



EXCHANGER SIZE	DIMENSIONS											
	A		B		C		D		N1		N2	
	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm	inches	mm
WS-102-4-4	38 1/2	978	12 1/2	318	4 1/2	114	26	660	4	102	1 1/2	38
WS-103-4-4	50 1/2	1283	24 1/2	622	16 1/2	419	38	965	4	102	1 1/2	38
WS-104-4-4	62 1/2	1588	36 1/2	927	28 1/2	724	50	1270	6	152	2	51
WS-105-4-4	74 1/2	1892	48 1/2	1232	40 1/2	1029	62	1575	6	152	2	51
WS-106-4-4	86 1/2	2197	60 1/2	1537	52 1/2	1334	74	1880	6	152	2	51
WS-107-4-4	98 1/2	2502	72 1/2	1842	64 1/2	1638	86	2184	6	152	2	51
WS-108-4-4	110 1/2	2807	84 1/2	2146	76 1/2	1943	98	2489	6	152	2	51
WS-109-4-4	122 1/2	3112	96 1/2	2451	88 1/2	2248	110	2794	6	152	2	51
WS-1010-4-4	134 1/2	3416	108 1/2	2756	100 1/2	2553	122	3099	6	152	2	51
WS-1011-4-4	146 1/2	3721	120 1/2	3061	112 1/2	2858	134	3404	6	152	2	51
WS-1012-4-4	158 1/2	4026	132 1/2	3366	124 1/2	3162	146	3708	6	152	2	51
WS-1013-4-4	170 1/2	4331	144 1/2	3670	136 1/2	3467	158	4013	6	152	2	51
WS-1014-4-4	182 1/2	4636	156 1/2	3975	148 1/2	3772	170	4318	6	152	2	51
WS-1015-4-4	194 1/2	4940	168 1/2	4280	160 1/2	4077	182	4623	6	152	2	51

NOZZLE SCHEDULE				
SERVICE	MARK	SHELL SIDE	MARK	TUBE SIDE
INLET	N1	AS PER TABLE	N5	3 (76) FLG
OUTLET	N2	AS PER TABLE	N6	3 (76) FLG
DRAIN	N3	1/2 (13) NPT	N7	1/2 (13) NPT
VENT	N4	3/4 (19) NPT		

**NOTES:**

- SUPPORTS SUPPLIED ONLY IF SPECIFIED ON ORDER.
- NOZZLE SIZES SHOWN ARE RECOMMENDED FOR MAXIMUM EXCHANGER LIFE.
- FABRICATED TO ASME CODE SECTION VIII DIVISION 1 AND LATEST ADDENDA.
- DRAWING IS NOT TO SCALE.
- 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.	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-10-4P-4	REV.
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