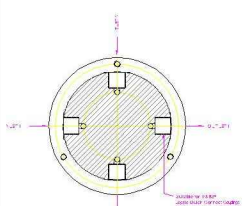
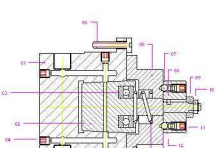
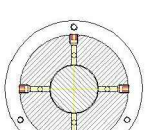


SECTION B-B



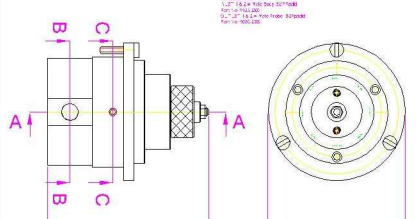
SECTION A-A



SECTION C-C

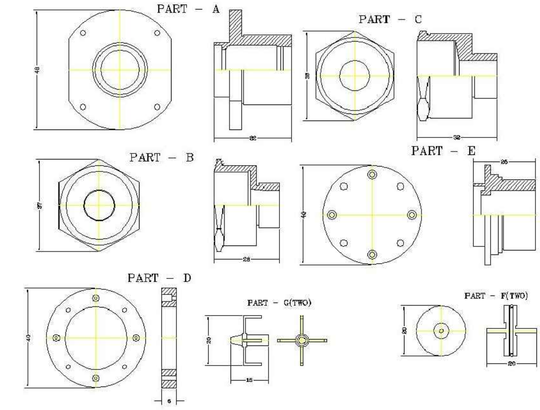
No.	Part No.	PART NAME	DRG NO	NO OFF	BRIEF MATERIAL SPECIFICATION
	1.00	**Rotary Valve Assembly**	**RVA-00**	**1**	**Assembly**
01	1.01	Valve Body	RVA-01	1	Carbon Steel
02	1.02	Valve Spool	RVA-02	1	Brass
03	1.03	Thrust Bearing	RVA-03	1	SKF 51100
04	1.04	Plug M5x6 *	RVA-04	8	Bought Out
05	1.05	Cheese HeadScrew M4x10 *	RVA-05	3	Bought Out
06	1.06	Valve Cover	RVA-06	1	Alloy Steel
07	1.07	Steel Ball Dia 4 mm *	RVA-07	2	Bought Out
08	1.08	Round Pin Dia 3mm	RVA-08	1	Carbon Steel
09	1.09	Thrust Washer	RVA-09	1	Carbon Steel
10	1.10	Hex Nut M4 *	RVA-10	1	Bought Out
11	1.11	Steel Ball Retainer	RVA-11	2	Carbon Steel
12	1.12	Valve Knob	RVA-12	1	Carbon Steel
13	1.13	Thrust Spring	RVA-13	1	Spring Steel
14	1.14	Cheese Head Screw M3	RVA-14	3	Bought Out

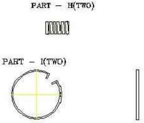
* Refer the corrective details



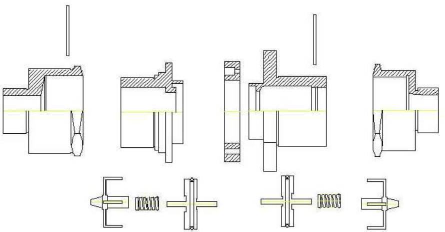
Rotary Valve Pnuematic

Hydraulic QuickDisconnet coupling



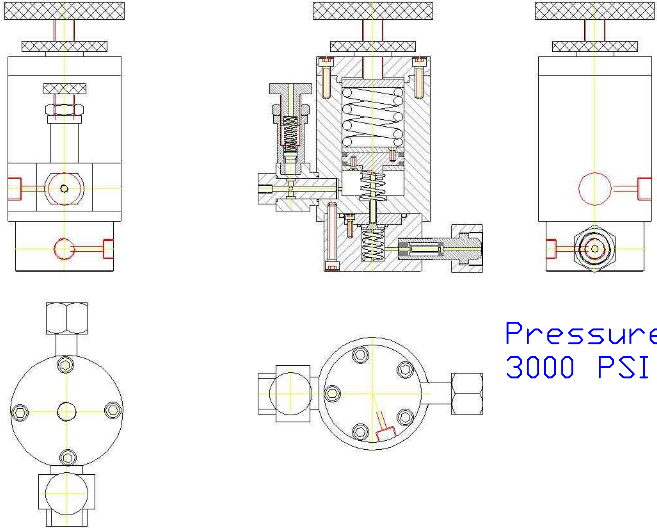


COUPLING ASSEMBLY LAY OUT
(Seals and O–ring not shown)



Cost Estimation of SELF SEALING COUPLING - HAL Helicopter Division												
Sl no.	Part No.	No of	Matl	Size of Matl	Rate K g	Total Cost Mat	Process Cost/unit	Total Cost/Unit	Cost of Tools & fixtures	Testing Charges	Qty	Total Cost/unit
1	Part A	1	Al alloy IS-733	Dia 52x36	300	261	400	661	7000		20	1011
2	Part B	1	Al alloy IS-733	Dia 42x30	300	142	400	542	7000		20	892
3	Part C	1	Al alloy IS-733	Dia 40x36	300	154	400	554	7000		20	904
4	Part D	1	SS	Dia 44x12	250	143	650	793	11000		20	1343
5	Part E	1	SS	Dia 44x30	250	358	800	1158	9000		20	1608
6	Part F	2	Al alloy IS-733	Dia 25x25	300	84	600	684	8000		20	1084
7	Part G	2	Al alloy IS-733	Dia 25x20	300	67	1000	1067	9000		20	1517
8	Part H	2	Spring steel			160		160	5000		20	410
9	Part I	2	Spring steel			160		160	5000		20	410
10	Part J	4	Rubber (Viton)			480		480	11000		20	1030
11	Assembly	1	Assembly				500	500	20000	30000	20	3000
12	**Total cost**					**2006**	**4750**	**6758**	**99000**	**30000**		**13206**
13	**Margin**					500	1000	**1500**	**15000**	**5000**	**20**	**2750**
14	**Price**							**8258**	**114000**	**35000**		**15958**

NOTE: The two types of couplings are identical, tool cost is amortised on 20 Nos.

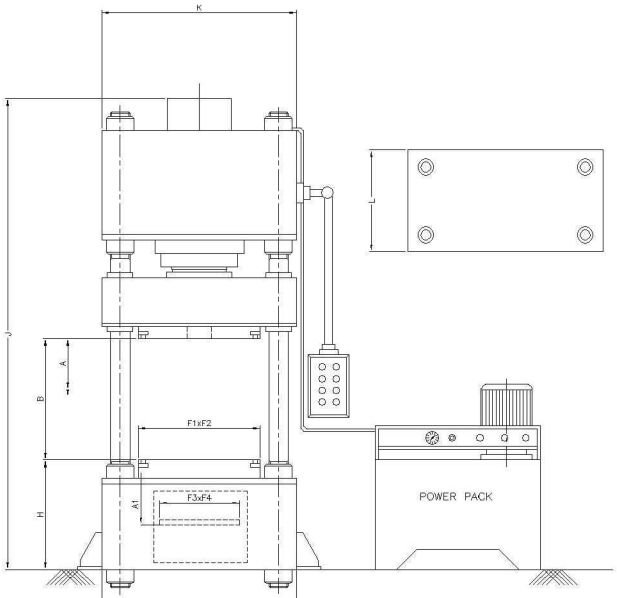


Pressure Regulator
3000 PSI - 100 psi

Unlimited tolerances							
DIMENSION	I-1I	11-5I	51-1II	1I1-5]I	5]1-1I[I	1I11-3III	-3000
FABRICATION	± I.5		± 1.5	+/- 2	± 3	± 4	± 6
MACHINING	± I.1	± [.2	± I.3	± I.5	±].8	± 1.2	± 2

1 DO NOT SCALE THE DRAWING
2 ALL DIMENSIONS IN MM
3 UNMENTIONED CHAMFERS 0.5 mm
4 UNMENTIONED RAD 0.5
5 REMOVE SHARP CORNERS.
6 IF IN DOUBT ASK DESIGN DEPT.

