

REPLACEMENT OF 3 NOS OF SPRINKLER ISOLATION VALVES , 3 NOS OF CHECK VALVES AND 20 NOS OF DRAIN VALVES AT TERMINAL 3, SINGAPORE CHANGI AIRPORT

A. INVITATION TO QUOTE

Changi Airport Group (Singapore) Pte Ltd (CAG) invites competent contractors to submit their quotation to replace 3nos of sprinkler isolation and 20nos of drain valves each at Terminal 3 Singapore Changi Airport (Refer to **Annex A**).

B. Scope of Work

The works shall consist of but not limited to the following:

1. To supply and install new sprinkler isolation and drain valves as indicated in the following list below (See Annex A).
2. Supply labour, material, transportation and all necessary tools and equipment to carry out the works including Testing & Commissioning and PE(Mechanical) endorsement if necessary.
3. The successful contractor shall cordon off the working area and provide the necessary signage.
4. The successful contractor shall carry out the necessary measurements on site to ensure the accuracy of the replacement works.
5. The successful contractor must submit the Method of Statement and Risk Assessment for all the equipments used as well as the work processes, including the removal and reinstate of the works.
6. Erect mobile scaffolding to support the replacement works. Erecting of mobile scaffold shall be carry out by scaffolding erector and scaffolding supervisor (if necessary).
7. The successful contractor shall remove and disposed existing sprinkler valves and replace it with a brand new sprinkler valves.
8. Any part of the works found to be defective after the installations, will be rejected and the awarded contractor shall replace

the defective parts with new parts and it must be in good conditions/operations after testing.

9. All construction waste, including the rusty pipes, valves etc shall be disposed off site on a daily basis.

C. Delivery

The contractor is required to complete the works **within 8 weeks from the date of award**. The awarded Contractor shall complete the works specified in this quotation before or on the targeted completion date. No extension of time will be allowed unless expressly stated by the CAG.

- a) **All measurements listed in the specifications are estimated. It is the onus of the contractors to confirm the measurements and verify the parts and components of the sprinkler valves & check valves upon award of the works.**

D. Acceptance of Terms and Conditions

CAG has taken that the contractor has read and understood all the terms and conditions of the RFQ and shall observe all the specifications and requirements as stated in this document.

E. Price Schedule

S/no	Description	Qty	Unit	Rate	Amount
1	Supply labour, machine, material, transportation and all necessary tools & equipment to carry out the replacement works of the new sprinkler isolation pipes , check valves and drain valves as stated in the drawings, including testing & commissioning, removal of existing pipes and to be disposed off-site.	1	Lot		
2	PE (Mechanical) Endorsement (If Necessary).	1	Lot		
3	Others necessary works Any work but not included in the breakdown that is deemed necessary for purpose of completion of entire works.	1	Lot		
Total Cost (Excluding GST) (to be key into ChangeProcure)					\$

Note

- The above quantities given are an estimate for costing purposes only.
- CAG reserves the right to reduce or add accordingly.
- This is a lump sum quotation. It is the onus of the contractor to verify all quantities and specifications on site. No claims for variation or additional monies will be allowed.
- The Contractor shall provide a **one (1) year warranty** for all material described in this section against defective materials and poor workmanship, from the handover acceptance date of the completed works.

F. Submissions

The Contractor shall submit the following for the purpose of evaluation by CAG:

- (1) **Enter “Total Cost” into Changi eProcure as lump Sums**
- (2) Upload Section F into Changi eProcure showing the price schedule
- (3) Proposal and drawings of new control panel and its control wiring
- (4) Track records and relevant past works/ projects

Please note that CAG reserves the right not to award the quotation to any Contractor who fails to submit all the required submissions listed above.

The closing date of submission is on **Monday, 13 January @2pm.**

G. Contact Details of CAG Representative

Contractors may contact the under mentioned CAG representative regarding this quotation:

1. Mr. Zulkifli Hamdan
Integrated Facilities Management Terminal 3
Handphone no: 9128 2156
Email address: zulkifli.hamdan@changiairport.com

