



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-123-4E3	54 7/8	1394	37	940	26	660	38	965	6	152	2	51
WS-124-4E3	66 7/8	1699	49	1245	38	965	50	1270	6	152	2	51
WS-125-4E3	78 7/8	2003	61	1549	50	1270	62	1575	6	152	2	51
WS-126-4E3	90 7/8	2308	73	1854	62	1575	74	1880	6	152	2	51
WS-127-4E3	102 7/8	2613	85	2159	74	1880	86	2184	8	203	2 1/2	64
WS-128-4E3	114 7/8	2918	97	2464	86	2184	98	2489	8	203	2 1/2	64
WS-129-4E3	126 7/8	3223	109	2769	98	2489	110	2794	8	203	2 1/2	64
WS-1210-4E3	138 7/8	3527	121	3073	110	2794	122	3099	8	203	2 1/2	64
WS-1211-4E3	150 7/8	3832	133	3378	122	3099	134	3404	8	203	2 1/2	64
WS-1212-4E3	162 7/8	4137	145	3683	134	3404	146	3708	8	203	2 1/2	64
WS-1213-4E3	174 7/8	4442	157	3988	146	3708	158	4013	8	203	2 1/2	64
WS-1214-4E3	186 7/8	4747	169	4293	158	4013	170	4318	8	203	2 1/2	64
WS-1215-4E3	198 7/8	5051	181	4597	170	4318	182	4623	8	203	2 1/2	64

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	N1	AS PER TABLE	N5	4 (102) NPT
OUTLET	N2	AS PER TABLE	N6	4 (102) 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 ±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.	35 °F	1.7 °C	35 °F	1.7 °C
HYDRO. TEST PRESSURE	225 PSIG	1551 KPa	200 PSIG	1379 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-12-4P-E3	REV.			
DATE:	12 / 01 / 94	BY:	D.C.R.	TEL :	(416) 755-2291	TEL :	(514) 421-2424	TEL :	(716) 693-8813	TEL :	(44) 120-657-9491