

Notice Inviting e-Tender

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**Tender for Supply, Installation, Commissioning, Operation & Maintenance of Medical Gas Pipeline System (MGPS)
In 3 New Medical Colleges of West Bengal**
(Submission of *online* Bid)

Bid Reference No.: WBMSCL/NIT-57/2014

Dated-26.08.2014

The following amendment has been made in the revised tender document
Published vide No: WBMSCL/NIT-57A/2014, on 12/09/2014,

Amendment – IV

Wherever the term 'Warranty' appears in the bid document may be ignored.

Amendment – V

PERFORMANCE BANK GUARANTEE (PBG)

Sl	Type	Amount	Validity	When to return back
1	PBG to be submitted within 14 days of issuance of AOC	10% of the total bid value i.e. sum of BOQs for 3 Medical Colleges.	14 months	On receipt of PBG of amount 10% of the 10 years charges for comprehensive maintenance of the entire MGPS including cost of operation at Sl 2.
2	PBG to be submitted within 14 days of completion of 1 (one) year from the date of Commissioning	10% of the total price quoted for 10 years charges for comprehensive maintenance including cost of operation of the entire MGPS	9 years + 2 months	After successful completion of 10 years (from the date of commissioning) of comprehensive maintenance including operation of the entire MGPS.

Amendment – VI

1/40 of the total price quoted for Comprehensive Maintenance of the entire MGPS including cost of operation for 10 years shall be paid after successful completion of operation & maintenance in each quarter. For this purpose, selected bidder would be required to produce documentary proof i.e. service/ maintenance reports duly signed by the authorized signatory of the MCH/MSVP.

Amendment – VII

REQUIREMENT FOR MALDA MEDICAL COLLEGE & HOSPITAL

Sl. No	Description of Items	Unit	Qty
A	OXYGEN SYSTEM		
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
2	Fully Automatic(Imported) control panel for Oxygen Having a constant flow output of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	1
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	517
5	Oxygen flow meters with humidifier as per standards	Nos	493
6	H.P. tubing having anti static core white color 5mtrs with Keat conversion for Oxygen as per Standards	Set	10
B	NITROUS OXIDE SYSTEM		
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1
2	Fully Automatic control panel(Imported) for Nitrous Oxide Having a min. flow output of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1
4	Front loading N2O outlets as per standards	No.	15
5	H.P. tubing having anti static core Blue color 5mtrs with conversion for Nitrous Oxide as per ISO Standards	Set	6
C	VACUUM SYSTEM		
1	Vacuum Central System Complete with Three nos Vacuum Pumps , model 15 v or equivalent each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2 nos of capacity 2000 liter each , Filter etc.	Set	1
2	Bacterial Filter Imported	Set	1
3	Surface mounted front loading double locked Vacuum out lets, as per Standards	Nos	495
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	486
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per Standards	Nos	6
6	High Pressure color coded yellow Tube as per ISO Standards as per Standards	Mtr	30
D	COMPRESSED AIR SYSTEM		
1	Compressed Air system complete with Quadruplex Reciprocating, Air cooled type, Base frame mounted compressor will provide minimum 1850 lpm air flow. 2 nos. of Receiver each having minimum 1500 litre water capacity along with duplex Air Dryer.	Set	1
2	4-stage Air Filtration System	Set	2
3	Duplex Pressure Reducing System	Set	2
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per Standards	Nos	130
5	Front loading double locked Surgical Air-7 bar out lets , as per Standards	no.	15
6	HP colour coded black Tubing as per ISO Standards as per Standards	Mtr	30
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)		
1	Duplex AGSS complete with Electrical connection etc.	Set	1