Or

2. Mr. Shafarudin Abdul Latiff
Integrated Facilities Management Terminal 3

Handphone no: 97773797

Email address: shafarudin.abdul.latiff@changiairport.com

GENERAL REQUIREMENTS

1. The rate quoted shall include all labours, equipment & materials for the entire work. If the contractor needs to use any electrical appliances, the contractor **MUST** provide his own circuit breaker to prevent any tripping to CAG electricity network.
2. The price stated in the quotation offer will be held valid for a period of 2 (two) months from the date of closing.
3. All quotes shall be submitted on-line through SESAMI, **no hard copy is allowed.**
4. Contractors shall submit the work schedule to the CAG within 7 working days upon the award of the job. The approved scheduling program used shall be Microsoft Project or equivalent. The format of submission to CAG shall be in portable document format (pdf).
5. The contractor must submit the as-built drawings of the completed site duly endorsed by the PE to the project officer within 14 days upon completion of the work (4 set hardcopy and 1 set soft copy), if required.
6. The contractor shall submit copies of all approvals from the statutory authorities to the CAG for record (If necessary).
7. The contractor shall take extreme care not to damage any CAG property and equipment during the installation. Protective floor coverings in the form of 6mm thick plywood laid on 4mm thick underlay and covered with a 4mm thick grey felt carpet, properly secured to the floor with approved adhesive tape, shall be provided at the expense of the contractor.
8. The contractor shall ensure that the job site is properly cordoned up using approved free-standing standees and plastic chain with appropriate caution / work in progress / directional signage. In certain areas, a full-height timber hoarding of at least 6mm thick plywood with approved finishes shall be provided. The contractor shall organise his work such that at any point of time, the entrances, exits and walkway shall not be blocked and remain accessible by airport users at all times. The contractor shall also maintain a clean and safe working environment within the job site.

9. The contractor shall clear and remove all debris away from the work site and out of the Airport daily, using approved heavy-duty polythene bags.
10. The contractor will be held responsible for the safe custody of materials delivered to the site by him.
11. The Contractor shall make good damages caused by his workers during the execution of the works at his own expenses. (The use of the term "Make Good" implies that such work is to match the existing in all respect). CAG shall determine the necessity and extent of making good and rectification of damages or defective works and the decision of CAG thereon shall be final and conclusive.
12. In the event that damage is done to public or private services or property such as cables, pipes, ceiling panels etc. by the contractor whether by accident or otherwise causing black-out or other nuisance or inconvenience or which is likely to bring CAG into disrepute, CAG reserves the right to impose administrative charges upon the Contractor. The Contractor may also be restricted from participating in CAG projects for a period to be decided by CAG. In addition, all expenditure for such necessary reinstatements or repairs incurred shall be borne by the Contractor either by deduction from the contract sum or direct payment by the Contractor.
13. The contractor shall at his own cost remove, replace and rectify any components/parts installed by him if it is caused by poor workmanship or inferior materials.
14. The contractor shall clean up the job site thoroughly, to the satisfaction of CAG, prior to handing back the site to CAG.
15. CAG shall be at liberty to object to and require the contractor to remove forthwith any person employed by the contractor, who in the opinion of CAG has misbehaved himself or is incompetent or negligent in the proper performance of his duties or whose employment is otherwise considered by CAG to be undesirable.
16. Non-citizens shall be lawfully employed and be in possession of the necessary work permits to allow them to work at the work site.
17. The contractor shall take all necessary precautions to restrict his workman to areas where work is in progress and prevent them from wandering to other parts of the compound.
18. The contractor shall attached the catalogues of all the products that they are providing in the SESAMI.

Terms and Conditions

A. PAYMENT

1. Payment shall be made to the Contractor after the Works have been delivered, which CAG, in its sole discretion concludes have been satisfactorily performed. The contractor shall present to CAG the invoice for payment for the actual quantities supplied.

B. LIQUIDATED DAMAGES FOR UNSATISFACTORY WORKS

1. In the event that the contractor is found to have committed any irregularities or fails to complete the performances of services by the date specified in the quotation, CAG shall have the right to deduct from any moneys due or to become due to the Contractor as liquidated damages until the Services are performed.

Works/Services	Amt (S\$)
Failure of contractor to complete the works within 8 weeks from date of award.	\$100 per day

C. DEFECTS LIABILITY PERIOD (DLP)

1. ALL works in this quotation shall carry a defects liability period (DLP) of **one year** against defects caused by manufacturing or poor workmanship. The DLP starts on the day the completed site is officially handed over to CAG for operations. Should defects be reported by CAG, the contractor shall respond within 1 (one) working day to rectify such defects. If the defects cannot be rectified promptly due to the absence of materials or other reasons, the contractor shall do so within a reasonable time deem appropriate by CAG.

