THE TASQ™ LINE INTENSIFIER PUMP

INSTALLATION, OPERATION & MAINTENANCE MANUAL

INTERFACE DEVICES, INC.
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Milford, CT 06460

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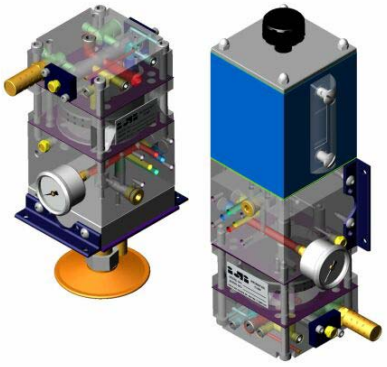
Tough, Affordable, Simple, Quality



Left: NOR, Right: SCR

SECTION 1.0: INTRODUCTION

A. The TASQ Line pumps are a single ratio, single acting pump. All ratios are rated at 0.60 peak hydraulic horsepower at a maximum air consumption of 9 SCFM.

B. TASQ pumps are furnished with either an integral, self-contained reservoir having a capacity of 40, 60, 80 or 120 cubic inch oil capacity or without a reservoir (the non reservoir version includes mounting brackets, pump-to-reservoir gasket and a 200 mesh low profile suction strainer).

SECTION 2.0: INSTALLATION AND OPERATION

A. INSTALLATION

1. Self Contained Reservoir version: Drill the four mounting holes on the intended vertical mounting surface per the dimensions shown on the enclosed "General Arrangement-Self Contained Reservoir" Drawing. Mount the pump using four (4) ¼" fasteners.

2. Non Reservoir version: Drill the four (4) pump mounting holes and the three (3) pipe holes in the reservoir top per the dimensions shown on the enclosed "General Arrangement-Customer Mount Reservoir" drawing. Install your own "Suction" (3/8 NPT x length to suit) pipe into the pump suction port. Install your own "Return" (1/4 NPT x length to suit) pipe into the return port. Mount the pump to the reservoir top and install the furnished suction strainer to the bottom end of the suction pipe before attaching the reservoir top to the reservoir.

B. CHECK LIST

Before operating the unit, complete the following checklist to assure proper and safe operation:

1. All hydraulic components (fittings, hoses, valves, etc.) shall be rated at, or above the maximum operating pressure of the power unit.

2. Inlet air pressure must not exceed 150 psig (10 bar). Normal range of supply air pressure shall be not less than 50 and not over 100 psig (4-7 bar).

3. All air supply fittings and lines shall be of non-corrosive materials and of pipe size adequate for the pump.

4. Air supply must be free of contaminants and an air regulator and filter installed as close as possible to the pump. Be sure the second unused "air in" port is plugged.

5. Air lubrication must NOT be used.

6. At initial startup, the air regulator MUST be turned out completely counter-clockwise (CCW) before the supply air source is turned on.

C. RESERVOIR FILLING AND DRAINING

It is recommended that a light grade hydraulic oil be used. (Mobil DTE 24®, Shell Tellus 32®, or equivalent) Consult your distributor or the manufacturer if your application requires other than light viscosity petroleum based fluids recommended above.

Remove vent/filler cap. Pour clean oil through a strainer into reservoir until full as indicated in the upper bulls-eye. Replace vent/filler cap. Top-off the reservoir after the system has been bled (Sec. D, below).

Note: The self-contained reservoir may be drained in the future via the "B" cylinder port.

D. START-UP & BLEEDING THE SYSTEM

Once all the above requirements are met and the reservoir is full, make sure the air regulator is completely turned out counterclockwise (CCW) before connecting the air supply. Slowly turn in the air regulator clockwise (CW) until the pump just begins to reciprocate. Alternately extend and retract the cylinder(s), bleeding the lines at the stroked end of each cylinder.

SECTION 3.0: MAINTENANCE AND SERVICE

A. GENERAL

1. Upon receipt of the pump, inspect the assembly thoroughly. If physical damage is evident, do not operate the unit. Consult your distributor or the manufacturer for replacement parts or corrective action.

2. TASQ Series pumps are designed to be virtually maintenance free as long as the air supply and hydraulic oil are contaminant free. However, it is recommended that the air cycling valve spool and seals be greased every six months or annually, depending on usage. Refer to items 4 through 43 on the enclosed "Pump Assembly" drawings.

B. TROUBLE SHOOTING GUIDE

If a problem arises with the unit, the following guide should help to make an accurate diagnosis and offer a proper remedy:

SYMPTOM	CORRECTIVE ACTION
Pump will not cycle after extended no-flow period.	• Check that supply air pressure exceeds 50 psi. • Check that Air Cap valve spool is not stuck in mid position; if so, disconnect and reconnect the air supply to reset the spool to its default position.
Pump brings system up to normal operating pressure but "chugs" intermittently.	• Check all system components for leaks, including valve or cylinder that may be bypassing internally. • If symptom is coupled with evidence of fluid leakage from the air cap muffler, then internal rod seals are worn excessively; repair/replace without delay to prevent internal damage to the pump (Note: This condition is always caused by contaminated oil).
Pump will not cycle Pump "short" cycles	• Air limit valve in Air Cap failed. Replace. • Air limit valve in Hydraulic Body failed. Replace.
Pump cycles but does not generate pressure.	• Pump is airbound; check fluid reservoir level and bleed. • Pump internal check valves are jammed with foreign material; remove and clean; be sure that reservoir does not contain any foreign material.
Pump Air Cap leaking air continuously.	• Leak from muffler; spool valve seals worn or contaminated; clean/replace seals. • Leak from 4-way air valve cap; stem seals worn or contaminated; clean/replace cap.