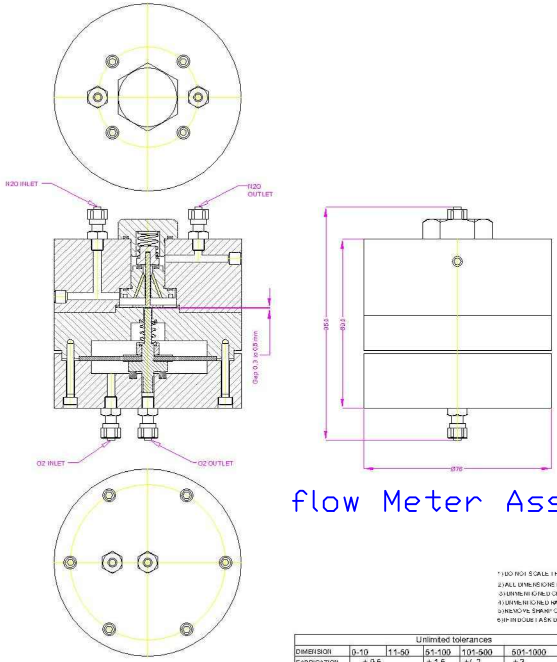
See Above	BLOCK	--		Qty 11
MATERIAL	---			
A	PROJECTION:-	SCALE 11 / DRGS NOT TO BE SCALED	DRAWN:-C.A.R / APPROVED BY:- / DATE:26-13-15	
PART NAME Assembly	TITLE:- High Pressure Regulator Assembly		DRG No. ---	
Erkadi Systems - BANGALORE				



Main Ram Forward Capacity=100Tons
Main Ram Return Capacity = 36Tons
Main Ram Stroke 'A' = 100 mm
Daylight 'B' = 800 mm
Table Size 'F1xF2' = 800x800 mm
Die Cushion Capacity = 40 Tons
Die Cushion Ram Stroke 'A1' = 200 mm
Working Height 'H' = 800 mm.
Width 'K' = 1150 mm
Depth 'L' = 1100 mm
Height 'J' = 3450 mm
Approach Speed = 85 mm/sec
Pressing Speed = 12 mm/sec
Return speed = 160 mm/sec
Die Cushion Table size 'F3xF4' = 500x500 mm
Electric Motor Capacity = 18.5 KW
Oil Tank Capacity = 500 Litres.

Hydraulic DeepDrawing Press

TITLE: 100 T FOUR PILLAR DOWN STROKING HYD. PRESS.		DRG.NO.
		FINE-COM1
DATE:	DRN: CSR	CKD:

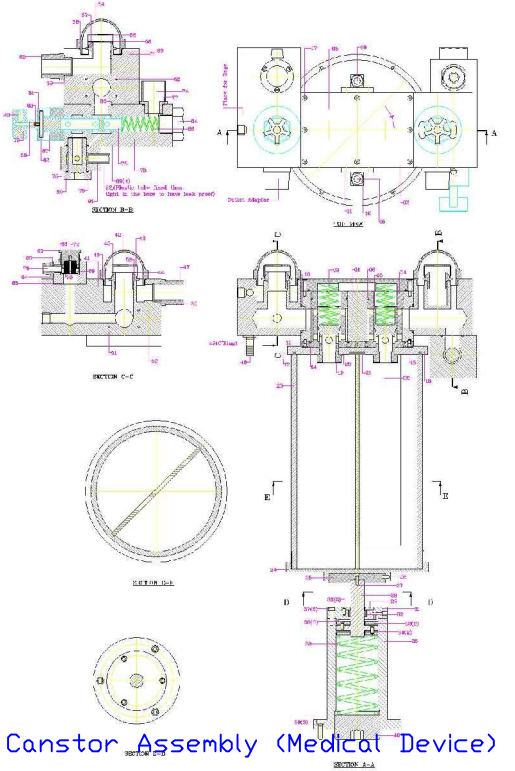


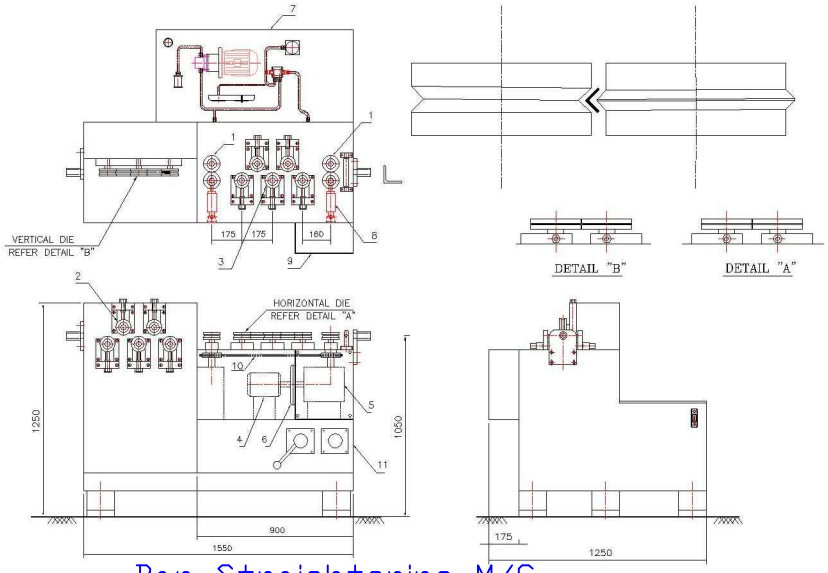
flow Meter Assembly (Medical Device)

1) DO NOT SCALE THE DRAWING
2) ALL DIMENSIONS IN MM
3) UNMENTIONED CHAMFERS 0.25 mm
4) UNMENTIONED RADIUS
5) REMOVE SHARP CORNERS.
6) IF IN DOUBT ASK DESIGN DEPT.

Unlimited tolerances							
DIMENSION	0-10	11-50	51-100	101-500	501-1000	1001-3000	[illegible]
FABRICATION	± 0.5		± 1.5	+/- 2	± 3	± 4	± 6
MACHINING	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

See Above	--	--	Qty 01
MATERIAL	--		
A	PROJECTION:-	SCALE 1:1 DRGS NOT TO BE SCALED	DRAWN:-C.S.R APPROVED BY:- DATE:24-02-06
PART NAME Hypoxia Guard Assly	TITLE:- New Flow meter Assembly		DRG NO. HG-00


SECTION B-B
SECTION C-C
SECTION D-D
SECTION E-E
SECTION A-A
Canstor Assembly (Medical Device)



Bar Straightening M/C

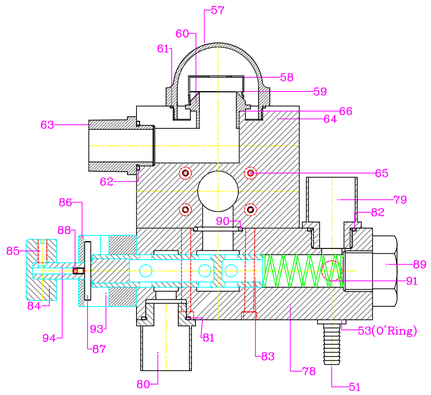
ITEM No	DESCRIPTION	QTY
11	Machine structure	1
10	Chain	1
9	Control panel	1
8	Hydraulic cylinder–adjustable	1
7	Power pack	1
6	Tyre coupling	1
5	Gear reduction box	1
4	Hydraulic motor	1
3	Horizontal die	5
2	Vertical die	5
1	Horizontal drive cum gripper die	2

