

ASSEMBLY PROCEDURE FOR GAS PISTON: (USE 86859 ASSEMBLY TOOL)

WITH PISTON ROD HELD SECURELY AND EXTENDING 1/4" BEYOND THE END OF THE GAS BARREL, ASSEMBLE THE PARTS IN THE ORDER SHOWN (DETAIL D) USING THE FLAT END OF THE ASSEMBLY TOOL TO COMPACT THE SEALS. MAKE SURE THAT THE BELLEVILLE SPRINGS ARE ASSEMBLED IN SETS OF TWO, CUPPED ALTERNATIVELY IN OPPOSITE DIRECTIONS. USE THE OTHER END OF THE ASSEMBLY TOOL TO TORQUE THE NUT DOWN UNTIL SNUG AND THEN BACK OFF UNTIL A SLOT IN THE NUT LINES UP WITH THE HOLE IN THE ROD. INSERT AND SECURE THE COTTER PIN.

* CAUTION: MAKE SURE NUT (86789) SURFACE DOES NOT PROTRUDE BEYOND END OF ROD (86788). THIS CAN BE ACHIEVED BY USING FEWER NUMBER OF BELLEVILLE SPRINGS (16719-13) IF NECESSARY.

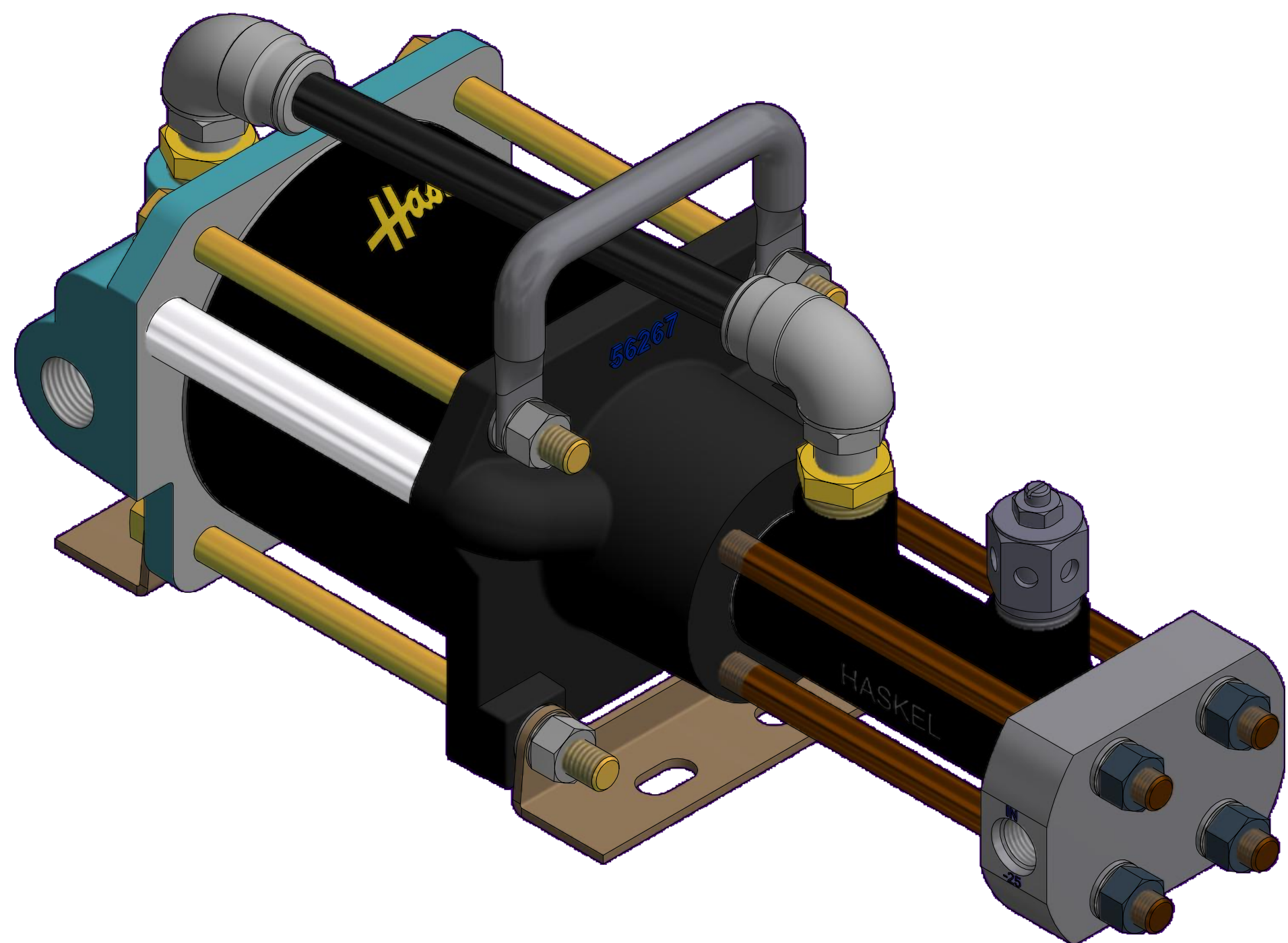
ASSEMBLY PROCEDURE FOR GAS CHECK VALVES: (USE 16675 ASSEMBLY TOOL)

1. PLACE OUTLET PORT IN THE UPRIGHT POSITION. INSERT SEAT, BALL, RING, SMALL SPRING, SHANK, AND LARGE SPRING UNTIL SEATED PROPERLY. IT IS IMPORTANT THAT THESE PARTS ARE IN PROPER POSITION BEFORE CONTINUING. SLIDE ONE SET OF PACKINGS (BRONZE, THIN TFE BACK-UP, O-RING, THICK TFE BACK-UP) IN THE ORDER SHOWN ONTO SEAT FITTING. THE THICK TFE BACK-UP WILL PROVIDE SUFFICIENT GRIP TO RETAIN THE PACKINGS DURING INSERTION. THEN, USING ASSEMBLY TOOL, SCREW SEAT IN UNTIL IT IS SNUG (APPROXIMATELY 5/8" BELOW END CAP FACE). USING A THIN ROD, DEPRESS BALL THROUGH INLET PORT TO VERIFY PROPER MOVEMENT.

