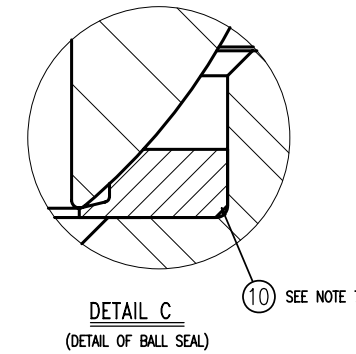
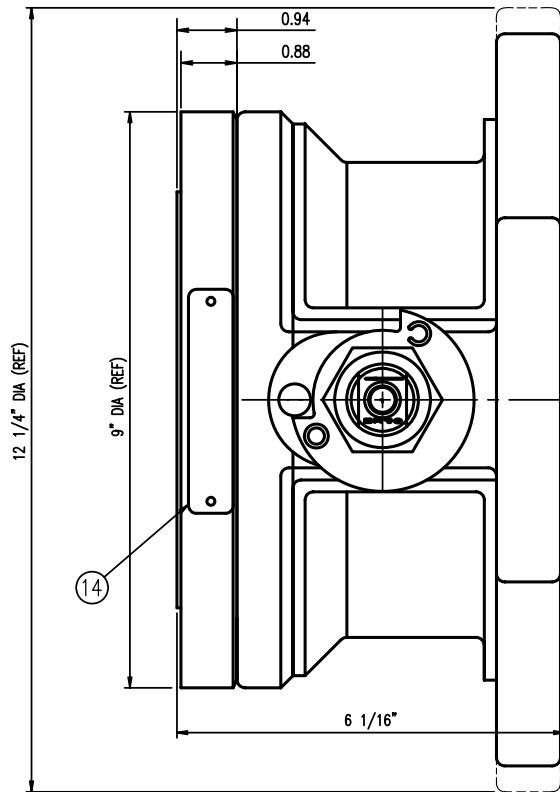
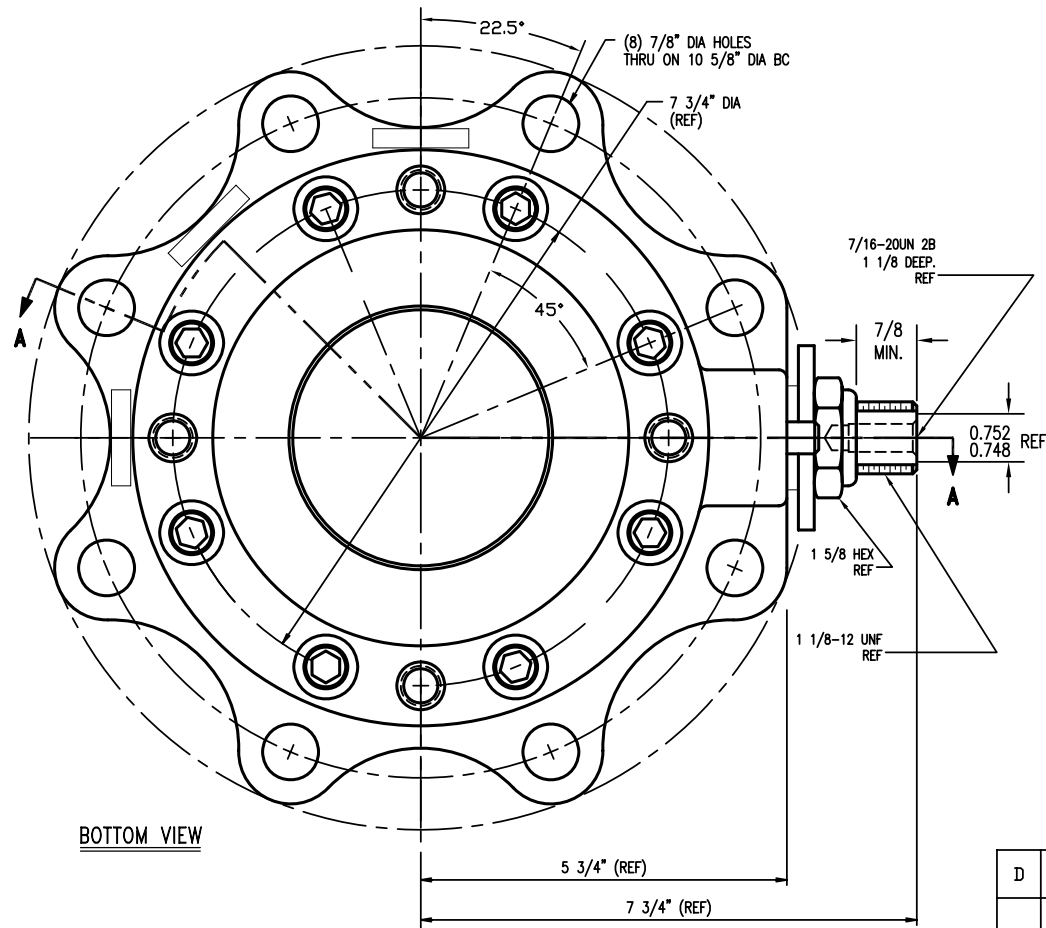