STRAIGHTENING MACHINE

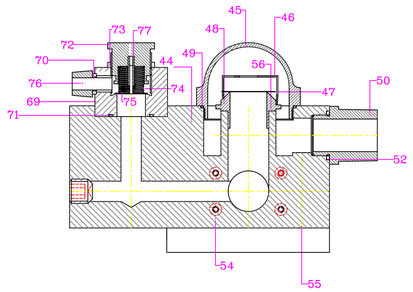
NS

01	1.1.01	RValve Body	CBA-VA-01/R	1
02	1.1.02	Bottom Plate	CBA-VA-02	1
03	1.1.03	Valve Spring	CBA-VA-03	2
04	1.1.04	Valve Guide-LH	CBA-VA-04	1
05	1.1.05	Valve Guide-RH	CBA-VA-05	1
06	1.1.06	Main Valve Spool	CBA-VA-06	2
07	1.1.07	Valve Guide O-Ring ID 36 CS 2	CBA-VA-07	2
08	1.1.08	Counter Sunk Hex Head Screw M3x15	CBA-VA-08	8
09	1.1.09	Sealing Ring - Bottom Plate	CBA-VA-09	1
10	1.1.10	Suspension With Seal	CBA-VA-10	2
11	1.1.11	Canister Hold	CBA-VA-11	2
12	1.1.12	Counter Sunk Hex Head Screw M3x9-Canister Hold	CBA-VA-12	4
13	1.1.13	Valve guide LH & RH Top O-ring, I.D.39xCS2	CBA-VA-13	2
14	1.1.14	Counter Sunk Hex Head Screw M3x9-Valve Guide	CBA-VA-14	6
15	1.1.15	Valve Guide LH&RH Bottom O-ring, I.D.38xCS2	CBA-VA-15	2
16	1.1.16	Hex Head Nut M8x0.75	CBA-VA-16	2
17	1.1.17	O-Ring Valve Body-OD 26, CS 2	CBA-VA-17	2
II	**1.2.00**	**Canister Assembly**	**CBA-CA-00**	**1**
18	1.2.01	Sealing Ring-Canister, ID 134, CS 2	CBA-CA-01	1
19	1.2.02	Canister Top Plate	CBA-CA-02	1
20	1.2.03	Push Pin	CBA-CA-03	2
21	1.2.04	In Let tube O-Ring, OD 23, CS 2	CBA-CA-04	1
22	1.2.05	In let Tube	CBA-CA-05	1
23	1.2.06	Clamp Bolt-Canister,	CBA-CA-06	1
24	1.2.07	Clamp Tube Canister	CBA-CA-07	1
25	1.2.08	External Clamp Tube - Canister	CBA-CA-08	1
26	1.2.09	O-ring Push Pins, ID 20CS 2	CBA-CA-09	1
27	1.2.10	Canister Vessel	CBA-CA-10	1
28	1.2.11	Bottom Plate-Canister	CBA-CA-11	1
29	1.2.12	Cap Screw - M3x8	CBA-CA-12	6
30	1.2.13	Bottom Plate O-ring ID130, CS 3	CBA-CA-13	1
31	1.2.14	Canister Mesh	CBA-CA-14	1
32	1.2.15	O-ring , ID 41, CS3	CBA-CA-15	1
33	1.2.16	In Let tube Plug O-Ring, ID 16, CS 2	CBA-CA-16	1
34	1.2.17	In Let tube Bottom Plug	CBA-CA-17	1
35	1.2.18	Cap Screw M5x11	CBA-CA-18	1
36	1.2.19	Spring Washer	CBA-CA-19	1
37	1.2.20	Spring Washer O-Ring ID 42.CS 3	CBA-CA-20	1
38	1.2.21	Clamp Spring	CBA-CA-21	1
39	1.2.22	Clamp Knob	CBA-CA-22	1
40	1.2.23	Handle	CBA-CA-23	4
41	1.2.24	External Clamp	CBA-CA-24	1
42	1.2.25	Grub Screw	CBA-CA-25	1
43	1.2.26	External Circlip (Shaft O.D. 28), to IS:3075 Type A	CBA-CA-26	1
III	**1.3.00**	**ROut Let Assembly**	**CBA-OA-00/R**	**1**
44	1.3.01	ROut Let Body	CBA-OA-01/R	1
45	1.3.02	Valve Cap Out Let	CBA-OA-02	1
46	1.3.03	Valve Guide-OA	CBA-OA-03	1
47	1.3.04	Mica non-return Valve	CBA-OA-04	1
48	1.3.05	Valve Seat-OA	CBA-OA-05	1
49	1.3.06	Valve Cap-O-ring ID 44x1.5	CBA-OA-06	1
50	1.3.08	Adaptor OA	CBA-OA-07	1
51	1.3.09	Fresh Gas Adaptor	CBA-OA-08	1
52	1.3.10	Out let Adaptor-O-Ring ID20 CS 2	CBA-OA-09	1
53	1.3.11	Fresh Gas Inlet O-Ring ID 8, CS 2	CBA-OA-10	1
54	1.3.11	Cap Screws M3x76	CBA-OA-11	4
55	1.3.12	Plug M8	CBA-OA-12	1
56	1.3.13	Rubber Washer, OD27xID21x0.5thick	CBA-OA-13	1

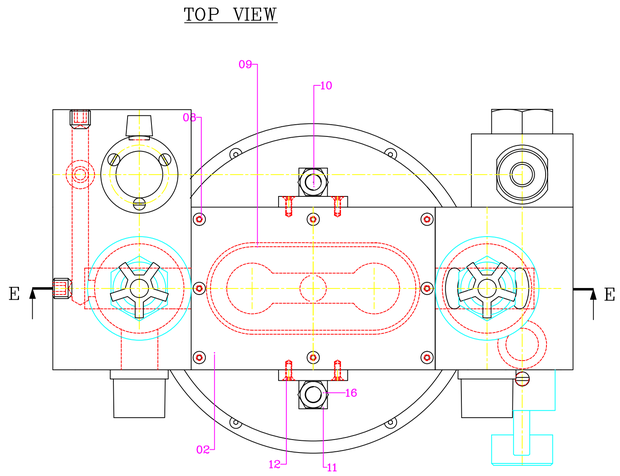
VI	**1.4.00**	**RIn Let Assembly**	**CBA-IA-00/R**	**1**
57	1.4.01	Valve Cap-In Let	CBA-IA-01	1
58	1.4.02	Valve Guide-IA	CBA-IA-02	1
59	1.4.03	Mica non-return Valve-Out Let	CBA-IA-03	1
60	1.4.04	Valve Seat-IA	CBA-IA-04	1
61	1.4.05	Valve Cap-O-ring ID 44x2-In Let	CBA-IA-05	1
62	1.4.06	Inlet Adaptor-O-Ring ID20 CS 2	CBA-IA-06	1
63	1.4.07	Inlet Adaptor	CBA-IA-07	1
64	1.4.08	RIn Let Body	CBA-IA-08/R	1
65	1.4.09	Cap Screws M3x76	CBA-IA-09	4
66	1.4.10	Rubber Washer, OD27xID21x0.5thick	CBA-IA-10	1
V	**1.5.00**	**RRelief Valve Assembly**	**CBA-RA-00/R**	**1**
67	1.5.01	Relief Valve Body****(Deletedn Revised design)	CBA-RA-01	1
68	1.5.02	Banjo- Relief Valve**** (Deleted in Revised Design)	CBA-RA-02	1
69	1.5.03	RRelief Valve Sleeve	CBA-RA-03/R	1
70	1.5.04	Bonded Seal, 10x8x2 Or Use Rubber Washer, 10x8x1Or O-ring O.D. 10 CS 1 mm	CBA-RA-04	1
71	1.5.05	Sleeve O-Ring ID 18x1.5	CBA-RA-05/R	1
72	1.5.06	Adjusting Nut	CBA-RA-06	1
73	1.5.07	Lock Nut	CBA-RA-07	1
74	1.5.08	Relief Valve Spring	CBA-RA-08	1
75	1.5.09	Valve Disc	CBA-RA-09	1
76	1.5.10	Relief Valve adaptor	CBA-RA-10	1
77	1.5.11	Valve disc Guide	CBA-RA-11	1
V1	**1.6.00**	**RSelector Assembly**	**CBA-SA-00/R**	**1**
78	1.6.01	RSelector Body	CBA-SA-01/R	1
79	1.6.02	Ventilator Adaptor	CBA-SA-02	1
80	1.6.03	Bladder Adaptor	CBA-SA-03	
81	1.6.04	Bladder Adaptor O-Ring ID 20xCS 2	CBA-SA-04	1
82	1.6.05	Ventilator Adaptor O-Ring ID 20xCS 2	CBA-SA-05	1
83	1.6.06	RSelector Valve spool	CBA-SA-06/R	1
84	1.6.07	Spool Knob	CBA-SA-07	1
85	1.6.08	Knob Grub screw, M5x10	CBA-SA-08	1
86	1.6.09	RSpool Cap & Stopper	CBA-SA-09/R	1
87	1.6.10	Dowel Pin /R	CBA-SA-10/R	1
88	1.6.11	Grub Screw M3x6/R	CBA-SA-11/R	1
89	1.6.12	Spring Nut/R	CBA-SA-12/R	1
90	1.6.13	O'Ring Selector Body ID 20, CS2	CBA-SA-13	1
91	1.6.14	Selector Valve Spring/R	CBA-SA-14/R	1
92	1.6.15	Cap Screw M5x55	CBA-SA-15	4
93	1.6.16	Cap Screw M4x30/R	CBA-SA-16/R	2
94	1.6.17	Valve Stem/R	CBA-SA-17/R	1
95	1.6.18	Spring Guide**** (Deleted)	CBA-SA-18	1



