



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-183-4-4	55 3/4	1416	18 1/2	470	4	102	38	965	10	254	4	102
WS-184-4-4	67 3/4	1721	30 1/2	775	16	406	50	1270	10	254	4	102
WS-185-4-4	79 3/4	2026	42 1/2	1080	28	711	62	1575	10	254	4	102
WS-186-4-4	91 3/4	2330	54 1/2	1384	40	1016	74	1880	10	254	4	102
WS-187-4-4	103 3/4	2635	66 1/2	1689	52	1321	86	2184	10	254	4	102
WS-188-4-4	115 3/4	2940	78 1/2	1994	64	1626	98	2489	10	254	4	102
WS-189-4-4	127 3/4	3245	90 1/2	2299	76	1930	110	2794	10	254	4	102
WS-1810-4-4	139 3/4	3550	102 1/2	2604	88	2235	122	3099	10	254	4	102
WS-1811-4-4	151 3/4	3854	114 1/2	2908	100	2540	134	3404	10	254	4	102
WS-1812-4-4	163 3/4	4159	126 1/2	3213	112	2845	146	3708	10	254	4	102
WS-1813-4-4	175 3/4	4464	138 1/2	3518	124	3150	158	4013	10	254	4	102
WS-1814-4-4	187 3/4	4769	150 1/2	3823	136	3454	170	4318	10	254	4	102
WS-1815-4-4	199 3/4	5074	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	4 (102) FLG
OUTLET	N2	AS PER TABLE	N6	4 (102) FLG
DRAIN	N3	3/4 (19) NPT	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 MAXIMUM EXCHANGER LIFE.
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	150 PSIG	1034 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	225 PSIG	1551 KPa
CONTENTS	STEAM		WATER	

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

TITLE	A R M S T R O N G				NUMBER	REV.
G.A. 150 LB. WS SERIES HEAT EXCHANGERS	TORONTO - CANADA	MONTREAL - CANADA	BUFFALO - N. Y.	COLCHESTER - U.K.	WS-18-4P-4	
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