



| EXCHANGER SIZE | DIMENSIONS |      |        |     |        |     |        |      |        |    |        |    |
|----------------|------------|------|--------|-----|--------|-----|--------|------|--------|----|--------|----|
|                | A          |      | B      |     | C      |     | D      |      | N1     |    | N2     |    |
|                | inches     | mm   | inches | mm  | inches | mm  | inches | mm   | inches | mm | inches | mm |
| WS-82-2-3      | 28         | 711  | 13     | 330 | 4 3/4  | 121 | 26     | 660  | 2      | 51 | 1      | 25 |
| WS-83-2-3      | 40         | 1016 | 25     | 635 | 16 3/4 | 425 | 38     | 965  | 2 1/2  | 64 | 1      | 25 |
| WS-84-2-3      | 52         | 1321 | 37     | 940 | 28 3/4 | 730 | 50     | 1270 | 3      | 76 | 1      | 25 |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
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|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
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|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |
|                |            |      |        |     |        |     |        |      |        |    |        |    |

| NOZZLE SCHEDULE |      |              |      |            |
|-----------------|------|--------------|------|------------|
| SERVICE         | MARK | SHELL SIDE   | MARK | TUBE SIDE  |
| INLET           | N1   | AS PER TABLE | N5   | 3 (76) NPT |
| OUTLET          | N2   | AS PER TABLE | N6   | 3 (76) 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 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-8-2P-3-(3)     | REV.                |                     |                     |                        |
| DATE: | 12 / 01 / 94                           | BY:               | D.C.R. | TORONTO - CANADA | MONTREAL - CANADA | BUFFALO - N. Y. | COLCHESTER - U.K. | TEL: (416) 755-2291 | TEL: (514) 421-2424 | TEL: (716) 693-8813 | TEL: (44) 120-657-9491 |