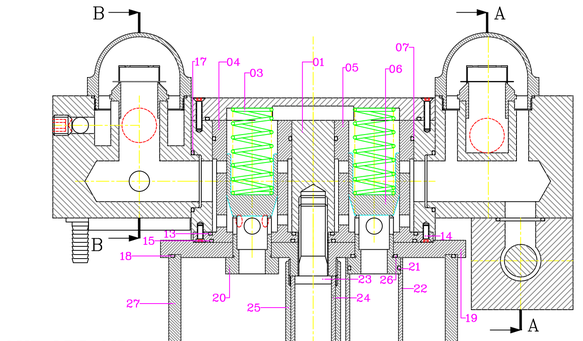
SECTION A–A



SECTION B–B

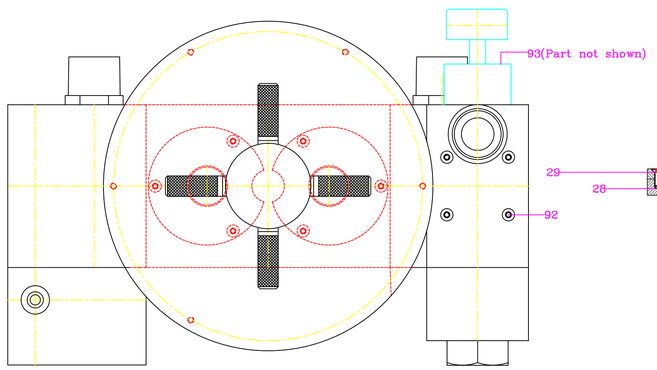


TOP VIEW

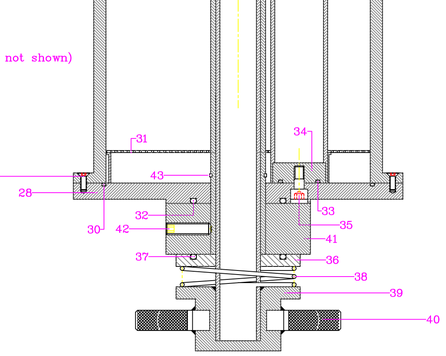


OUT LET SIDE

INLET SIDE



BOTTOM VIEW

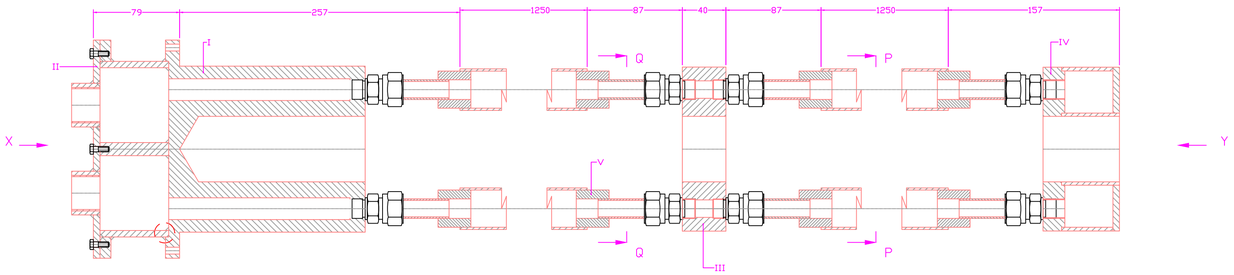


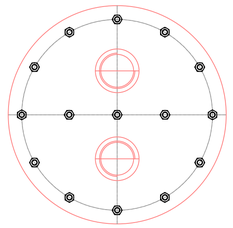
SECTION E–E

Circle Breathing System
–(Medical equipment)

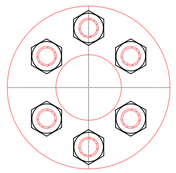
Unlimited tolerances							
DIMENSION	0–10	11–50	51–100	101–500	501–1000	1001–3000	ABOVE 3000
FABRICATION	± 0.5		± 1.5	+/– 2	± 3	± 4	± 6
MACHINING	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

A	SCALE: 1:1	Drawn By: CSR
		Approved By
	DATE: 27/07/04; Modified 21/01/05	
– – – –	TITLE: Circle breath Assembly	DRG NO

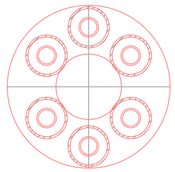




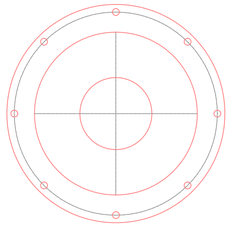
VIEW X



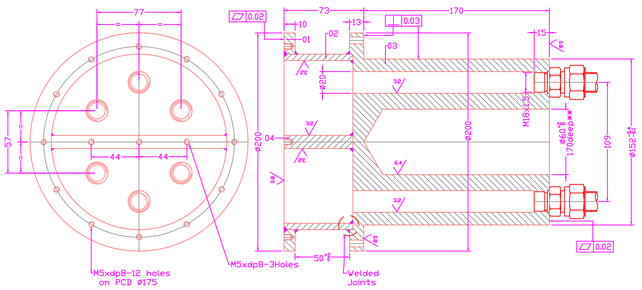
SECTION Q-Q



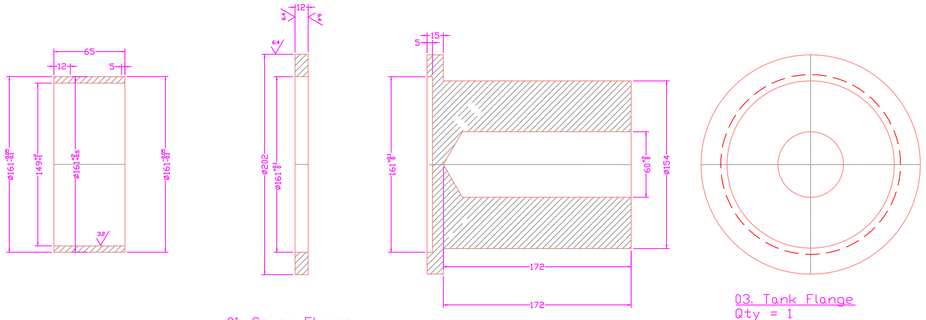
SECTION P-P



VIEW Y



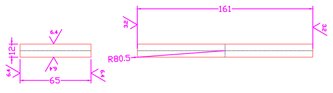
I. FRONT HEADER
Fabricated & Machined.



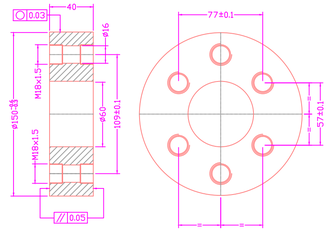
02. Tube
Qty = 1
Matl = M.S. or S.S.
Select Nearest O.D.

01. Cover Flange
Qty = 1
Matl = M.S. or S.S.

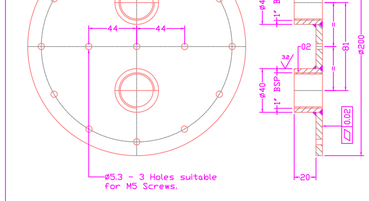
03. Tank Flange
Qty = 1
Matl = M.S. OR S.S.



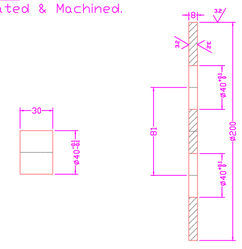
04. PARTITON
Qty = 1
Matl = M.S. Or S.S.



III. INTERMEDIATE SUPPORT
Machined.
Matl = M.S.(Galvanized) OR S.S.
Qty = 1



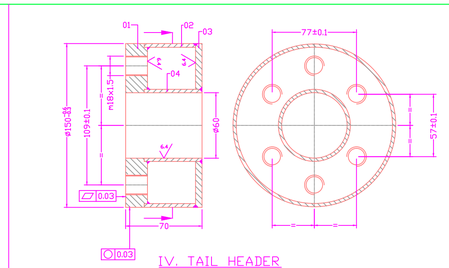
II. COVER
Fabricated & Machined.



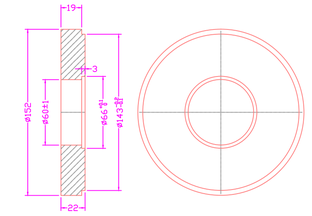
02. INSERT
Qty = 2
Matl = M.S. OR S.S.

01. Cover Plate
Qty = 1
Matl = M.S. OR S.S.

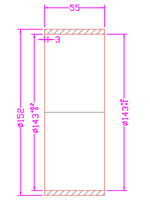
SPECIAL NOTE:-
1. Welding symbols & methods are not shown. It is assumed that fabricators knows the welding methods suitable to this application.
2. Follow IS; standard for welding.
3. electrical arc weldig is suitable for this application.
4. In the event of non-availibility of required size of tube or plate, select the nearet higher size.
5. Machining should be done after welding, wherever shown.
6. Purpose of ø60 mm hole in Tank Flange is to reduce weight.
8. Parts 01 to 04 of "I" are to be fabricated & then machined.
9. Machinig allowance is given for all the parts wherever required.
10. Welding shown ◢ thus.



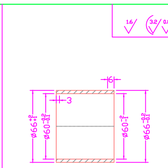
IV. TAIL HEADER
Fabricated & Machined.
Matl = M.S.(Galvanized) OR S.S.
Qty = 1



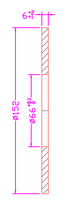
01. INLET
Matl = M.S. OR S.S.
Qty = 1



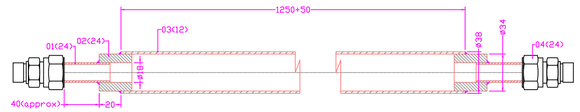
02. OUTER PIPE
Matl = M.S. OR S.S.
Qty = 1



01. INNER PIPE
Matl = M.S. OR S.S.
Qty = 1

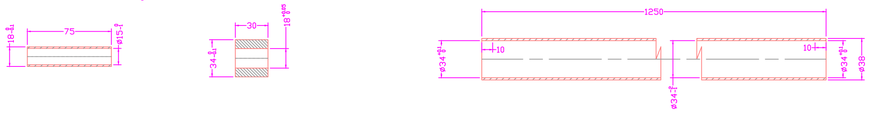


04. COVER PLATE
Matl = M.S. OR S.S.



V. COOLER TUBE ASSLY
Matl = M.S. OR S.S.
Qty = 12

Male Stud Coupling
Polyhydron GE18PLM18
Matl : Carbon Steel
OR S.S.
Qty = 24



01. ENTRY & EXIT TUBE
Matl = M.S. OR S.S.
(Seamless)
Qty = 24

02. COUPLER BUSH
Matl = M.S. OR S.S.
Qty = 24

02. COOLER TUBE
Matl = M.S. OR S.S.
(Seam less)
Qty = 12

Cooler assembly & parts Drawing.

