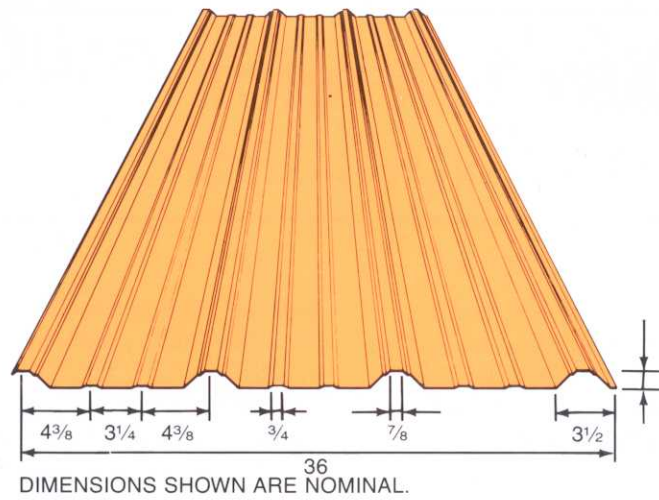


# THE DURARIB STAR ROOF SYSTEM



# STAR DURA-RIB ROOF SYSTEM



ENGINEERING PROPERTIES OF STEEL DURA-RIB ROOF PANEL									
GAUGE	STEEL THK. (IN.)	COATED THK. (IN.)	FY (KSI)	WEIGHT (#/FT <sup>2</sup> )	OUTSIDE IN COMPRESSION		INSIDE IN COMPRESSION		F <sub>b</sub> (KSI)
					I <sub>x</sub> (IN. <sup>4</sup> /FT.)	S <sub>x</sub> (IN. <sup>3</sup> /FT.)	I <sub>y</sub> (IN. <sup>4</sup> /FT.)	S <sub>y</sub> (IN. <sup>3</sup> /FT.)	
26	.018	.0198	80	.933	0.03909	0.04327	0.03588	0.04294	36
24	.022	.0239	50	1.128	0.04752	0.05614	0.04518	0.05354	30

- SECTION PROPERTIES HAVE BEEN CALCULATED IN ACCORDANCE WITH THE 1986 AISI COLD-FORMED SPECIFICATION WITH 1989 ADDENDUM.
- STEEL THICKNESS WAS USED IN DETERMINING SECTION PROPERTIES. COATED THICKNESS INCLUDES GALVANIZED OR ZINC-ALUMINUM COATING.

ALLOWABLE LOAD (PSF) FOR NOMINAL PURLIN SPACING							
GAUGE	SPAN CONDITION	LOAD CONDITION	PURLIN SPACING				
			3'-0"	4'-0"	5'-0"	6'-0"	
26	SIMPLE	GRAVITY	115.16 151.87	64.78 64.07	41.46 32.80	28.79 18.98	
		UPLIFT	152.37 174.24	85.71 73.51	54.85 37.64	38.09 21.78	
	2-SPAN	GRAVITY	114.28 351.13	64.28 148.13	41.14 75.84	28.57 43.89	
		UPLIFT	153.54 438.91	86.37 185.17	55.28 94.81	38.39 54.86	
	3-SPAN	GRAVITY	142.85 274.80	80.35 115.93	51.43 59.36	35.71 34.35	
		UPLIFT	191.93 343.50	107.96 144.91	69.09 74.20	47.98 42.94	
	4-SPAN	GRAVITY	133.38 291.71	75.03 123.06	48.02 63.01	33.34 36.46	
		UPLIFT	179.20 364.64	100.80 153.83	64.51 78.76	44.80 45.58	
	24	SIMPLE	GRAVITY	124.51 184.62	70.03 77.88	44.82 39.88	31.13 23.08
			UPLIFT	158.32 219.41	89.06 92.56	57.00 47.39	39.58 27.43
		2-SPAN	GRAVITY	118.74 434.17	66.79 183.17	42.75 93.78	29.69 54.27
			UPLIFT	166.01 542.71	93.38 228.96	59.76 117.23	41.50 67.84
3-SPAN		GRAVITY	148.43 339.79	83.49 143.35	53.43 73.39	37.11 42.47	
		UPLIFT	207.51 424.73	116.72 179.18	74.70 91.74	51.88 53.09	
4-SPAN		GRAVITY	138.59 360.70	77.95 152.17	49.89 77.91	34.65 45.09	
		UPLIFT	193.75 450.87	108.99 190.21	60.75 97.39	48.44 56.36	