SECTION 4.0: GENERAL ASSEMBLY

This section is provided to a general overview for all the service needs of the TASQ Series pumps. An exploded view with Bill of Materials of all parts is included at the back of this manual.

The general assembly of all TASQ Series Pumps consists of three major sub-assemblies: AIR CAP, AIR BODY, and HYDRAULIC BODY. It is most efficient if each of these three components is entirely sub-assembled prior to final assembly.

A. MOUNTING THE AIR BODY TO THE HYDRAULIC BODY

Slip one air body gasket over the air piston and align to the edges with the hydraulic body. Apply a thin film of waterproof grease to the bore of the Air Body and lay atop the piston with chamfered bore edge down. Holding the Air Body and piston with both hands, "squeeze" the body over the air piston seal and wiggle down until contact is made with the body gasket.

Insure that the twin locating pins remain in place during the above to assure proper alignment between the ratio plate and the air body.

B. MOUNTING THE AIR CAP TO THE AIR BODY

Be sure the Air Cap is fully sub-assembled before mounting it to the Air Body. Place another air body gasket on the Air Body and align to the edges. Place the Air Cap on the Air Body with the side "Air In" port in plane with the DO-3 pad on the hydraulic body.

C. Install the four (4) 5/16 x 4.5 socket head cap screws (with lock washers) through the air cap and air body and thread into the hydraulic body. Cross torque all four cap screws to 11 ft. lbs.

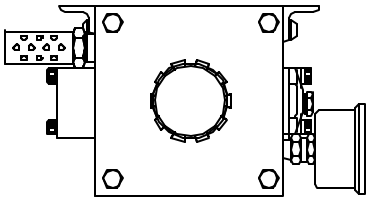
SECTION 5.0: WARRANTY STATEMENT

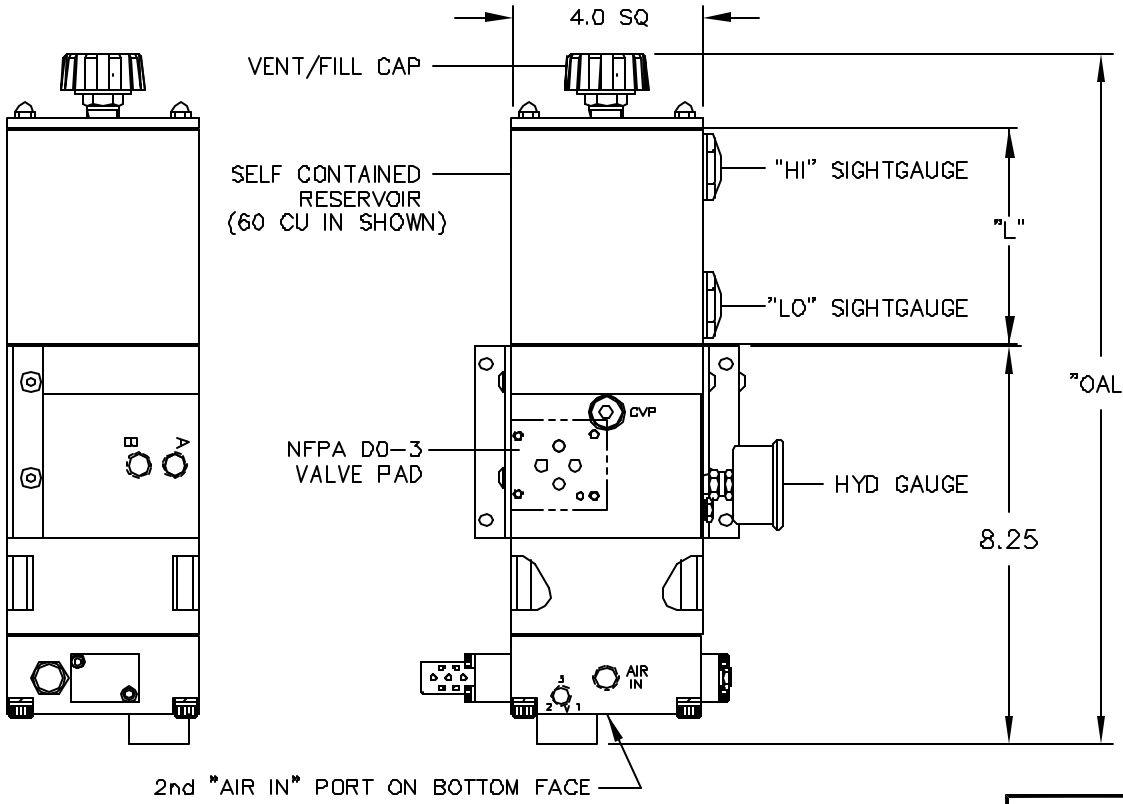
INTERFACE DEVICES, INC. (hereafter, the factory) warrants it's products to be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of shipment from the factory. Any defect discovered after the warranty period has expired will be deemed to be outside the above coverage. No goods claimed to be under warranty shall be accepted for return unless authorized by the factory beforehand.

