

## 19-IN. RACK ANGLES

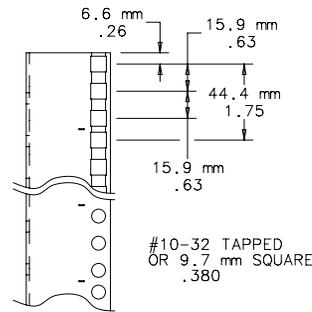
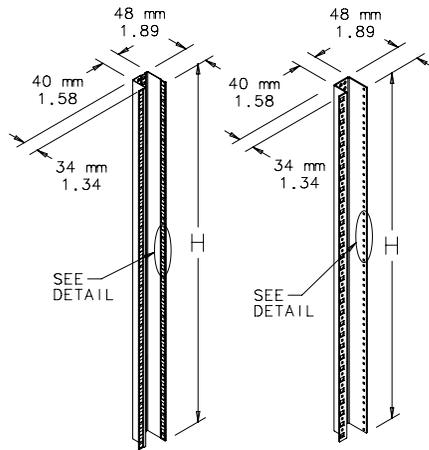


19-in. U-Shaped Rack Angles are available in square-hole and tapped-hole designs. Tapped Rack Angles are 12 gauge plated steel with 10-32 tapped holes. Square-Hole Rack Angles are 14 gauge plated steel designed to accept metric or English cage nuts. 19-in. Rack Angles are fixed directly into a 600-mm wide enclosure frame. To mount 19-in. Rack Angles in 700- or 800-mm wide frames, use Frame Reducing Brackets.

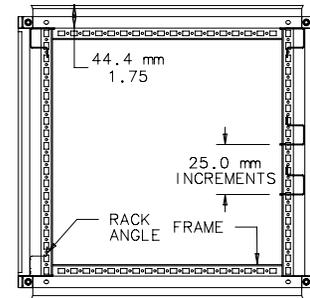
**BULLETIN: P20**

Catalog Number	Hole	H (mm)	H (in.)	Fits Frame	Rack Units
PRA197TH	Square	578	22.77	700 mm	13
PRA197TP	Tapped	578	22.77	700 mm	13
PRA198TH	Square	712	28.02	800 mm	16
PRA198TP	Tapped	712	28.02	800 mm	16
PRA1914TH	Square	1290	50.77	1400 mm	29
PRA1914TP	Tapped	1290	50.77	1400 mm	29
PRA1916TH	Square	1467	57.77	1600 mm	33
PRA1916TP	Tapped	1467	57.77	1600 mm	33
PRA1918TH	Square	1690	66.52	1800 mm	38
PRA1918TP	Tapped	1690	66.52	1800 mm	38
PRA1920TH	Square	1867	73.52	2000 mm	42
PRA1920TP	Tapped	1867	73.52	2000 mm	42
PRA1922TH	Square	2090	82.27	2200 mm	47
PRA1922TP	Tapped	2090	82.27	2200 mm	47

Vertical holes spaced in 1.75-in. (44.5-mm) increments.



DETAIL



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## 23-IN. RACK ANGLES



23-in. Rack Angles are available for telecom applications. They fit directly into 700-mm wide frames or into 800-mm wide frames using Frame Reducing Brackets. Rack Angles are 12 gauge steel with 10-32 tapped holes. 23-in. Rack Angles are available with 1.00-in. vertical hole spacing.

**BULLETIN: P20**

Catalog Number	Hole	Height mm/in.	Fits Frame Height	Rack Units
PRA237TP	Tapped	584 22.99	700 mm or taller	13
PRA2314TP	Tapped	1270 50.00	1400 mm or taller	29
PRA2316TP	Tapped	1473 57.99	1600 mm or taller	33
PRA2318TP	Tapped	1676 65.98	1800 mm or taller	38
PRA2320TP	Tapped	1879 73.98	2000 mm	42

Vertical holes spaced in 1.00 in. (25.4mm) increments.

