

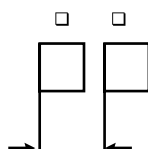
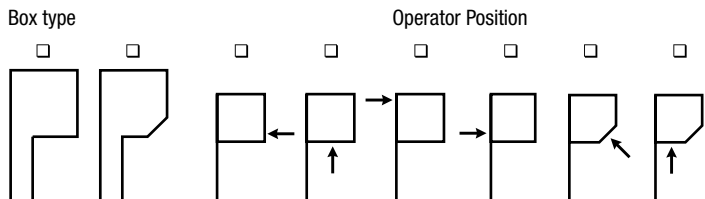
Opening Rail Height

Axle:
 Aluminum Steel

Operator Side viewed from back of box:
 Right
 Left

Sill:
 L Angle
 U Channel

Base Slat:
 Key Lock
 Slide Lock



Comments: _____

Terms and Conditions

§1. Contract

All offers, quotes and sales by ROLLAC Shutter of Texas, Inc. are subject to these terms and conditions of sale.

§2. Acceptance

By taking delivery of products, Buyer agrees to these terms and conditions unless otherwise expressly agreed under separate written contract with ROLLAC. The terms and conditions stated herein shall prevail over any different or additional terms and conditions proposed by Buyer and shall apply to the sale or shipment of any goods in response to Buyer's order. ROLLAC hereby objects to any different or additional terms and conditions, which may be proposed or have been proposed by Buyer in any purchase order form or other document.

§3. Privacy

With Rollac's shopping cart not being saved on a SSL Server (secured server), Rollac takes no responsibility for any lost data. To respect Rollac customers' privacy Rollac does not demand any credit card, check or other financial information through means of the web site. Any information necessary to complete a purchase will be inquired by phone, fax, or email.

§4. Prices and Delivery

All quoted prices are subject to change without notice. Prices on accepted orders remain firm for a period of four months from the date of order acceptance, provided final delivery occurs within that period. Quoted prices are in U.S. dollars F.O.B. ROLLAC Plant, Pearland, Texas, excluding freight, packaging and taxes. Quoted delivery dates are approximate.

§5. Sales Tax

ROLLAC is required to charge applicable state and local tax on every item.

§6. Payment Terms

6.1. For customers with established credit, terms are net thirty (30) days from date of shipment. If credit is not established, please include payment with order or purchase through Visa, Master Card, or American Express.

6.2. Amounts past due are subject to a finance-charge of 1.5% per month

6.3. On past due accounts ROLLAC retains the right to halt further deliveries and service to Buyer until all past due amounts have been paid, and the required payment in advance for orders not yet delivered.

6.4. Export orders may be subject to special export payment terms and conditions. (see 20.)

§7. Credit Balance

Customer agrees that any credit balances issued will be applied within one (1) year of its issuance. IF NOT APPLIED OR REQUESTED WITHIN ONE (1) YEAR, ANY BALANCE REMAINING WILL BE SUBJECT TO CANCELLATION, AND ROLLAC SHALL HAVE NO FURTHER LIABILITY.

§8. Freight Terms

Freight and shipping fees will be charged for shipments to a customer's place of business anywhere in the contiguous United States, using a carrier of our choice. Other terms apply to Alaska, Hawaii, Puerto Rico, and export orders. Any extra charges incurred for additional services, such as customer's carrier or special handling by the carrier, must be paid by the consignee. Items backordered from an order qualifying for prepaid shipping charges will be shipped prepaid. Title and risk of loss pass to the customer upon tender of shipment to the carrier. If product is damaged in transit, consignee must file claim with the carrier.

§9. Inspection and Claims

All claims against ROLLAC for shortages, damage, etc., must be made in writing to ROLLAC within fourteen days from the date of receipt, otherwise all claims are waived. Buyer shall inspect all products upon delivery and immediately notify the carrier of any defects, loss or damage by telephone and confirm the same in writing to the carrier. ROLLAC cannot process any claim of the buyer concerning product shipments unless Buyer notes its claim, in writing, on all delivery receipts signed by the Buyer and Buyer otherwise complies and properly substantiates its claim in accordance with the carrier's requirements.

§10. Risk of Loss

Full risk of loss, damage or destruction of the goods shall pass to Buyer upon delivery of the goods, to the carrier at the point of shipment or upon delivery at storage, whichever applies.

