

C4021 - CSIR 3457 PHARMA - SPECIALISED GAS - PRICE BREAKDOWN SCHEDULE - SMF

BILL NO.1 : PRELIMINARY AND GENERAL COSTS

(Note : These prices shall be firm and not subject to price adjustment)

Item	Description	Unit	QTY	Supply Rate	Install Rate	Amount
1.1	<u>SITE ESTABLISHMENT</u>					
1	Camp and fencing	sum	1			
2	Office	sum	1			
3	Office Equipment	sum	1			
4	Store	sum	1			
5	Workshop	sum	1			
6	Other	sum	1			
1.2	<u>ADMINISTRATIVE</u>					
1	Site personnel	sum	1			
2	Supervisory staff	sum	1			
3	Guards	sum	1			
4	Transport	sum	1			
5	Insurance	sum	1			
6	Cost of Guarantee	sum	1			
7	Financing of Retention	sum	1			
8	Running costs e.g. telephone, electricity,					
9	cleaning, services, printing, stationery, etc.	sum	1			
1.3	<u>GENERAL COSTS</u>					
1	Allow an amount if required for expenses incurred to tender.	sum	1			
2	Loading and off loading of material and equipment	sum	1			
3	Setting out of Works.	sum	1			
4	Cleaning of site upon completion of Contract.	sum	1			
5	Critical Path/Schedule.	sum	1			
6	Issuing Cadded Workshop drawings	sum	1			
7	Issuing 4 sets of "As-built" drawings and operational manuals including CD	sum	1			
8	Test and commissioning of complete Works.	sum	1			
9	Inspection and handing over.	sum	1			
10	QC/QA	sum	1			
11	Other items not specifically mentioned	sum	1			
1.4	<u>COMPLIANCE</u>					
1	Allow for complying with the conditions & requirements of tendering & contract conditions	sum	1			
Total for Bill No. 1 Carried forward to summary page						

BILL NO.2 : SPECIALIZED GAS RETICULATION - SMF

(Note : These prices shall be firm and not subject to price adjustment)

Item	Description	Unit	QTY	Supply Rate	Install Rate	Amount
<u>SMALL MOLECULAR FACILITY - OXYGEN</u>						
2.1	Supply and installation of stainless steel SS40, 316, seamless piping, including fittings, painting and labelling as per SANS colour coding, plastic brackets, painting wall plates and sleeves where required, for a complete working installation as per the drawings, schedules and specifications.					
1	DN 6 pipe	m	21			
2	DN 8 pipe	m	33			
3	DN 10 pipe	m	11			
4	DN 15 pipe	m	22			
5	DN 20 pipe	m	2			
2.2	Supply and installation of 90° bends, reducers and tee-junction fittings to stainless steel piping and/or fittings complete as per the drawings, schedules and specifications.					
1	ELBOW - ø6 mm-ø6 mm	no	7			
2	ELBOW - ø8 mm-ø8 mm	no	8			
3	ELBOW - ø10 mm-ø10 mm	no	3			
4	ELBOW - ø15 mm-ø15 mm	no	6			
5	ELBOW - ø20 mm-ø20 mm	no	2			
6	REDUCER - ø15 mm-ø10 mm	no	2			
7	REDUCER - ø20 mm-ø8 mm	no	4			
8	REDUCER - ø20 mm-ø10 mm	no	2			
8	REDUCER - ø20 mm-ø15 mm	no	1			
10	TEE - ø10 mm-ø10 mm-ø10 mm	no	1			
11	TEE - ø15 mm-ø15 mm-ø15 mm	no	1			
12	TEE - ø20 mm-ø20 mm-ø20 mm	no	3			
2.3	Supply and installation of Stainless steel TESCOM SG1 Series gas pressure regulators with shut-off valve or other equally approved, vertically mounted, including backplates, blocks, outlet sockets, probes, engraved cover plates, etc. and joint to supply pipes complete as per drawings, schedules and specifications.					
1	Oxygen (O2) Sing Stage Regulator with shut-off	no	3			
2.4	Supply and installation of pipe accessories including joints to stainless steel pipes and/or fittings complete as per the drawings, schedules and specifications.					
1	Non-Return Valve	no	3			
2	Flashback Arrestor	no	3			
3	Piping Connector	no	3			
<u>SMALL MOLECULAR FACILITY - HYDROGEN</u>						
2.5	Supply and installation of stainless steel SS40, 316, seamless piping, including fittings, painting and labelling as per SANS colour coding, plastic brackets, painting wall plates and sleeves where required, for a complete working installation as per the drawings, schedules and specifications.					
1	DN 6 pipe	m				
2	DN 8 pipe	m	54			
3	DN 10 pipe	m				
4	DN 15 pipe	m	18			
5	DN 20 pipe	m	2			