Upon discovery of a defect (other than freight damage) or a shortage of an item received in the original factory container, the purchaser shall, within (10) calendar days, deliver notice of the defect or shortage. Damaged freight claims must be placed with the freight carrier and will not be honored by the factory. If after due investigation of a claim of defect or shortage is found valid, the factory may discharge it's entire obligations to the purchaser by either repair or replacement of the defective product or component and for shortages by furnishing a replacement of the missing quantity (FOB, factory).

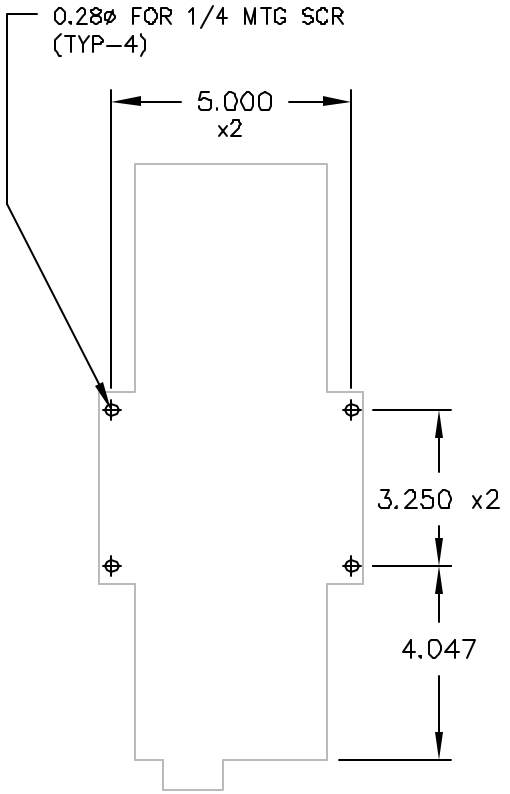
This express warrantee supersedes and is in lieu of all other remedies and warranties, including the implied warranties of merchantability and fitness, and liability for negligence. IN NO EVENT SHALL THE FACTORY BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL LOSSES, EXPENSES OR DAMAGES.

VOLUME (CU IN)	OAL	L
40	12.75	3.00
60	14.25	4.50
80	15.50	5.75
100	17.00	7.25
120	18.5	8.75
160	21.25	11.50





MOUNTING DIMENSIONS

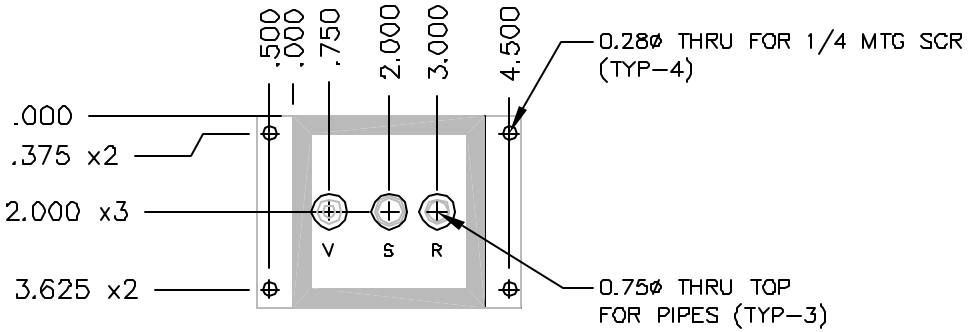


PNEUMATIC & HYDRAULIC CONNECTIONS:

BOTH "AIR IN" PORTS* & "A" & B" CYL PORTS: 1/4 NPT.
HYD "GA" PORT: 1/8 NPT
* PLUG THE UNUSED "AIR IN" PORT.

