



1:15



- JOINT MOVEMENT VALUES ARE BASED ON A JOINT SETTING TEMPERATURE OF 15°C
- JOINT MOVEMENT VALUES ARE BASED ON MINIMUM AND MAXIMUM EFFECTIVE TEMPERATURES OF -40°C AND +40°C, RESPECTIVELY
- MAXIMUM PERMISSIBLE SHEAR MOVEMENT FOR: (SHEAR MOVEMENT ACTING ALONE)
 - 102 V-SEAL IS 20
 - 125 V-SEAL IS 25
 - 178 V-SEAL IS 30
- MAXIMUM PERMISSIBLE MOVEMENT NORMAL TO JOINT FOR: (NORMAL MOVEMENT ACTING ALONE)
 - 102 V-SEAL IS 30
 - 125 V-SEAL IS 55
 - 178 V-SEAL IS 90
- MAXIMUM GAP "X" FOR:
 - 102 V-SEAL IS 90
 - 125 V-SEAL IS 115
 - 178 V-SEAL IS 150
- THE 102, 125, 178 SEAL REFERS TO MANUFACTURER'S SIZE DESIGNATION
- JOINTS ON SKEW SHALL HAVE THE SEAL INSTALLED AT THE DECK JOINT SETTING TEMPERATURE TO MAINTAIN ALIGNMENT OF EXTRUSION ENDS

- BOLT SPACING "H" IS NOT TO EXCEED 150
- SELECT PLATE WIDTH "D_A" OR "D_B" TO AVOID LOCATING GAPS BETWEEN COVER PLATE UNDER WHEEL LINES
- COUNTERBORE HOLE NOT SHOWN FOR CLARITY

THE DECK JOINT SHALL MEET THE FOLLOWING TOLERANCES:

- VARIATION OF GAP SETTING "X" SHALL BE WITHIN ± 3 mm BETWEEN CROWN AND GUTTER LINES
- PLATE GAPS BETWEEN COVER PLATE AND BASE PLATE:
 - = 100% OF LENGTH: GAP <= 0.4 mm AT HOLD POINT 1
 - = 100% OF LENGTH: GAP <= 1.0 mm AT HOLD POINT 2 AND WITNESS POINTS 1 & 2
- MAXIMUM ALLOWABLE VARIATION FOR FLATNESS OF COVER PLATES AND BASE PLATES IN THE DIRECTION PARALLEL TO TRAFFIC IS 0.5 mm/m
- OUT-OF-STRAIGHTNESS OF THE DECK JOINT ASSEMBLY BETWEEN THE CROWN AND GUTTER LINES IN THE VERTICAL PLANE SHALL NOT EXCEED 5 mm
- HORIZONTAL SWEEP OF THE DECK JOINT ASSEMBLY BETWEEN THE CROWN AND GUTTER LINES SHALL NOT EXCEED 6 mm
- IN A FULLY CLOSED POSITION, THE COVER PLATE SHALL HAVE A UNIFORM SIDE GAP TO THE ADJACENT FINGER OF 3 mm $\pm$ 1.5 mm

V-SEAL SUMMARY TABLE			
SKEW (DEGREES)	MAXIMUM PERMISSIBLE JOINT MOVEMENT PARALLEL TO ROADWAY (mm)		
	102 mm SEAL	125 mm SEAL	178 mm SEAL
0	30	55	90
10	30	56	91
15	31	57	93
20	32	59	96
25	33	61	99
30	35	64	87
35	37	63	76
40	39	57	68
45	41	51	62
50	38	47	57

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- PLATE GAPS SHALL BE MEASURED BETWEEN THE COVER PLATES AND BASE PLATES AT THE FOLLOWING WITNESS AND HOLD POINTS:
 - AFTER COMPLETION OF FABRICATION, BUT BEFORE SHIPPING ANGLES ARE TIGHTENED. PLATE GAP MEASUREMENTS SHALL BE TAKEN AT BOTH THE -5°C AND +15°C DECK JOINT GAP SETTINGS WITH THE JOINT IN A RELAXED CONDITION (HOLD POINT 1)
 - AFTER SITE INSTALLATION OF THE DECK JOINT INTO THE BLOCKOUT WITH SHIPPING ANGLES REMOVED BUT BEFORE ANY CONCRETE IS PLACED (WITNESS POINT 1)
 - AFTER ABUTMENT SIDE BLOCKOUT CONCRETE HAS BEEN PLACED AND HAS ACHIEVED A MINIMUM STRENGTH OF 20 MPa BUT BEFORE CONCRETE IS PLACED INTO THE DECK SIDE BLOCKOUT (WITNESS POINT 2)
 - AFTER COMPLETION OF CURING OF ALL THE DECK JOINT BLOCKOUT CONCRETE, WHEN THE BRIDGE TEMPERATURE AND TEMPERATURE GRADIENT IN THE BRIDGE GIRDERS ARE SIMILAR TO THOSE THAT EXISTED AT WITNESS POINT 2 AND BEFORE EPOXY INJECTION (HOLD POINT 2)
- AT EACH WITNESS POINT AND HOLD POINT, WRITTEN ACCEPTANCE OF THE DECK JOINT PLATE GAP MEASUREMENTS SHALL BE PROVIDED BY BOTH THE CONTRACTOR AND CONSULTANT WITHIN THE DECK JOINT ASSEMBLY DELIVERY AND INSTALLATION INSPECTION AND TEST PLAN (ITP)

• WORK THESE DRAWINGS TOGETHER: S-1800, S-1801, S-1802, S-1803, S-1804 AND S-1805

5				RECOMMENDED DIRECTOR BRIDGE ENGINEERING	
4				ORIGINAL SIGNED BY <u>JOHN ALEXANDER</u>	
3					
2	2023-10-01	COVER PLATE MATERIAL		APPROVED EXECUTIVE DIRECTOR TECHNICAL STANDARDS BRANCH	COVER PLATED V-SEAL DECK JOINT ASSEMBLY - SHEET 1
1	2021-02-11	GENERAL REVISIONS	MT	ORIGINAL SIGNED BY <u>DARREN CARTER</u>	
REV	DATE	REVISION		BY	
DESIGNER	ORIGINAL SIGNED BY	MT	CHECKER	ORIGINAL SIGNED BY	CM
				DATE <u>2021-02-16</u>	
				DATE 2020-09-04	
				SHEET 1 OF 6	
				DRAWING S-1800-20	