



DIMENSIONS SHOWN AS: inches (mm)

EXCHANGER SIZE *BAFFLE SPACING	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS3H-85-4*-E3	74 7/8	1902	60 1/4	1530	48 5/8	1235	62	1574	4	102	1	25
WS3H-86-4*-E3	86 7/8	2207	72 1/4	1835	60 5/8	1540	74	1880	4	102	1 1/4	32
WS3H-87-4*-E3	98 7/8	2511	84 1/4	2140	72 5/8	1845	86	2184	4	102	1 1/4	32
WS3H-88-4*-E3	110 7/8	2816	96 1/4	2445	84 5/8	2149	98	2489	6	152	1 1/4	32
WS3H-89-4*-E3	122 7/8	3121	108 1/4	2750	96 5/8	2454	110	2794	6	152	1 1/4	32
WS3H-810-4*-E3	134 7/8	3426	120 1/4	3054	108 5/8	2759	122	3099	6	152	1 1/4	32
WS3H-811-4*-E3	146 7/8	3731	132 1/4	3359	120 5/8	3064	134	3404	6	152	1 1/4	32
WS3H-812-4*-E3	158 7/8	4035	144 1/4	3664	132 5/8	3369	146	3708	6	152	1 1/4	32
WS3H-813-4*-E3	170 7/8	4340	156 1/4	3969	144 5/8	3673	158	4013	6	152	1 1/4	32
WS3H-814-4*-E3	182 7/8	4645	168 1/4	4274	156 5/8	3978	170	4318	6	152	1 1/4	32

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	N1	AS PER TABLE	N5	2 (51) NPT
OUTLET	N2	AS PER TABLE	N6	2 (51) NPT
DRAIN			N7	1/2 (13) NPT
VENT	N4	3/4 (19) NPT		

NOTES: 1. SUPPORTS SUPPLIED ONLY IF SPECIFIED ON ORDER.
 2. NOZZLE SIZES SHOWN ARE RECOMMENDED FOR MAX. EXCHANGER LIFE, NO EXTERNAL FORCES APPLY.
 3. FABRICATED TO ASME CODE SECTION VIII DIVISION 1 AND LATEST ADDENDA.
 4. DRAWING IS NOT TO SCALE.
 5. ALL DIM'S ±1/8 (3) UNLESS OTHERWISE SHOWN.

DESIGN CONDITIONS				
	SHELL		TUBES	
DESIGN PRESSURE	300 PSIG	2068 KPa	300 PSIG	2068 KPa
DESIGN TEMPERATURE	375 °F	191 °C	375 °F	191 °C
MIN. DESIGN METAL TEMP.	35 °F	1.7 °C	35 °F	1.7 °C
HYDRO. TEST PRESSURE	450 PSIG	3102 KPa	450 PSIG	3102 KPa
CONTENTS	STEAM		WATER	

CUSTOMER:
 LOCATION:
 ENGINEER:
 ORDER No.:
 PROJECT/JOB:
 LOCATION:
 TAG: (QUOTE #)

TITLE	G.A. 300 LB. WS SERIES HEAT EXCHANGERS	A R M S T R O N G				NUMBER	WS3H-8-4P-E3(6)	REV.			
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