- TOP VALUES ARE BASED ON STRESS. UPLIFT VALUES INCLUDE 1/3 INCREASE FOR WIND.
- BOTTOM VALUES ARE BASED ON DEFLECTION OF L/150 FOR GRAVITY AND L/120 FOR UPLIFT.
- STANDARD FASTENER UPLIFT ALLOWABLE IS 267 LBS. PER FASTENER INCLUDING 1/3 INCREASE. (PULLOVER FOR #12 FASTENER WITH 1/2" DIA. WASHER.)



## Star Building Systems

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PDS-DRR-600

# Dura-Rib Roof System Specifications

## I. GENERAL

- A. The roof system will consist of metal panels joined together with fasteners through overlapping sidelaps and secured to the structure with fasteners. Integral components such as ridge cover, perimeter trim, gutter and flashings will be furnished as required.

## II. PANEL DESCRIPTION

- A. All Dura-Rib panels will be precision roll formed to provide 36" wide net coverage. Finished panels will have four major corrugations 1 1/8" high at 12" on center, with two minor ribs between each major rib.

## III. PANEL DESIGN

- A. Panel design shall be in accordance with AISI "Specification for the Design of Light-Gauge, Cold Formed Steel Structural Members," and in accordance with sound engineering methods and practices.
- B. Panels shall have a support bearing leg on one lap corrugation which shall support the panel at the sidelaps.
- C. Panels of maximum possible length (42'-9") will be provided to minimize end splices. All endlaps will be minimum of 6" and shall occur at supporting member.
- D. A butyl sealing compound which is nondrying, nonshrinking, and nontoxic with superior adhesion to plastics, metals and woods shall be placed in all roof sidelaps and endlaps in a way that prevented entry of water, dust and air into the building. The compound can be easily applied at temperatures of -10° to +140° F.
- E. All fasteners will be installed at locations shown on manufacturer's drawings.

## IV. PANEL MATERIALS AND FINISH

- A. The roof will be covered with:
  - 1. Dura-Rib panels of 26 or 24 gauge, 80,000 PSI minimum yield steel (ASTM A446-72 Grade D) with G-90 zinc coating (ASTM Galvanized Specification A525) or Aluminum-Zinc alloy coating (ASTM Specification A792).
  - 2. Factory colored Dura-Rib panels of 26 or 24 gauge, 80,000 PSI minimum yield steel (ASTM A446-72 Grade D) with G90 zinc coating (ASTM Galvanized Specification A525) or Aluminum-Zinc alloy coating (ASTM Specification A792). Siliconized of linear polyester coating can be applied, or an inorganically pigmented 70% polyvinylidene fluoride coating can be applied (70% Kynar).

## V. FASTENERS

- A. All connection of roof panels to structural framing shall be made with #12 - 14 x 1 1/4" self-drilling carbon steel screws, long life coated, colored to match roof panel, with sealing washer.
- B. All connection of roof panel side laps shall be made with 1/4" x 3/4" self-drilling carbon steel screws, long life coated, colored to match roof panel, with sealing washer.
- C. All connection of trim to wall panels and trim spliced will be made with #8 x 5/8" self-drilling carbon steel screws, cadmium plated and painted.

## VI. ACCESSORIES

- A. Accessories, i.e. ventilators, windows, doors, etc. shall be as standard with Star Building Systems unless otherwise noted, and furnished as specified.
- B. Standard accessory locations shall be as shown on erection drawings as furnished by Star Building Systems.

