



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-69-4E1	120 5/8	3064	107	2718	99	2515	109	2769	4	102	1 1/4	32
WS-610-4E1	132 5/8	3369	119	3023	111	2819	121	3073	4	102	1 1/4	32
WS-611-4E1	144 5/8	3673	131	3327	123	3124	133	3378	4	102	1 1/4	32
WS-612-4E1	156 5/8	3978	143	3632	135	3429	145	3683	4	102	1 1/4	32

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	(N1)	AS PER TABLE	(N5)	1 1/2 (38) NPT
OUTLET	(N2)	AS PER TABLE	(N6)	1 1/2 (38) NPT
DRAIN			(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 KP _a	150 PSIG	1034 KP _a
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 _a	300 PSIG	2068 KP _a
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-6-4P-E1-(4)	
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	