



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-183-2-1	43 7/8	1114	18 1/2	470	4	102	38	965	10	254	4	102
WS-184-2-1	55 7/8	1419	30 1/2	775	16	406	50	1270	10	254	4	102
WS-185-2-1	67 7/8	1724	42 1/2	1080	28	711	62	1575	10	254	4	102
WS-186-2-1	79 7/8	2029	54 1/2	1384	40	1016	74	1880	10	254	4	102
WS-187-2-1	91 7/8	2334	66 1/2	1689	52	1321	86	2184	10	254	4	102
WS-188-2-1	103 7/8	2638	78 1/2	1994	64	1626	98	2489	10	254	4	102
WS-189-2-1	115 7/8	2943	90 1/2	2299	76	1930	110	2794	10	254	4	102
WS-1810-2-1	127 7/8	3248	102 1/2	2604	88	2235	122	3099	10	254	4	102
WS-1811-2-1	139 7/8	3553	114 1/2	2908	100	2540	134	3404	10	254	4	102
WS-1812-2-1	151 7/8	3858	126 1/2	3213	112	2845	146	3708	10	254	4	102
WS-1813-2-1	163 7/8	4162	138 1/2	3518	124	3150	158	4013	10	254	4	102
WS-1814-2-1	175 7/8	4467	150 1/2	3823	136	3454	170	4318	10	254	4	102
WS-1815-2-1	187 7/8	4772	162 1/2	4128	148	3759	182	4623	10	254	4	102

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	N1	AS PER TABLE	N5	6 (152) NPT
OUTLET	N2	AS PER TABLE	N6	6 (152) NPT
DRAIN	N3	3/4 (19) 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	150 PSIG	1034 KPa	125 PSIG	862 KPa
DESIGN TEMPERATURE	375 °F	191 °C	375 °F	191 °C
MIN. DESIGN METAL TEMP.	40 °F	4.4 °C	40 °F	4.4 °C
HYDRO. TEST PRESSURE	225 PSIG	1551 KPa	250 PSIG	1723 KPa
CONTENTS	STEAM		WATER	

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

TITLE G.A. 150 LB. WS SERIES HEAT EXCHANGERS	A R M S T R O N G				NUMBER WS-18-2P-1	REV. A 2001 J.R.
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