INTERFACE DEVICES, INC.
230 DEPOT ROAD
MILFORD, CT 06460

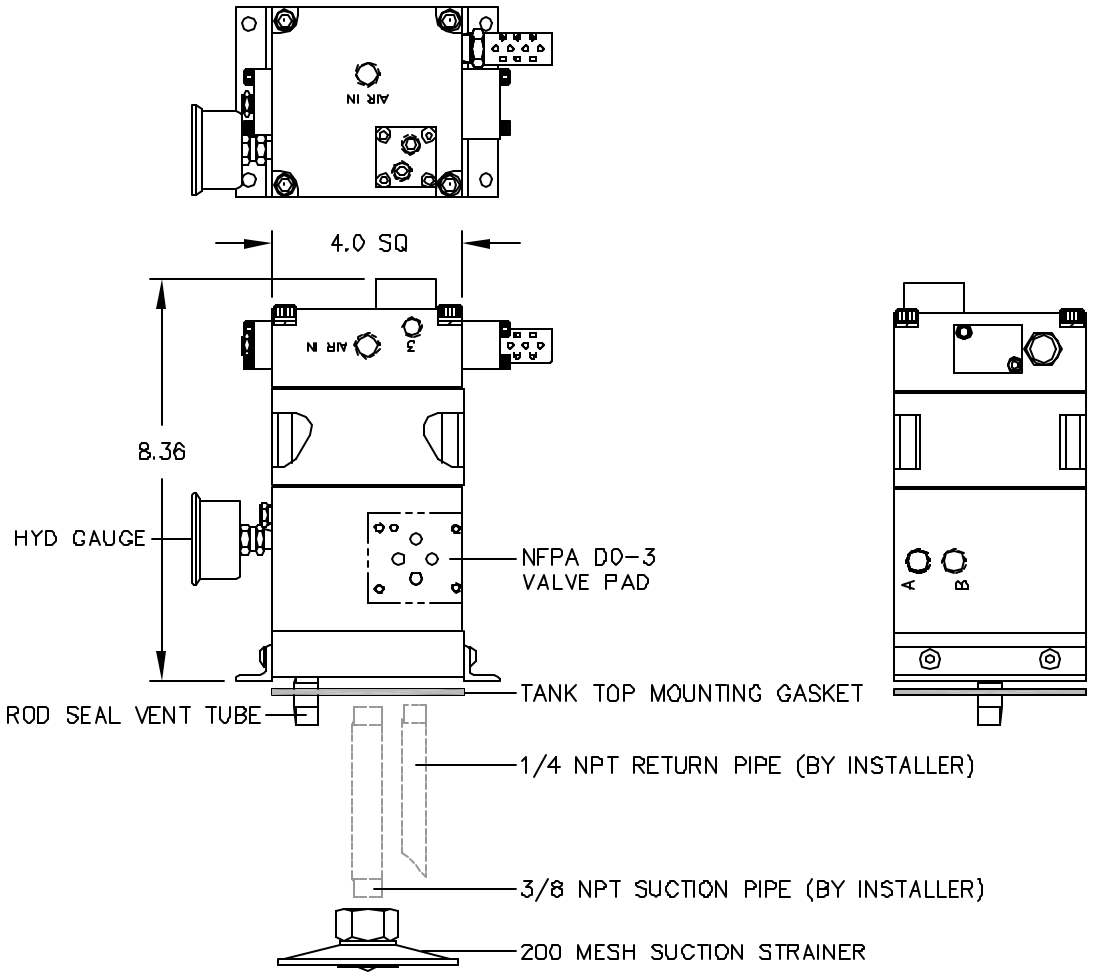
SCALE: 1/4	TITLE: GENERAL ARRANGEMENT, TASQ SERIES PUMP
DWN BY: TWH	
DATE: 2/26/03	REF: SELF-CONTAINED RESERVOIR
SHT: 1 OF: 1	DWG NO: P09-0003 REV: -



PUMP MTG. TO RESERVOIR DRILL DIMENSIONS

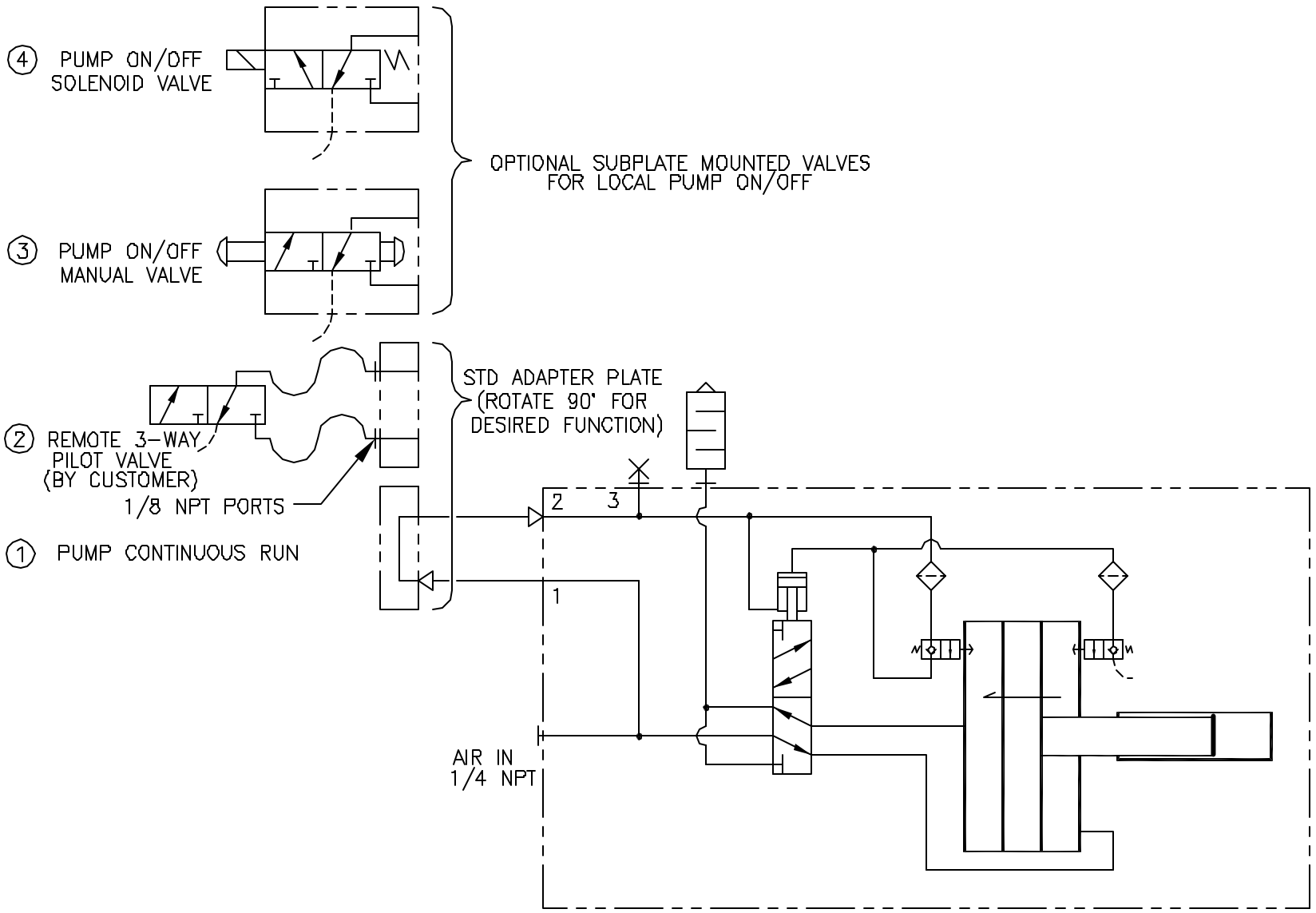
PNEUMATIC & HYDRAULIC CONNECTIONS:

BOTH "AIR IN" PORTS* & "A" & B" CYL PORTS: 1/4 NPT.
HYD "GA" PORT: 1/8 NPT
* PLUG THE UNUSED "AIR IN" PORT.



INTERFACE DEVICES, INC.
230 DEPOT ROAD
MILFORD, CT 06460

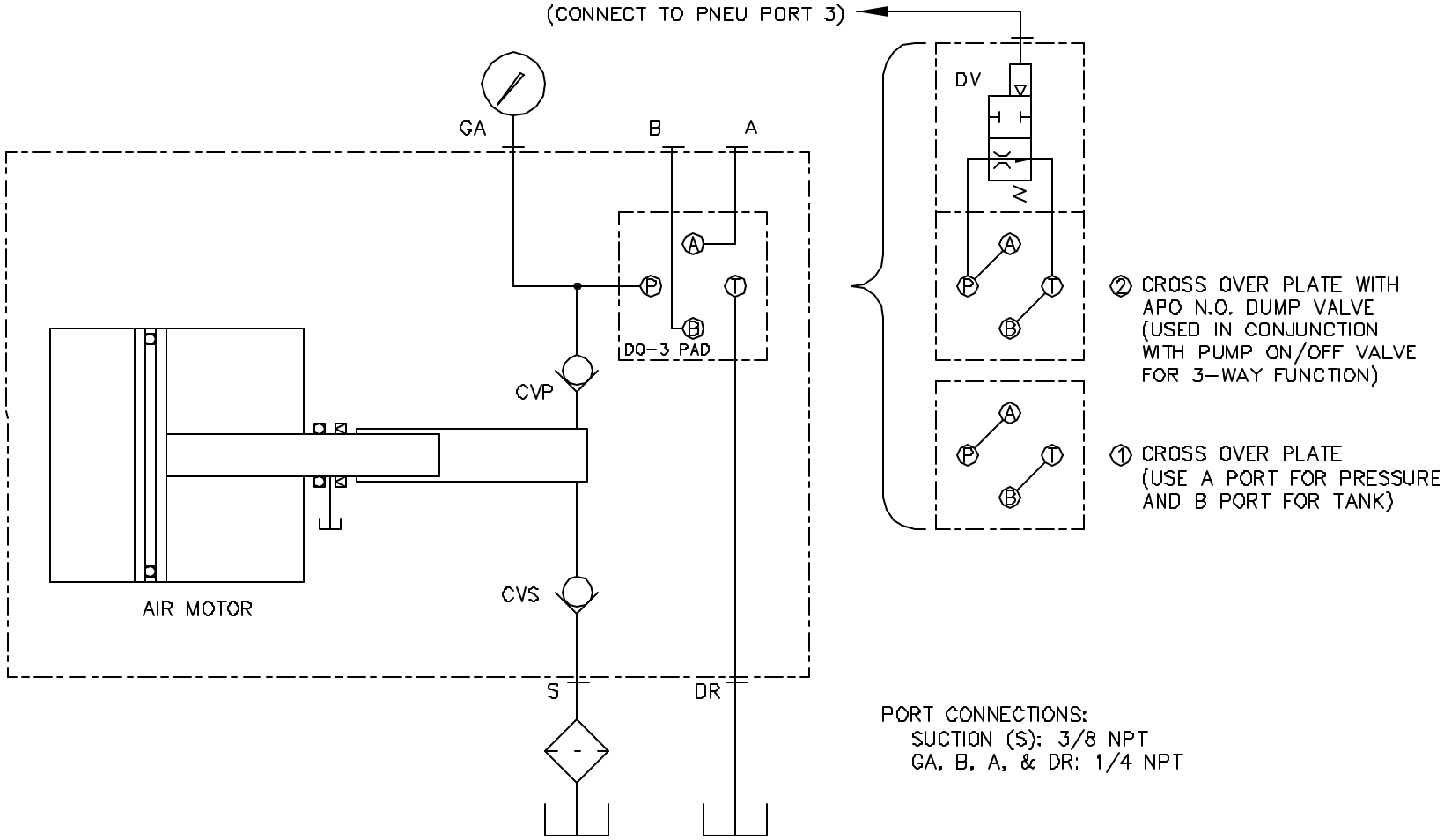
SCALE: 1/4	TITLE: GENERAL ARRANGEMENT, TASQ SERIES PUMP
DWN BY: TWH	
DATE: 2/26/03	REF: CUSTOMER MOUNT RESERVOIR
SHT: 1 OF: 1	DWG NO: P09-0002 REV: –