2	Front loading double locked AGSS out lets , as per Standards	No.	15
F	MISCELLANEOUS ITEMS		
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System (Cascading / seq.) complete with plant Room wiring.	Nos	1
2	Distribution Copper Pipe		
a	76 mm OD X 1.5 mm Thick	Mtr	100
b	54 mm OD x 1.2 mm thick	Mtr.	150
c	42 mm OD x 1.2 mm thick	Mtr	750
d	28 mm OD x 0.9 mm thick	Mtr	1100
e	22 mm OD x 0.9 mm thick	Mtr	2200
f	15 mm OD x 0.9 mm thick	Mtr	2150
g	12 mm OD x 0.7 mm thick	Mtr	1500
3	Valve Box- as per Standards		
a	6 Gas	No.	1
b	5 Gas	No.	4
c	4 Gas	No.	1
d	3 Gas	No.	3
e	2 Gas	No.	15
4	Medical Gas Digital Alarm System as per Standards		
a	6 Gas	No.	1
b	5 Gas	No.	2
c	4 Gas	No.	1
d	3 Gas	No.	3
e	2 Gas	No.	11
5	Isolation Valve		
a	15 MM.	No.	44
b	22 MM.	No.	26
c	28 MM.	No.	2
d	42 MM.	No.	3
e	54 MM.	No.	3
f	76 MM.	No.	1
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	31
6.1	Bed Head Panel with 2-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	2
7	SS 304 Rigid Ceiling OT Pendant	No.	15
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1
9	10 years charges for comprehensive maintenance including cost of operation of the entire MGPS	Set	1

Payment will be made based on

- i) Quantity as per the approved drawing by WBMSCL; and
- ii) Actual measurement at site after commissioning.

Amendment – VIII

REQUIREMENT FOR MURSHIDABAD MEDICAL COLLEGE & HOSPITAL

Sl. No	Description of Items	Unit	New General	Sadar	Main Building	TB & Chest	Isolation Building	Total
MEDICAL GAS PIPE LINE								
A	OXYGEN SYSTEM							
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards'	Set	1					1
1(a)	2 x 10 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set		1	1	1	1	4
2	Fully Automatic control panel(imported) for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	1	1	1	1	1	5
3	2 X 10 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1					1
3(a)	2 x 5 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set		1	1	1	1	4
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	467	246	214	27	40	994
5	Oxygen flow meters with humidifier as per standards	Nos	437	234	214	27	40	952
6	H.P. tubing having anti static core white color 5mtrs with conversion for Oxygen as per ISO standards	Set	20	20	20	20	20	100
B	NITROUS OXIDE SYSTEM							
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per standards	Set	1	1				2
2	Fully Automatic control panel (Imported)for Nitrous Oxide Having a min. flow out put of 500-1000 LPM at 4.2 bar pressure as per Standards	Set	1	1				2
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per standards	Set	1	1				2
4	Surface Mounted mounted front loading N2O outlets as per standards	No.	13	6				19
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	13	13				26
C	VACUUM SYSTEM							
1	Vacuum Central System Complete with Three nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And two nos Receiver each capacity 2000 liters, Filter etc.	Set	1					1
1(a)	Vacuum Central System Complete with Two nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And two nos Receiver each capacity 1000 liters, Filter etc.			1	1			2
1 (b)	Vacuum Central System Complete with 2 nos Vacuum Pumps v244. each having 34.6 cfm PD with 2 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 500 liters, Filter etc.					1	1	2
2	Bacterial Filter(Imported)	Set	1	1	1	1	1	5

