



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-143-2-2	50 7/8	1292	22	559	12 1/2	318	38	965	6	152	2	51
WS-144-2-2	62 7/8	1597	34	864	24 1/2	622	50	1270	6	152	2	51
WS-145-2-2	74 7/8	1902	46	1168	36 1/2	927	62	1575	8	203	2 1/2	64
WS-146-2-2	86 7/8	2207	58	1473	48 1/2	1232	74	1880	8	203	2 1/2	64
WS-147-2-2	98 7/8	2511	70	1778	60 1/2	1537	86	2184	8	203	2 1/2	64
WS-148-2-2	110 7/8	2816	82	2083	72 1/2	1842	98	2489	8	203	2 1/2	64
WS-149-2-2	122 7/8	3121	94	2388	84 1/2	2146	110	2794	8	203	2 1/2	64
WS-1410-2-2	134 7/8	3426	106	2692	96 1/2	2451	122	3099	8	203	2 1/2	64
WS-1411-2-2	146 7/8	3731	118	2997	108 1/2	2756	134	3404	8	203	2 1/2	64
WS-1412-2-2	158 7/8	4035	130	3302	120 1/2	3061	146	3708	8	203	2 1/2	64
WS-1413-2-2	170 7/8	4340	142	3607	132 1/2	3366	158	4013	8	203	2 1/2	64
WS-1414-2-2	182 7/8	4645	154	3912	144 1/2	3670	170	4318	8	203	2 1/2	64
WS-1415-2-2	194 7/8	4950	166	4216	156 1/2	3975	182	4623	8	203	2 1/2	64

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 DIM'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.	40 °F	4.4 °C	40 °F	4.4 °C
HYDRO. TEST PRESSURE	225 PSIG	1551 KPa	300 PSIG	2068 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-14-2P-2	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