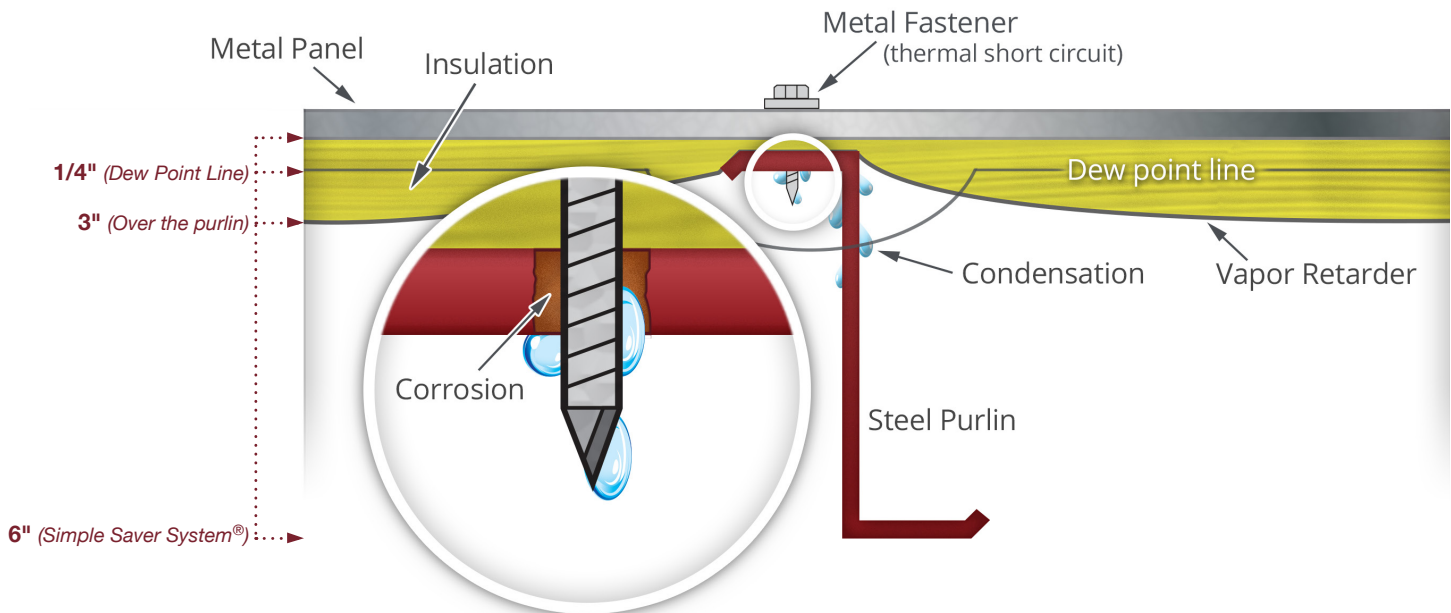


EFFECTS OF TRADITIONAL INSULATION SYSTEMS



MAJOR DEFECTS

- Improper placement of vapor retarder (over the purlin)
- Severe loss of insulation value from compression

RELATED PROBLEMS WITH TRADITIONAL INSULATION SYSTEMS

Condensation

Causes dripping, damage to ceilings and building contents, deterioration of facings, and wet insulation. This condensation is often perceived to be caused by roof leaks.

Corrosion

Structural deterioration, roof panel deterioration, shortened roof life, high repair costs. Also causes loosening of roof fasteners and standing seam clip fasteners.

