NOTES TO SHOP

1. THIS DRIVELINE IS TO BE SHIPPED COMPLETELY ASSEMBLED AS SHOWN. PIPE CPLG'S. AND PIPE TAPS TO BE PLUGGED FOR TESTING AND SHIPPING.
2. PIPING AND COMPONENTS ARE TO BE PROPERLY BRACED AND SUPPORTED FOR OPERATION AND SHIPPING. TEMPORARY, REMOVABLE SHIPPING SUPPORTS SHALL BE STENCILED "SHIPPING SUPPORT"
3. PIPE IS DESIGNATED BY NOMINAL SIZE. PIPE 3/4" AND SMALLER SHALL BE SCH. 80. PIPE 1" THRU 10" SHALL BE SCH. 40, PIPE 12" AND UP SHALL BE .375 WALL EXCEPT WHERE NOTED.
4. STEEL TUBING IS DESIGNATED BY O.D. STL.
   COPPER TUBING IS DESIGNATED BY O.D.
   STAINLESS STEEL TUBING IS DESIGNATED BY O.D. SST.
5. USE WELD TYPE FITTINGS. 2" AND SMALLER SHALL BE SOCKET WELD, 2-1/2" AND LARGER SHALL BE BUTT WELD, EXCEPT WHERE NOTED. ALL REDUCERS ARE BUTT WELD CONCENTRIC EXCEPT WHERE NOTED. ALL ELBOWS ARE LONG RADIUS EXCEPT WHERE NOTED.
6. SCREWED FITTINGS SHALL BE FORGED STEEL. SCREWED BUSHINGS SHALL BE STEEL OUTSIDE HEX. EXCEPT WHERE NOTED.
7. USE ANSI FLANGES WHERE NOTED, AND/OR WHERE REQ'D. FOR VALVES COMPR. CONNS., ETC. 2" AND SMALLER SHALL BE SOCKET WELD, 2-1/2" AND LARGER SHALL BE SLIP-ON, EXCEPT WHERE NOTED.
   FLANGE BOLT HOLES SHALL STRADDLE ℄'S.
8. CUSTOMER CONNECTIONS (INCLUDING ANCHOR BOLT HOLES) SHALL HAVE A LOCATION TOLERANCE OF ±1/4". FLANGE FACES SHALL BE WITHIN 1/8" PER 12" OF THE PLANE INDICATED ON THE DRAWING.
9. ON COMPONENTS, SUCH AS GEARS AND MOTORS, GAUGES SHOULD BE REPIPED AND THERMOMETERS SHOULD BE ROTATED TO A POSITION WHERE THEY CAN BE EASILY READ.
10. PIPING FABRICATION, ASSEMBLY, TEST AND INSPECTION TO BE IN ACCORDANCE WITH ANSI B31.5 CODE. SEE DWG. 099-02818C FOR WELDING PROCEDURES.
11. ITEMS INDICATED THUS ◯ APPEAR ON MISC. B.M. FOR FIELD ASSEMBLY, DWG. 376-73785C.

NOTES TO SHOP (CONT.)