INTERFACE DEVICES, INC.
230 DEPOT ROAD
MILFORD, CT 06460

SCALE: N/A	TITLE: PNEUMATIC SCHEMATIC, TASQ SERIES PUMP	
DWN BY: TWH		
DATE: 2/25/03	REF:	
SHT: 1 OF: 1	DWG NO: P09-4001	REV: –

STANDARD PAD OPTIONS
IF DIRECTIONAL VALVE IS
NOT USED



② CROSS OVER PLATE WITH APO N.O. DUMP VALVE (USED IN CONJUNCTION WITH PUMP ON/OFF VALVE FOR 3-WAY FUNCTION)

① CROSS OVER PLATE (USE A PORT FOR PRESSURE AND B PORT FOR TANK)

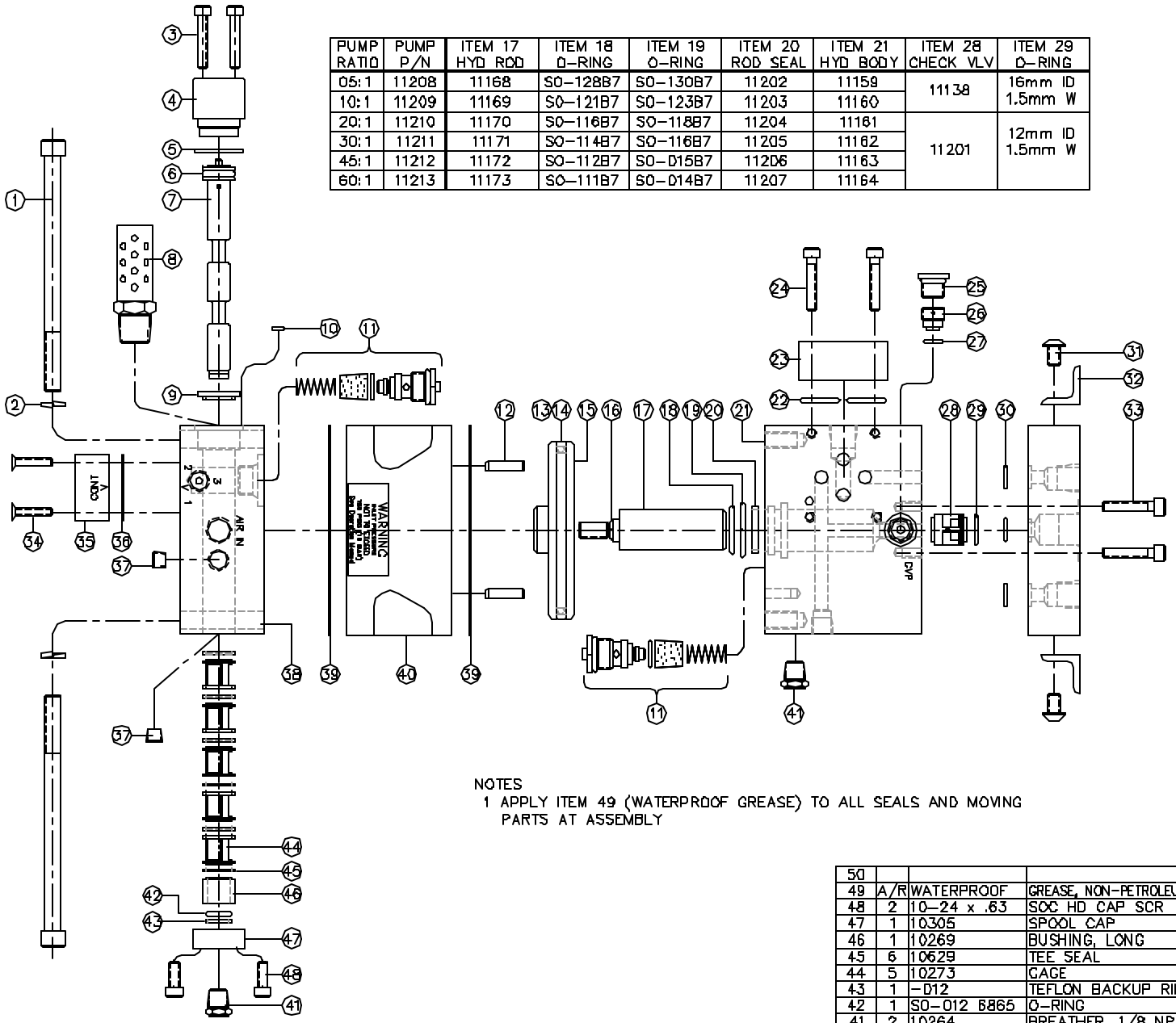
PORT CONNECTIONS:
SUCTION (S): 3/8 NPT
GA, B, A, & DR: 1/4 NPT