2. PLACE INLET PORT IN UPRIGHT POSITION. INSERT LARGE SPRING, SHANK, RING, SMALL SPRING, BALL AND SEAT INTO PORT UNTIL SEATED. IT IS IMPORTANT THAT THE PARTS ARE IN PROPER POSITION BEFORE CONTINUING. SLIDE ONE SET OF PACKINGS (BRONZE, THIN TFE BACK-UP, O-RING, THICK TFE BACK-UP) IN THE ORDER SHOWN ONTO SEAT FITTING. THE THICK TFE BACK-UP WILL PROVIDE SUFFICIENT GRIP TO RETAIN THE PACKINGS DURING INSERTION. THEN, USING THE ASSEMBLY TOOL, SCREW THE SEAT IN UNTIL IT IS SNUG (APPROXIMATELY 5/8" BELOW END FACE). CHECK THAT THE BALL IS FREE TO MOVE BY DEPRESSING IT WITH A THIN ROD FROM THE INLET END.

NOTES:

- 1. GAS PISTON ASSEMBLY, 86784
- 2. PART OF GAS SECTION SEAL KIT, 86796
- 3. PART OF AIR SECTION SEAL KIT, 86797
- 4. PART OF GAS END CAP, 86798
- 5. PARTS TO BE OXYGEN CLEANED PER HPS-4.11
- 6. TORQUE TO 15 FT. LBS.
- 7. THIS IS A STANDARD 4AG-25 BOOSTER WITH THE FOLLOWING MODIFICATIONS:
 - *ADDED PRESSURE RELIEF VALVE (ITEM 78) TO CYCLING VALVE
 - *THE GAS SECTION TO BE CLEANED FOR OXYGEN SERVICE (SEE NOTE 5)
- 8. ALL DIMENSIONS SHOWN ARE APPROXIMATE IN INCHES, WITH CENTIMETERS IN PARENTHESES.