## 24-IN. RACK ANGLES

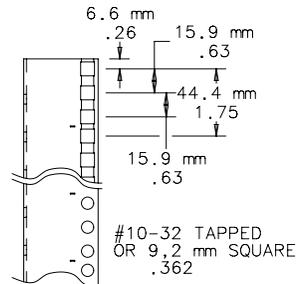
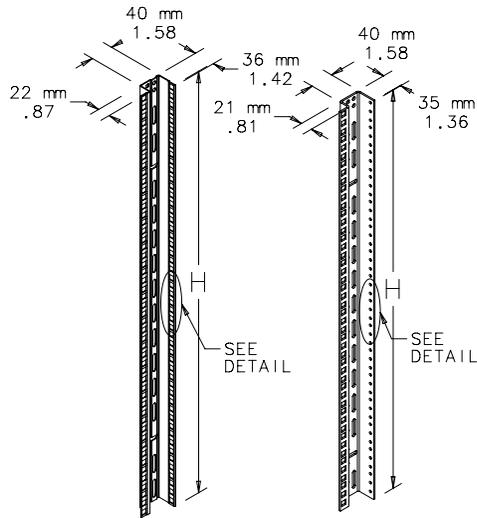


24-in. Rack Angles are available in both square-hole and tapped-hole designs. Tapped Rack Angles are 12 gauge plated steel with 10-32 tapped holes. Square-Hole Rack Angles are 14 gauge plated steel designed to accept metric or English cage nuts. 24-in. Rack Angles fit directly into 700- or 800-mm wide frames using Frame Reducing Brackets.

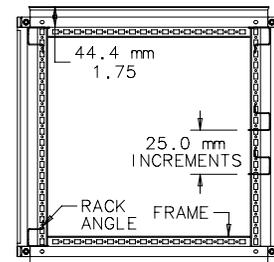
**BULLETIN: P20**

Catalog Number	Hole	H (mm)	H (in.)	Fits Frame	Rack Units
PRA247TH	Square	578	22.77	700 mm	13
PRA247TP	Tapped	578	22.77	700 mm	13
PRA2414TH	Square	1245	49.02	1400 mm	29
PRA2414TP	Tapped	1245	49.02	1400 mm	29
PRA2416TH	Square	1467	57.77	1600 mm	33
PRA2416TP	Tapped	1467	57.77	1600 mm	33
PRA2418TH	Square	1690	66.52	1800 mm	38
PRA2418TP	Tapped	1690	66.52	1800 mm	38
PRA2420TH	Square	1867	73.52	2000 mm	42
PRA2420TP	Tapped	1867	73.52	2000 mm	42
PRA2422TH	Square	2090	82.27	2200 mm	47
PRA2422TP	Tapped	2090	82.27	2200 mm	47

Vertical holes spaced in 1.75-in. (44.5-mm) increments.



DETAIL



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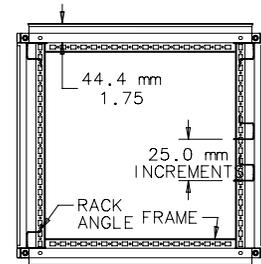
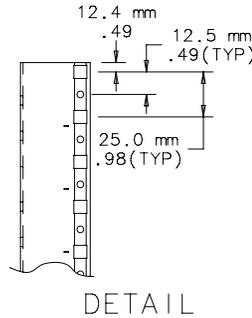
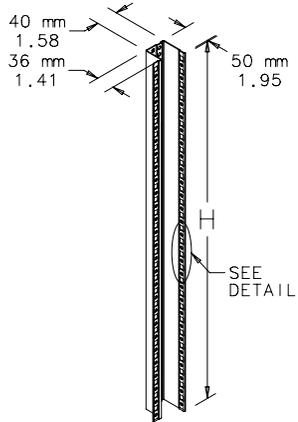
## METRIC RACK ANGLES

Metric U-Shaped Rack Angles are available with square holes spaced vertically in 25-mm increments to accept metric or English cage nuts. These Rack Angles are built in accordance with standard IEC 917-2-1 to accommodate metric subracks. They are sized to fit directly into 600-mm wide frames. Use Frame Reducing Brackets to mount in 700- or 800-mm wide frames.

**BULLETIN: P20**

Catalog Number	H (mm)	H (in.)	Fits Frame Height	Rack Units
PRAM7	575	22.64	700 mm	22
PRAM14	1275	50.20	1400 mm	29
PRAM16	1475	58.07	1600 mm	33
PRAM18	1675	65.94	1800 mm	38
PRAM20	1875	73.82	2000 mm	42
PRAM22	2075	81.69	2200 mm	47

Vertical holes spaced in 25-mm increments.



