



# AMULFED DAIRY

A UNIT OF GUJARAT CO-OPERATIVE MILK MARKETING FEDERATION LIMITED  
PURCHASE INQUIRY

**Inquiry No** : **AFD/PUR/PKS/ENQ/AC/1, Dated: Dec 18, 2018**

**Description** : **Purchase Inquiry for Supply, installation and commissioning of Co2 Cylinders and System and supply of Fire extinguisher.**

**Qty** : **As per below Details.**

**Due Date** : **21.12.2018**

Dear Sir,

You are requested to give your most competitive rates for supply, installation of CO2 Cylinders and System **and supply of Fire extinguisher** at PFP-AFD Plant, as per the attached specification/ requirement mentioned in the attached annexure.

1. The offer should reach, AmulFed Dairy (A Unit Of Gujarat Co - Operative Milk Marketing Federation Limited.) Plot No. - 35, Near Indira Bridge, Ahmedabad - Gandhinagar Highway, Village: Bhat, Dist.: Gandhinagar. Pin No.382 428.
2. The offer should be sent in sealed cover super scribing on the top left hand corner offer for inquiry No. AFD/PUR/PKS/ENQ/AC/1 dtd. 18/12/2018. Offer received after due date for whatsoever reason may be rejected.
3. Your offer should be sent through Post/Courier/mail or by Fax or personally.
4. Offer should be valid for acceptance, for 45 days from due date of submission of offer.
5. The price should be quoted on F.O.R basis inclusive of packing and forwarding, taxes, excise duties, freight etc. However if it is separate, it should be clearly mentioned in the quotation.
6. It should cover a warranty of at least one-year against manufacturing defect.
7. Realistic earliest delivery period should be indicated.
8. It is not binding on us to accept lowest offer.
9. Right to reject any or all the offers without assigning any reason is reserved by us.
10. Offer which are incomplete or not meeting the conditions or only for part items, are liable for rejections.
11. No queries regarding the status of the offer will be entertained at any time.
12. The final supplier will be the combined decision of our technical team and management and no reason of final selection will be conveyed to any bidder.
13. Payment terms with 30 days credit shall be preferred.
14. We are an ISO 14001 certified unit. We follow Eco- friendly processes in our factory & also expect same to be followed in your company.
15. For any query, you may contact Mr. Palak Shah, Purchase Department( 07359001666),or mail: [palak.shah@amul.coop](mailto:palak.shah@amul.coop)

**Amul SAGAR**

Plot No. 35, Nr. India Bridge, Ahmedabad – Gandhinagar Highway, Village: Bhat, Dist.: Gandhinagar, PIN 382 428  
Tel. No.: (079) 23969055 – 58, Fax No.: (079) 23969059  
Website: [www.amul.com](http://www.amul.com)



# AMULFED DAIRY

A UNIT OF GUJARAT CO-OPERATIVE MILK MARKETING FEDERATION LIMITED

Encl: Annexure-I-Technical Specification

## 1. Supply and scope of work for CO2 flooding system CI-4.

### Supply Part:

- CO2 cylinders, Capacity-45 kg , Nominal water capacity 67.5 ltr – Qty 09 Nos.
  - Supplier has to fix the valves on cylinders which are supplied by PFP-AFD.
  - The cylinders are CCOE Nagpur and ISI approved.
  - Hydro testing certificate for each cylinder at 250 bar (mention in UTECO details)
  - Working Pressure of the cylinder 166.7 bar (mention in UTECO details).
- Supplier has to supply MS plate / angle/ bolts / material for making structure / frame / brackets at 2/3 Cylinder height to support and arrange cylinders. (Sample available at site)

### Service Part:

- Supplier has to collect valves from PFP-AFD and fix it on cylinders at the time of cylinder filling.
- Supplier has to make Frame at site to support cylinders.
- Loading, unloading and Transportation is in supplier scope.

-Detail Specification and Drawing is enclosed herewith for your reference.