REVISION			
REV	DESCRIPTION	DATE	CHECKED
G	REVISED PER ECO 32793	7/26/2018	PM

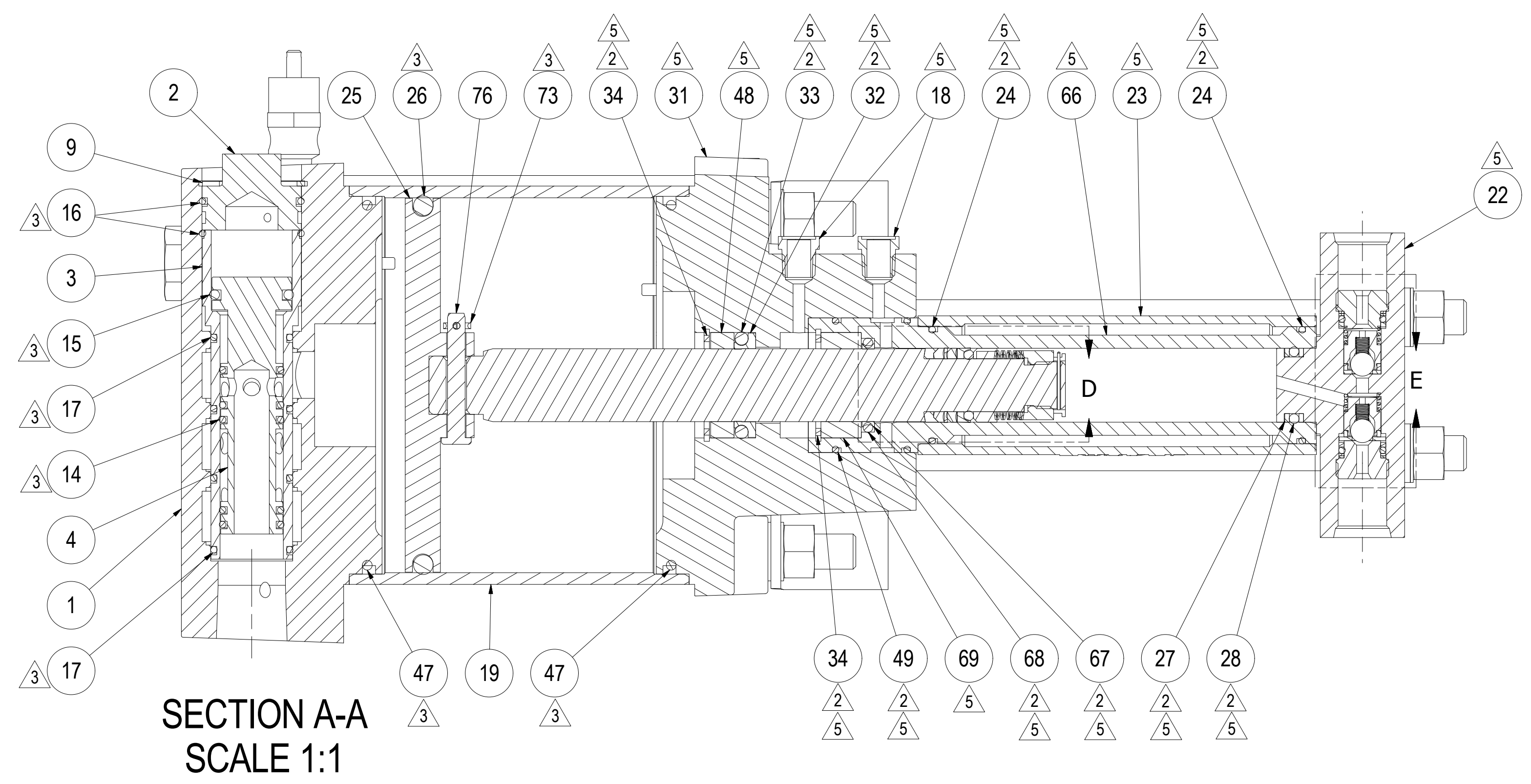
2	124470738	ELBOW,MALE SWVL,1/2TBX3/8NPT	BRASS	80	1	86438-2	BEARING-PISTON	BRONZE, C94300	40
2	61112-8-6B	PIPE THREAD REDUCER	BRASS	79	10	16719-13	SPRING WASHER, BELLEVILLE	17-7PH SS	39
1	KSV10-1-155	RELIEF VALVE, 155 PSI	BRASS	78	1	16704-50	SEAL, TEFLON	PTFE	38
4	17834	NUT, 3/8-24	316 SS	77	1	568113-31	O-RING	VITON	37
1	MS20392-2C37	PIN	ALLOY STEEL	76	1	27065-50	SEAL	CARBON FILLED PTFE	36
1	MS24665-24	COTTER PIN	STAINLESS STEEL	75	2	17225-50	BACKUP	BRONZE, SOFT TIN	35
1	28081-1	SEAT	PTFE, VIRGIN	74	2	5008-112H	RETAINING RING	300 SERIES SS	34
1	MS24665-151	COTTER PIN	C.R. STEEL	73	1	568212-7	O-RING	VITON	33
1	27077-16	PILOT TUBE	304 SS	72	1	86441	ROD SEAL, AG-50	CARBON FILLED PTFE	32
2	5005-31H	RETAINER RING	15-7 PH	71	1	86787	END CAP, VENT 4"	ALUMINUM 356-T6	31
2	55701-8	BOLT,3/8-16X6.00	AISI 1020	70	2	55742	MOUNTING BRACKET	STEEL	30
1	86440	BEARING, AG-50	RYTON 134	69	1	27078-17	FLOW TUBE	304 SS	29
1	568117-7	O-RING	VITON	68	1	568114-7	O-RING	VITON	28
1	51351-5	GLIDER RING	CARBON FILLED PTFE	67	2	17254-50	BACKUP RING	PTFE-GLASS FIBER FILLED	27
1	86790	GAS BARREL, 4AG-25	15-5 SS	66	1	568343-2	O-RING	BUNA-N	26
2	54067	SEAT, CHECK VALVE	15-5 SS	65	1	86786	AIR PISTON, 4"	6061-T6 AL	25
2	17422	BACK-UP	ALUM BRONZE	64	2	568024-7	O-RING	VITON	24
2	17421	BACKUP RING	PTFE	63	1	86791	COOLING BARREL	2024-T4 AL	23
2	568012-31	O-RING	VITON	62	1	86792	GAS END CAP, 4AG-25	304 SS	22
2	56228	BACKUP RING	PTFE	61	2	55701-4	BOLT,3/8-16x5-1/2	AISI 1020	21
2	28082	SPRING	316 SS	60	4	86803	TIE ROD	AISI 4140H	20
2	26685	SPRING	316 SS	59	1	86785	BARREL-AIR, 4"	AEROSLIDE	19
2	26130-8	BALL	316 SS	58	3	29348-2	BREATHER 1/8" NPT	BRASS	18
2	28083-1	RING	316 SS	57	4	568018-2	O-RING	BUNA-N	17
1	28081-3	SEAT	PTFE, VIRGIN	56	2	568021-2	O-RING	BUNA-N	16
2	28083-2	RETAINER CHECK VALVE	316 SS	55	1	568115-2	O-RING	BUNA-N	15
1	86795	HANDLE, 4"	AISI 1018 TB	54	5	568015-21	O-RING	BUNA-N (MOLY FILLED)	14
1	17568-2	PLUG, 1/8 NPT	STEEL	53	4	17563-6	NUT, 3/8-16	STEEL	13
1	86805	TUBING, COOLING	NYLON	52	8	1720	LOCKWASHER, 3/8	STAINLESS STEEL	12
1	86804	MUFFLER	BRASS	51	12	AN960-C616	WASHER	STAINLESS STEEL	11
1	27375-3V	STEM, PILOT VALVE	303 SS	50	2	568906-9	O-RING	BUNA-N	10
2	568027-2	O-RING	BUNA-N	49	1	N5000-106H	RING, RETAINING	ALLOY STEEL	9
1	86440-1	BEARING, AG-50	RYTON 134	48	2	16510	PLUG	AL 2024-T351 OR T4	8
2	568154-2	O-RING	BUNA-N	47	2	16513	SPRING	ASTM-A-228	7
1	27375-5V	STEM	304 SS	46	2	568006-2	O-RING	BUNA-N	6
2	568010-2	O-RING	BUNA-N	45	2	16517	SPACER	BRASS	5
2	568014-2	O-RING	BUNA-N	44	1	55727	SPOOL, 4"	DELTRIN PLASTIC	4
1	86789	NUT, RETAINER	303 S.S.	43	1	56215-2	SLEEVE, AIR VALVE, 4"	7075-T6 AL	3
1	86443	BACK-UP, SEAL	ALUM BRONZE	42	1	56216	PLUG	2024-T4 AL	2
1	86788	PISTON ROD, 4AG-25	15-5 PH (H925)	41	1	56213	CAP, AIR VALVE END	ALUMINUM 356-T6	1
QTY	PART NUMBER	DESCRIPTION	MATERIAL	ITEM	QTY	PART NUMBER	DESCRIPTION	MATERIAL	ITEM