2.6	Supply and installation of 90° bends, reducers and tee-junction fittings to stainless steel piping and/or fittings complete as per the drawings, schedules and specifications.					
1	ELBOW - Ø8 mm-Ø8 mm	no	14			
2	ELBOW - Ø15 mm-Ø15 mm	no	7			
3	ELBOW - Ø20 mm-Ø20 mm	no	2			
4	REDUCER - Ø10 mm-Ø8 mm	no	2			
5	REDUCER - Ø15 mm-Ø8 mm	no	1			
6	REDUCER - Ø20 mm-Ø8 mm	no	4			
7	REDUCER - Ø20 mm-Ø15 mm	no	4			
8	TEE - Ø8 mm-Ø8 mm-Ø8 mm	no	1			
9	TEE - Ø15 mm-Ø15 mm-Ø15 mm	no	2			
10	TEE - Ø20 mm-Ø20 mm-Ø20 mm	no	2			
2.7	Supply and installation of Stainless steel TESCO SG1 Series gas pressure regulators with shut-off valve or other equally approved, vertically mounted, including backplates, blocks, outlet sockets, probes, engraved cover plates, etc. and joint to supply pipes complete as per drawings, schedules and specifications.					
1	Hydrogen (H2) Sing Stage Regulator with shut-off	no	3			
2.8	Supply and installation of pipe accessories including joints to stainless steel pipes and/or fittings complete as per the drawings, schedules and specifications.					
1	Non-Return Valve	no	3			
2	Flashback Arrestor	no	3			
3	Piping Connector	no	3			
SMALL MOLECULAR FACILITY - NITROGEN						
2.9	Supply and installation of stainless steel SS40, 316, seamless piping, including fittings, painting and labelling as per SANS colour coding, plastic brackets, painting wall plates and sleeves where required, for a complete working installation as per the drawings, schedules and specifications.					
1	DN 6 pipe	m				
2	DN 8 pipe	m	133			
3	DN 10 pipe	m	16			
4	DN 15 pipe	m	52			
5	DN 20 pipe	m	3			
2.10	Supply and installation of 90° bends, reducers and tee-junction fittings to stainless steel piping and/or fittings complete as per the drawings, schedules and specifications.					
1	ELBOW - Ø8 mm-Ø8 mm	no	40			
2	ELBOW - Ø10 mm-Ø10 mm	no	7			
3	ELBOW - Ø15 mm-Ø15 mm	no	11			
4	ELBOW - Ø20 mm-Ø20 mm	no	2			
5	REDUCER - Ø10 mm-Ø8 mm	no	14			
6	REDUCER - Ø10 mm-Ø10 mm	no	1			
7	REDUCER - Ø15 mm-Ø8 mm	no	1			
8	REDUCER - Ø15 mm-Ø10 mm	no	6			
9	REDUCER - Ø20 mm-Ø15 mm	no	5			
10	TEE - Ø8 mm-Ø8 mm-Ø8 mm	no	1			
11	TEE - Ø10 mm-Ø10 mm-Ø10 mm	no	11			
12	TEE - Ø15 mm-Ø15 mm-Ø15 mm	no	5			