12. PREPARE SURFACE AND PAINT DRIVELINE PER YORK STD. ISP-201 (AMERLOCK), PANEL IS PAINTED BY VENDOR. SEAL WELDING IS NOT REQUIRED.
13. AREAS DIFFICULT TO PAINT AFTER ASSEMBLY ON DRIVELINE SUCH AS FLANGE FACES (EXCEPT GASKET SURFACE), BOLT HOLES, AREAS BETWEEN COMPONENTS OR PIPE AND SUPPORTS, UNDERSIDE OF BASE MOUNTED COMPONENTS, ETC., SHALL BE PAINTED WITH SPECIFIED PRIMER PRIOR TO ASSEMBLY ON UNIT.
14. 1/4 — 3-061, 3-062 — ALL PIPE AND ANGLE SUPPORTS TO BASE AND SHELL SUPPORTS TO SHELLS.
15. ALL MULTI-STAGE COMPRESSORS MUST HAVE 1/8" OF SHIMS BEFORE MOUNTING AND ALIGNING THE REMAINING DRIVE LINE COMPONENTS.
16. MULTI-STAGE TURBO COMPR. UNITS:
    SHIM DRIVE LINE & ALIGN SHAFTS.
    ALL EXTRA SHIMS TO BE SHIPPED LOOSE WITH UNIT. FOR QUANTITY AND LOCATION OF ADJUSTING LUGS 066-77431A, JACKSCREWS 021-00900 AND JAM NUT 021-00594 SHOP TO CONTACT CONTRACT ENGINEERING. (BULL GEAR FLOAT TO BE .050" TO .060").
17. ALL SHIMS FOR DRIVELINE TO BE STAINLESS STEEL.
    USE THE FOLLOWING QTY'S. PER COMPONENT MTG. HOLE AS REQ'D.
    005-01089, .060 THK. (QTY. 3) 005-02573, .016 THK. (QTY. 1)
    005-00765, .030 THK. (QTY. 1) 005-03337, .006 THK. (QTY. 4)
18. REMOVE HIGH SPEED COUPLING AND SHIP LOOSE. DISASSEMBLE LOW SPEED COUPLING AND TAPE FOR SHIPMENT. REPLACE COUPLING GUARDS FOR SHIPMENT.
19. ITEMS INDICATED THUS ⬡ APPEAR ON PRELIST.
20. FOR LOCATION AND QUANTITY OF PUBLICITY NAMEPLATE 029-13216B, CONTACT CONTRACT ENGINEERING.
21. FOR LIFTING LUG MOUNTING REF. DWG. 099-06037B. SHOP TO CONTACT CONTRACT ENGINEERING FOR QTY. AND LOCATION.
22. SEE B.M. 376-73781-001 FOR DRIVELINE MATERIAL.

EQUIPMENT	REFRIGERANT SIDE-PSIG DESIGN	WATER SIDE-PSIG DESIGN
COOLER	185	150
CONDENSER	185	150
INTERCOOLER	185	——
COMPRESSOR	260	——
COMPR. OIL COOLER	* 300	150
RECEIVER	200	——
RTU CONDENSER	300	150
GEAR OIL COOLER	* 150	150