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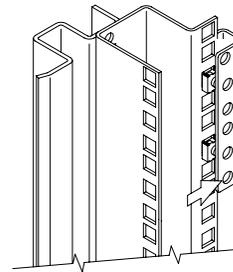
## RACK ANGLE ADAPTER BRACKET



Rack Angle Adapter Brackets mount to PROLINE and PROLINE G2 Rack Angles. They bring out the rear leg mounting surface to allow traditional Rack Mount Slides (A16SL2U, sold separately) to be used. Fits tapped or through-hole PROLINE and PROLINE G2 Rack Angles. Rack Angle Adapter Brackets come in a quantity of four and are 14 gauge steel. They have a plated finish.

**BULLETIN: P20**

Catalog Number	Gauge	Use With
PBRAA	14	Rack-Mount Slides A16SL2U



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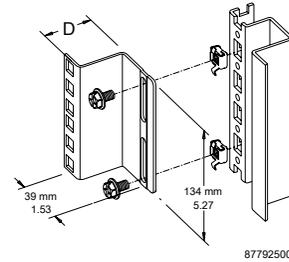
## FRAME ACCESSORY BRACKET



Frame Accessory Brackets mount directly to the PROLINE frame and are used in place of rack angles to mount rack accessories such as shelves and pull-out shelves. Frame Accessory Brackets are furnished in sets of four and are 14 gauge plated steel. Mounting hardware is included.

**BULLETIN: P20**

Catalog Number	Description	D (mm)	D (in.)
PFB19	19-in. EIA spacing	36	1.42
PFB23	23-in. EIA spacing	36	1.42
PFB24	24-in. EIA spacing	22	0.87
PFBM	Metric IEC 91721 spacing	36	1.42

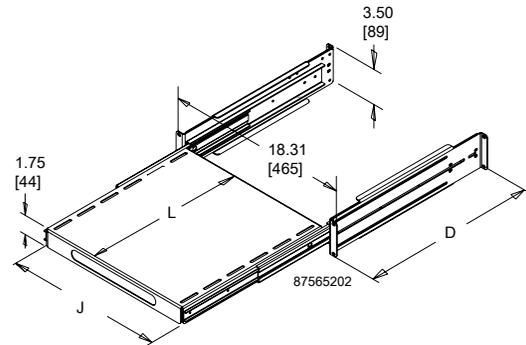


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## RACK-MOUNT, PULL-OUT SHELF

Rack-Mount, Pull-out Shelf mounts to front surface of front and back rack angles. Models fit 19- or 23-in. rack spacing. Adjusts to fit multiple-depth enclosures and rack angle placements. Shelf can be used on 2-post rack or cabinet with front rack angles only by reversing support bracket. Optional cable manager arm available. 14 gauge steel with 12 gauge supports and RAL 9005 black or RAL 7035 gray polyester powder paint finish. Load rating: 150 lb. (68.0 kg) with four corner mounting; 75 lb. (34.0 kg) with two-post or front-rack-angle cabinet mounting. Optional Cable Manager Arm is recommended to help control cable movement as shelf slides in and out.

**BULLETIN: DACCY, P20**



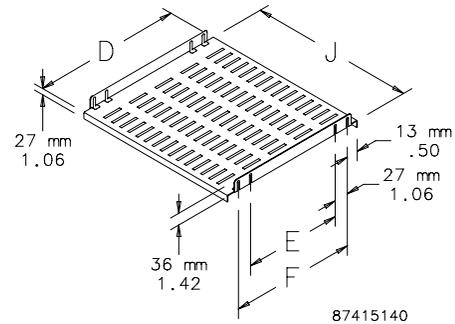
Catalog Number	D Max. (in.)	D Max. (mm)	L (in.)	L (mm)	J (in.)	J (mm)	Shelf Pullout (in.)	Shelf Pullout (mm)	Fits Rack	Rack Units	Color
P19SHP68B	37.40	950	16.72	425	16.20	412	17.00	432	19 in.	2	Black
P19SHP68	37.40	950	16.72	425	16.20	412	17.00	432	19 in.	2	Gray
P19SHP810B	41.30	1050	24.59	625	16.20	412	17.00	432	19 in.	2	Black
P19SHP810	41.30	1050	24.59	625	16.20	412	17.00	432	19 in.	2	Gray
P23SHP68B	37.40	950	16.72	425	20.20	513	17.00	432	23 in.	2	Black
P23SHP68	37.40	950	16.72	425	20.20	513	17.00	432	23 in.	2	Gray
P23SHP810B	41.30	1050	24.59	625	20.20	513	17.00	432	23 in.	2	Black
P23SHP810	41.30	1050	24.59	625	20.20	513	17.00	432	23 in.	2	Gray