## VII. TESTING

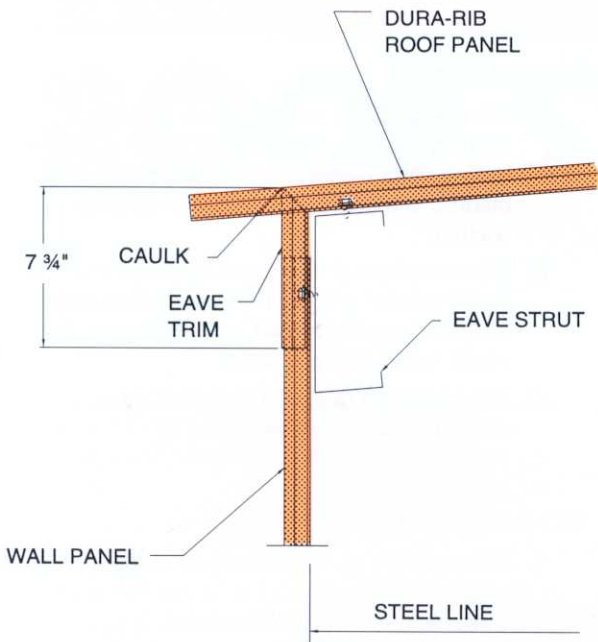
- A. The Dura-Rib Roof System is classified by the UNDERWRITER'S LABORATORIES, INC. class 30 or 90 for wind uplift resistance only. U.L. Classified Building Materials Index, Construction No. 59. The roof system shall be listed as class 30 or 90 in the U.L. Materials Directory for wind uplift resistance test per UL 580.

## VIII. WARRANTIES

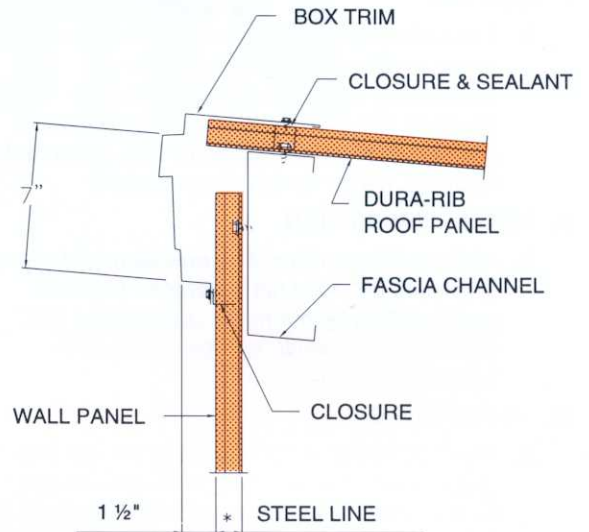
- A. All roof panels shall be warranted for a period of one year for defects in material or workmanship.
- B. Panels finished with siliconized or linear polyester coatings shall be warranted for a 10 year period against blistering, peeling, and chalking according to manufacturer's standard warranty. Panels finished with 70% Kynar coating shall be warranted for 20 years.
- C. All unfinished roof panels are available with warranties of 20 years against perforation according to manufacturer's standard warranty.



