



DIMENSIONS SHOWN AS: inches (mm)

EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-168-2E2	127 1/8	3229	97 1/4	2470	83	2108	98	2489	10	254	3	76
WS-169-2E2	139 1/8	3534	109 1/4	2775	95	2413	110	2794	10	254	3	76
WS-1610-2E2	151 1/8	3839	121 1/4	3080	107	2718	122	3099	10	254	3	76
WS-1611-2E2	163 1/8	4143	133 1/4	3385	119	3023	134	3404	10	254	3	76
WS-1612-2E2	175 1/8	4448	145 1/4	3689	131	3327	146	3708	10	254	3	76
WS-1613-2E2	187 1/8	4753	157 1/4	3994	143	3632	158	4013	10	254	3	76
WS-1614-2E2	199 1/8	5058	169 1/4	4299	155	3937	170	4318	10	254	3	76
WS-1615-2E2	211 1/8	5363	181 1/4	4604	167	4242	182	4623	10	254	3	76

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	(N1)	AS PER TABLE	(N5)	6 (152) FLG
OUTLET	(N2)	AS PER TABLE	(N6)	6 (152) FLG
DRAIN	(N3)	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 KP <sub>a</sub>	150 PSIG	1034 KP <sub>a</sub>
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 KP <sub>a</sub>	300 PSIG	2068 KP <sub>a</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	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	WS-16-2P-E2-(10)	