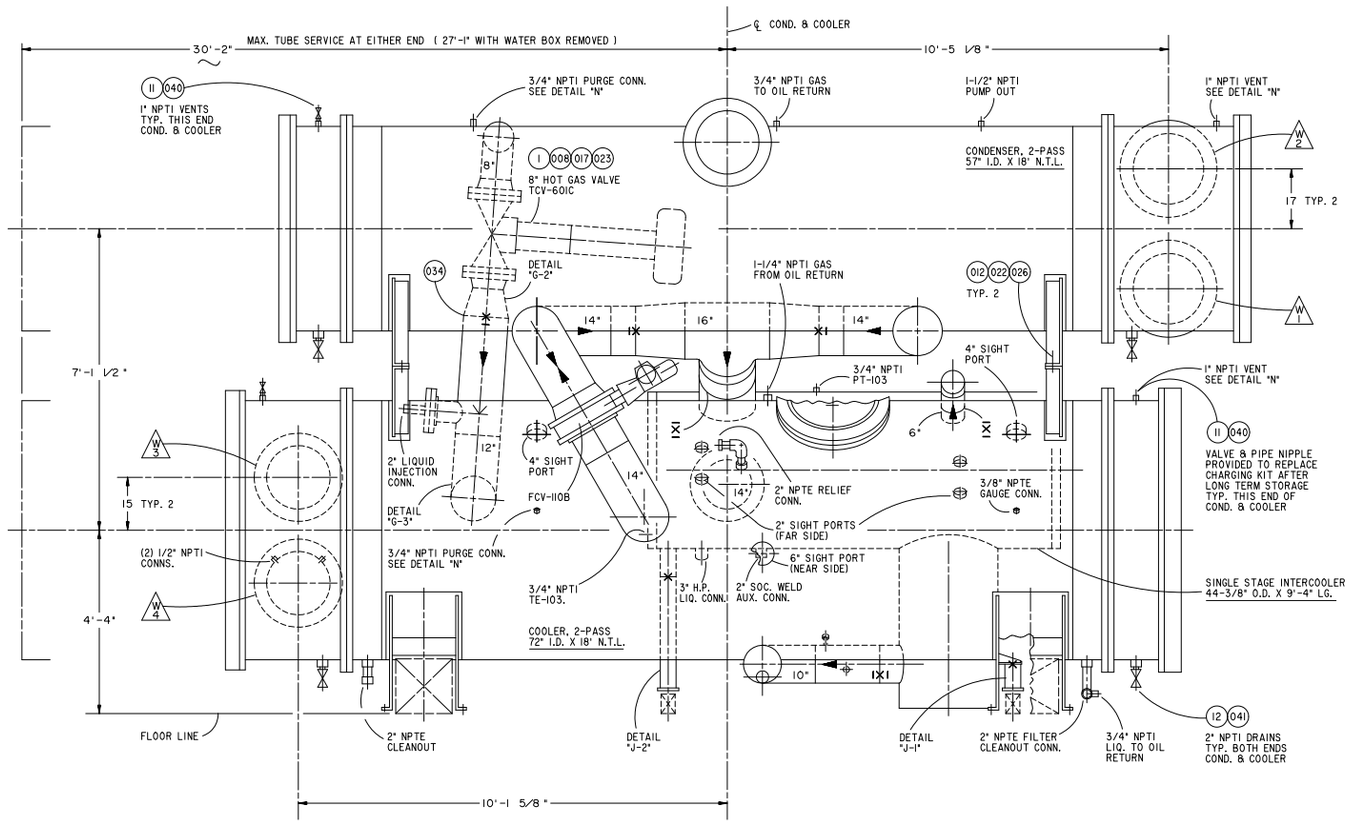
* OIL SIDE

DESIGN LOAD CONDITIONS

1. LOAD 3000 TONS.
2. COOL 6000 G.P.M. OF WATER FROM 57.0°F TO 45.0°F.
3. CONDENSER 9000 G.P.M. OF WATER FROM 85.0°F TO 94.3°F.
4. GEAR INPUT HORSEPOWER 2262.
5. COMPRESSOR SHAFT HORSEPOWER 2227.
6. COMPRESSOR FULL LOAD SPEED 3911 R.P.M.
7. APPROX. EVAPORATOR TEMP. 42.0°F.
8. APPROX. CONDENSER TEMP. 98.0°F.
9. COOLER LIQUID PRESS. DROP 34.4 FT. WATER.
10. CONDENSER WATER PRESS. DROP 31.6 FT.
11. DESIGN TUBE SIDE FOULING FACTOR COOLER 0.0005.
12. DESIGN TUBE SIDE FOULING FACTOR CONDENSER 0.001.
13. CONTROL POWER REQUIREMENTS: ELECTRIC 3.0 KVA, 120 V., 1 PH., 60 HZ.
    PNEUMATIC 3.5 S.C.F.M. AT 70 TO 100 PSIG.
14. AUX. OIL PUMP POWER REQUIREMENTS: COMPR. 3.0 H.P. / GEAR 2.0 H.P. } 460 V., 3 PH., 60 HZ.
    TOTAL 5.0 H.P.
15. AUX. WATER REQUIREMENTS OIL COOLERS: COMPRESSOR 20 G.P.M., 16 FT. P.D.
    ENTERING WATER TEMP. 85.0°F GEAR 16 G.P.M., 6 FT. P.D.
    TUBE SIDE FOULING FACTOR 0.001 TOTAL 36 G.P.M., 23 FT. P.D.
16. MOTOR RATED 2500 H.P., 1800 R.P.M.