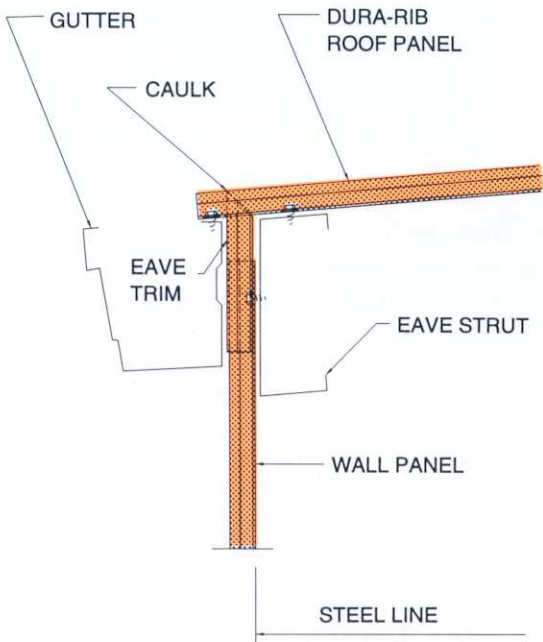
# DURA-RIB ROOF SYSTEM



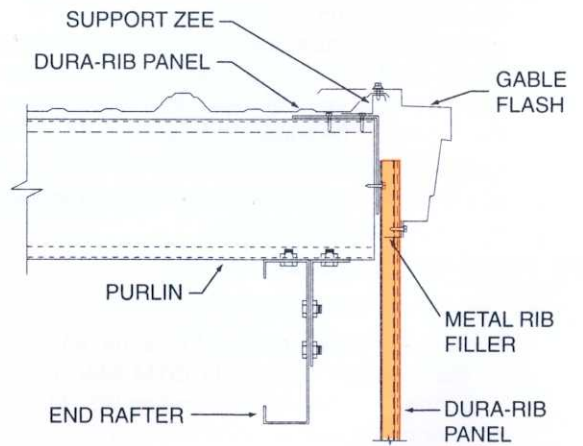
**LOW EAVE - PLAIN TRIM**



**HIGH EAVE - BOX TRIM**



**EXTERIOR EAVE GUTTER**



**GABLE - BOX TRIM**

# DURA RIB

STAR

DURABLE, COST EFFICIENT

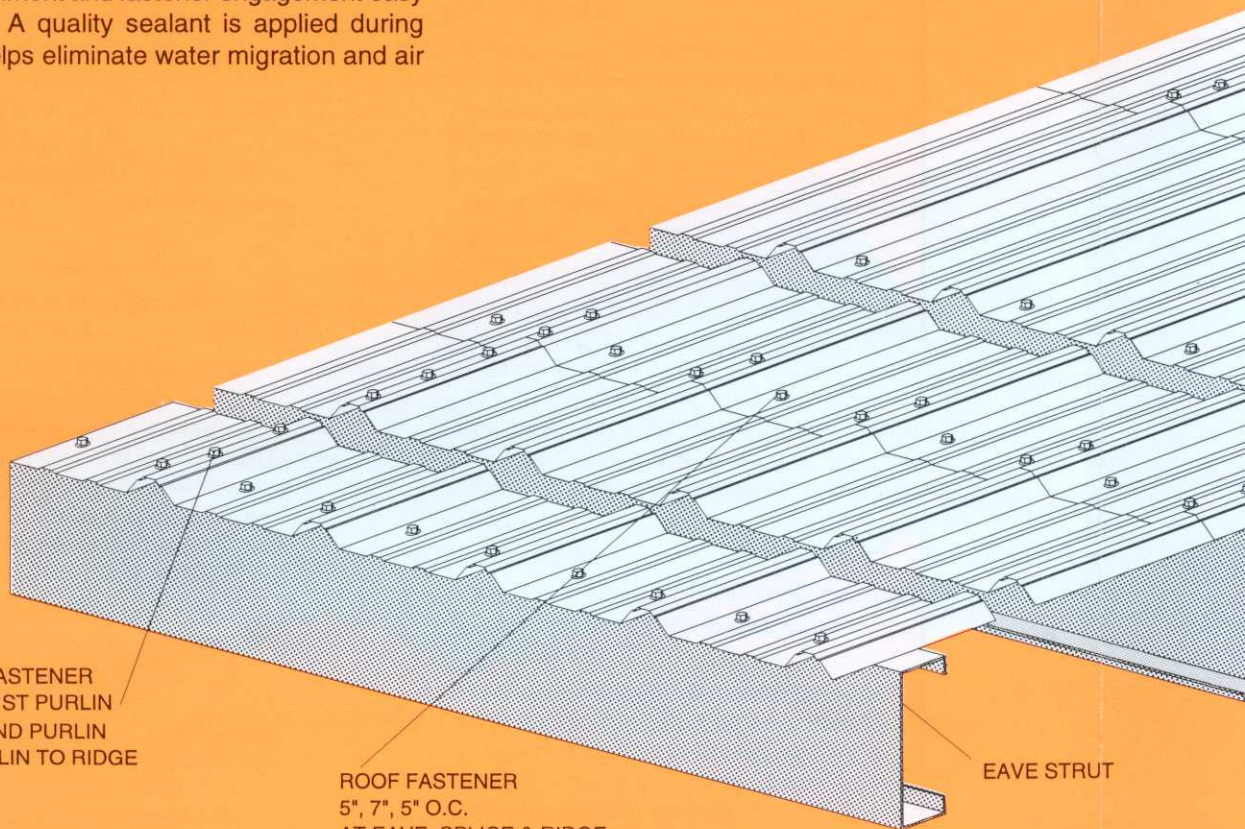
Star Dura-Rib roof panel is a proven product that provides durability, cost efficiency, and ease in erection.

