



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-42-2-4	33 1/4	845	15 3/4	400	9 1/2	241	26	660	2	51	1	25
WS-43-2-4	45 1/4	1149	27 3/4	705	21 1/2	546	38	965	2	51	1	25
WS-44-2-4	57 1/4	1454	39 3/4	1010	33 1/2	851	50	1270	2	51	1	25
WS-45-2-4	69 1/4	1759	51 3/4	1314	45 1/2	1156	62	1575	2 1/2	64	1 1/4	32
WS-46-2-4	81 1/4	2064	63 3/4	1619	57 1/2	1461	74	1880	2 1/2	64	1 1/4	32
WS-47-2-4	93 1/4	2369	75 3/4	1924	69 1/2	1765	86	2184	2 1/2	64	1 1/4	32
WS-48-2-4	105 1/4	2673	87 3/4	2229	81 1/2	2070	98	2489	2 1/2	64	1 1/4	32
WS-49-2-4	117 1/4	2978	99 3/4	2534	93 1/2	2375	110	2794	2 1/2	64	1 1/4	32
WS-410-2-4	129 1/4	3283	111 3/4	2838	105 1/2	2680	122	3099	2 1/2	64	1 1/4	32
WS-411-2-4	141 1/4	3588	123 3/4	3143	117 1/2	2985	134	3404	2 1/2	64	1 1/4	32
WS-412-2-4	153 1/4	3893	135 3/4	3448	129 1/2	3289	146	3708	2 1/2	64	1 1/4	32

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	(N1)	AS PER TABLE	(N5)	1 1/4 (32) FLG
OUTLET	(N2)	AS PER TABLE	(N6)	1 1/4 (32) FLG
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	150 PSIG	1034 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	225 PSIG	1551 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-4-2P-4	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		