NOTES TO ERECTING ENGINEER AND PIPING CONTRACTOR:

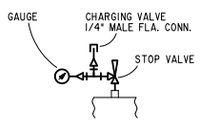
51. PIPING CONNECTIONS TO THE WATER, LIQUID, STEAM OR OIL NOZZLES MUST BE PROPERLY BRACED AND SUPPORTED TO PREVENT ANY UNNECESSARY STRAIN ON THE NOZZLES. USE SUITABLE TYPE PIPE HANGERS. USE EXPANSION JOINTS, FLEXIBLE CONNECTORS OR LOOPS AS REQUIRED TO MINIMIZE NOISE OR VIBRATION TRANSMISSION TO BUILDING. COMPANION FLANGES, GASKETS, BOLTS AND NUTS AT WATER, LIQUID, STEAM OR OIL NOZZLES ARE NOT BY YORK. THERMOMETER WELL AND PRESSURE GAUGE CONNS. TO BE INSTALLED IN PIPING NEAR CONDENSER BY PIPING CONTRACTOR.
52. CONDUCTIVE HEAT COMPOUND, MISC. MAT'L. ITEM NO. 10, TO BE INSTALLED IN THERMOMETER WELLS AFTER ERECTION.
53. VENT AND DRAIN PIPING NOT BY YORK, EXCEPT AS SHOWN.
54.
55.
56. FOR DRY CONTROL AIR REQUIREMENTS WHEN APPLICABLE, SEE PNEUMATIC PIPING CONTROL DIAGRAM ON YORK WIRING DIAGRAM DWG. 076-73793E.
57. VERIFY BUILDING DIMENSIONS PERTAINING TO EQUIPMENT LOCATION. INSPECT ALL EQUIPMENT BEFORE ERECTING. USE ONLY CERTIFIED OR FINAL CONSTRUCTION PRINTS.
58. REMOVE TESTING AND SHIPPING MATERIALS PER ERECTING INSTRUCTIONS. CARE MUST BE TAKEN TO PREVENT DIRT AND MOISTURE FROM GETTING INTO THE REFRIGERANT SYSTEM.
59. WHEN ASSEMBLING GASKET JOINTS IN FIELD FOR REFRIGERANT CONNECTIONS USE GRAPHITE AND OIL ON FLANGE FACES. THE ENTIRE REFRIGERANT CIRCUIT MUST BE FREE OF DIRT, SCALE AND MOISTURE AND BE PRESSURE AND VACUUM TESTED AS SPECIFIED IN ERECTING INSTRUCTIONS BEFORE CHARGING SYSTEM WITH REFRIGERANT.
60. ALL SHELLS ARE INSPECTED AND STAMPED IN ACCORDANCE WITH A.S.M.E. PRESSURE VESSEL CODE SECTION VIII DIVISION 1. CONSTRUCTED & TESTED IN ACCORDANCE WITH ASHRAE STD. 15 SAFETY CODE.
61. ALL FINISH PAINTING, TOUCHING UP OR SPECIAL PAINTING TO BE DONE IN FIELD UNLESS OTHERWISE NOTED.
62. ALL INSULATING OF SHELLS AND PIPE LINES TO BE DONE IN FIELD. FOR THERMAL INSULATION RECOMMENDATIONS SEE DWG. 076-72039D. FOR ACCOUSTICAL INSULATION RECOMMENDATIONS SEE DWG. 076-72040D.
63. INTERCOOLER OR FLOAT CHAMBER VALVE FLOAT BALLS ARE WIRED IN THE CLOSED POSITION FOR SHIPPING. REMOVE WIRE PRIOR TO CHARGING SYSTEM.
64. FOR MISC. MATERIAL FOR FIELD ASSEMBLY SEE YORK BILL OF MAT'L. 376-73785C.
    ITEMS THAT ARE INDICATED THUS (00) ARE PURCHASED ASSEMBLIES SUCH AS VALVES.
    ITEMS THAT ARE INDICATED THUS (000) ARE PART OF A PURCHASED KIT & INCL. ITEMS SUCH AS PIPE FITTINGS, HARDWARE, ETC.
65. WHEN ERECTING SHELLS IN FIELD, AXIS OF SHELLS TO BE PLUMB & LEVEL AT BOTH ENDS.