2.11	Supply and installation of Stainless steel TESCO SG1 Series gas pressure regulators with shut-off valve or other equally approved, vertically mounted, including backplates, blocks, outlet sockets, probes, engraved cover plates, etc. and joint to supply pipes complete as per drawings, schedules and specifications.					
1	Nitrogen (N2) Sing Stage Regulator with shut-off	no	18			
2.12	Supply and installation of pipe accessories including joints to stainless steel pipes and/or fittings complete as per the drawings, schedules and specifications.					
1	Non-Return Valve	no	18			
2	Flashback Arrestor	no				
3	Piping Connector	no	18			
	SMALL MOLECULAR FACILITY - COMPRESSED AIR					
2.13	Supply and installation of galvanised steel, seamless piping, including fittings, painting and labelling as per SANS colour coding, plastic brackets, painting wall plates and sleeves where required, for a complete working installation as per the drawings, schedules and specifications.					
1	DN 6 pipe	m				
2	DN 8 pipe	m				
3	DN 10 pipe	m				
4	DN 15 pipe	m				
5	DN 20 pipe	m	114			
2.14	Supply and installation of 90° bends, reducers and tee-junction fittings to stainless steel piping and/or fittings complete as per the drawings, schedules and specifications.					
1	ELBOW - ø20 mm-ø20 mm	no	20			
2	REDUCER - ø20 mm-ø15 mm	no	4			
3	TEE - ø20 mm-ø20 mm-ø20 mm	no	15			
2.15	Supply and installation of BROEN-LAB shut-off valve or other equally approved, vertically mounted, including backplates, blocks, outlet sockets, probes, engraved cover plates, etc. and joint to supply pipes complete as per drawings, schedules and specifications.					
1	Compressed Air (Comp Air) Suspended Tap for Exposed Piping: 2530 177 1021-T	no	4			
2.16	Supply and installation of pipe accessories including joints to stainless steel pipes					
1	Non-Return Valve	no				
2	Flashback Arrestor	no				
3	Piping Connector	no				

2.17	Supply and installation of isolating valve boxes including three piece stainless steel ball valves, paint finish, markings, name plates, labels, etc. complete as per the drawings, schedules and specifications.					
2.17.1	SMF.00.008 - SYNTHETICS LAB					
	Valve box to take valve sizes	no	1			
1	- (Comp Air) DN 20					
2	- (N2) DN 10					
3	- (H2) DN 15					
4	- (O2) DN 10					
2.17.2	SMF.00.007 - FLOW LABORATORY					
	Valve box to take valve sizes	no	1			
1	- (Comp Air) DN 20					
2	- (N2) DN 15					
3	- (H2) DN 8					
4	- (O2) DN 8					
2.17.3	SMF.00.010 - SCALE-UP/PRE-PILOT					
	Valve box to take valve sizes	no	1			
1	- (Comp Air) DN 20					
2	- (N2) DN 15					
3	- (H2) DN 8					
4	- (O2) DN 8					
Total for Bill No. 2 Carried forward to summary page					R	-

BILL NO.3 : GENERAL ITEMS FOR SMF

(Note : These prices shall be firm and not subject to price adjustment)

Item	Description	Unit	QTY	Supply Rate	Install Rate	Amount
3.1	Miscellaneous items not in BOQ for a complete and working installation to be listed below:					
3.1.1		sum	1			
3.1.2		sum	1			
3.1.3		sum	1			
3.1.4		sum	1			
3.1.5		sum	1			
3.2	Nitrogen Manifold					
3.2.1	Manual changeover manifold for 2 x duty and 2 x standby cylinders, including all required shutoff valves, solenoid valves, pressure reducing valves, pressure transmitters and pressure indicators for a fully functional installation as per drawings, schedules and specifications.	sum	1			
3.3	Hydrogen Manifold					
3.3.1	Manual changeover manifold for 2 x duty and 2 x standby cylinders, including all required shutoff valves, solenoid valves, pressure reducing valves, pressure transmitters and pressure indicators for a fully functional installation as per drawings, schedules and specifications.	sum				
3.4	Oxygen Manifold					
3.4.1	Manual changeover manifold for 2 x duty and 2 x standby cylinders, including all required shutoff valves, solenoid valves, pressure reducing valves, pressure transmitters and pressure indicators for a fully functional installation as per drawings, schedules and specifications.	sum	1			
3.5	Compressed Air line to be connected with the existing compressed air system on site.	sum	1			
3.6	12 month maintenance	sum	1			
3.7	Training of staff	sum	1			
Total for Bill No. 3 Carried forward to summary page						