INTERFACE DEVICES, INC.
230 DEPOT ROAD
MILFORD, CT 06460

SCALE: N/A	TITLE: HYDRAULIC SCHEMATIC TASQ SERIES PUMP
DWN BY: TWH	
DATE: 2/26/03	REF:
SHT: 1 OF: 1	DWG NO: P09-3001 REV: –

REV	DESCRIPTION	DATE

PUMP RATIO	PUMP P/N	ITEM 17 HYD ROD	ITEM 18 O-RING	ITEM 19 O-RING	ITEM 20 ROD SEAL	ITEM 21 HYD BODY	ITEM 28 CHECK VLV	ITEM 29 O-RING
05:1	11208	11168	SO-128B7	SO-130B7	11202	11159	11138	16mm ID 1.5mm W
10:1	11209	11169	SO-121B7	SO-123B7	11203	11160		
20:1	11210	11170	SO-116B7	SO-118B7	11204	11161	11201	12mm ID 1.5mm W
30:1	11211	11171	SO-114B7	SO-116B7	11205	11162		
45:1	11212	11172	SO-112B7	SO-D15B7	11206	11163		
60:1	11213	11173	SO-111B7	SO-D14B7	11207	11164		



NOTES
1 APPLY ITEM 49 (WATERPROOF GREASE) TO ALL SEALS AND MOVING PARTS AT ASSEMBLY

ITEM	QTY	PART NUMBER	DESCRIPTION
50			
49	A/R	WATERPROOF	GREASE, NON-PETROLEUM
48	2	10-24 x .63	SOC HD CAP SCR
47	1	10305	SPOOL CAP
46	1	10269	BUSHING, LONG
45	6	10629	TEE SEAL
44	5	10273	CAGE
43	1	-012	TEFLON BACKUP RING
42	1	SO-012 B865	O-RING
41	2	10264	BREATHER, 1/8 NPT

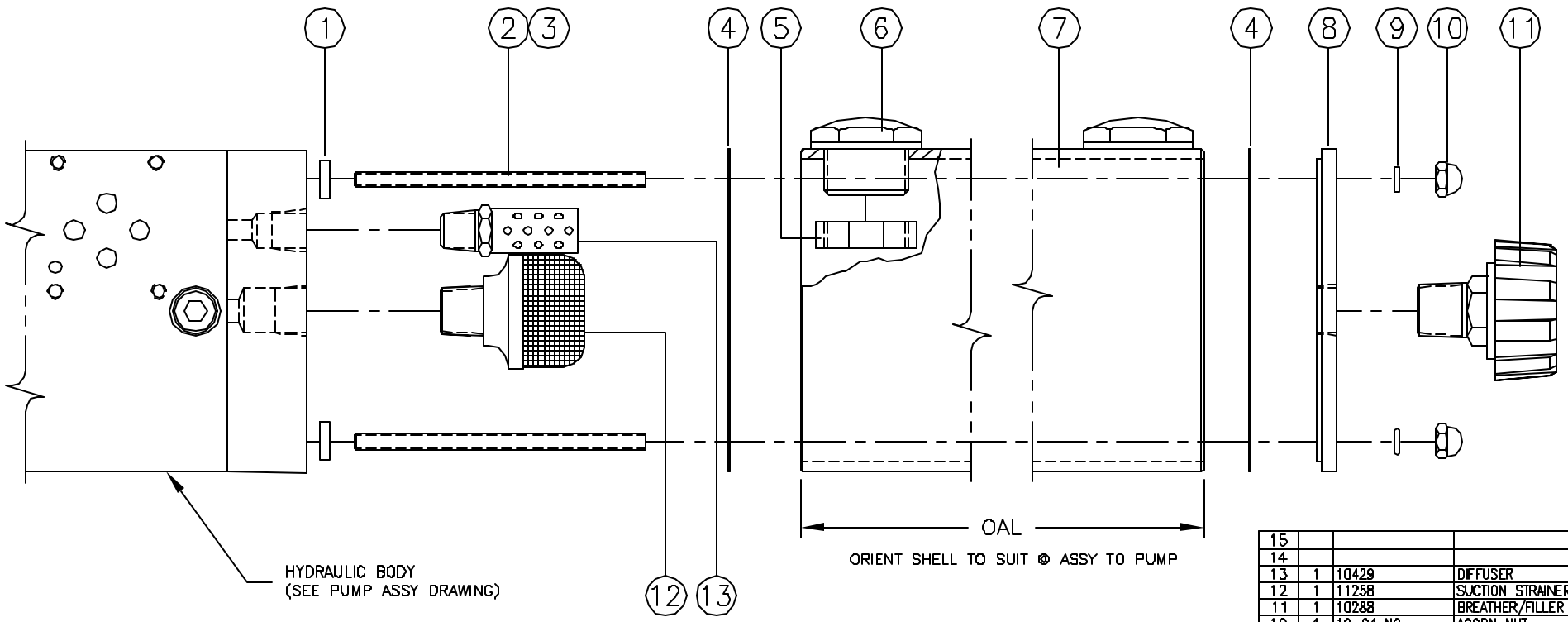
PUMP ASSEMBLY PART NO: (SEE CHART)