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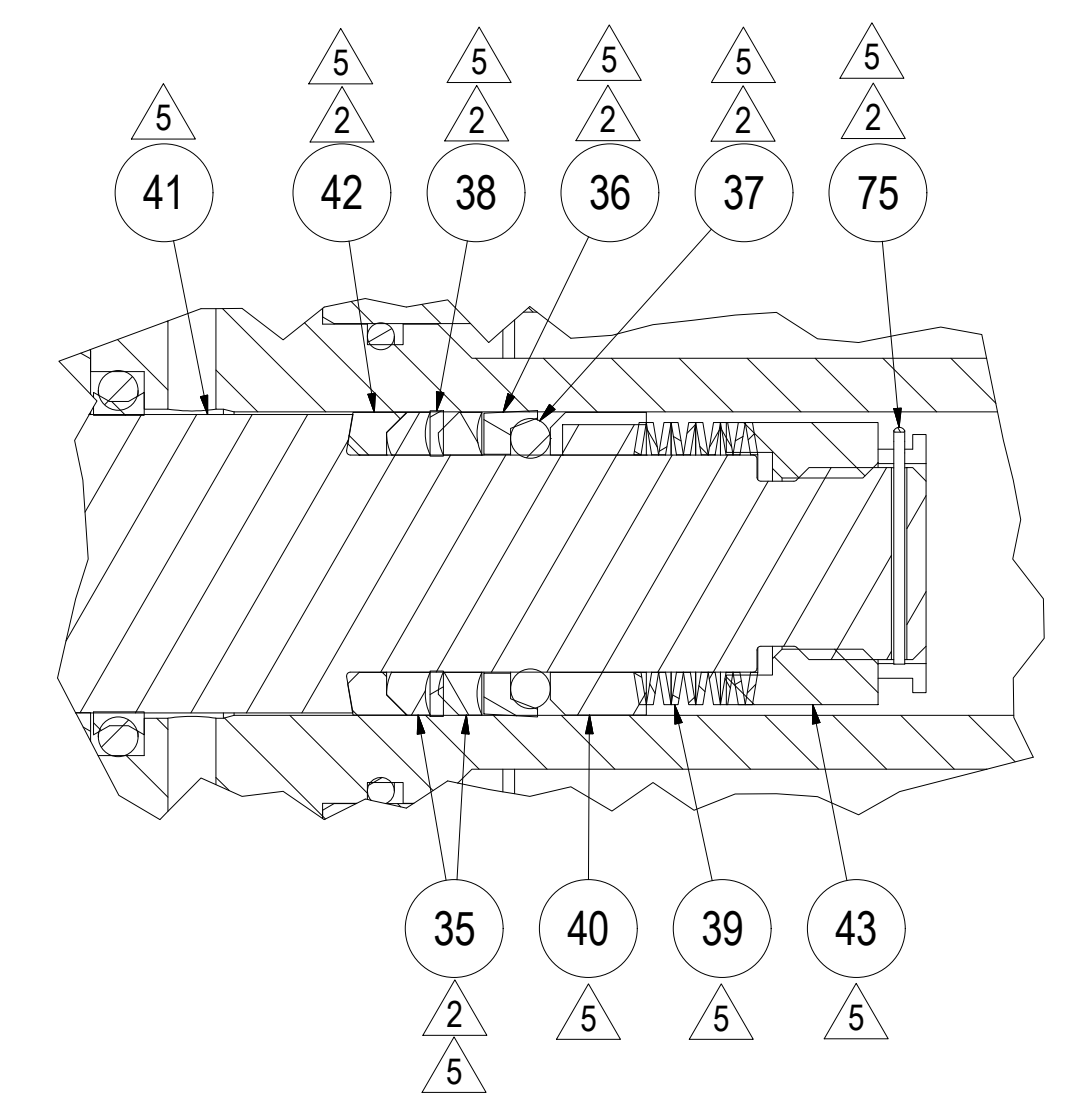
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NEXT ASSY (REF ONLY)		Haskel International, LLC Burbank, California 91502	
APPROVALS	DATE	TITLE	MINI SPORT BOOSTER ASEMBLY (MSB-9000)
DRAWN D MACH	8/10/2006	SIZE	D
CHECKED PD	11/29/2006	CAGE CODE	81400
APPROVED SDQ	11/29/2006	DWG NO.	86783
CAD FILENAME	86783	SCALE:	NA
INVENTOR DRAWING		SHEET 1 OF 3	