3	Surface mounted front loading double locked Vacuum out lets , as per standards	Nos	463	246	214	27	40	990
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per standards	Nos	437	234	214	27	40	952
5	Theatre Suction Unit , trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	13	6				19
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	65	30	30	30	30	185
D	COMPRESSED AIR SYSTEM							
1	Compressed Air system complete with 04 nos. 57 CFM capacity Non-lubricated, Reciprocating Air cooled type Base Frame mounted Air compressors with 15 HP motors with a 2 nos of Receiver of 1500 liter water capacity each along with 4 No. Air Dryer	Set	1					1
1(a)	Compressed Air system complete with 02 nos. 37 CFM capacity Non-lubricated, Reciprocating, Air cooled type Base Frame mounted Air compressors from with 10 HP motors with two Receiver each of 500 liter water capacity along with 2 No. Air Dryer			1				1
2	4-stage Air Filtration System	Set	2	2				4
3	Duplex Pressure Reducing System	Set	2	2				4
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per standards	Nos	67	23				90
5	Surface mounted front loading double locked Surgical Air-7 bar out lets , as per standards	Nos	13					13
6	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	65	65				130
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)							
1	Duplex AGSS complete with Electrical connection etc.	Set	1					1
2	Front loading double locked AGSS out lets , as per standards	No.	13					13
F	MISCELLANEOUS ITEMS							
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1	1	1	1	1	5
2	Distribution Copper Pipe							
a	76 mm OD X 1.5 mm Thick	Mtr	100	60	40	50	60	310
b	54 mm OD x 1.2 mm thick	Mtrs	220					220
c	42 mm OD x 1.2 mm thick	Mtr	380	30				410
d	28 mm OD x 0.9 mm thick	Mtr	765	150	125	20	15	1075
e	22 mm OD x 0.9 mm thick	Mtr	2565	400	425	155	50	3595
f	15 mm OD x 0.9 mm thick	Mtr	3000	550	300	135	30	4015
g	12 mm OD x 0.7 mm thick	Mtr	2200	1350	1100	145	110	4905
3	Valve Box -as per standards							
a	6 Gas	No.	6					6
b	5 Gas	No.	2					2
c	4 Gas	No.	1	6				7
d	3 Gas	No.	4	1				5
e	2 Gas	No.	18	5	7	3	2	35
4	Medical Gas Digital Alarm System as per standards							

a	6 Gas	No.	3					3
b	5 Gas	No.	1					1
c	4 Gas	No.	1	1				2
d	3 Gas	No.	4	1				5
e	2 Gas	No.	10	2	7	2	2	23
5	Isolation Valve							
a	15 MM.	No.	36	27	7	3	2	75
b	22 MM.	No.	19	12	8	4	3	46
c	28 MM.	No.	2	2	2	2	2	10
d	42 MM.	No.	3	2				5
e	54 MM.	No.	5					5
f	76 MM.	No.	1					1
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17					17
7	SS 304 Rigid Ceiling OT Pendant	No.	13					13
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1	1	1	1	1	5
9	10 years charges for comprehensive maintenance including cost of operation of the entire MGPS	Set	1	1	1	1	1	5

Payment will be made based on

- iii) Quantity as per the approved drawing by WBMSCL; and
- iv) Actual measurement at site after commissioning.

Amendment – IX

REQUIREMENT FOR COLLEGE OF MEDICINE AND SAGORE DATTA HOSPITAL

S.No	Description of Items	Unit	Qty
A	OXYGEN SYSTEM		
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
2	Fully Automatic control panel Imported for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	1
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	718
5	Oxygen flow meters with humidifier as per Standards	Nos	670
6	H.P. tubing having anti static core white color 5mtrs with conversion kit for Oxygen as per Standards	Set	20
B	NITROUS OXIDE SYSTEM		
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1
2	Fully Automatic control panel (Imported)for Nitrous Oxide Having a min. flow out put of 500-1000 LPM at 4.2 bar pressure as per Standards	Set	1
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1
4	Front loading N2O outlets as per Standards	No.	12
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	20
C	VACUUM SYSTEM		
1	Vacuum Central System Complete with Four nos of Vacuum Pumps, Rotary vane type. Each having minimum 3000 lpm, interconnecting pipes, NRV, exhaust silencer. 2 nos. of Receiver each having 3000 litres, Filter etc.	Set	1
2	Bacterial Filter Imported	Set	1
3	Surface mounted front loading double locked Vacuum out lets, as per Standards	Nos	664
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	620
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	11
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	55
D	COMPRESSED AIR SYSTEM		
1	Compressed Air system complete with 04 nos. Reciprocating, Air cooled type, 57 cfm , Base frame mounted compressor will provide minimum 1750 lpm air flow. 2 nos. of Receiver each having minimum 1500 litre water capacity along with duplex Air Dryer.	Set	1
2	4-stage Air Filtration System	Set	2
3	Duplex Pressure Reducing System	Set	2
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per standards	Nos	150