Dura-Rib is a 36" wide panel with 1 1/8" high ribs on 12" centers and a full sidelap configuration. It is available in 24 and 26 gauge steel. The 80,000 pounds per square inch yield enhances walkability, resistance to hail damage and along with the deep ribbed panel configuration increases load carrying capacity.

The sidelap configuration is engineered to ensure weathertightness. The purlin bearing leg design makes panel alignment and fastener engagement easy and consistent. A quality sealant is applied during erection which helps eliminate water migration and air infiltration.

Special fasteners with innovative pilot points to minimize fastener strip-out are used, and increased fasteners along the eaves will combat moisture migration from ice and snow build-up.

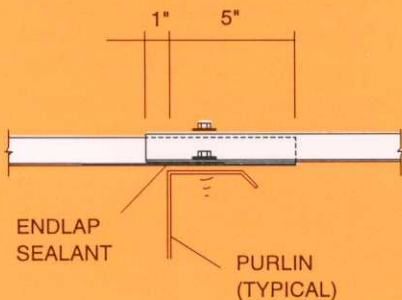
Dura-Rib panels have both UL 30 and UL 90 classification from Underwriters Laboratories, Inc., for wind uplift resistance. These ratings meet the requirements in most states for reduced insurance coverage rates, thereby resulting in substantial savings on insurance premiums.



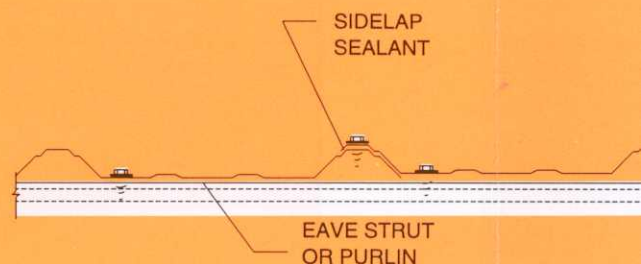
ROOF SIDELAP FASTENER  
6" O.C. EAVE TO 1ST PURLIN  
12' O.C. 1ST TO 2ND PURLIN  
24" O.C. 2ND PURLIN TO RIDGE