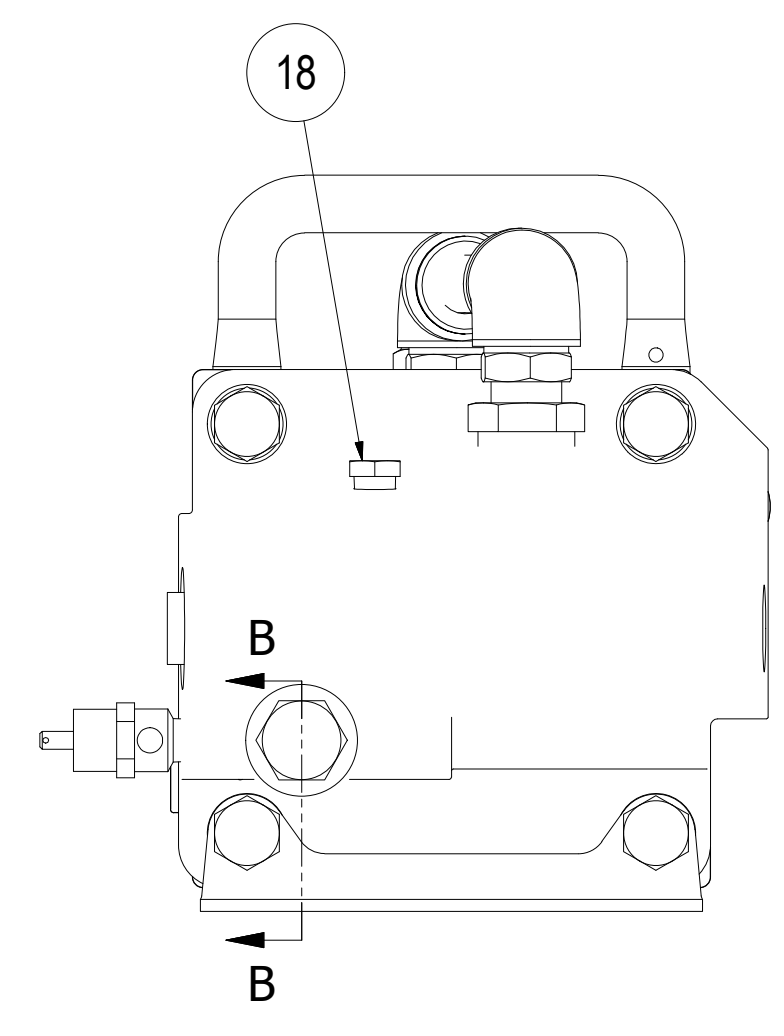
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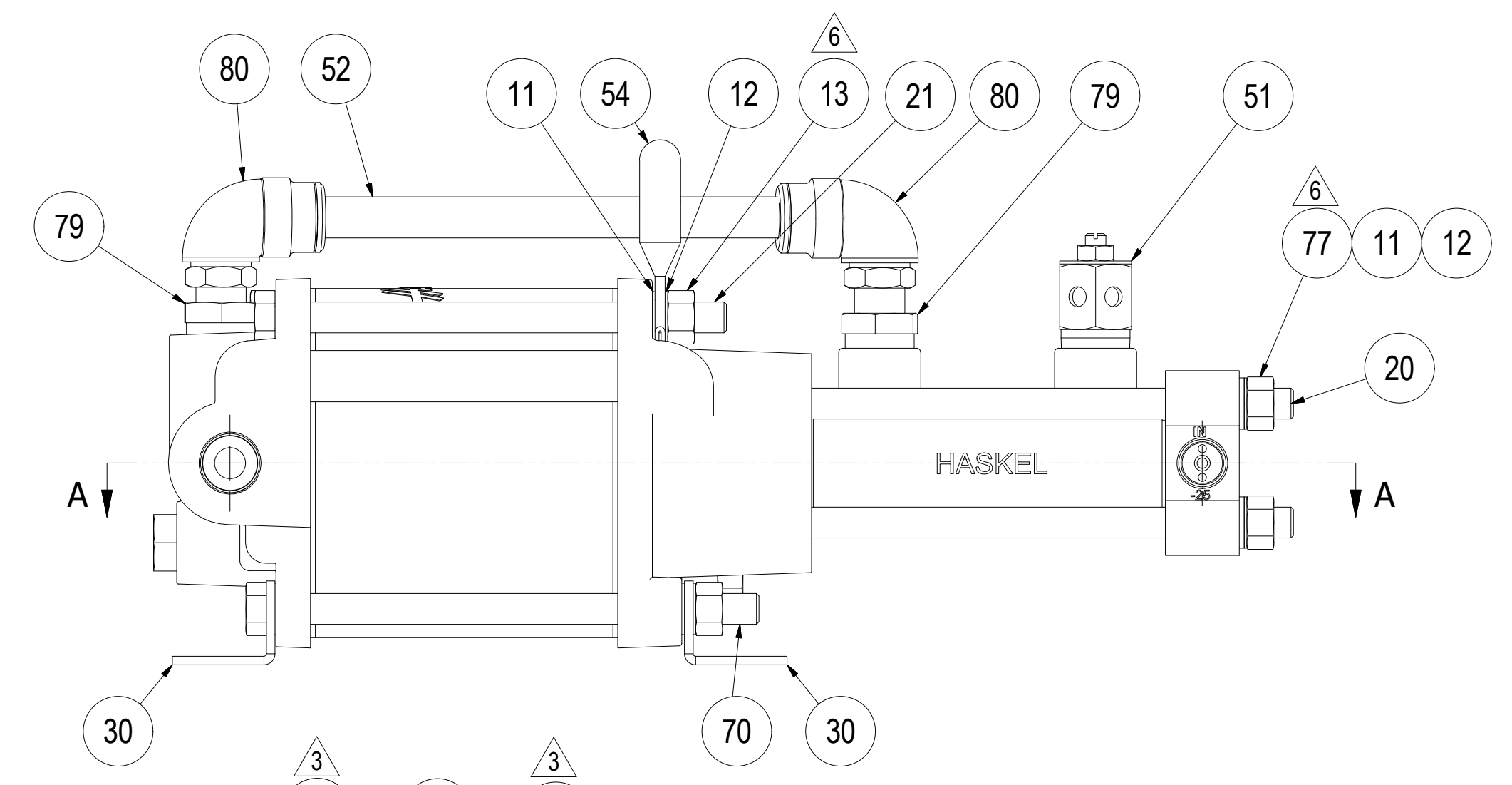