Exposed Purlins

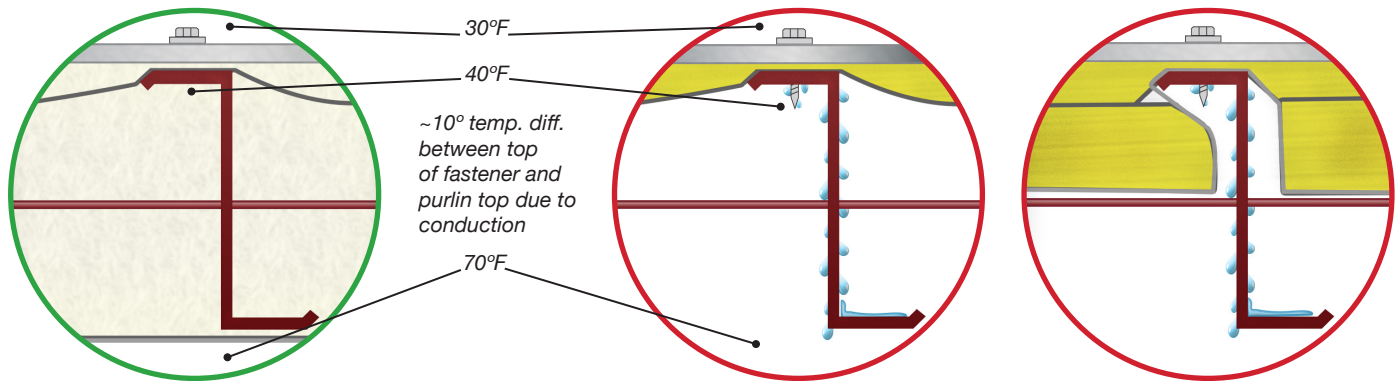
Unfinished appearance, collects dust and dirt, absorbs light, reflects sound, needs painting and cleaning. Radiates heat from the exterior and transfers cold air into building's interior.

Poor Quality In-place Vapor Retarder

Ineffective joint sealing methods destroy perm ratings. Improper placement outside of dew point line results in condensation and corrosion.

Obsolete Thermal Performance Actual insulation values are 50% to 75% less than economically desirable.

SIMPLE SAVER SYSTEM® VS. TRADITIONAL METHODS OF INSTALLATION



SIMPLE SAVER SYSTEM®

- Thick Insulation
- Proper Vapor Retarder Placement
- Purlins Fully Encapsulated
- Attractive Appearance
- Extrusion Welded Seams

OVER-THE-PURLIN METHOD

- Severely Compressed Insulation
- Defective Vapor Retarder Placement
- Exposed Conductive Structure
- Unfinished Appearance
- Poorly Sealed Seams

LONG TAB METHOD

- Compressed Insulation
- Defective Vapor Retarder Placement
- Voids in Insulation
- Exposed Conductive Structure
- Unfinished Appearance
- Poorly Sealed Seams

METAL BUILDING DEW POINT TABLE*

Interior Temp. (dry bulb)	Interior Relative Humidity Percentage								
	10	20	30	40	50	60	70	80	90
	Purlin Temperature at Which Condensation Occurs								
-20							-27	-24	-22
-10				-28	-23	-20	-17	-14	-12
0		-30	-23	-18	-13	-10	-7	-5	-2
10	-30	-21	-13	-8	-4	0	3	5	8
20	-23	-12	-5	1	5	10	13	15	18
30	-15	-3	5	11	15	19	22	25	28
40	-8	5	13	19	24	28	31	34	37
50	0	13	21	27	32	37	40	44	47
60	7	20	29	35	41	46	50	54	57
Room temp @ 5' above floor level → 70	14	28	37	45	50	55	59	63	67
Ceiling temperature → 80	20	36	46	54	60	65	69	73	77
90	27	44	54	63	69	74	79	83	87
100	34	52	63	71	78	84	88		
110	41	60	71	80	87				

The temperature at ceiling is often 10°F higher than temperatures at 5' above floor level due to heat gradients. To prevent condensation in a metal building, warm humid air must be prevented from contacting any interior surface temperature that is below the dew point of the interior air mixture. The over-the-purlin and long tab methods of insulating do not prevent internal air from contacting cold conductive roof fasteners and the surrounding purlin areas.