



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-123-4-3	41 1/4	1048	22 3/4	578	12 1/2	318	38	965	6	152	2	51
WS-124-4-3	53 1/4	1353	34 3/4	883	24 1/2	622	50	1270	6	152	2	51
WS-125-4-3	65 1/4	1657	46 3/4	1187	36 1/2	927	62	1575	6	152	2	51
WS-126-4-3	77 1/4	1962	58 3/4	1492	48 1/2	1232	74	1880	6	152	2	51
WS-127-4-3	89 1/4	2267	70 3/4	1797	60 1/2	1537	86	2184	8	203	2 1/2	64
WS-128-4-3	101 1/4	2572	82 3/4	2102	72 1/2	1842	98	2489	8	203	2 1/2	64
WS-129-4-3	113 1/4	2877	94 3/4	2407	84 1/2	2146	110	2794	8	203	2 1/2	64
WS-1210-4-3	125 1/4	3181	106 3/4	2711	96 1/2	2451	122	3099	8	203	2 1/2	64
WS-1211-4-3	137 1/4	3486	118 3/4	3016	108 1/2	2756	134	3404	8	203	2 1/2	64
WS-1212-4-3	149 1/4	3791	130 3/4	3321	120 1/2	3061	146	3708	8	203	2 1/2	64
WS-1213-4-3	161 1/4	4096	142 3/4	3626	132 1/2	3366	158	4013	8	203	2 1/2	64
WS-1214-4-3	173 1/4	4401	154 3/4	3931	144 1/2	3670	170	4318	8	203	2 1/2	64
WS-1215-4-3	185 1/4	4705	166 3/4	4235	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	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 DIM'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-3	REV.	
DATE:	12 / 01 / 94	BY:	D.C.R.	TORONTO - CANADA	MONTREAL - CANADA	BUFFALO - N. Y.	COLCHESTER - U.K.		
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