§11. Force Majeure

If an order cannot be completed due to causes beyond ROLLAC's control, ROLLAC retains the right to either cancel the unfinished portion of the order or complete the order if and when this becomes possible. Buyer shall not have the right to withhold payment on delivered goods and/or services. Force Majeure includes but is not limited to strikes, lockouts, storms, floods, wars, revolutions, major equipment failures or fire damage at production facilities, and other such acts of God or man.

§12. Warranty

ROLLAC warrants all supplied parts against defects in material and workmanship for a period of two full years from date of sale with the following exceptions: (1) all electric motors are warranted for a period of five years and (2) all electronic components (automatic and radio control system components) are warranted for a period of one year. If any part or component does not function as intended during the warranty period, ROLLAC will, at its option, repair the part or furnish a replacement part to Buyer free of charge. This warranty does not apply in cases of abuse, misuse, misapplication or any defects due to faulty installation. ROLLAC disclaims all other warranties, expressed or implied including, without limitation, the warranties of merchantability, fitness, burglar proof, and light blockage.

Terms and Conditions

§13. Return

No goods may be returned without the express written approval of ROLLAC and without a return authorization number. Returns are subject to ROLLAC's acceptance, and a restocking charge of 20% of invoice value will apply on all returned goods. Goods approved for return must be returned in appropriate packaging, freight prepaid and accompanied by a copy of the original invoice. Goods that arrive damaged or cannot be returned to stock will not receive credit.

§14. Title

Title to the merchandise shall remain in Rollac until payment to Rollac of full purchase price by Buyer. Rollac retains the right to repossess, and any other remedies provided by law.

§15. Limited Liability

ROLLAC's liability for any and all claims, charges, expenses, damages, losses and injuries arising out of or relating to its performance or breach of any agreement of sale of goods and the manufacture, sale delivery, resale, repair or use of any goods shall not exceed the purchase price of such goods. This shall be Buyer's sole and exclusive remedy against ROLLAC outside of the remedy provided for under ROLLAC's warranty. In no event shall ROLLAC be liable for incidental, special or consequential damages.

§16. Liens and Security Interest

Buyer shall not allow any un-discharged lien, encumbrance or charges upon the goods supplied by ROLLAC until ROLLAC has received payment in full for such goods. If any liens, encumbrances or charges are filed against ROLLAC goods prior to full payment, Buyer shall discharge the liens, encumbrances or charges within ten days and reimburse ROLLAC for expenses incurred in defending its security interest. Title to goods shall remain with ROLLAC until full payment has been received.

§17. Statute of Limitations

Any action against ROLLAC shall be commenced within one year after the cause of action has accrued.

§18. Arbitration, Indemnification and Choice of Law

18.1. Any legal action with respect to any transaction must be commenced within one year after the cause of action has arisen.

18.2. Disputes arising under this agreement shall be decided under procedures set by the American Arbitration Association. Buyer shall be liable for all costs of collection, fees, expenses, court costs and reasonable attorney fees.

18.3. Buyer expressly agrees to indemnify and hold ROLLAC harmless from all charges and liability from any party relating to actions under this agreement. The rights and duties of the parties to this agreement and the construction and effect of these terms and conditions shall be governed by the laws of the State of Texas.

§19. Full Agreement

These terms and conditions represent the total agreement of the parties, and all agreements entered into prior to or contemporaneously with the execution of this agreement, other than as provided herein, are excluded whether oral or in writing.

§20. Special Export Terms and Conditions

20.1. Order Acceptance:

Buyer acknowledges that no order shall be deemed accepted unless and until it is verified and accepted by ROLLAC. Buyer further consents that submission of its order shall subject Buyer to the jurisdiction of the courts of the United States and the State of Texas.

20.2. Payment Terms:

Unless Buyer has an existing account with ROLLAC and unless otherwise agreed, all export sales are made on condition that Buyer make payment in advance by credit card or wire transfer at the time of order, or that Buyer establishes satisfactory credit with ROLLAC prior to shipment. For Buyers with established credit, terms are net thirty (30) days from date of shipment.

At ROLLAC's option, certain export orders may be subject to special export payment terms and quotations.

All payments must be in U.S. dollars, and ROLLAC shall have the right of set-off and deduction for all sums owed.