### FIXED SHELF

Fixed Shelves mount to the front and back rack angles. The shelf is 14 gauge steel with adjustable 12 gauge steel supports. Adjustable to fit multiple-depth enclosures or rack angle placements. Entire assembly is finished with RAL 7035 textured light-gray polyester powder paint. Load rating is 150 lb. (68 kg).

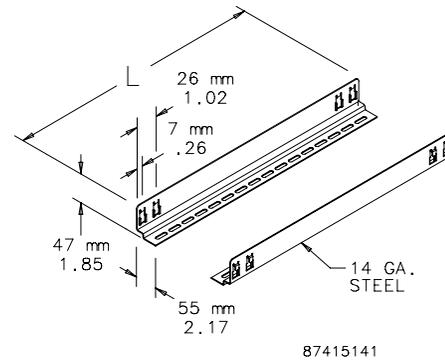
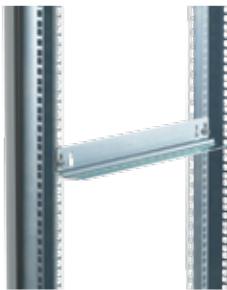
**Rack accessories that are shorter than the enclosure depth can be mounted to rack angles or frame accessory brackets attached to grid straps. Order these items separately.**

**BULLETIN: P20**



Catalog Number	D (mm)	D (in.)	E (mm)	E (in.)	F (mm)	F (in.)	J (mm)	J (in.)	Fits Rack Width
P19SH5	349	13.74	264.8	10.43	318.4	12.54	477	18.78	19 in.
P19SH6	449	17.68	364.8	14.36	418.4	16.47	477	18.78	19 in.
P19SH8	649	25.55	564.8	22.24	618.4	24.35	477	18.78	19 in.
P19SH9	749	29.49	664.8	26.17	718.4	28.28	477	18.78	19 in.
P23SH5	349	13.74	270	10.63	323.6	12.74	578.6	22.78	23 in.

### GUIDES



Equipment Guides help support rack-mounted equipment during installation. Guides mount between two pairs of rack angles. Slotted holes are provided for vertical or lateral adjustment. Furnished in pairs. Guides have plated finish. Mounting hardware included. Rack accessories that are shorter than the enclosure depth can be mounted to rack angles using Adjustable Rack-Mount Rails or Grid Straps. Order these items separately.

**BULLETIN: P20**

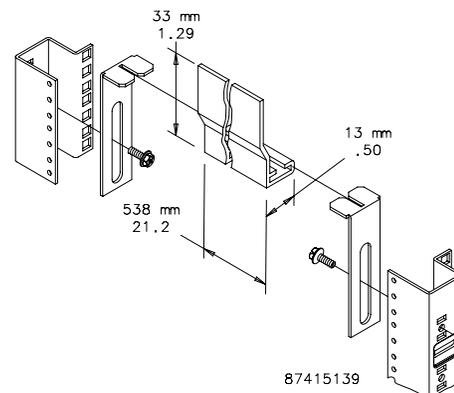
Catalog Number	L (mm)	L (in.)	Frame Depth (mm)	Frame Depth (in.)
PG4	218	8.80	400	15.75
PG5	319	12.56	500	19.68
PG6	420	16.54	600	23.62
PG8	621	24.45	800	31.49
PG9	823	32.40	900	35.43

### FILLER PANEL FOR RACK ANGLES

Filler Panels are used to completely fill 19-in. rack mounting spaces at top and bottom of PROLINE door opening. Extruded aluminum Filler Panels are furnished in pairs and include mounting hardware.

**BULLETIN: P20**

Catalog Number	Description
PF19RA	Filler Panel for Rack Angles



### SCREW PACKAGE

Twenty plated screws are included in each package. Screws attach rack panels to rack mounting angles. Available in #10-32, #12-24, M5 and M6.