66. ALL SHELLS AND INTERCONNECTING PIPING ARE SHIPPED LOOSE FOR FIELD ASSEMBLY. REMOVE TEST CLOSURES, AS APPLICABLE, BEFORE PIPING.
67. X DENOTES FIELD WELDED JOINTS (USE BACK-UP WELDING RINGS AT ALL FIELD BUTT WELDED JOINTS). FIELD WELDED JOINTS INDICATED IXI OR XI DENOTES END OF PIPE SECTION MUST BE CUT TO LENGTH AND SCARFED FOR WELDING.
68. CAUTION: COMPRESSOR AND SHELLS ARE SHIPPED WITH 4 TO 6 PSIG HOLDING CHARGE.
69. THE RELIEF CONNECTIONS SHOULD BE VENTED OUTSIDE THE BUILDING BY MEANS OF A PROPERLY SIZED LINE IN ACCORDANCE WITH ASHRAE STD. 15 & OTHER APPLICABLE CODES FOR PERSONNEL SAFETY.
70. ON NON-FABRICATED MAJOR PIPING, MISC. LOOSE PIPE & FITTINGS (SEE NOTE 64), IT IS VERY IMPORTANT FOR THE FIELD ERECTING CONTRACTOR TO COMMERCIALLY BLAST CLEAN ALL INSIDE SURFACES.
71. ALL REFRIGERANT PIPING SHALL CONFORM TO THE REQUIREMENTS OF ANSI/ASME B31.5, REFRIGERANT PIPING, FOR MATERIALS, DESIGN, FABRICATION, ASSEMBLY, ERECTION, TEST AND INSPECTION.
72. DESIGN, CONSTRUCTION, INSTALLATION, OPERATION AND INSPECTION OF THE SYSTEM SHALL CONFORM TO ANSI/ASHRAE STD. 15, SAFETY CODE FOR MECHANICAL REFRIGERATION.
73. ALL APPLICABLE STATE, COUNTY, CITY AND LOCAL LAWS, RULES AND REGULATIONS PETAINING TO CONSTRUCTION, INSTALLATION AND INSPECTION SHALL ALSO BE CONFORMED TO.
74. SYSTEM TO BE ERECTED ON SPRING ISOLATORS PER YORK INSTRUCTIONS. INSTALL 1" THK. X 3" X 6" SHIMS YORK P/N 076-42613R IN LOCATIONS SHOWN ON FLOOR LOADING DIAGRAM WHEN INSTALLING EQUIPMENT. ADJUST SPRING ISOLATORS TO JUST RAISE THE EQUIPMENT OFF THE SHIMS (WITH UNIT FULLY CHARGED). THEN REMOVE SHIMS. REFER TO YORK FORM 160.71-N1.
75. CONTROL PANEL MAY BE LOCATED SUCH THAT THE TOTAL ACTUAL LENGTH OF INDIVIDUAL CONTROL PIPING RUNS DO NOT EXCEED 50 FT. ALL REFRIGERANT, OIL AND ELECTRICAL CONNECTIONS SHALL BE TOP ENTRY.
76. REFER TO SYSTEM PIPING DWG. 376-73786E FOR DETAILS OF PRESSURE AND LEAK TESTING.
77. A ROLL OF SHIM STOCK .001 THK. IS SHIPPED WITH MISC. MAT'L. FOR USE IN FINAL ALIGNMENT OF DRIVELINE (S.O. ITEM)
78. THE ENTIRE WATER AND OIL CIRCUITS MUST BE FREE OF DIRT, SCALE AND MOISTURE AND BE PRESSURE AND VACUUM TESTED AS SPECIFIED IN ERECTING INSTRUCTIONS BEFORE CHARGING SYSTEM.
79. ASSEMBLE COUPLING AND ALIGN SHAFTS AS REQ'D. IN ERECTING INSTRUCTIONS. DOWEL PINS AND NUTS FOR DRIVELINE COMPONENTS ARE FACTORY SUPPLIED FOR FIELD INSTALLATION. INSTALL DOWELS AFTER HOT ALIGNMENT CHECK. DOWEL COMPR. AND MOTOR ACROSS SHAFT ENDS. SPEED INCR. AS SHOWN IN MISALIGNMENT DETAIL.
80. TS & LWT AND THEIR THERMO WELLS ARE SECURED INSIDE CONTROL PANEL FOR FIELD INSTALLATION PRIOR TO FILLING WATER CIRCUITS.