Cost Estimation - Conveyor Assembly- Pioneer balloon project Part Name : Cooler Assembly

No.	Discription	No. Off	Wt KGs'
I	Front Header	1	0.00
01	Cover Flange	1	3.02
02	Tube	1	3.50
03	Tank Flange	1	47.77
04	Partition	1	1.01
II	Cover	1	0.00
01	Cover Flange	1	1.97
02	Insert	2	0.59
III	Intemediate Support	1	6.66
V	Tail Header	1	0.00
01	Inlet	1	3.75
02	Outer Tube	1	1.10
03	Inner Tube	1	0.50
04	Cover Plate	1	0.85
V	Cooler Tube Assly	1	0.00
01	Entry & Exit Tube	24	6.00
02	Coupler Bush	24	5.13
03	Cooler Tube	12	14.00
04	Male StdCplg M18		4.50
VI	Hex Screws M5x15	15	1.50
	TOTAL		101.86

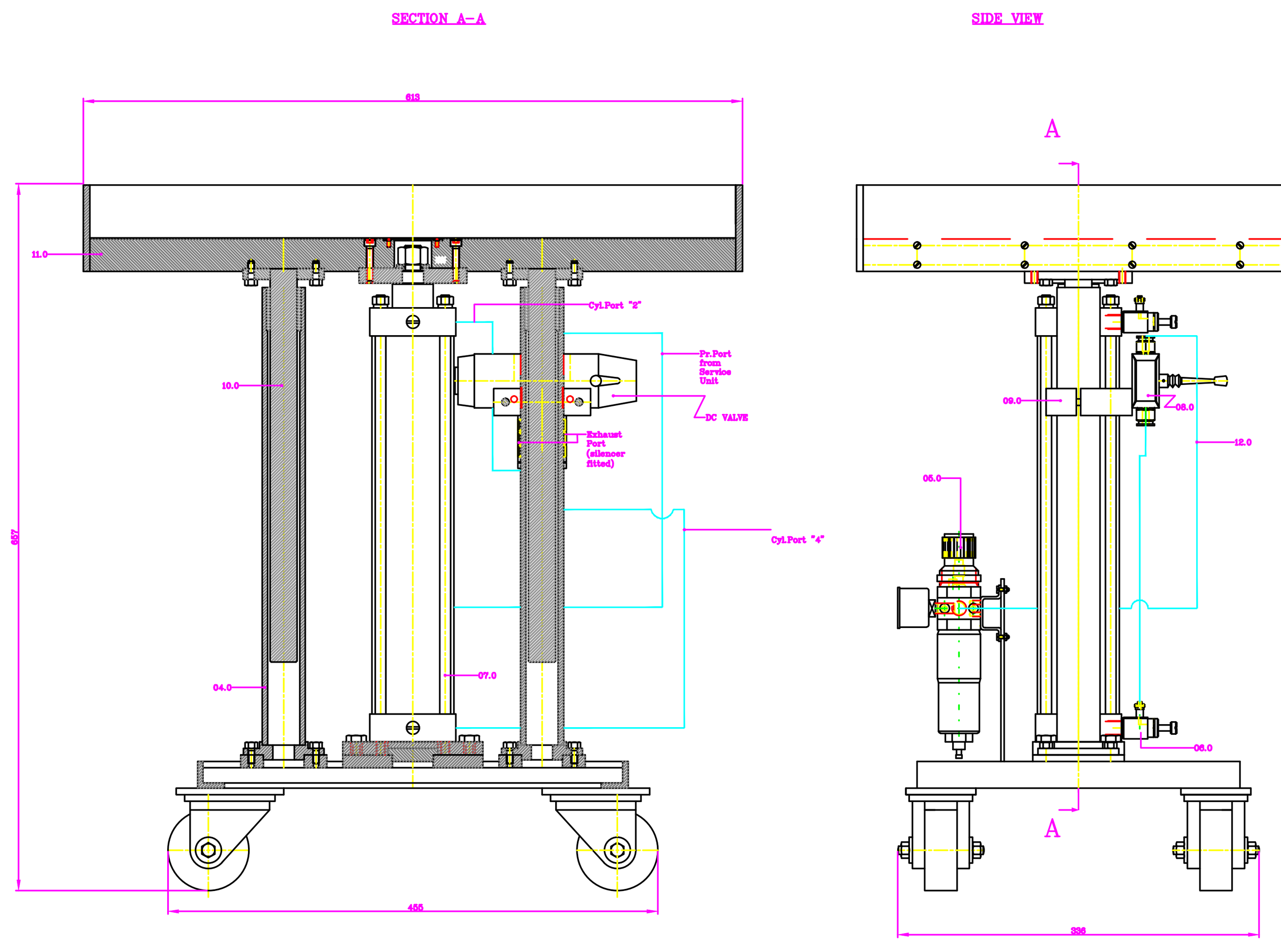
The Weight schedule is the weight of raw material required to manufacture the assembly. Actual weight is around 30 % less.

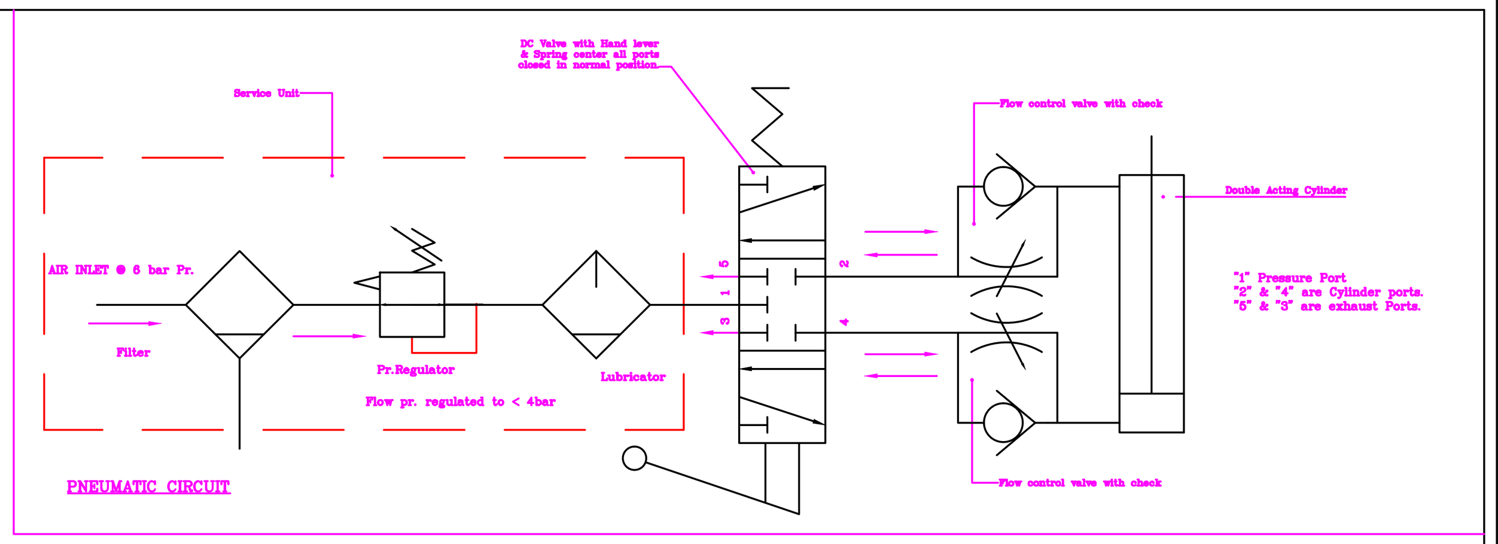
(15)5480 PIBA (1)/1

REV. NO.	REVISION	DATE	PROJECT : BALLOON MANUFACTURING FACILITY	CLIENT :	MATERIAL: See above
				DRAWN : -----	SIZE: See the DRG above
				CHKD :	Supplier:- To be ascertained
				APPRD :	EST MASS = 60 Kgs
				DATE :	QTY: 18 (approx)
				THIRD ANGLE PROJECTION	Unlimited Tolerance Linear & Angular IS 2102-1969 Threads Run out & Under Cut- To IS 1369-1975

1. Do not scale the drawing.
2. All dimensions are in MM.
3. Unlimited chamfers 0.25 mm.
4. Unlimited Fillet radius 0.25 mm
5. Remove sharp corners.
6. If in doubt ask design dept.