**BULLETIN: A80, DACCY**

Catalog Number	Description	Pkg. Qty.
AS1032	10-32 x .75	20
ES1224	12-24 x .5	20
ASM5	Metric M5 x 20	20
ASM6	Metric M6 x 16	20
ASM6250	Metric M6 x 16	250

### CAGE NUT PACKAGE

Twenty plated cage nuts are included in each package. Available in #10-32, #12-24, M5 and M6, these cage nuts fit all PROLINE and PROLINE G2 rack angles with square holes.

**BULLETIN: DACCY**

Catalog Number	Description	Pkg. Qty.
P1032CN	10-32 thread	20
P1224CN	12-24 thread	20
PM5CN	Metric M5 thread	20
PM6CN	Metric M6 thread	20

## RACK PANELS



Rack Panels are available in aluminum and painted steel. Aluminum Rack Panels are .125-in.-thick 5052-H32 alloy. Steel Rack Panels are 12 gauge steel and finished in RAL 7035 textured light-gray polyester powder paint. All panels are flat with oblong holes positioned at EIA standard spacing. Mounting hardware is sold separately.

**BULLETIN: P20**

Catalog Number	Material	Rack Angle Size	Rack Units
P19RP1UA	Aluminum	19 in.	1
P19RP1UP	Steel	19 in.	1
P19RP2UA	Aluminum	19 in.	2
P19RP2UP	Steel	19 in.	2
P19RP3UA	Aluminum	19 in.	3
P19RP3UP	Steel	19 in.	3
P19RP4UA	Aluminum	19 in.	4
P19RP4UP	Steel	19 in.	4
P19RP5UA	Aluminum	19 in.	5
P19RP5UP	Steel	19 in.	5
P19RP6UP	Steel	19 in.	6
P19RP6UA	Aluminum	19 in.	6
P19RP7UA	Aluminum	19 in.	7
P19RP7UP	Steel	19 in.	7
P19RP8UA	Aluminum	19 in.	8
P19RP8UP	Steel	19 in.	8
P19RP9UA	Aluminum	19 in.	9
P19RP9UP	Steel	19 in.	9
P19RP10UA	Aluminum	19 in.	10
P19RP10UP	Steel	19 in.	10
P19RP11UA	Aluminum	19 in.	11
P19RP11UP	Steel	19 in.	11
P19RP12UA	Aluminum	19 in.	12
P19RP12UP	Steel	19 in.	12
P19RP16UA	Aluminum	19 in.	16
P19RP16UP	Steel	19 in.	16

## ADJUSTABLE RACK-MOUNTING RAILS



Catalog Number	L (mm)	L (in.)	Fits Frame Depth	Finish
PBARA9	811	31.92	900	Plated
PBARA9B	811	31.92	900	Painted RAL 9005 Black
PBARA10B	911	35.86	1000	Painted RAL 9005 Black
PBARA11B	1011	39.79	1100	Painted RAL 9005 Black
PBARA12B	1111	43.73	1200	Painted RAL 9005 Black

Mounting rails allow rack angles to be positioned anywhere within the PROLINE frame. The left-to-right adjustment pertains only when the enclosure is wider than the minimum width required for rack angles. Includes two right-hand and two left-hand 12 gauge plated or painted steel mounting rails. Mounting hardware is included.

**BULLETIN: DPY, P20**

Catalog Number	L (mm)	L (in.)	Fits Frame Depth	Finish
PBARA6	511	20.11	600	Plated
PBARA8	711	27.98	800	Plated

## FRAME-REDUCING BRACKETS FOR FRAMES OR GRID STRAPS

Frame-Reducing Brackets mount directly to 700- or 800-mm wide PROLINE frames or to grid straps. Converts wider frames to 600-mm wide, allowing 19-in. rack angles to fit, or to 700-mm wide, allowing 23-in. rack angles to fit. Can be used to left- or right-justify the rack-mounted equipment. Furnished in sets of four. 14 gauge plated steel. Mounting hardware is included.

### BULLETIN: P20

Catalog Number	Reduces Frame Width	W (mm)	W (in.)	Converts Frame Width
PRB200	200	200	7.87	From 1000 to 600 From 1000 to 800 From 800 to 600 mm

Catalog Number	Reduces Frame Width	W (mm)	W (in.)	Converts Frame Width
PRB50	50	50	1.97	From 700 to 600 From 800 to 700 mm
PRB100	100	100	3.94	From 800 to 600 From 800 to 700 From 700 to 600 mm