VIEW "A-A"

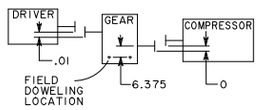
APPROX. SERVICE RIGGING WEIGHTS	LBS.
INTERCOOLER END COVERS (EA.)	1,339
COOLER WATER BOX COVERS (EA.)	5,715
CONDENSER WATER BOX COVERS (EA.)	3,100
COMPRESSOR TOP HALF CASING	6,000
COMPRESSOR ROTOR	490
MOTOR ROTOR	2,400
SUCTION LINE	2,060
DISCHARGE LINE	1,965

APPROX. OPERATING WEIGHTS	LBS.
COOLER	60,400
CONDENSER	62,000
SHELL SUPPORTS	770
TOTAL SHELL PACKAGE INCL. WATER & REFRIG.	123,200
COMPR.	25,000
GEAR	2,682
MOTOR	10,800
DRIVE BASE	7,800
TOTAL DRIVE PACKAGE INCL. OIL & REFRIG.	46,600
INTERCOOLER	9,000
SUPPORT	62
TOTAL INTERCOOLER PACKAGE INCL. REFRIG.	9,100
TOTAL INTERCONNECTING PIPING	9,000
CONTROL PANEL	950
APPROX. TOTAL SYSTEM WEIGHT	188,850
REFRIG. CHARGE REQUIRED (INCL. IN TOTAL WEIGHTS)	10,000

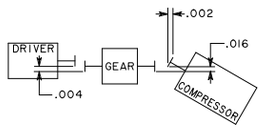


DETAIL "N"

LONG TERM STORAGE CHARGING KIT (SUPPLIED ON CONDENSER & COOLER) TYP. 4



PLAN



ELEVATION

COLD MISALIGNMENT REQUIRED

101. DIAL INDICATOR READING SHOULD BE TWICE SHAFT MISALIGNMENT.
102. A HOT FINAL ALIGNMENT MUST BE MADE WHILE COMPONENTS ARE NEAR OPERATING TEMPERATURE.
103. FIGURES ARE BASED ON GEAR DOWELING AS SHOWN. MISALIGNMENT MEASURES FROM RIM OF COUPLING HUBS. TOLERANCE IS +/-.001.

90-813634

REV. LEV.	DATE	REVISION RECORD	CHG. NO.	DR.	CK.
A	12-3-90	COMPLETED FOR SHOP RELEASE	——	MEB	WDH
B	1-30-91	COMPLETED WEIGHT CHARTS & COLD MISC. ALIGNMENT	CS91-0097	WDH	MEB
C	2-20-91	ADDED DWG. NO. TO NOTE 11. ADDED "DESIGN" TO TEST CHART COLUMNS. UPDATED DESIGN LOAD COND. 4. UPDATED NOTES 53, 64 & 70. DELETED COUPLING INSTALLATION NOTES 54 & 55.	CS91-0198	MEB	MEB
D	4-22-91	REMOVED VENT VALVES AT D & E-4. ADDED DET. N. ADD REF. TO DET. N AT C & E-7. AS BUILT REVISION.	CS91-0405	MEB	MEB

YORK INTERNATIONAL CORPORATION
YORK, PA. 17405

DIMENSIONS ARE IN INCHES
DO NOT SCALE
TOLERANCES PER ENG. STD. M-282
WELDING PER ENG. STD. M-30
REF. DWG.

UNIT
TURBOMASTER
OM 3000
REFRIGERANT-134a

MATERIAL
TYPE _____ ENG. STD. _____
PART NO. _____
CUT SIZE _____

NAME	DATE
DR. M E BAUGHMAN	11-21-90
APPR. W.D.HOPKINS	12-3-90
SCALE: 3/4" = 12"	

SIZE E | CAGE NO 66935 | DRAWING NUMBER 076-73781-000

WT. = LBS. | ORIG. NO. 076-7378IE | SHEET 2 OF 3

05-26-98 16:48

CS.90-813634.UNIT.076-7378IE.SHT2