## 2. Supply of Fire Extinguisher as per the Below List:

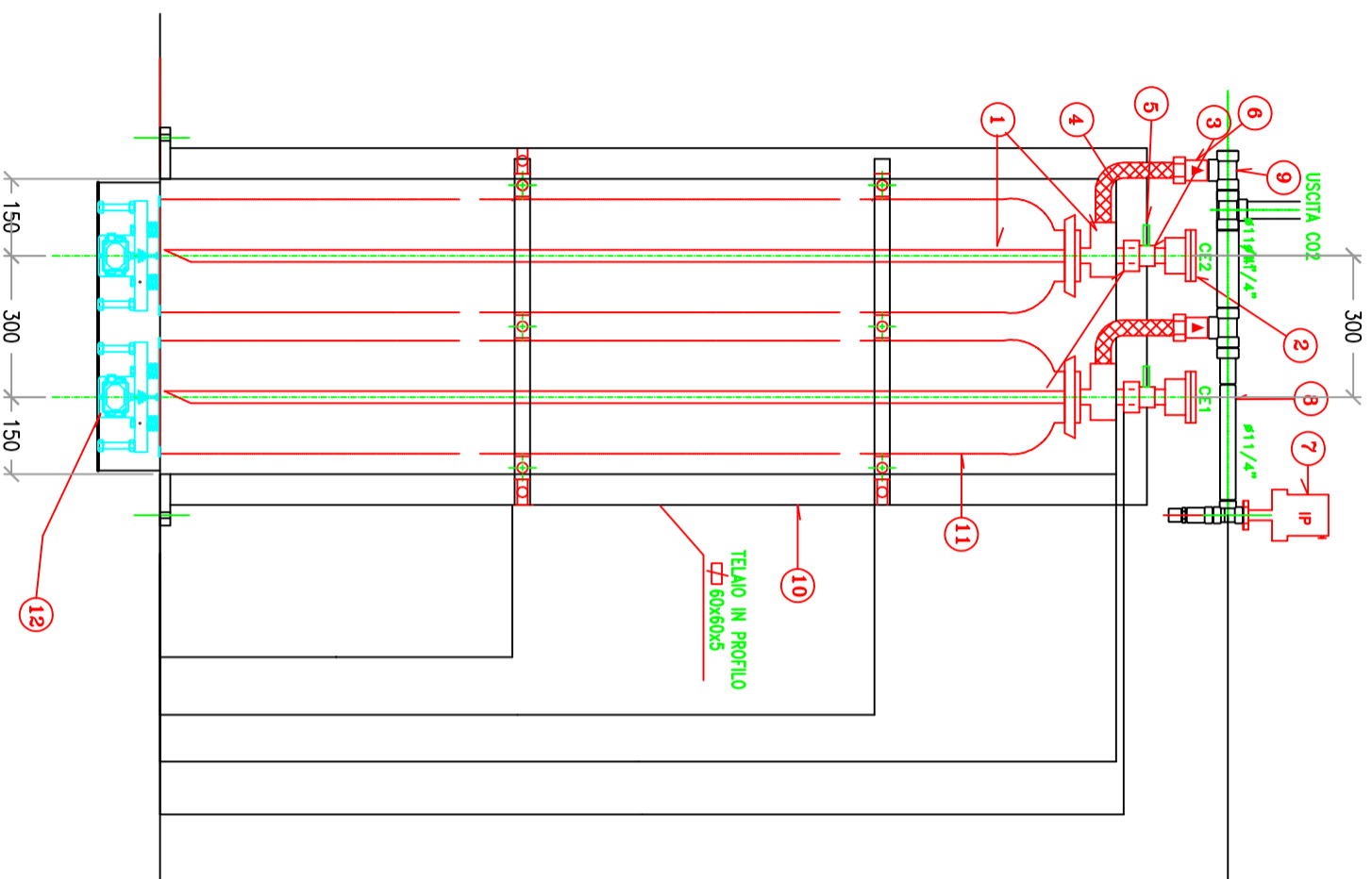
ITEM CODE	DESCRIPTION	QTY
3049485	FIRE EXTINGUISHER, DRY CHEMICAL, BC, 5 KGS	10
4003351	FIRE EXTINGUISHER, MECH. FOAM-50 LTR	4
4003352	FIRE EXTINGUISHER, CO2, 22 KG WITH TROLLEY	4
4000766	FIRE EXTINGUISHER CO2 & SQUEEZE GRIP 2KG	10
4000764	FIRE EXTINGUISHERS / 4.5 KGS/ CO2 TYPE	10

Amul SAGAR

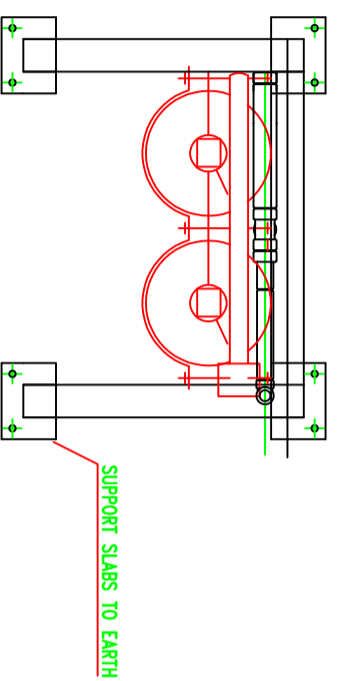
Plot No. 35, Nr. India Bridge, Ahmedabad – Gandhinagar Highway, Village: Bhat, Dist.: Gandhinagar, PIN 382 428