5	Front loading double locked Surgical Air-7 bar out lets , as per standards	no.	16
6	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	55
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)		
1	Duplex AGSS complete with Electrical connection etc.	Set	1
2	Front loading double locked AGSS out lets , as per standards	No.	16
F	MISCELLANEOUS ITEMS		
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1
2	Distribution Copper Pipe		
a	76 mm. OD X 1.5 mm. Thick	Mtr.	85
b	54 mm OD x 1.2 mm thick	Mtr.	110
c	42 mm OD x 1.2 mm thick	Mtr	300
d	28 mm OD x 0.9 mm thick	Mtr	1100
e	22 mm OD x 0.9 mm thick	Mtr	3500
f	15 mm OD x 0.9 mm thick	Mtr	3100
g	12 mm OD x 0.7 mm thick	Mtr	2100
3	Valve Box-as per standards		
a	6 Gas	No.	8
b	5 Gas	No.	3
c	4 Gas	No.	1
d	3 Gas	No.	5
e	2 Gas	No.	49
4	Medical Gas Digital Alarm System as per standards		
a	6 Gas	No.	1
b	5 Gas	No.	5
c	4 Gas	No.	2
d	3 Gas	No.	3
e	2 Gas	No.	13
5	Isolation Valve		
a	15 MM.	No.	106
b	22 MM.	No.	66
c	28 MM.	No.	2
d	42 MM.	No.	4
e	54 MM.	No.	3
f	76 MM.	No.	1
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17
7	SS 304 Rigid Ceiling OT Pendant	No.	16
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1
9	10 years charges for comprehensive maintenance including cost of operation of the entire MGPS	Set	1

Payment will be made based on

- v) Quantity as per the approved drawing by WBMSCL; and
- vi) Actual measurement at site after commissioning.

Amendment – X

9.a) BOQ FOR MALDA MEDICAL COLLEGE & HOSPITAL

S.No	Description of Items	Unit	Qty (1)	Basic Price per unit (INR) (2)	Tax per Unit (INR) (3)	Total Unit Price (INR) (4) = (2) + (3)	Total Price (INR) (5) = (4)X(1)
A	OXYGEN SYSTEM						
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1				
2	Fully Automatic(Imported) control panel for Oxygen Having a constant flow output of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	1				
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1				
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	517				
5	Oxygen flow meters with humidifier as per standards	Nos	493				
6	H.P. tubing having anti static core white color 5mtrs with Keat conversion for Oxygen as per Standards	Set	10				
B	NITROUS OXIDE SYSTEM						
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1				
2	Fully Automatic control panel(Imported) for Nitrous Oxide Having a min. flow output of over 1000 LPM at 4.2 bar pressure as per Standards	Set	1				
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1				
4	Front loading N2O outlets as per standards	No.	15				
5	H.P. tubing having anti static core Blue color 5mtrs with conversion for Nitrous Oxide as per ISO Standards	Set	6				
C	VACUUM SYSTEM						

