



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-203-4E1	63 5/8	1616	36 7/8	937	21	533	39	991	12	305	4	102
WS-204-4E1	75 5/8	1921	48 7/8	1241	33	838	51	1295	12	305	4	102
WS-205-4E1	87 5/8	2226	60 7/8	1546	45	1143	63	1600	12	305	4	102
WS-206-4E1	99 5/8	2530	72 7/8	1851	57	1448	75	1905	12	305	4	102
WS-207-4E1	111 5/8	2835	84 7/8	2156	69	1753	87	2210	12	305	4	102
WS-208-4E1	123 5/8	3140	96 7/8	2461	81	2057	99	2515	12	305	4	102
WS-209-4E1	135 5/8	3445	108 7/8	2765	93	2362	111	2819	12	305	4	102
WS-2010-4E1	147 5/8	3750	120 7/8	3070	105	2667	123	3124	12	305	4	102
WS-2011-4E1	159 5/8	4054	132 7/8	3375	117	2972	135	3429	12	305	4	102
WS-2012-4E1	171 5/8	4359	144 7/8	3680	129	3277	147	3734	12	305	4	102
WS-2013-4E1	183 5/8	4664	156 7/8	3985	141	3581	159	4039	12	305	4	102
WS-2014-4E1	195 5/8	4969	168 7/8	4289	153	3886	171	4343	12	305	4	102
WS-2015-4E1	207 5/8	5274	180 7/8	4594	165	4191	183	4648	12	305	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	(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 ±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-20-4P-E1	REV.
DATE: 12/01/94	BY: D.C.R.	TORONTO - CANADA TEL: (416) 755-2291	MONTREAL - CANADA TEL: (514) 421-2424	BUFFALO - N. Y. TEL: (716) 693-8813	COLCHESTER - U.K. TEL: (44) 120-657-9491	