DRG TITLE: LATEX BALLOON DIPPING LINE
ASSEMBLY : CONVEYOR (REVERSE TYPE)
SUB ASSEMBLY : Cooler Assembly
ASSOCIATE ASSEMBLY: Latex Tank Assembly
PART NAME- Assembly | Scale: 1:2

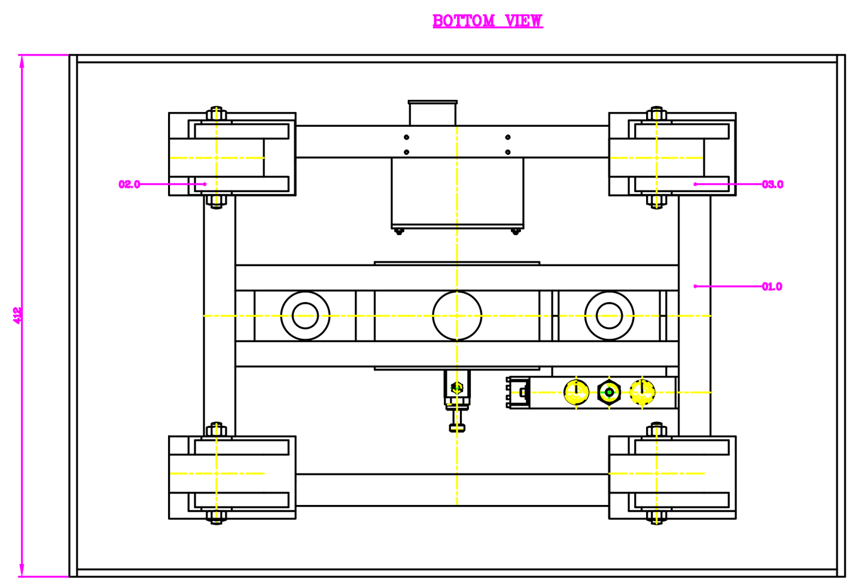




NOTE :- ASSEMBLY DRAWING VIEWS ARE IN CYLINDER IN CLOSED POSITION. CYLINDER ROD FULLY EXTENDED(300MM), HEIGHT WILL INCREASE BY 300 MM. AVOID PUSHING TROLLEY IN CYLINDER EXTENDED POSITION.

No.	PART NAME	DRG NO	NO OFF
00.0	**Pneumatic Lift Assembly**	**PLA-PLA-00**	**1**
01.0	Chassis-Fabrication	PLA-CF-00	
02.0	Front Wheel Assembly	PLA-FWA-00	2
03.0	Rear Wheel Assembly	PLA-RWA-00	2
04.0	Guide Rod Support Assembly	PLA-GRS-00	2
05.0	Air Service Unit Assembly	PLA-ASA-00	1
06.0	Flow Control Valve	PLA-FCV-00	2
07.0	Air Cylinder Assembly	PLA-ACA-00	1
08.0	DC Hand Lever Valve	PLA-HLV-00	1
09.0	Clamp Assembly	PLA-CA-00	1
10.0	Guide Rod Assembly	PLA-GRA-00	2
11.0	Table Assembly	PLA-TA-00	1
12.0	Plastic Tube	PLA-TU-00	1

NOTE: DETAIL INDIVIDUAL PARTS REFER BOM



Working Principle & Construction features

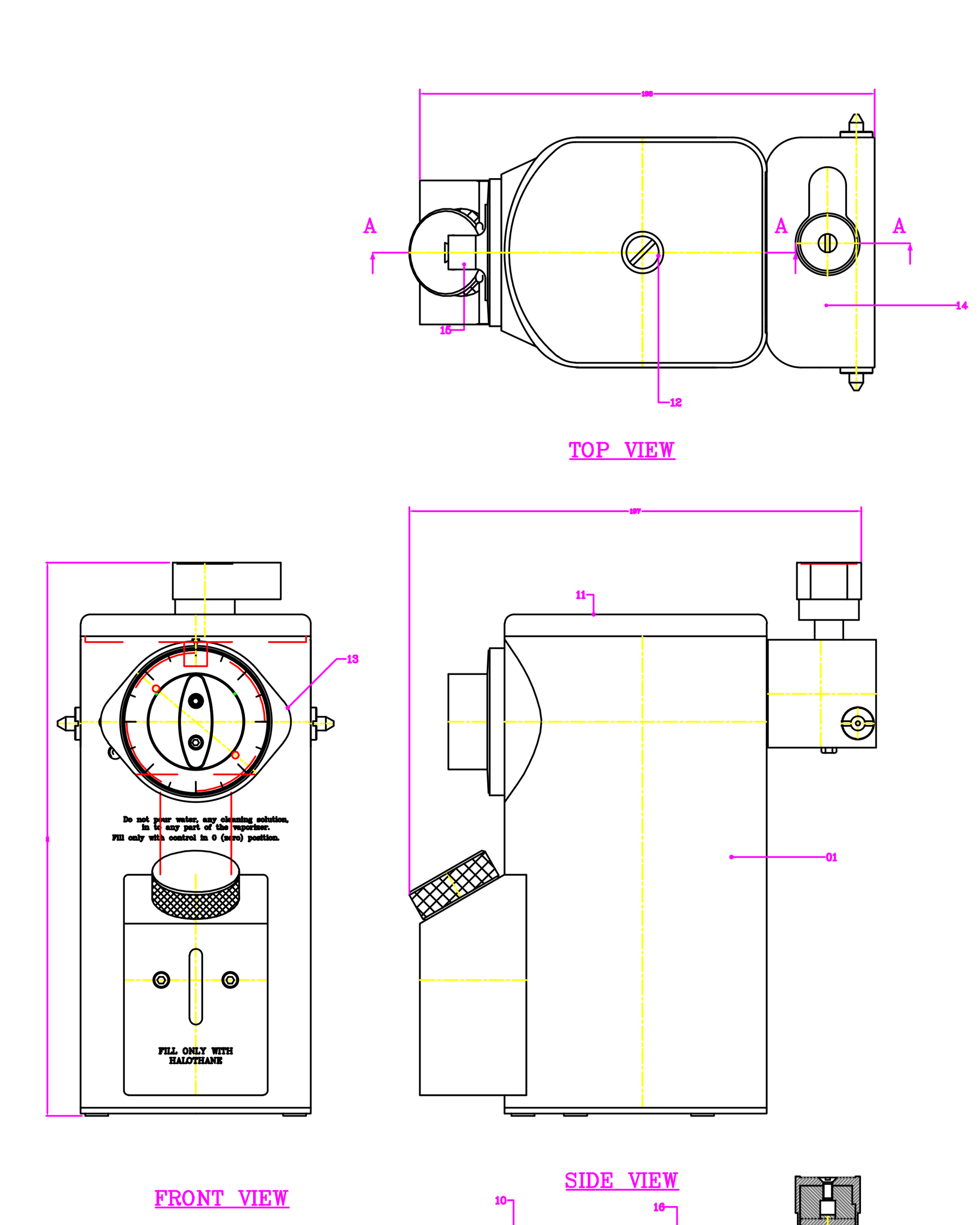
Double acting cylinder is mounted on a MS fabricated chassis. The chasis rolls on four wheels & two front wheels are turnable to facilitate the change in the direction of movement. Trolley movement is by pushing.
An alluminium platform is secured on to the piston rod of the cylinder. The platform moves up by "pressing and holding" the hand lever of DC Valve in one direction or down by "pressing & holding" the hand lever of the DC Valve in the opposite direction. The valve is spring center & all ports are closed in normal position. The platform can be stopped in any position before the maximum stroke on either direction of movement (i.e. while moving "UP" or "DOWN") by releasing the hand lever. The hand lever returns to nutral position (spring center). The platform ceases to move.
Air is supplied to the pr. port of the DC valve. The max pressure should not exceed 4 kg/cm2.
Air is regulated from a service unit of reputed make. Service unit comprises of Pr.Reulator,Pr Guage, Air filter, Condensate drain, & a flow regulator is mounted on a separate plate.
Two flow control valves are fitted to the cylinder ports, one at each ports, to control the forward & return speeds. The flow control valves are adjustable to get required speeds.
In case clean air is supplied directly service unit may not be fitted in the lift assembly.
If cylinder speed is not be controlled in both direction, then one flow meter is sufficient.
The maximum weight that can be lifted is around 75 Kgs.
Stroke of the cylinder is 300 mm.