ITEM	QTY	PART NUMBER	DESCRIPTION
40	1	10112	AIR BODY
39	2	10334	GASKET, AIR BODY
38	1	11126	AIR CAP
37	2	1/8 HHP-S	PIPE PLUG, 1/8 NPT
36	1	10333	GASKET
35	1	10100	CROSSOVER BLOCK
34	2	M4 x 20	FLT HD SCR
33	6	10-24 x 1.00	SOC HD CAP SCR
32	2	10262	MOUNTING BRACKET
31	4	1/4-20 x .38	BUT HD CAP SCR
30	3	SO-011B7	O-RING
29	1	SEE CHART	O-RING
28	1	SEE CHART	CHECK VALVE (S)
27	1	SO-010B7	O-RING
26	1	10698	CHECK VALVE (P)
25	1	4HP50N-S	HOLLOW HEX PLUG
24	REF	10-24 x 1.00	SOC HD CAP SCR
23	1	11200	D03 XOVER PLATE
22	REF	016	O-RING
21	1	SEE CHART	HYDRAULIC BODY
20	1	SEE CHART	ROD SEAL
19	1	SEE CHART	O-RING
18	1	SEE CHART	O-RING
17	1	SEE CHART	HYDRAULIC ROD
16	1	SO-902B7	O-RING
15	1	11167	AIR PISTON
14	1	10377	GLYD RING
13	1	SO-233B7	O-RING
12	2	ø.1875 X .75	DOWEL PIN
11	2	10017	2-WAY AIR VLV ASSY
10	1	SO-006B7	O-RING
9	1	10271	SPACER, SHORT
8	1	10431	MUFFLER, 3/8 NPT
7	1	10659	SPOOL, AIR
6	1	SO-111CN7	O-RING
5	1	SO-019B7	O-RING
4	1	10298	PILOT CAP
3	2	10-24 x 1.00	SOC HD CAP SCR
2	4	5/16	HI COLLAR LOCKNUT
1	4	5/16-18 x 4.50	SOC HD CAP SCR

INTERFACE DEVICES, INC.
230 DEPOT ROAD
MILFORD, CT 06460

SCALE: HALF	TITLE: PUMP ASSEMBLY, TASQ SERIES (NO RESERVIOR)
DWN BY: WNI	
DATE: 11/18/02	REF: 20:1 THRU 60:1 RATIO
SHT: 1 OF: 1	DWG NO: P09-1001 REV: -

REV	DESCRIPTION	DATE



ITEM	QTY	PART NUMBER	DESCRIPTION
15			
14			
13	1	10429	DIFFUSER
12	1	11258	SUCTION STRAINER
11	1	10288	BREATHER/FILLER CAP
10	4	10-24 NC	ACORN NUT
9	4	SO-008B7	O-RING
8	1	10304	COVER, RESERVOIR
7	1	SEE TABLE	RESERVOIR SHELL
6	2	SEE TABLE	SIGHT GAUGE
5	2	SEE TABLE	LOCKNUT, SIGHT GAUGE
4	2	10338	GASKET, RESERVOIR
3	A/R	#242	LOCTITE
2	4	SEE CHART	STUD
1	4	10-24 NC	ROUND JAM NUT

ASSEMBLY PART NO	VOLUME (CU IN)	OAL	RESERVOIR SHELL PART NO	STUD SIZE (4) REQ'D	SIGHTGAGE (2) REQ'D	LOCKNUT (2) REQ'D
11259	40	3.00	10590	10-24 x 3.62	10363	3/4-16 NF
11260	60	4.50	10592	10-24 x 5.12	10363	3/4-16 NF
11261	80	5.75	10593	10-24 x 6.38	10364	10443
11262	100	7.25	10595	10-24 x 7.88	10364	10443
11263	120	8.75	10852	10-24 x 9.38	10364	10443
11264	160	11.50	10596	10-24 x 12.12	10364	10443

0 1 2 3 4

INCHES ON ORIGINAL DWG

INTERFACE DEVICES, INC.
230 DEPOT ROAD
MILFORD, CT 06460

SCALE: N/A	TITLE: RESERVOIR ASSY, SELF CONTAINED. 40 THRU 120 CU IN
DWN BY: TWH	
DATE: 2/25/03	REF: TASQ Series Pumps
SHT: 1 OF: 1	DWG NO: P09-1901 REV: –