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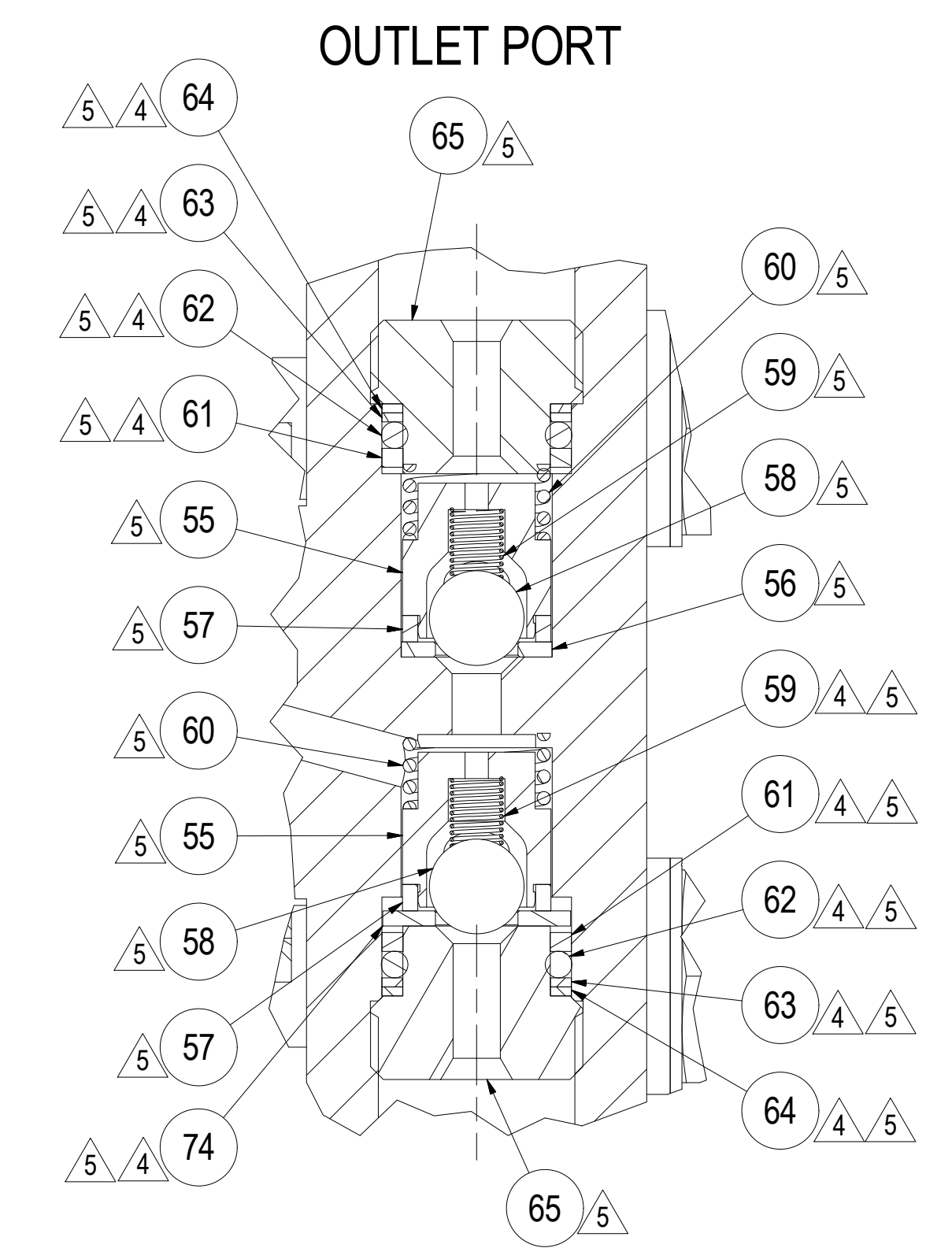
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SECTION B-B
SCALE 1:1