ROOF FASTENER  
5", 7", 5" O.C.  
AT EAVE, SPLICE & RIDGE

EAVE STRUT



**TYPICAL PANEL LAP SECTION**



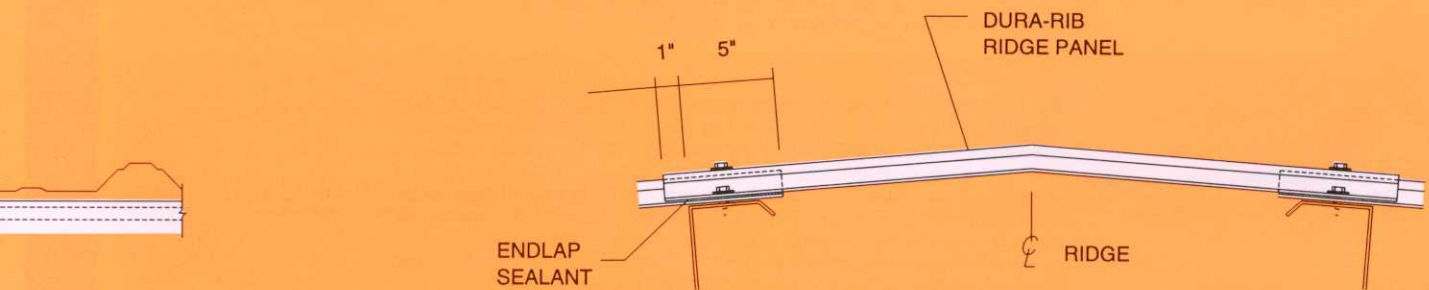
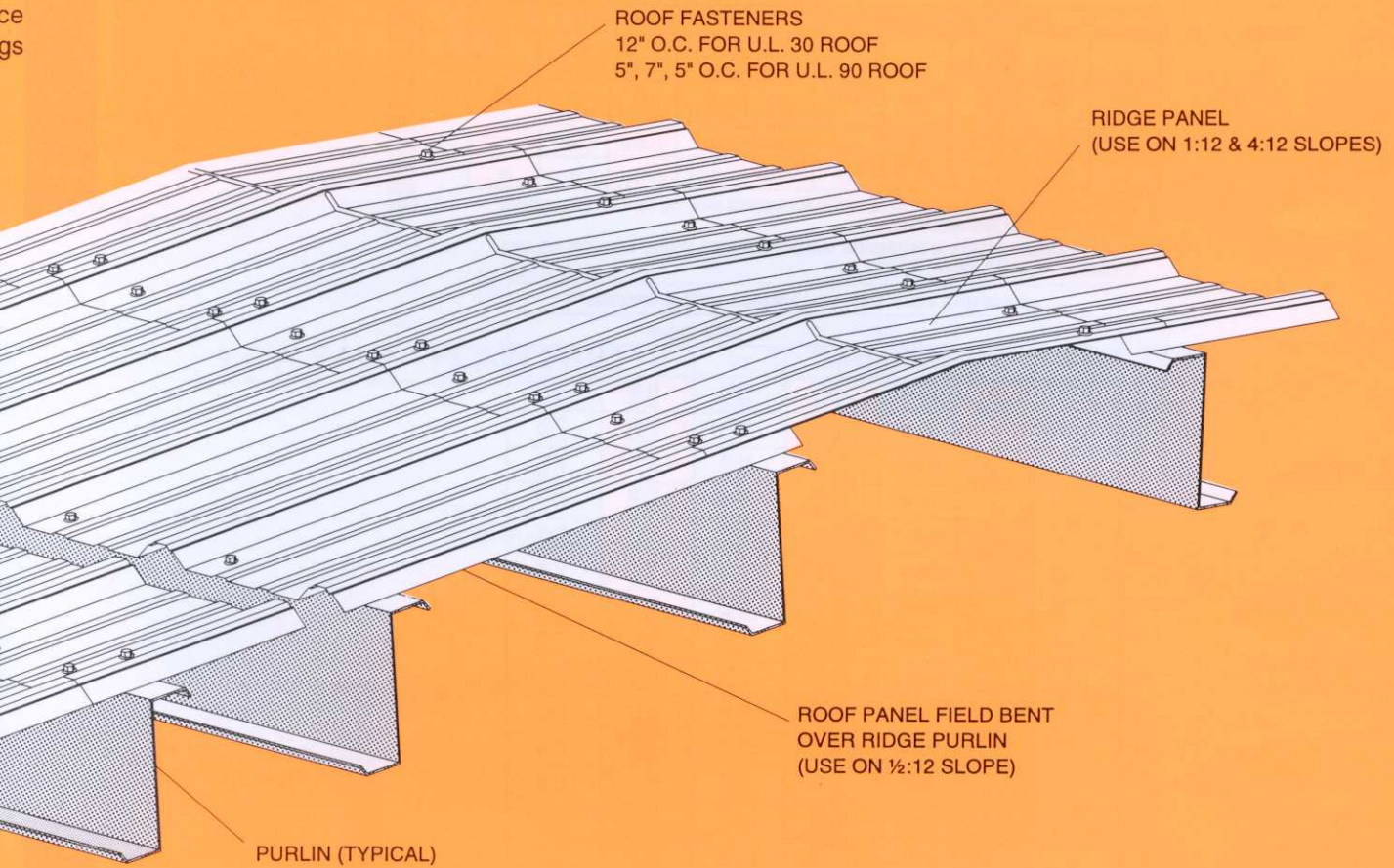
**TYPICAL ROOF SECTION**

# ST EFFICIENT, EASY TO ERECT

Dura-Rib is available with a long life coating guaranteed for 20 years against roof perforations. It is also available with G-90 galvanized or Aluminum-Zinc coating, factory painted with either siliconized polyester or 70% Kynar®, warranted for up to 20 years against

chipping, peeling and blistering. The standard color for Dura-Rib roof panels is white with other colors available.

When these factors are combined, Dura-Rib becomes an uncompromising roof system.



**TYPICAL RIDGE SECTION**