SUMMARY OF BILLS OF QUANTITIES

Item	Description		Sub-Total
	TOTAL FOR BILL NO. 1		
	TOTAL FOR BILL NO. 2		
	TOTAL FOR BILL NO. 3		
	TOTAL FOR BILLS OF QUANTITIES (excl. VAT)		

TENDER SUMMARY

Item	Description	Unit	Rate	Amount		Sub-Total
	AIR CONDITIONING AND VENTILATION INSTALLATION					
A	Bills of Quantities No. 1 TO 3					
	Subtotal					
	Provisional Amounts for :					
B	Provisional amount for alarm system - SMF			R 320,000.00		
C						
D						
E						
	Subtotal for B+C+D+E					
	TOTAL NET CONTRACT SUM (excl vat)					

- 1 Above Total Net contract sum to be carried forward
- 2 All the rates in this document must be supplied.
- 3 Above amounts to exclude VAT.

C4021 - CSIR 3457 PHARMA - SPECIALISED GAS - PRICE BREAKDOWN SCHEDULE - BP

BILL NO.1 : PRELIMINARY AND GENERAL COSTS

(Note : These prices shall be firm and not subject to price adjustment)

Item	Description	Unit	QTY	Supply Rate	Install Rate	Amount
1.1	<u>SITE ESTABLISHMENT</u>					
1	Camp and fencing	sum	1			
2	Office	sum	1			
3	Office Equipment	sum	1			
4	Store	sum	1			
5	Workshop	sum	1			
6	Other	sum	1			
1.2	<u>ADMINISTRATIVE</u>					
1	Site personnel	sum	1			
2	Supervisory staff	sum	1			
3	Guards	sum	1			
4	Transport	sum	1			
5	Insurance	sum	1			
6	Cost of Guarantee	sum	1			
7	Financing of Retention	sum	1			
8	Running costs e.g. telephone, electricity,					
9	cleaning, services, printing, stationery, etc.	sum	1			
1.3	<u>GENERAL COSTS</u>					
1	Allow an amount if required for expenses incurred to tender.	sum	1			
2	Loading and off loading of material and equipment	sum	1			
3	Setting out of Works.	sum	1			
4	Cleaning of site upon completion of Contract.	sum	1			
5	Critical Path/Schedule.	sum	1			
6	Issuing Cadded Workshop drawings	sum	1			
7	Issuing 4 sets of "As-built" drawings and operational manuals including CD	sum	1			
8	Test and commissioning of complete Works.	sum	1			
9	Inspection and handing over.	sum	1			
10	QC/QA	sum	1			
11	Other items not specifically mentioned	sum	1			
1.4	<u>COMPLIANCE</u>					
1	Allow for complying with the conditions & requirements of tendering & contract conditions	sum	1			
Total for Bill No. 1 Carried forward to summary page						

BILL NO.2 : SPECIALIZED GAS RETICULATION - BP

(Note : These prices shall be firm and not subject to price adjustment)