1	Vacuum Central System Complete with Three nos Vacuum Pumps , model 15 v or equivalent each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 2 nos of capacity 2000 liter each , Filter etc.	Set	1				
2	Bacterial Filter Imported	Set	1				
3	Surface mounted front loading double locked Vacuum out lets , as per Standards	Nos	495				
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	486				
5	Theatre Suction Unit , trolley mounted with 2 nos 2000 ml Collection Jars as per Standards	Nos	6				
6	High Pressure color coded yellow Tube as per ISO Standards as per Standards	Mtr	30				
D	COMPRESSED AIR SYSTEM						
1	Compressed Air system complete with Quadruplex Reciprocating, Air cooled type, Base frame mounted compressor will provide minimum 1850 lpm air flow. 2 nos. of Receiver each having minimum 1500 litre water capacity along with duplex Air Dryer.	Set	1				
2	4-stage Air Filtration System	Set	2				
3	Duplex Pressure Reducing System	Set	2				
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per Standards	Nos	130				
5	Front loading double locked Surgical Air-7 bar out lets , as per Standards	no.	15				
6	HP colour coded black Tubing as per ISO Standards as per Standards	Mtr	30				
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)						
1	Duplex AGSS complete with Electrical connection etc.	Set	1				
2	Front loading double locked AGSS out lets , as per Standards	No.	15				
F	MISCELLANEOUS ITEMS						
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1				
2	Distribution Copper Pipe						
a	76 mm OD X 1.5 mm Thick	Mtr	100				
b	54 mm OD x 1.2 mm thick	Mtr.	150				
c	42 mm OD x 1.2 mm thick	Mtr	750				
d	28 mm OD x 0.9 mm thick	Mtr	1100				
e	22 mm OD x 0.9 mm thick	Mtr	2200				

f	15 mm OD x 0.9 mm thick	Mtr	2150				
g	12 mm OD x 0.7 mm thick	Mtr	1500				
3	Valve Box- as per Standards						
a	6 Gas	No.	1				
b	5 Gas	No.	4				
c	4 Gas	No.	1				
d	3 Gas	No.	3				
e	2 Gas	No.	15				
4	Medical Gas Digital Alarm System as per Standards						
a	6 Gas	No.	1				
b	5 Gas	No.	2				
c	4 Gas	No.	1				
d	3 Gas	No.	3				
e	2 Gas	No.	11				
5	Isolation Valve						
a	15 MM.	No.	44				
b	22 MM.	No.	26				
c	28 MM.	No.	2				
d	42 MM.	No.	3				
e	54 MM.	No.	3				
f	76 MM.	No.	1				
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	31				
6.1	Bed Head Panel with 2-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	2				
7	SS 304 Rigid Ceiling OT Pendant	No.	15				
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1				
9	10 years charges for comprehensive maintenance including cost of operation of the entire MGPS	Set	1				
BOQ for Malda Medical College & Hospital / Grand Total in INR							

Amendment – XI

9.b) BOQ FOR MURSHIDABAD MEDICAL COLLEGE & HOSPITAL

S.No	Description of Items	Unit	Qty (1)	Basic Price per unit (INR) (2)	Tax per Unit (INR) (3)	Total Unit Price (INR) (4) = (2) + (3)	Total Price (INR) (5) = (4)X(1)
MEDICAL GAS PIPE LINE							
A	OXYGEN SYSTEM						
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards'	Set	1				
1(a)	2 x 10 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	4				
2	Fully Automatic control panel(imported) for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	5				
3	2 X 10 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1				
3(a)	2 x 5 size Emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	4				
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	994				
5	Oxygen flow meters with humidifier as per standards	Nos	952				
6	H.P. tubing having anti static core white color 5mtrs with conversion for Oxygen as per ISO standards	Set	100				
B	NITROUS OXIDE SYSTEM						

1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per standards	Set	2				
2	Fully Automatic control panel (Imported)for Nitrous Oxide Having a min. flow out put of 500-1000 LPM at 4.2 bar pressure as per Standards	Set	2				
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per standards	Set	2				
4	Surface Mounted mounted front loading N2O outlets as per standards	No.	19				
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	26				
C	VACUUM SYSTEM						
1	Vacuum Central System Complete with Three nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And two nos Receiver each capacity 2000 liters, Filter etc.	Set	1				
1(a)	Vacuum Central System Complete with Two nos Vacuum Pumps 15V . each having 149 cfm PD with 10 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And two nos Receiver each capacity 1000 liters, Filter etc.		2				
1 (b)	Vacuum Central System Complete with 2 nos Vacuum Pumps v244. each having 34.6 cfm PD with 2 HP motor Filter, interconnecting pipes, NRV, auto switch gear assy., exhaust silencer And Receiver – 500 liters, Filter etc.		2				
2	Bacterial Filter(Imported)	Set	5				
3	Surface mounted front loading double locked Vacuum out lets, as per standards	Nos	990				
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per standards	Nos	952				
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	19				
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	185				
D	COMPRESSED AIR SYSTEM						