Tel. No.: (079) 23969055 – 58, Fax No.: (079) 23969059

Website: www.amul.com



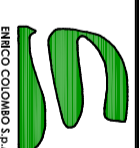
CYLINDER BANK – FRONT VIEW



CYLINDER BANK – UPPER VIEW

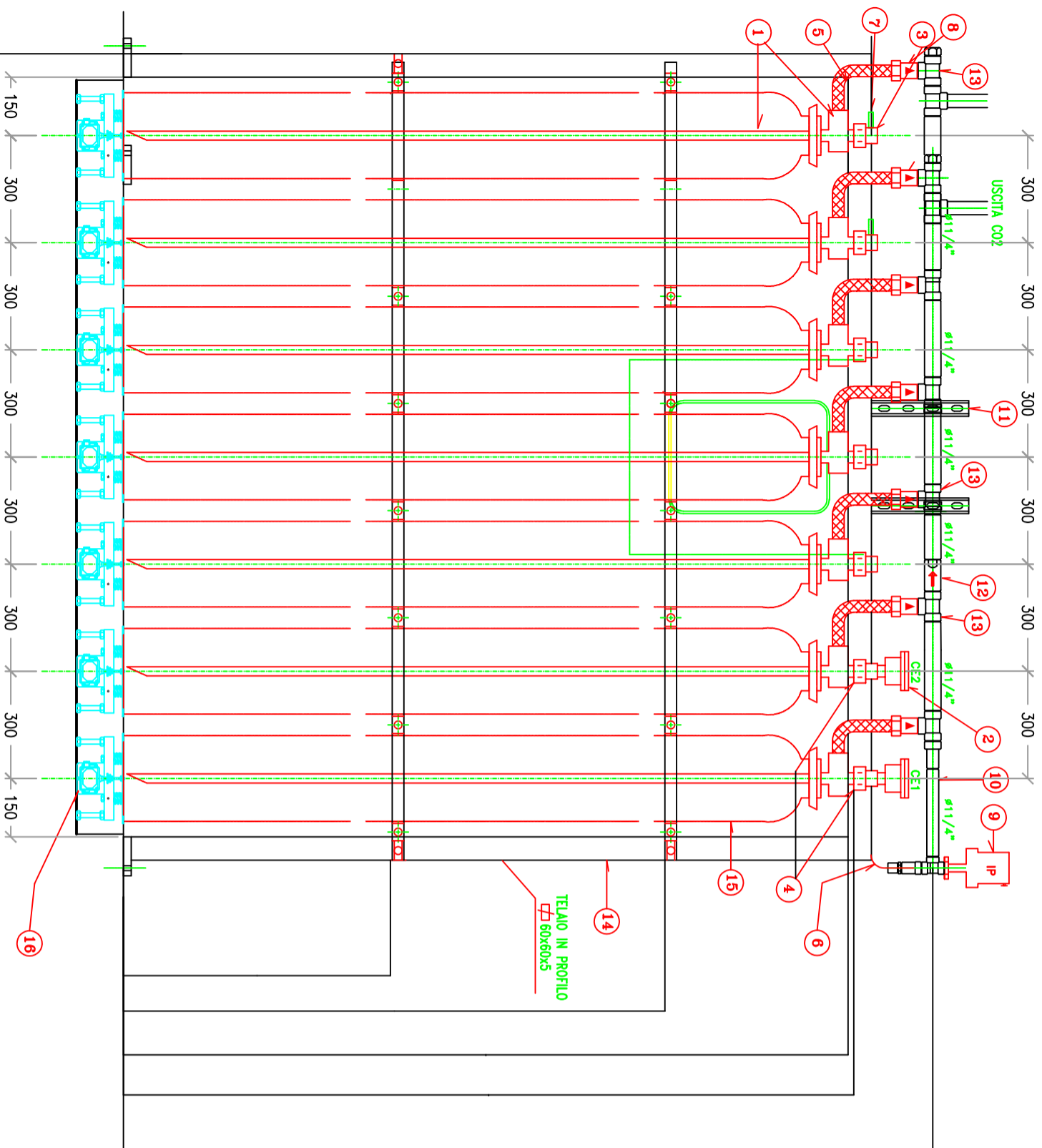
POS.	DESCRIPTION DESCRIZIONE	Q.TY	OUR SUPPLY NOSTRA FORNITURA	YOUR SUPPLY VOSTRA FORNITURA
1	Ø 1" DISCHARGE VALVE WITH SIPHON VALVOILA DI SCARICA Ø 1" CON PISCIANTE	2	X	
2	24 V DC ELECTRIC CONTROL HEAD COMANDO ELETTRICO 24 V DC	2	X	
3	INTERCONNECTOR INTERCONNETTORE	2	X	
4	3/4" R1-RUBBER FLEXIBLE LOOP COLLO D'OCA FLESSIBILE 3/4" IN GOMMA R1	2	X	
5	VENT SERIATTORE	1	X	
6	CHECK VALVE 3/4" VALVOILA DI NON RITORNO 3/4"	2	X	
7	PRESSURE SWITCH PRESSOSTATO	1	X	
8	CO2 DISCHARGE MANIFOLD FOR 2 67.5 L CYLINDERS COLLETTORE DI RACCOLTA CO2 PER 2 BOMBOLE DA 67.5 L	1	X	
9	Tee 1 1/4" x 3/4" x 1 1/4"	2	X	
10	SUPPORT CHASSIS FOR RACK CYLINDER TELAIO SUPPORTO GRUPPO BOMBOLE	1	X	
11	67.5 L CO2 CYLINDER CHARGED WITH 45 KG. ( NOT INCLUDED IN THE SUPPLY ) BOMBOILA CO2 67,5 L CARICA CON 45 KG. ( ESCLUSA DALLA FORNITURA )	2		X
12	SCALE FOR CYLINDERS (OPTIONAL) BILANCIA PER BOMBOLE (OPZIONALE)	2	X	