Pneumatic Lift Assembly

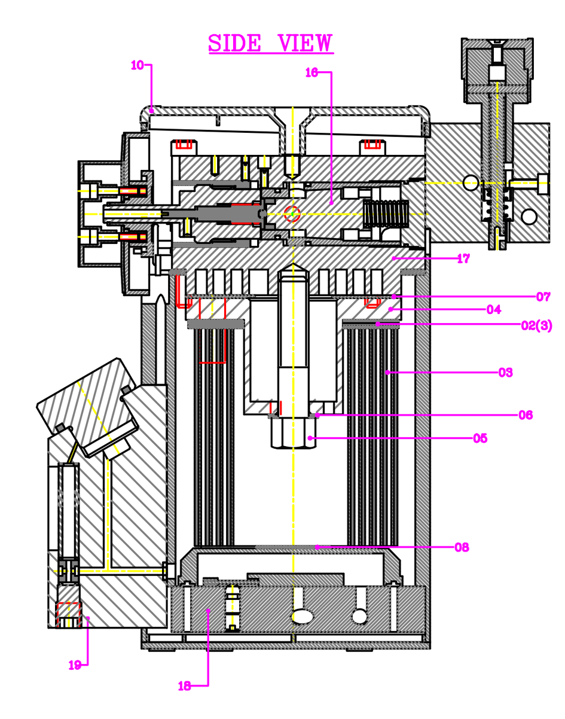
Unlimited tolerances							
DIMENSION	0-10	11-50	51-100	101-500	501-1000	1001-3000	> 3000
FABRICATION	± 0.5		± 1.5	+/- 2	± 3	± 4	± 6
MACHINING	± 0.1	± 0.2	± 0.3	± 0.5	± 0.8	± 1.2	± 2

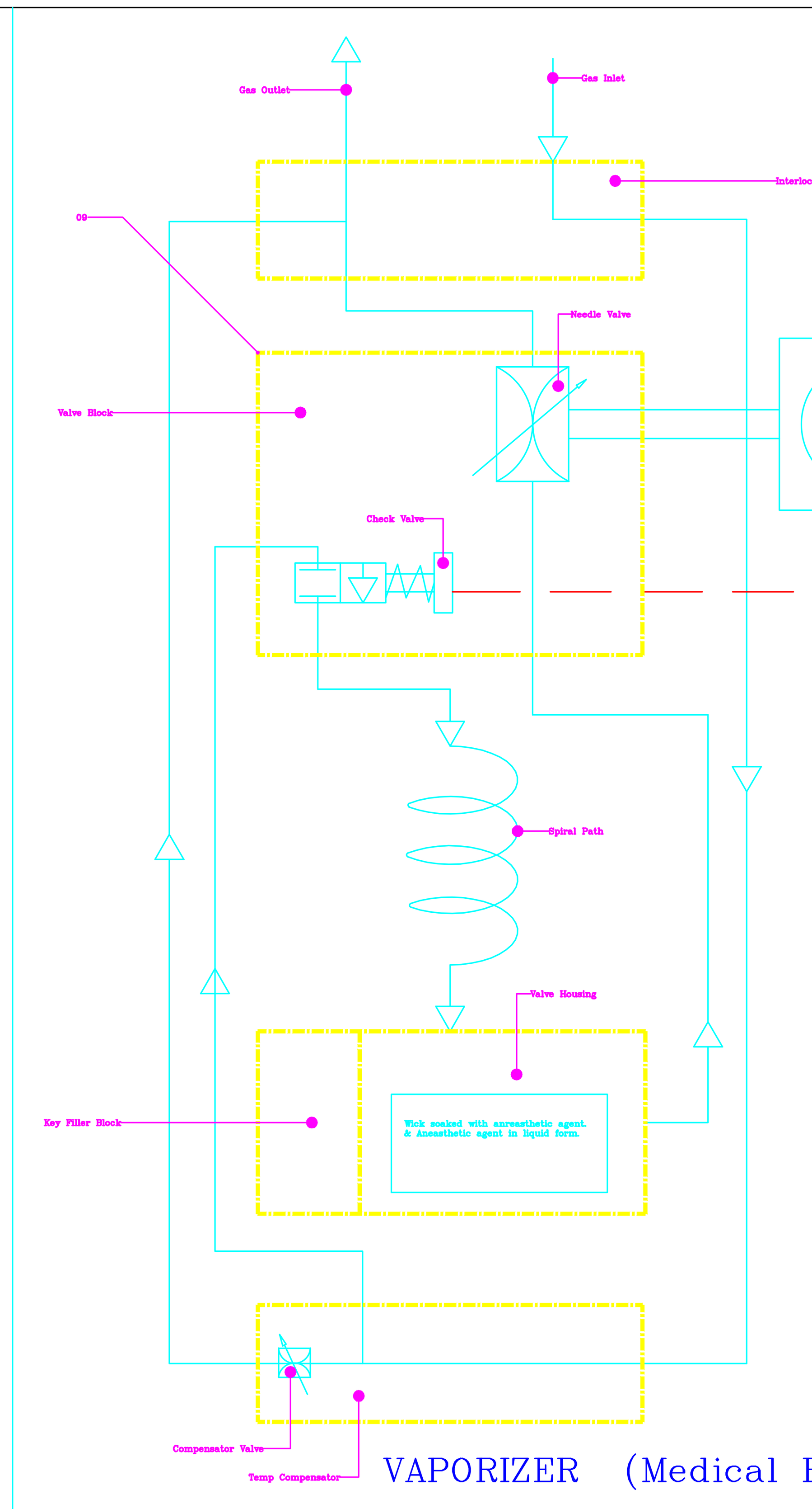
1) DO NOT SCALE THE DRAWING
2) ALL DIMENSIONS IN MM
3) UNMENTIONED CHAMFERS 0.5 mm
4) UNMENTIONED RAD 0.5
5) REMOVE SHARP CORNERS.
6) IF IN DOUBT ASK DESIGN DEPT.

PART NAME: Layout & BOM — TITLE:- Pneumatic Lift Assembly — DRG NO. PLA-PLA-00 — DATE: 11-05-06 — Qty 01 — DRAWN:-C.S.R