1	Compressed Air system complete with 04 nos. 57 CFM capacity Non-lubricated, Reciprocating Air cooled type Base Frame mounted Air compressors with 15 HP motors with a 2 nos of Receiver of 1500 liter water capacity each along with 4 No. Air Dryer	Set	1				
1(a)	Compressed Air system complete with 02 nos. 37 CFM capacity Non-lubricated, Reciprocating Air cooled type Base Frame mounted Air compressors from with 10 HP motors with two Receiver each of 500 liter water capacity along with 2 No. Air Dryer		1				
2	4-stage Air Filtration System	Set	4				
3	Duplex Pressure Reducing System	Set	4				
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per standards	Nos	90				
5	Surface mounted front loading double locked Surgical Air-7 bar out lets , as per standards	Nos	13				
6	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	130				
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)						
1	Duplex AGSS complete with Electrical connection etc.	Set	1				
2	Front loading double locked AGSS out lets , as per standards	No.	13				
F	MISCELLANEOUS ITEMS						
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	5				
2	Distribution Copper Pipe						
a	76 mm OD X 1.5 mm Thick	Mtr	310				
b	54 mm OD x 1.2 mm thick	Mtrs	220				
c	42 mm OD x 1.2 mm thick	Mtr	410				
d	28 mm OD x 0.9 mm thick	Mtr	1075				
e	22 mm OD x 0.9 mm thick	Mtr	3595				
f	15 mm OD x 0.9 mm thick	Mtr	4015				
g	12 mm OD x 0.7 mm thick	Mtr	4905				
3	Valve Box-as per standards						
a	6 Gas	No.	6				
b	5 Gas	No.	2				

c	4 Gas	No.	7					
d	3 Gas	No.	5					
e	2 Gas	No.	35					
4	Medical Gas Digital Alarm System as per standards							
a	6 Gas	No.	3					
b	5 Gas	No.	1					
c	4 Gas	No.	2					
d	3 Gas	No.	5					
e	2 Gas	No.	23					
5	Isolation Valve							
a	15 MM.	No.	75					
b	22 MM.	No.	46					
c	28 MM.	No.	10					
d	42 MM.	No.	5					
e	54 MM.	No.	5					
f	76 MM.	No.	1					
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17					
7	SS 304 Rigid Ceiling OT Pendant	No.	13					
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	5					
9	10 years charges for comprehensive maintenance including cost of operation of the entire MGPS	Set	1					
BOQ for Murshidabad Medical College & Hospital / Grand Total in INR								

Amendment – XII

9.c) BOQ FOR COLLEGE OF MEDICINE AND SAGORE DATTA HOSPITAL

S.No	Description of Items	Unit	Qty	Basic Price per unit (INR)	Tax per Unit (INR)	Total Unit Price (INR)	Total Price (INR)
			(1)	(2)	(3)	(4) = (2) + (3)	(5) = (4)X(1)
A	OXYGEN SYSTEM						
1	2 x 20 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1				
2	Fully Automatic control panel Imported for Oxygen Having a constant flow out put of over 1500-2000 lpm at 4.2 bar pressure as per Standards	Set	1				
3	2 X 10 size emergency manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder as per Standards	Set	1				
4	Surface mounted front loading Oxygen outlets as per Standards	Nos	718				
5	Oxygen flow meters with humidifier as per Standards	Nos	670				
6	H.P. tubing having anti static core white color 5mtrs with conversion kit for Oxygen as per Standards	Set	20				
B	NITROUS OXIDE SYSTEM						
1	2 x 4 size main manifold complete with middle frame with chain for individual cylinder along with Non Return Valves for every cylinder. as per Standards	Set	1				
2	Fully Automatic control panel (Imported)for Nitrous Oxide Having a min. flow out put of 500-1000 LPM at 4.2 bar pressure as per Standards	Set	1				
3	Two cylinder Emergency Nitrous oxide arrangement using a high flow double gauge Regulator as per Standards	Set	1				
4	Front loading N2O outlets as per Standards	No.	12				
5	H.P. tubing having anti static core Blue color 5mtrs with Keat conversion for Nitrous Oxide as per ISO Standards	Set	20				
C	VACUUM SYSTEM						
1	Vacuum Central System Complete with Four nos of Vacuum Pumps, Rotary vane type. Each having minimum 3000 lpm, interconnecting pipes, NRV, exhaust silencer. 2 nos. of Receiver each having 3000 litres, Filter etc.	Set	1				
2	Bacterial Filter Imported	Set	1				