20.3. Credit Balance:

Buyer agrees that any credit balances issued will be applied within one (1) year of its issuance. If not applied or requested within one (1) year, any balance remaining will be subject to cancellation and ROLLAC shall have no further liability.

20.4. Freight Policy:

Shipping terms are FOB. Buyer shall be responsible for obtaining insurance. At ROLLAC's option, freight policy for certain export orders may be subject to special terms and conditions. If any item is backordered on an order qualifying for freight payment, that item will be shipped prepaid as Buyer's exclusive remedy. If product is damaged in transit, Buyer must file claim exclusively with airline, carrier, vessel and/or insurance company.

20.5. Product Suitability:

Many countries and localities have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from location to location. While ROLLAC attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, Buyer should review the product application and applicable codes and regulations to be sure that the product, and use will comply with them.

Terms and Conditions

20.6. Trademarks and Copyrights:

Buyer acknowledges that it has no right, title or interest in the trademarks or copyrights in the products and covenants that it will take no action to register or otherwise interfere with such rights of ROLLAC. Buyer agrees that it will not copy the products sold to Buyer or their packaging or trade dress.

20.7. Complete Agreement:

The sales terms and conditions in ROLLAC's forms, acknowledgements, quotations, invoices, catalog, web-site and dialog screens are incorporated herein by reference, and constitute the exclusive and entire agreement between Buyer and ROLLAC. They are also applicable to electronic orders and purchases from ROLLAC's web site and electronic catalogs.

20.8. Country of Importations:

Buyer represents that it is purchasing products from the United States and importing them to the country specified in Buyer's and ROLLAC's documentation. Buyer agrees that the products will be shipped to the specified destination in compliance with the laws of such destination and the United States, and that there will be no re-export or diversion from such specified destination. If requested by ROLLAC, Buyer shall provide documentation satisfactory to ROLLAC verifying delivery at the designated country. Buyer agrees to inform ROLLAC at the time of order of any NAFTA or other certificates of origin or other special documentation, packaging or product marking or labeling and ROLLAC shall not be responsible for providing any such documentation, packaging, marking or labeling unless ROLLAC expressly agrees.

20.9. Export and Import Licenses, Controls, Permits and Freight Forwarder:

Buyer shall be responsible for obtaining and paying for any permits, licenses or other governmental authorization(s) necessary for the exportation from the U.S. or importation of the products to the designated country of importation, and it shall comply with all laws and regulations thereof. Buyer shall select and pay the freight forwarder who shall solely be the Buyer's agent. The freight forwarder's actions shall not be deemed authorized by, or binding upon ROLLAC unless expressly agreed to by ROLLAC. The Buyer and its freight forwarder shall be solely responsible for preparing and filing the Shipper's Export Declaration. At the request of ROLLAC, Buyer agrees to provide copies of any export, shipping or import documents prepared by Buyer or its agents related to ROLLAC's sales to Buyer.

20.10. Foreign Corruption Practices Act:

Buyer acknowledges that it is not the agent of ROLLAC and represents and warrants that it has not, and covenants that it will not, pay anything of value to any government employee in connection with the resale of the products.

20.11. No Third Party Benefit:

The provisions stated above are for the sole benefit of the parties hereto and confer no rights, benefits or claims upon any person or entity not a party hereto.

20.12. Waiver:

The failure of either party to assert a right hereunder or to insist upon compliance with any term or condition will not constitute a waiver of that right or excuse any subsequent nonperformance of any such term or condition by the other party.



Towards Superior Technology and Higher Environmental Standards

Rollac Rolling Shutters is a leading manufacturer of rolling shutters. With more than 30 years of experience, we believe that technology and quality service are the driving forces behind our rolling shutters. We take pride in the fact that we are the only company in North America that manufactures rolling shutters from raw materials to finished solutions.

Using the latest technology at hand, all our solutions are engineered in house and suited to accommodate the American market. If you need a rolling shutter to protect from solar heat gain, a shield for security, or Miami Dade wind storm protection, Rollac Rolling Shutters provides the right solution.

Buildings consume 39% of all energy and are also the largest source of carbon dioxide emission in the USA. Therefore, we at Rollac strive to engage in environmentally responsible practices and pledge to integrate principles of sustainability into our rolling shutters and our day to day operations.

We consider it our responsibility to have a leading role in the industry and are proud to partner with experts and organizations that contribute to our knowledge of sustainability.



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