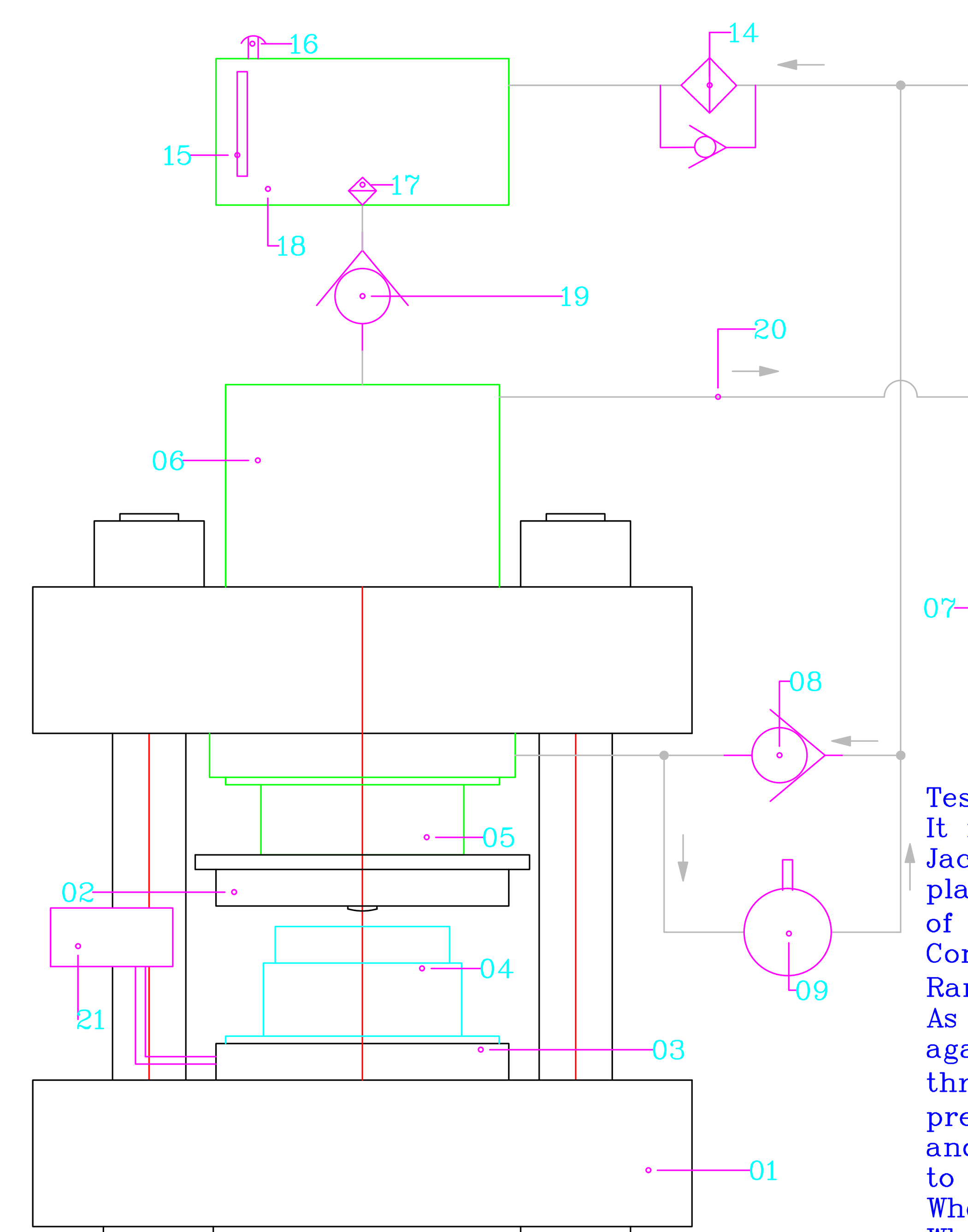


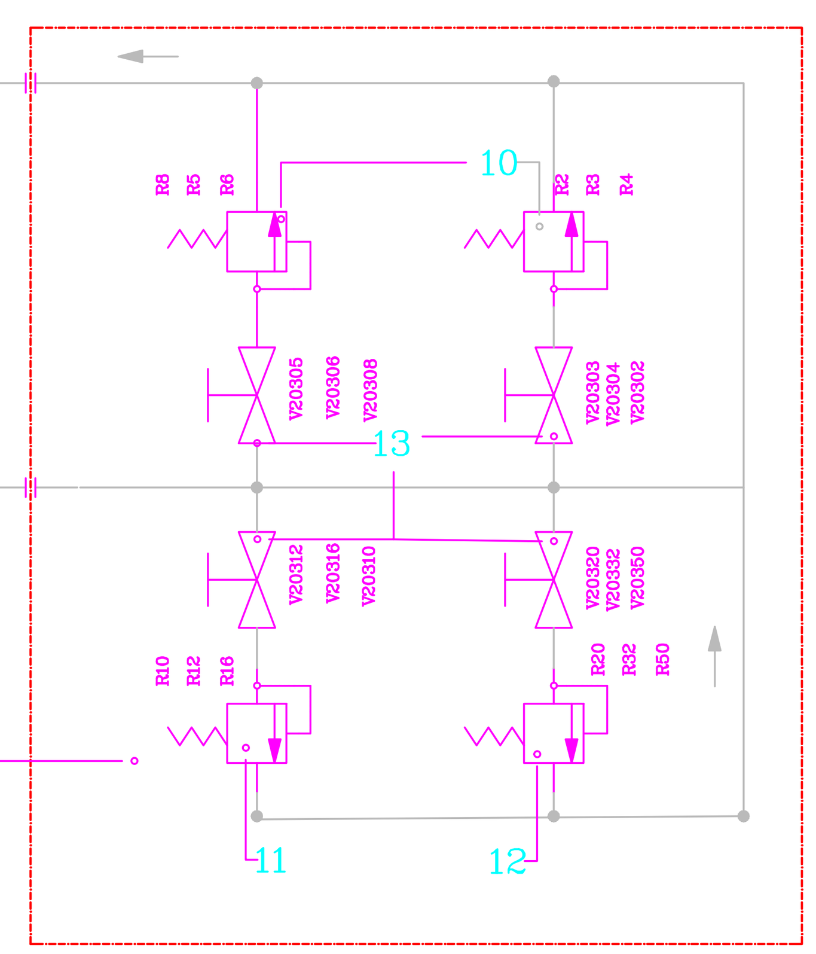
00	**Vaporizer Assembly**	**VA-VA-00**	**1**
01	Valve Housing	VA-VA-01	1
02	Seal Wick	VA-VA-02	3
03	Large Wick	VA-VA-03	1
04	Cover	VA-VA-04	1
05	Bolt M12x55 Hex Head	VA-VA-05(NA)	1
06	Seal Washer, 19.5x12.3x1.5	VA-VA-06(NA)	1
07	Seal, Cover	VA-VA-07	1
08	Cross Washer	VA-VA-08	1
09	Pcircuit	VA-VA-09	1
10	Top Cover (Molded)	VA-IA-04	1
11	Top Label	VA-IA-05	1
12	M6x25 Counter Screw	VA-IA-07	1
13	Bezel	VA-DC-01	1
14	Inter Lock Assly	VA-IA-00	1
15	Dial Cntr Mech Assly	VA-DC-00	1
16	Needle Assly & Drive	VA-NA-00	1
17	Close Mech Assly	VA-CA-00	1
18	Temp Compen Assly	VA-TC-00	1
19	Filler Assly-Manual	VA-FA-00	1





VAPORIZER (Medical Equipment)





JACK TEST RIG				
Test Rig Structure	01	In-House	01	MS Steel Fabrication
Compression Load Cell 1-75T	02	IPA	01	Resolution - 1KG. Fitted to Ram
Hyd Jack Mounting Plate	03	In-House	01	Carbon Steel
Jack under Test	04	VANKOS	01	Varies from 2 T - 50T
Hyd Double acting Ram	05	In-House	01	Test Load 2T-75T
Hyd Cylinder Assly Double Acting	06	In-House	01	Max Pr 200 Kg/cm2(Cyl Bore 270mm Stroke 200mm)
Hyd Manifold	07	In-House	01	MS Fabrication
Non-Return Valve	08	Polyhydron	01	1/8 BSP
Globe Valve - two way	09	Legris	01	M12x1.5 - Legris No.4732 04 67 Max Pr. 200kg/cm2
Relief valve Cartridge	10	Polyhydron	02	DPR-H-06-K-25-11
Relief Valves Cartridge type	11	Polyhydron	01	DPR-H-06-K-50-11
Relief Valves Cartridge type	12	Polyhydron	01	DPR-H-06-K-200-11
Shut off Valve Cartridge	13	Polyhydron	04	CV-20/08-11
Return Line Filter	14	Hydroline	01	CFR-025-04-B-025-S4
Level Gage	15	Hydroline	01	L6-03-M10
Filler Cum Breather	16	Hydroline	01	FSB-05-40Microns
Suction Strainer	17	Hydroline	01	SC3-002-BSP
Hyd Tank 10L	18	In-House	01	MS Fabrication
Prefill Valve/Check Valve	19	Polyhydron	01	CV-06-T (In line-Spring Removed)
Pipe line	20	Any Repute	1 Set	Seamless Tube

Testing procedure: Basic structure (01) designed to with stand load of 10 Tons. It is a four pillar press.
Jack under test mounted on plate on the bolster. Jack is rigidly fitted to the plate. Hydraulic cylinder mounted to the top of press frame is double acting & of capacity 10 T. Max pr 200 kg/cm2.
Comression load cell of 100 T fitted to the Ram of Cylinder.
Ram of the jack is moved up by stroking.(Movement is motorised.)
As soon as jack comes in contact with load cell, develps pressure & loaded against cylinder. Dead end of cylinder filler is filled with oil and can discharge thru' any one of the relief valves (10 to 13).one of the relief valves is set to a pressure as per load to be tested. Only corresponding Shut off valves(13) opened and all others are closed. Each relief valves can set to three pressure rating to develop load on the cylinder depending on the Jack under test.
When jack loaded fully, it moves up under constant load as stroking continues.
When testing is complete jack can be brough down.
Then Two way valve (09) open & Ram comes down. At the same oil is filled to the cylinder from check valve 19.

Testing machine to test hydraulic jacks

Transport Trolley (used to transport machines in work shops)

No.	Part Name	Part No.	Qty
01	Swivel Chasis-3T	SW-01	01
02	Axle-3T	SW-02	04
03	Bearng Housing-3T	SW-03a	04
04	Nylon/Polymer Wheel	SW-03b	04
05	Support	SW-03c	04
06	Bearing Spacer-3T	SW-04	04
07	Washer M20	SW-05	04
08	Hex Nut M20	SW-06(B/O)	08
09	Ball Brg SKF-62305-2RS!	SW-07(B/O)	08
10	Cap Screws M6x16	SW-08(B/O)	13
11	Pivot	SW-09	01
12	Thrust Brg-SKF51308	SW-10 (B/O)	01
13	Pivot Housing	SW-11	01
14	Bal Brg SKF6003-2RS1	SW-12(B/O)	01
15	Washer 17x35x3	SW-13	01
16	Circlip 10Dia	SW-14 (B/O)	01
17	Cover	SW-15	01
18	Lock Washer	SW-16	01
19	Rubber Mat	SW-17(B/O)	01
20	Handle	SW-18	01
21	Pin	SW-19	01
22	Washer -5Dia	SW-20	01
23	Hex Nut M5	SW-21	01
24	Grip	SW-22	01
25	Circlip 12 Dia	SW-23	01
26	Sheet Cover Front	SW-24	01
27	Sheet Cover Rear	SW-25	01
28	Counter sunk Screws M4x10	SW-26(B/O)	35