3	Surface mounted front loading double locked Vacuum out lets, as per Standards	Nos	664				
4	Ward Vacuum Unit with Regulator, Collection Jar of 600 ml with Bracket as per Standards	Nos	620				
5	Theatre Suction Unit, trolley mounted with 2 nos 2000 ml Collection Jars as per standards	Nos	11				
6	High Pressure color coded yellow Tube as per ISO Standards as per standards	Mtr	55				
D	COMPRESSED AIR SYSTEM						
1	Compressed Air system complete with 04 nos. Reciprocating, Air cooled type,57 cfm , Base frame mounted compressor will provide minimum 1750 lpm air flow. 2 nos. of Receiver each having minimum 1500 litre water capacity along with duplex Air Dryer.	Set	1				
2	4-stage Air Filtration System	Set	2				
3	Duplex Pressure Reducing System	Set	2				
4	Surface mounted front loading double locked Medical Air-4 bar out lets , as per standards	Nos	150				
5	Front loading double locked Surgical Air-7 bar out lets , as per standards	no.	16				
6	HP colour coded black Tubing as per ISO Standards as per standards	Mtr	55				
E	ANAESTHESIA GAS SCAVENGING SYSTEM (AGSS)						
1	Duplex AGSS complete with Electrical connection etc.	Set	1				
2	Front loading double locked AGSS out lets , as per standards	No.	16				
F	MISCELLANEOUS ITEMS						
1	Combined Electrical Control Panel for Vacuum System and Compressed Air System(Cascading / seq.) complete with plant Room wiring.	Nos	1				
2	Distribution Copper Pipe						
a	76 mm. OD X 1.5 mm. Thick	Mtr.	85				
b	54 mm OD x 1.2 mm thick	Mtr.	110				
c	42 mm OD x 1.2 mm thick	Mtr	300				
d	28 mm OD x 0.9 mm thick	Mtr	1100				
e	22 mm OD x 0.9 mm thick	Mtr	3500				
f	15 mm OD x 0.9 mm thick	Mtr	3100				
g	12 mm OD x 0.7 mm thick	Mtr	2100				
3	Valve Box-as per standards						
a	6 Gas	No.	8				
b	5 Gas	No.	3				
c	4 Gas	No.	1				

d	3 Gas	No.	5					
e	2 Gas	No.	49					
4	Medical Gas Digital Alarm System as per standards							
a	6 Gas	No.	1					
b	5 Gas	No.	5					
c	4 Gas	No.	2					
d	3 Gas	No.	3					
e	2 Gas	No.	13					
5	Isolation Valve							
a	15 MM.	No.	106					
b	22 MM.	No.	66					
c	28 MM.	No.	2					
d	42 MM.	No.	4					
e	54 MM.	No.	3					
f	76 MM.	No.	1					
6	Bed Head Panel with 3-services complete with Electrical Sockets and other accessories as per Technical Specification	No.	17					
7	SS 304 Rigid Ceiling OT Pendant	No.	16					
8	Automatic Change over system from LMO to Manifold and from Manifold to LMO	Set	1					
9	10 years charges for comprehensive maintenance including cost of operation of the entire MGPS	Set	1					
BOQ for College of Medicine and Sagore Datta Hospital / Grand Total in INR								

Note: Please upload 3 (three) separate statements for Gross price as above in pdf.