REVISIONE	0	DESCRIZIONE	Preliminary Issue	DATA	12.05.18	CC	RD
IMPIANTO	Rack Bombole CO2 - FLEEXO INDIA		UFFICIO TECNICO	SCALE	SCALA	ISO	
CLIENTE	UTEKO S.p.A. FLEEXO INDIA Maticcola 2844		SCALE	SCALA	ISO		
N° DIS.		ASS-2844	DIS.	R.D.	12.05.18		
COMM.		Colombo 2785	VERIF.	R.D.	12.05.18		
			VALID.	--			
			APPR.	--			

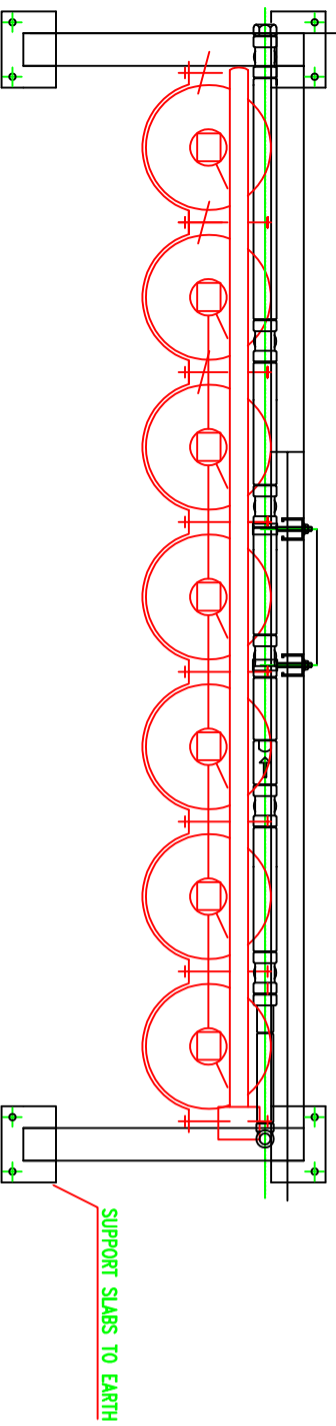


ENRICO COLOMBO S.p.A.

Questo disegno è proprietà riservata della ENRICO COLOMBO S.p.A. e' vietata la riproduzione e la comunicazione a terzi senza nostra autorizzazione scritta.