SECTION C-C
SCALE 1:1



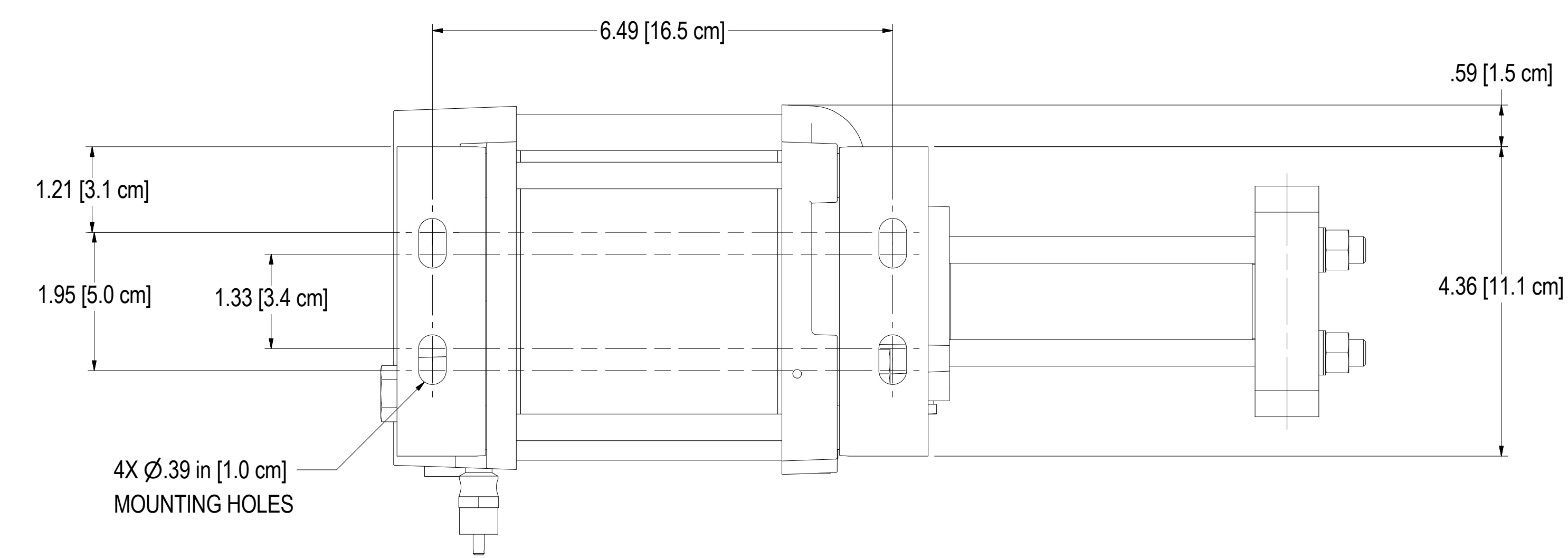
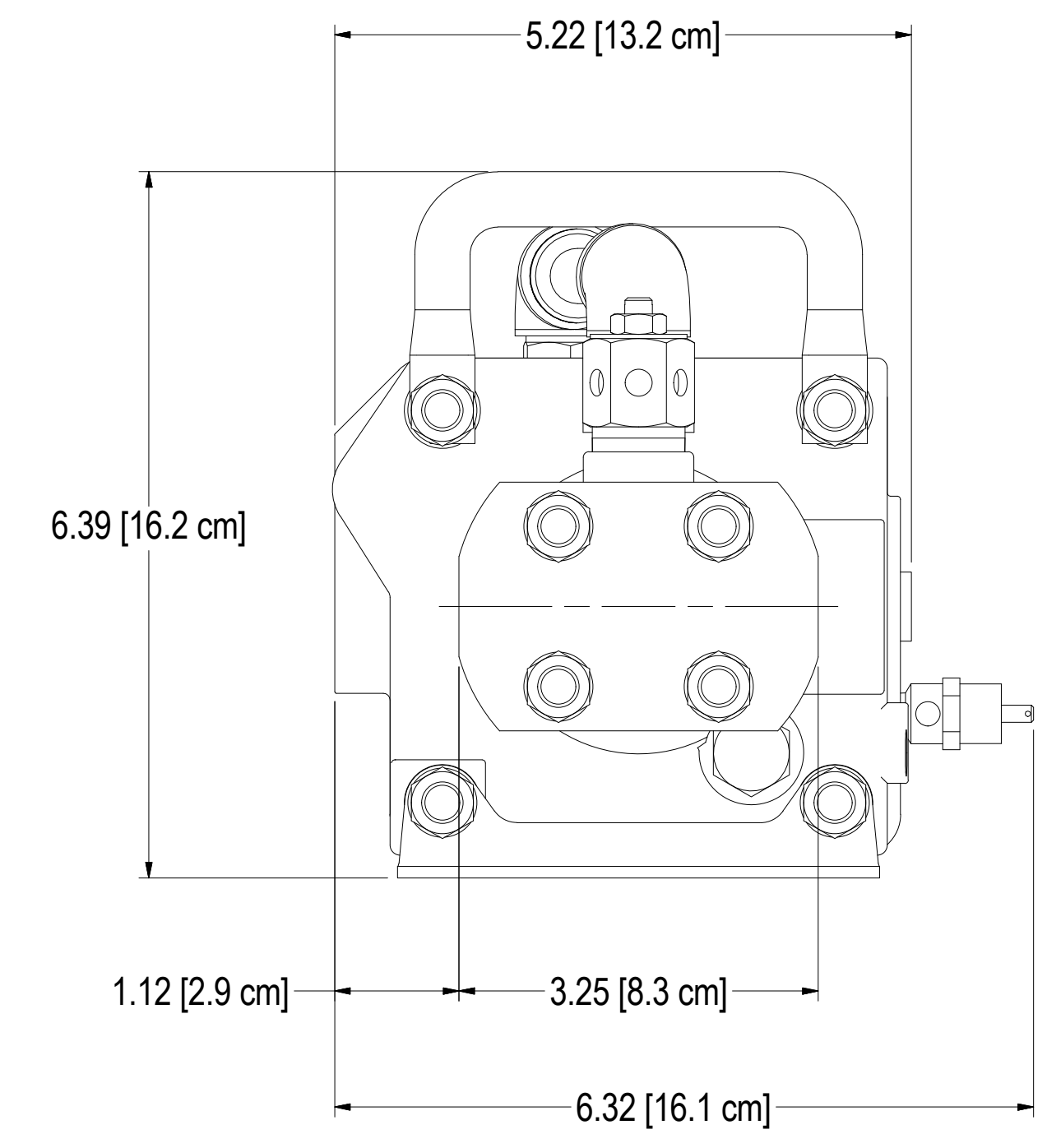
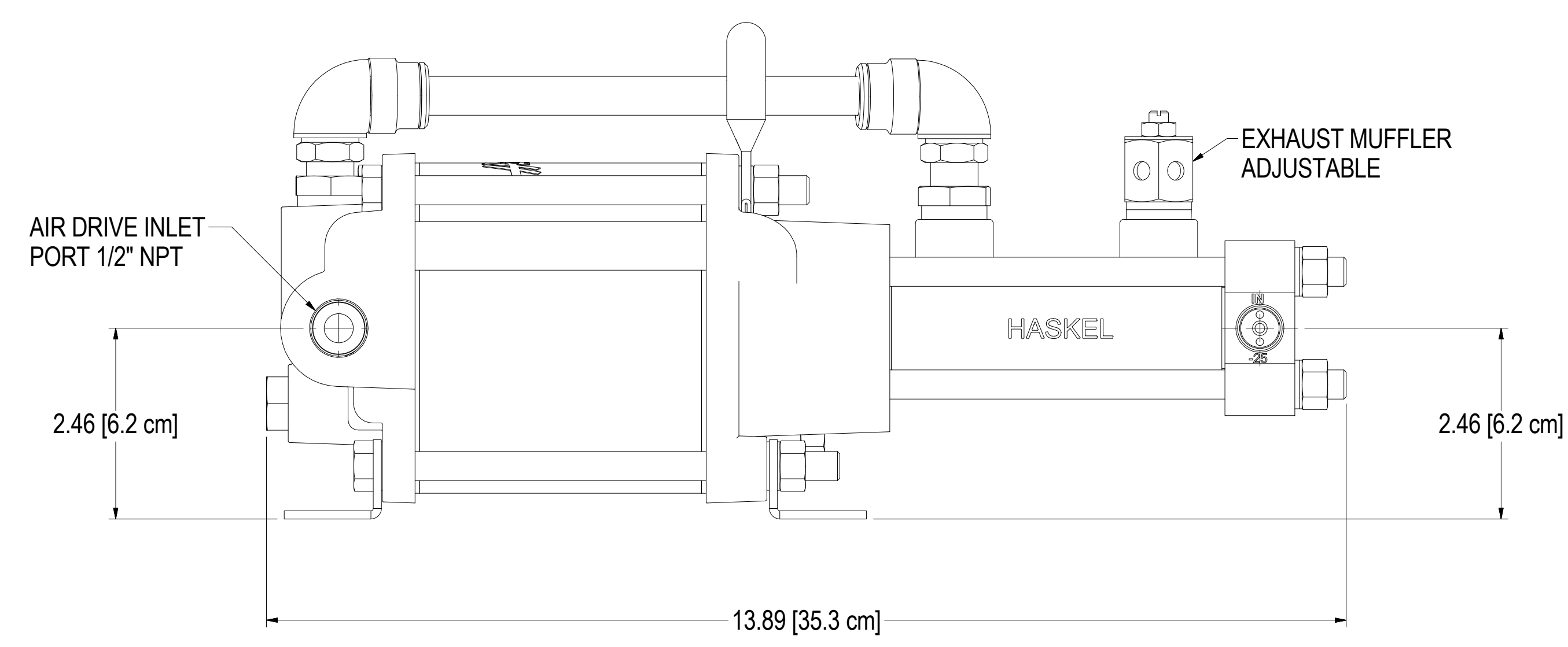
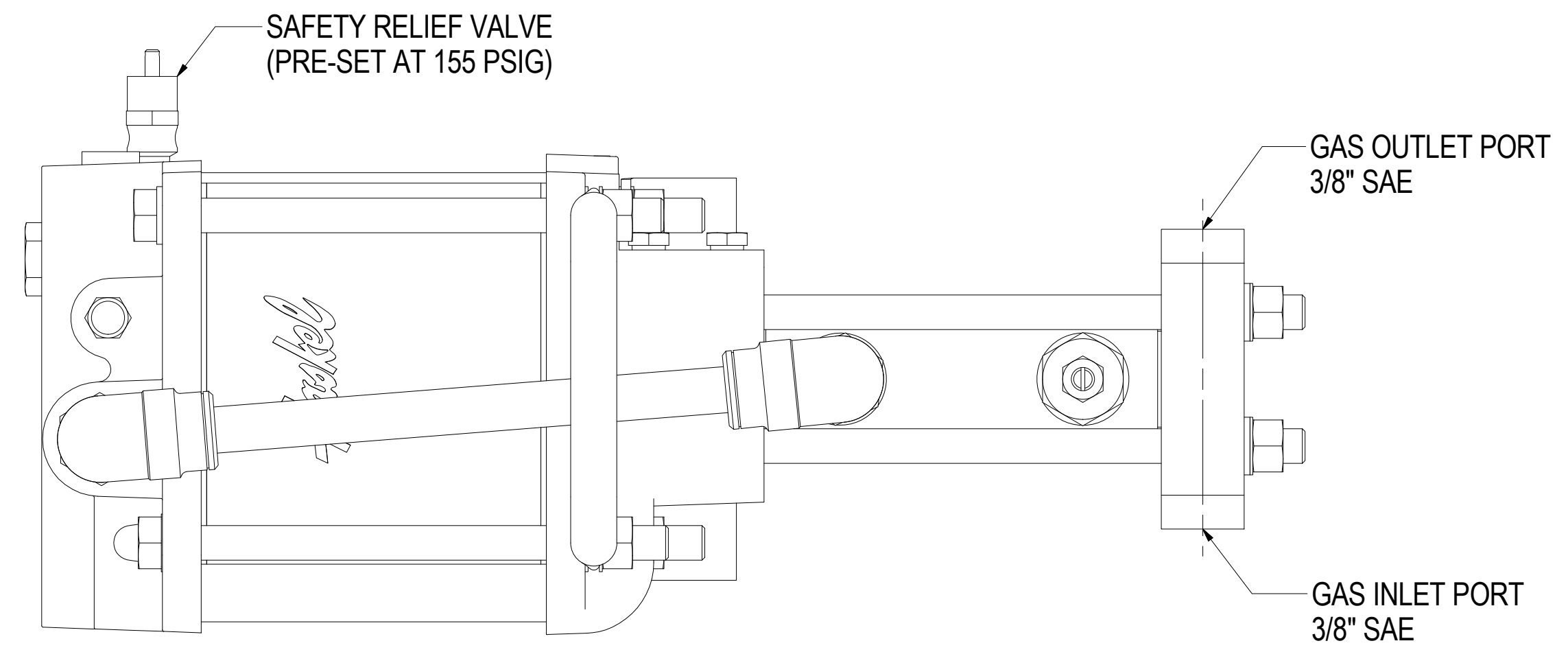
INLET PORT
DETAIL E
SCALE 2.5:1

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DRAWN D MACH	CHECKED PD	SCALE: NA	INVENTOR DRAWING	SHEET 3 OF 3	1