Item	Description	Unit	QTY	Supply Rate	Install Rate	Amount
	BIO-PHARMACY - LPG					
	2.1 Supply and installation of copper piping, including fittings, painting and labelling as per SANS colour coding, plastic brackets, painting wall plates and sleeves where required, for a complete working installation as per the drawings, schedules and specifications.					
1	DN 10 pipe	m	25			
2	DN 15 pipe	m				
	2.2 Supply and installation of 90° bends, reducers and tee-junction fittings to copper piping and/or fittings complete as per the drawings, schedules and specifications.					
1	ELBOW - Ø10 mm-Ø10 mm	no	10			
2	REDUCER - Ø20 mm-Ø10 mm	no	5			
3	TEE - Ø10 mm-Ø10 mm-Ø10 mm	no	1			
	2.3 Supply and installation of three piece stainless steel ball valves including joints to copper pipes and/or fittings complete as per the drawings, schedules and specifications.					
1	DN 10 isolating ball valve	no	1			
	2.4 Supply and installation of BROEN-LAB shut-off valve or other equally approved, vertically mounted, including backplates, blocks, outlet sockets, probes, engraved cover plates, etc. and joint to supply pipes complete as per drawings, schedules and specifications.					
1	Liquefied Petroleum Gas (LPG) Suspended Tap for Exposed Piping: 2530 171 1032-T	no	1			
	2.5 Supply and installation of isolating valve boxes including three piece stainless steel ball valves, paint finish, markings, name plates, labels, etc. complete as per the drawings, schedules and specifications.					
	2.5.1 BP.00.001 - LABORATORY AREA					
	Valve box to take valve sizes	no	1			
1	- (LPG) DN 10					
	BIO-PHARMACY - COMPRESSED AIR					
	2.6 Supply and installation of galvanised steel, seamless piping, including fittings, painting and labelling as per SANS colour coding, plastic brackets, painting wall plates and sleeves where required, for a complete working installation as per the drawings, schedules and specifications.					
1	DN 10 pipe	m	25			
2	DN 15 pipe	m				

2.7	Supply and installation of 90° bends, reducers and tee-junction fittings to stainless steel piping and/or fittings complete as per the drawings, schedules and specifications.					
1	ELBOW - ø20 mm-ø20 mm	no	10			
2	REDUCER - ø20 mm-ø10 mm	no	0			
3	TEE - ø10 mm-ø10 mm-ø10 mm	no	1			
2.8	Supply and installation of three piece stainless steel ball valves including joints to copper pipes and/or fittings complete as per the drawings, schedules and specifications.					
1	DN 10 isolating ball valve	no	1			
2.9	Supply and installation of BROEN-LAB shut-off valve or other equally approved, vertically mounted, including backplates, blocks, outlet sockets, probes, engraved cover plates, etc. and joint to supply pipes complete as per drawings, schedules and specifications.					
1	Compressed Air (Comp Air) Suspended Tap for Exposed Piping: 2530 177 1021-T	no	4			
Total for Bill No. 2 Carried forward to summary page						

BILL NO.3 : GENERAL ITEMS FOR BP

(Note : These prices shall be firm and not subject to price adjustment)

Item	Description	Unit	QTY	Supply Rate	Install Rate	Amount
3.1	Miscellaneous items not in BOQ for a complete and working installation to be listed below:					
3.1.1		sum	1			
3.1.2		sum	1			
3.1.3		sum	1			
3.1.4		sum	1			
3.1.5		sum	1			
3.2	LPG Manifold					
3.2.1	Manual changeover manifold for 1 x duty and 1 x standby cylinders, including all required shutoff valves, solenoid valves, pressure reducing valves, pressure transmitters and pressure indicators for a fully functional installation as per drawings, schedules and specifications.	sum	1			
3.3	Compressed Air line to be connected with the existing compressed air system on site.	sum	1			
3.4	12 month maintenance	sum	1			
3.5	Training of staff	sum	1			
Total for Bill No. 3 Carried forward to summary page						

SUMMARY OF BILLS OF QUANTITIES

Item	Description		Sub-Total
	TOTAL FOR BILL NO. 1		
	TOTAL FOR BILL NO. 2		
	TOTAL FOR BILL NO. 3		
	TOTAL FOR BILLS OF QUANTITIES (excl. VAT)		

TENDER SUMMARY

Item	Description	Unit	Rate	Amount		Sub-Total
	AIR CONDITIONING AND VENTILATION INSTALLATION					
A	Bills of Quantities No. 1 TO 3					
	Subtotal					
	Provisional Amounts for :					
B	Provisional amount for alarm system - BP			R 35,000.00		
C						
D						
E						
	Subtotal for B+C+D+E					
	TOTAL NET CONTRACT SUM (excl vat)					

- 1 Above Total Net contract sum to be carried forward
- 2 All the rates in this document must be supplied.
- 3 Above amounts to exclude VAT.



**Bill
No**

Amount

R

R

R

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Section 5.9 : Gas Bills of Quantities
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