CYLINDER BANK - FRONT VIEW



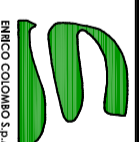
CYLINDER BANK - UPPER VIEW

POS.	DESCRIPTION	Q.TY	OUR SUPPLY NOSTRA FORNITURA	YOUR SUPPLY VOSTRA FORNITURA
1	Ø 1" DISCHARGE VALVE WITH SIPHON VALVOLE DI SCARICA Ø 1" CON PESCANTE	7	X	
2	24 V DC ELECTRIC CONTROL HEAD COMANDO ELETTRICO 24 V DC	2	X	
3	MANUAL AND PRESSURE CONTROL COMMANDO A MANO E PRESSIONE	5	X	
4	INTERCONNECTOR INTERCONNETTORE	7	X	
5	3/4" R1-RUBBER FLEXIBLE LOOP COLLO D'OCA FLESSIBILE 3/4" IN GOMMA R1	7	X	
6	CONTROL HOSE G1/4" F. SV. x G1/4" F. SV. 500/800 mm. MANICHETTA SERVOCOMANDO G1/4" F. SV. x G1/4" F. SV. 500/800 mm.	1	X	
7	VENT SPATATORE	1	X	
8	CHECK VALVE 3/4" VALVOLE DI NON RITORNO 3/4"	7	X	
9	PRESSURE SWITCH PRESSOSTATO	1	X	
10	CO2 DISCHARGE MANIFOLD FOR 12 67.5 L CYLINDERS COLLETTORE DI RACCOLTA CO2 PER 7 BOMBOLE DA 67.5 L	1	X	
11	CO2 DISCHARGE MANIFOLD SUPPORT SUPPORTO COLLETTORE DI RACCOLTA CO2	2		X
12	RESTRICTED CHECK VALVE 1" VALVOLE STROZZATA DI NON RITORNO 1"	1	X	
13	Tee 1 1/4" x 3/4" x 1 1/4"	7	X	
14	SUPPORT CHASSIS FOR RACK CYLINDER TELAILO SUPPORTO GRUPPO BOMBOLE	1		X
15	67.5 L CO2 CYLINDER CHARGED WITH 45 KG. ( NOT INCLUDED IN THE SUPPLY ) BOMBOLE CO2 67.5L CARICA CON 45 KG. ( ESCLUSA DALLA FORNITURA )	7		X
16	SCALE FOR CYLINDERS (OPTIONAL) BILANCIA PER BOMBOLE (OPZIONALE)	7		X

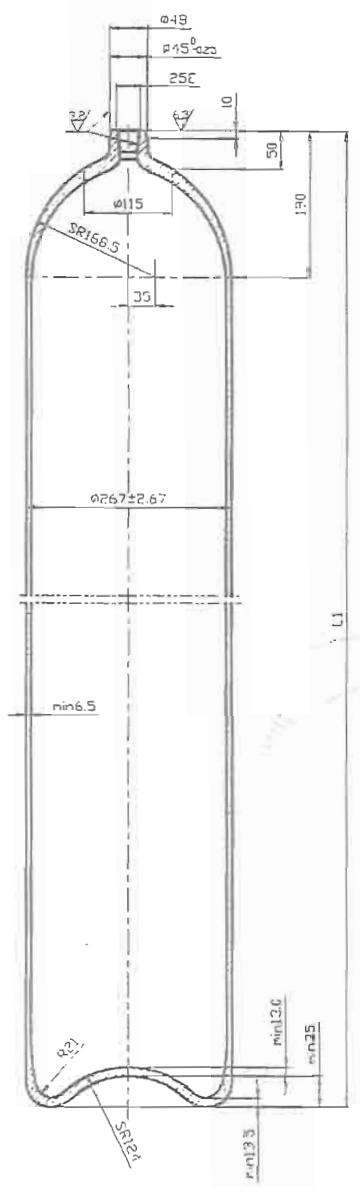
REVISIONE	0	DESCRIPTIONE	Preliminary Issue	DATA	12.05.18	CC		DIS.		APPR.	RD
IMPIANTO	Rack Bombele CO2 - FLEXO INDIA										
CLIENTE	UTEKO S.p.A. FLEXO INDIA										
	Maticcola 2844										
UFFICIO TECNICO	SCALA	ISO									
	SCALA										

N° DIS.	ASS-2844	SIGLA	FIRMA	DATA
DIS.		R.D.		12.05.18
VERIF.		R.D.		
VALID.	--			
APPR.	--			

Questo disegno è proprietà riservata della ENRICO COLOMBO S.p.A. e' vietata la riproduzione e la comunicazione a terzi senza nostra autorizzazione scritta.



ENRICO COLOMBO S.p.A.  
Colombo  
2785



TECHNICAL SPECIFICATION

WORKING PRESSURE	166.7bar
HYDRAULIC TESTING PRESSURE	250bar
FILLING MEDIUM	Compressed and Liquefied gases
NOMINAL WATER CAPACITY (L)	67.5
LENGTH OF SHELL (mm)	1510
WEIGHT OF SHELL - Approx. kg	82.0

TECHNICAL REQUIREMENTS

- 1: The design, manufacture, inspection and testing for the cylinder shall comply with requirements of ISO9809-1 and EN1964-1 Standard.
- 2: The material used for fabrication of gas cylinder adopted 34Mn2V which chemical composition shall comply with the requirements of GB13447, ISO9809-1 and EN1964-1 Standard as below:

Material (%)	C	Si	Mn	P	S	V	Cr	Ni	Cu	V+Ti+B+Nb+Zr
34Mn2V	0.30 0.37	0.17 0.35	1.40 1.70	≤0.020 S+P≤0.030	≤0.020	0.07 0.12	≤0.30	≤0.30	≤0.20	≤0.15

- 3: Before machining, the cylinder should be quenched and tempered, after heat treatment, the mechanical properties should meet the requirements as below:

R <sub>g</sub> (N/mm <sup>2</sup> )	Re(N/mm <sup>2</sup> )	A(%)	ΔK <sub>V</sub> (-50℃)/cm <sup>3/2</sup> ~ Transverse ~		Bend test
≥705	≥600	≥14	minimum	average	Df ≤ R <sub>100</sub> No cracks
			≥28	≥35	

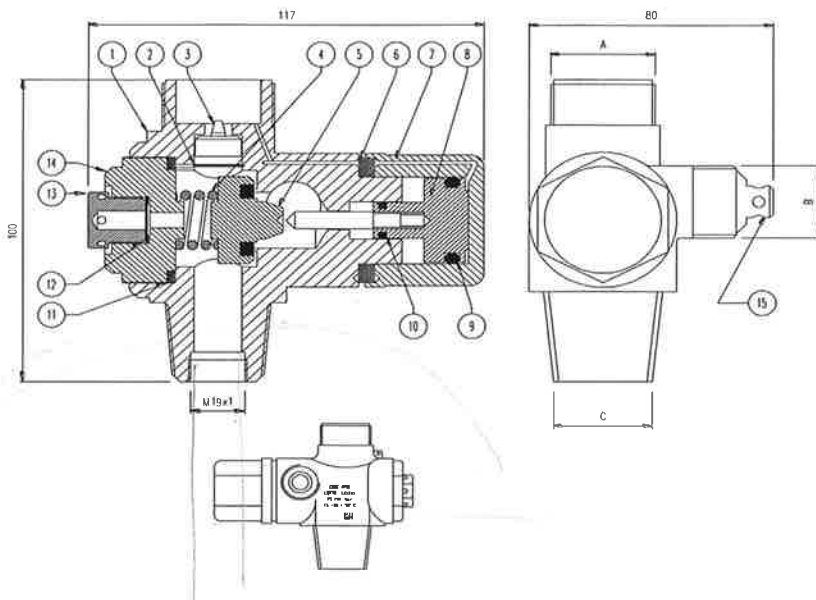
- \* Also satisfy R<sub>g</sub> < 950(N/mm<sup>2</sup>);
- 4: After heat treatment, non-destruction test shall be carried out one by one, shell shall have no cracks or other defects that may weaken the strength of the shell.
- 5: Hardness shall be measured one by one on 3 points along circumference uniformly with distance 30-50mm away from the bottom, and then average value is HB210 -265.
- 6: The external & internal surface of the finished cylinder shall be free from defects which would adversely affect the safe working of the cylinder in accordance with ISO9809-1 and EN1964-1 Standard.
- 7: Hydrostatic test shall be carried out one by one with suitable method accordingly, test pressure is 250bar and maintains for at least 30s and permanent volumetric expansion may not exceed 10% of total volumetric expansion at test pressure. after hydraulic pressure test, dry the cylinder inner.
- 8: The bursting pressure of the cylinder shall not be less than 400bar.
- 9: Stampmarking shall comply with the requirements of relevant standard or customer.
- 10: The opening threads shall according to the requirements of left drawing or specified by customer;
- 11: The out-of-roundness of the cylindrical shell shall not exceed 2% of the mean of the same cross-section diameters, the maximum deviation of the cylindrical part of the shell from a straight line shall not exceed 3%, deviation from vertical shall not exceed 10% and the outer diameter of the surface in contact with the ground shall be greater than 75% of the nominal outside diameter;

1. Material of the cylinder	34Mn2V
2. Material of the filling medium	
3. Drawing	
4. Date	

				EN1964:ISO9809 267-67 SL-166.7bar			DRW No	ZJD-GP2.C336-01
				SEAMLESS STEEL CYLINDER			ISSUE	Rev. 0
							Cylinder	
DESIGN	Xu Jijun	PROJ		Amount	14/14	Scale	JINDUN	
REVIEW		NO				1:1	浙江金盾压力容器有限公司	
AUT	Chen Zhen						Zhejiang Jindun Pressure Vessel Co., Ltd.	
APPROVAL	Yin Ming	DATE	2023.10	Page 1 of 1				

