



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		(N1)		(N2)	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-102-4E3	40 5/8	1032	24 1/2	622	15 1/4	387	26	660	4	102	1 1/2	38
WS-103-4E3	52 5/8	1337	36 1/2	927	27 1/4	692	38	965	4	102	1 1/2	38
WS-104-4E3	64 5/8	1641	48 1/2	1232	39 1/4	997	50	1270	6	152	2	51
WS-105-4E3	76 5/8	1946	60 1/2	1537	51 1/4	1302	62	1575	6	152	2	51
WS-106-4E3	88 5/8	2251	72 1/2	1842	63 1/4	1607	74	1880	6	152	2	51
WS-107-4E3	100 5/8	2556	84 1/2	2146	75 1/4	1911	86	2184	6	152	2	51
WS-108-4E3	112 5/8	2861	96 1/2	2451	87 1/4	2216	98	2489	6	152	2	51
WS-109-4E3	124 5/8	3165	108 1/2	2756	99 1/4	2521	110	2794	6	152	2	51
WS-1010-4E3	136 5/8	3470	120 1/2	3061	111 1/4	2826	122	3099	6	152	2	51
WS-1011-4E3	148 5/8	3775	132 1/2	3366	123 1/4	3131	134	3404	6	152	2	51
WS-1012-4E3	160 5/8	4080	144 1/2	3670	135 1/4	3435	146	3708	6	152	2	51
WS-1013-4E3	172 5/8	4385	156 1/2	3975	147 1/4	3740	158	4013	6	152	2	51
WS-1014-4E3	184 5/8	4689	168 1/2	4280	159 1/4	4045	170	4318	6	152	2	51
WS-1015-4E3	196 5/8	4994	180 1/2	4585	171 1/4	4350	182	4623	6	152	2	51

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	(N1)	AS PER TABLE	(N5)	3 (76) NPT
OUTLET	(N2)	AS PER TABLE	(N6)	3 (76) NPT
DRAIN	(N3)	1/2 (13) 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 DIMN'S  $\pm 1/8$  (3) UNLESS OTHERWISE SHOWN.

DESIGN CONDITIONS				
	SHELL		TUBES	
DESIGN PRESSURE	150 PSIG	1034 KP <sub>o</sub>	150 PSIG	1034 KP <sub>o</sub>
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	225 PSIG	1551 KP <sub>o</sub>	225 PSIG	1551 KP <sub>o</sub>
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-10-4P-E3	REV.	
DATE:	12 / 01 / 94	BY:	D.C.R.	TORONTO - CANADA	MONTREAL - CANADA	BUFFALO - N. Y.	COLCHESTER - U.K.		
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