| ITEM | QTY | PART NAME | A-522-C1-CS | | A-522-C1-MO | |
|------|-----|--|--------------|-----------------|--------------|-----------------|
| | | | PART NO. | MATERIAL | PART NO. | MATERIAL |
| 1 | 1 | CAP | 520-112-CS | STEEL | 520-112-MO | STAINLESS STEEL |
| 2 | 1 | STEM | 520-2-SS | STAINLESS STEEL | 520-2-SS | STAINLESS STEEL |
| 3 | 1 | BALL | 520-3-MO | STAINLESS STEEL | 520-3-MO | STAINLESS STEEL |
| 4 | 1 | BODY | 522-45-CS | STEEL | 522-45-MO | STAINLESS STEEL |
| 5 | 1 | PACKING | 520-5-01-TF | VIRGIN TEFLON | 520-5-01-TF | VIRGIN TEFLON |
| 6 | 1 | SPACER | 520-6-SS | STAINLESS STEEL | 520-6-SS | STAINLESS STEEL |
| 7 | 1 | PIN | 520-7-CS | STEEL | 520-7-CS | STEEL |
| 8 | 1 | STOP PLATE | 520-8-CS | STEEL PLATED | 520-8-CS | STEEL PLATED |
| 9 | 8 | CAPSCREW, HEX-SOC, 5/8"-11UNC-2A X 1" LG | 520-9-CS | STEEL | 520-9-CS | STEEL |
| 10 | 2 | SEAL, BALL | SEE TABLE | SEE TABLE | SEE TABLE | SEE TABLE |
| 11 | 1 | SEAL, VALVE BODY | 520-11-01-TF | VIRGIN TEFLON | 520-11-01-TF | VIRGIN TEFLON |
| 12 | 1 | WASHER, THRUST | 520-12-01-TF | VIRGIN TEFLON | 520-12-01-TF | VIRGIN TEFLON |
| 13 | 1 | LOCKNUT, HEX, THIN, 1 1/8"-12UNF, NYLON INSERT | 520-13-CS | STEEL PLATED | 520-13-CS | STEEL PLATED |
| 14 | 1 | NAMEPLATE | 522-14-52-SS | STAINLESS STEEL | 522-14-62-SS | STAINLESS STEEL |

| VALVE MODEL NO. | SEAL, BALL | |
|-----------------|--------------|----------------------|
| | PART NO. | MATERIAL |
| A-522-C1-CS | 520-10-01-TF | VIRGIN TEFLON |
| A-522-C1-MO | 520-10-01-TF | VIRGIN TEFLON |
| A-522-C1-CS-ST | 520-10-04-ST | 316 SS FILLED TEFLON |
| A-522-C1-MO-ST | 520-10-04-ST | 316 SS FILLED TEFLON |

NOTES:

- STOP PIN (7) INSTALLATION INTO BODY (4) IS AN INTERFERENCE FIT. THE STOP PIN MUST EXTEND 0.50" AFTER BEING PRESSED INTO BODY.
- BODY SEAL (1) MUST BE PRESS-FIT INTO BODY (4) BEFORE CAP (1) IS INSTALLED.
- AFTER ASSEMBLY THE BODY (4) AND CAP (1) MUST CONTACT. NO GAP GREATER THAN .002" IS ALLOWED. SEE NOTE #8.
- STEM PACKING (5) TO BE INSTALLED WITH CHEVRONS ORIENTED PER DETAIL "B".
- TORQUE PACKING NUT TO 150 FT-LBS INITIALLY.
- AFTER ASSEMBLY OF VALVE THERE MUST BE A 1/8" MIN. AND 1/4" MAX. GAP BETWEEN THE BODY (4) AND THE VALVE STEM STOP (6).
- APPLY SMALL AMOUNT OF DOW CORNING 111 LUBRICANT ON 45° TAPER OF BALL SEALS (10) PRIOR TO ASSEMBLY.
- TORQUE SOCKET HEAD CAP SCREWS IN CROSS PATTERN TO 130 LB-FT.
- VALVE IS ASSEMBLED FOR COUNTER CLOCKWISE SHAFT ROTATION TO CLOSE.
- FOR CLOCKWISE SHAFT ROTATION TO CLOSE, REMOVE ITEM #13, REMOVE, TURN OVER AND REINSTALL ITEM #8, AND REINSTALL AND TIGHTEN ITEM #13 PER NOTE #5.



| | | | | |
|-----|--|-----|---------|-----|
| D | DETAIL D WAS DETAIL C | CHP | 6-22-06 | CHP |
| C | REMOVED ITEM 5, 11 & 12 FROM CHART, ADDED VALVE MODEL NO. ADDED GREATER THAN .002" TO NOTE #3, ADDED IN CROSS PATTERN TO NOTE #8, REMOVED TORQUE INCREMENTS FROM NOTE #8 | CHP | 6-21-06 | RHD |
| B | 520-2 AND 520-8 WERE 520-20 AND 520-80, ADDED DETAIL C | CHP | 6-6-06 | RHD |
| A | 520-80-CS, 522-14-52-SS & 522-14-62-SS WERE 520-8-CS, 522-14-51-SS & 522-14-61-SS | CHP | 5-23-06 | CHP |
| LTR | REVISIONS | DRN | DATE | APP |

AAR E022012

MIDLAND MANUFACTURING CORP.
SKOKIE, IL, U.S.A.

4" BALL VALVE

| | | | |
|--------------|------------|------------------------------|---|
| MATERIAL: | SEE TABLE | TOLERANCES UNLESS SPECIFIED: | 2 PLACE DECIMAL ± .015 3 PLACE DECIMAL ± .005 ANGULAR ± 1', FRACTIONS ± 1/64 CHAMFERS AND WELD PREP ± 5' |
| SCALE: 1/3 | DRAWN: CHP | DATE: 5-19-06 | APPROVED: CHP |
| CAD FILE NO. | SIZE | DWG NO. | REV |
| A522-C1 | B | A-522-C1 | E |

| | | | | |
|-----|---------------|-----|----------|-----|
| E | ADDED NOTE #7 | FS | 12/14/07 | CHP |
| LTR | REVISIONS | DRN | DATE | APP |