## SCHEMA TECNICA - DATA SHEET

### VALVOLA A FLUSSO RAPIDO DA 1" NGT PER CO<sub>2</sub> 1"NGT CO<sub>2</sub> HIGH RATE DISCHARGE VALVE



Pos.	Cod./Code	Descrizione / Description	Materiale / Material
1	APD1B	Corpo valvola / Body valve	Ot. CW 617N UNI EN 12420 / Brass
2	APD-12	Spina elastica / Elastic pin	Inox 304 / S.S. 304 DIN 1481
3	APD-08	Nottolino / Seal small	Ot. CW 614N UNI EN12164 PTFE / Brass PTFE
4	APD-9	Molla / Spring	Inox 302 / S.S. 302
5	APD-10	Nottolone / Seal	Ot. CW 614N UNI EN12164 PTFE / Brass PTFE
6	APD-13	Guarnizione 8 fori / Gasket 8 holes	Nylon R6
7	APD-2	Tappo f. / Plug f.	Ot.CW 617N UNI EN 12420 / Brass
8	APD-14	Tampone con asta / Plug rod	Ot.CW 614N-UNI EN12164 Inox303 / Brass S.S.303
9	APD-16	OR N°4087	NBR P85
10	APD-15	OR 6,7x12x2,7mm	NBR P85
11	APD-8-2	Guarnizione / Washer	Nylon R6
12	APD-6	Disco di sicurezza 190bar / Safety disc 190bar	Nickel / Brass copper
13	D12	Nipplo / Nipplo	Ot. CW 614N UNI EN12164 / Brass
14	APD-3	Tappo f. / Plug f.	Ot.CW 614N UNI EN 12164 / Brass
15	APD-17	Rompigetto 4 fori / Flush Breaker	Ot.CW 614N UNI EN 12164 / Brass

A= Attacco comandi attuazione 1" ¼ 18 UNEF 2A / Actuator command connections

(B)= Uscita fluido W25,4x14F 1" / Outlet fluid

C= Filetto di connessione bombola 1" NGT DN25 / Connection thread to the cylinder

DATI TECNICI / TECHNICAL DATA		DATI TECNICI / TECHNICAL DATA	
Press.collaudo corpo / Test pressure body	280 bar	Disco di sicurezza / safety disc	190 bar +/-15 bar
Pressione di scoppio/outbreak pressure	420 bar	Temp. di progetto/Desing temperature	-20+50°C
Press. max di collaudo/Max test pressure	150 bar	Certificazioni/Certification	<b>EN 12094-4 CPR</b> <b>305/2011/EU (EX 89/106/CEE CPD)</b> <b>0099/CPR/A70/0076</b>
Coppia max serraggio / Tightening torque	Max 215 Nm		
Peso valvola/Valve weight	1,480 Kg.	<b>97/23/CE (PED)</b>	

Descrizione: Le valvole sono installate su bombole per CO<sub>2</sub> in ambienti domestici, industriali e marini, ad eccezione di quelli saturi con vapori di ammoniaci e idrogeno solforato.

Ricarica: Ricaricare dall'uscita "B" senza ausilio di attuatori.

Movimentare la bombola carica, sempre e comunque, con la ghiera e cappellotto di protezione. Assicurarsi anche di montare sugli attacchi "A" e "B" i tappi di protezione con fori radiali per lo sfiato.

Ricambi: Dopo ogni intervento è bene controllare i componenti pos.3, 5 e 11 ed eventualmente sostituirli. Si consiglia inoltre di sostituire il componente dopo 10 anni dalla data di acquisto.

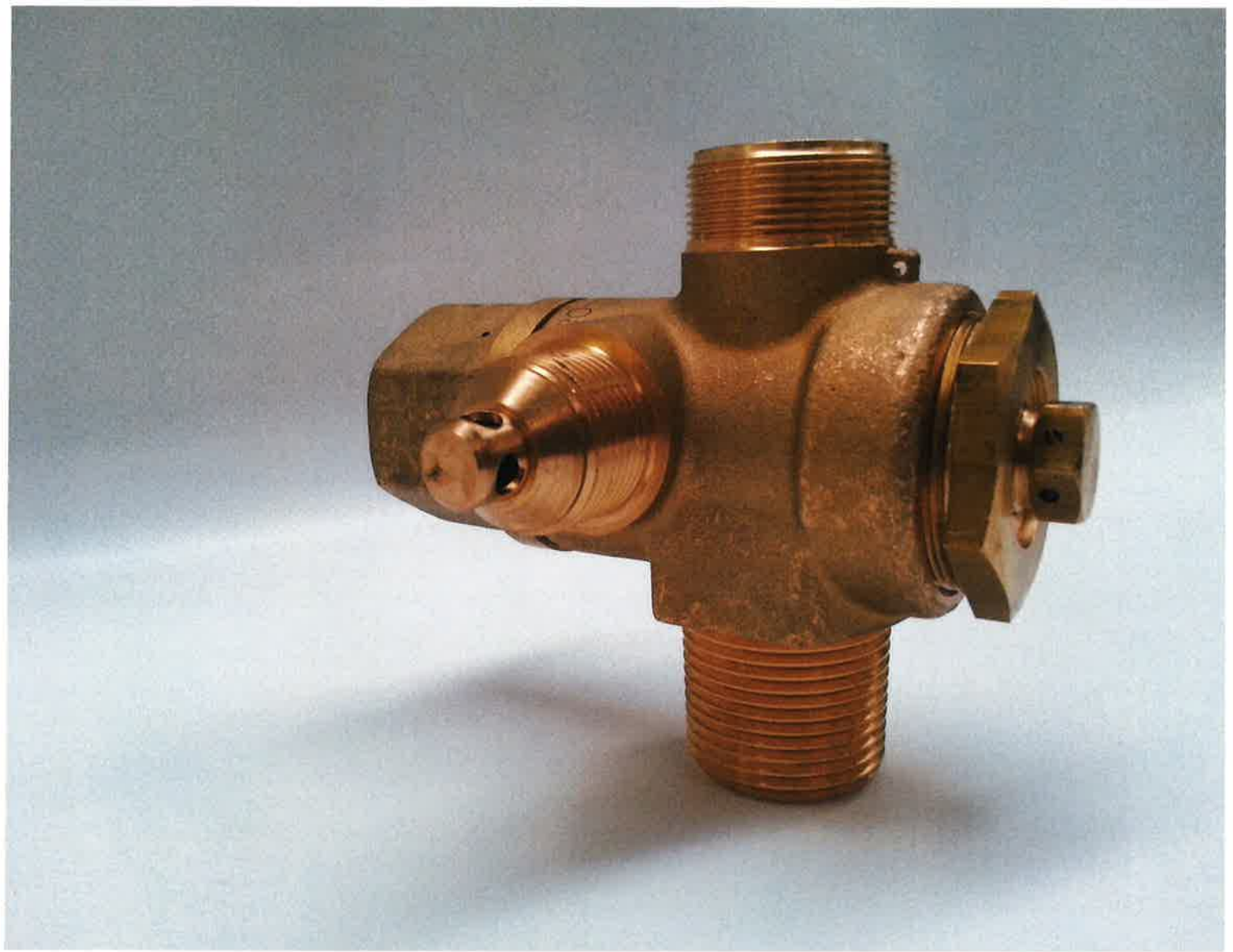
Description: These valves are installed in cylinders, for CO<sub>2</sub> in domestic, industrial and marine environments except the ones saturated of ammonia steams and sulphurized hydrogen.

Recharge: To recharge the output "B" without the aid of actuators.

Use attention for moving cylinder full, always to use cap and ring nut. Take care to use protection cap with radial holes for venting on A and B attacks

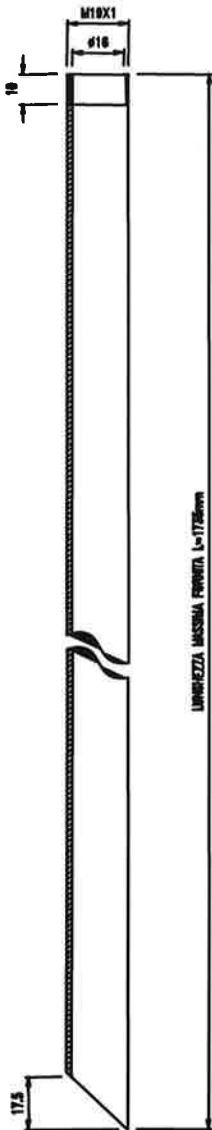
Spare parts : After every intervention position 3, 5 and 11 must be checked end eventually replaced. We moreover suggest to replace the component 10 years after the purchase date.

**CODE APD2**



**SCHEDA TECNICA - DATA SHEET**

**PESCANTE PER VALVOLA A FLUSSO RAPIDO L=1735 mm  
DIP TUBE FOR VALVE HRDV L=1735 mm**



Il pescante deve avere una lunghezza tale per cui, la distanza tra il punto più alto dell'apertura e il fondo della bombola, deve essere pari e non superiore a due volte il diametro interno del pescante.

The dip tube, must have a length, such from which the distance between the point more high for the fund and the tank must be the same and more of not than twice the internal diameter of dip tube.



Pos.	Cod. / Code	Descrizione / Description	Materiale / Material
1	APD13A	PESCANTE/DIP TUBE - M19X1 L=1735	ALLUMINIO / ALUMINIUM
Peso pescante /Dip tube weight		0,474Kg.	Conforme ai requisiti della direttiva EN 12094-4:2004

**CODE APD13A**