D. TERMINATION OF CONTRACT

1. Notwithstanding Clause B, in the event the Contractor fails to perform any of its obligations under the Contract, CAG may terminate the Contract and all of the Contractor's rights hereunder will be ended.
2. CAG may terminate this Contract for its convenience and without cause at any time by giving the Contractor at least fourteen (14) calendar days written notice of such termination. Termination shall be effective on the date that CAG specifies in its written notice to the Contractor.

E. CONTRACTOR'S QUALIFIED PERSONNEL

1. The Contractor shall engage at all times qualified and capable personnel for the performance of the works, and to complete the works in a good and
workmanlike manner, with the generally accepted professional standards of good and sound industry practices and in accordance with the terms of the Contract.

F. SAFETY

1. The Contractor shall at all times observe and comply with all prevailing laws and regulations relating to safety and shall bear all costs and expenses connected with the compliance of such laws and regulations. The Contractor shall be responsible to take all safety precautions to eliminate danger to his staff, the general public and the property of others. He shall not permit his staff to do anything not in accordance with the generally accepted principles of sound and safe practice or inappropriate to the area concerned.

G. NON-LIABILITY OF CAG

1. Neither CAG, its officers, directors, agents, nor employees shall be charged personally by the Contractor with any liability or held liable to it under any term or provision of this Contract or because of its execution or attempted execution, or because of any breach thereof.
2. In the event of CAG (including for this purpose every officer and department thereof) being held liable for damages arising out of any claim by any workman or employee employed by the Contractor in and for the performance of the Contract, the Contractor shall indemnify CAG, its officers or departments against such claim and any costs, charges and expenses in respect thereof, PROVIDED the same is not caused by the gross negligence or wilful default of CAG, its officers or agents.

H. ALTERATIONS, ERASURES, AMENDMENTS OR QUALIFICATIONS

1. Contractors shall not make any alterations, erasures, amendments or qualifications direct onto any part(s) of the Request for Quotation.

I. USE OF CAG NAME

No one should use the name/logo/ picture/photograph of CAG or Change Airport in any advertisements, press release, handouts or document, either locally or abroad for any purpose either for its own or for that of CAG without specific written permission from CAG.

J. CONFIDENTIALITY

1. Except with the written consent by CAG, the Contractor shall not disclose the Contract or purchases made in this Contract or any provisions thereof or any information issued or furnished by or on behalf of CAG in connection with Contract to any person.

K. AIRPORT RULES AND REGULATIONS

1. The Contractor shall be familiar with and strictly comply with the Airport Operational and Safety (AOS) Requirements of Changi Airport. The Contractor shall be held fully responsible for any consequences due to his failure on his part to comply with the AOS requirements. The Contractor shall observe all airport security and safety measures and procedures when executing works in the airport premises.

L. CONTRACTOR TO INFORM HIMSELF FULLY

1. The Contractor shall be deemed to have satisfied himself as regards to the requirement of the Contract and other relevant information affecting the execution of the works and the prices tendered. No claim by the Contractor for additional payment will be allowed on any ground.

M. INSURANCE

1. The Contractor shall be required at his own cost, to take out and maintain all necessary insurance required by law, for this project.

N. AWARD

1. CAG reserves the right not to accept the lowest or any quotation which CAG may receive.
2. CAG reserves the right to accept or reject portions of the proposal when awarding the contract to the successful Contractor. CAG also reserves the right to exercise in whole or in parts, the items specified under the Specifications.
3. CAG reserves the right to change the design, layout, type of materials, scope of work, venue, floor area and time and date of installation within reasonable limits. The Contractor should be flexible in reacting to changes in requirements and in meeting our needs throughout the work period.
4. The Contractor is to consult and obtain CAG's written approval should they need to change any of the above specifications, duties and job responsibilities before and during the course of the work. Under no circumstances is the Contractor to amend the job requirements without the permission of CAG.

O. FIRM PRICE

1. The lump sum quotation price to be submitted through SESAMI shall be firm and the contractor shall allow for all risks, any imposition of quota, currency rate fluctuation, and material prices that may affect the Lump Sum Quotation Price after the closing date of the Quotation. No claims for variation or additional monies will be allowed.

P. SUB-CONTRACTING

1. The Contractor shall not sub-contract or assign the Contract without the written consent of CAG.

TECHNICAL SPECIFICATIONS

2.0 SPRINKLER CONTROL ISOLATION AND DRAIN VALVE

2.1 General

Model :HPW

300 PSI Butterfly Valve

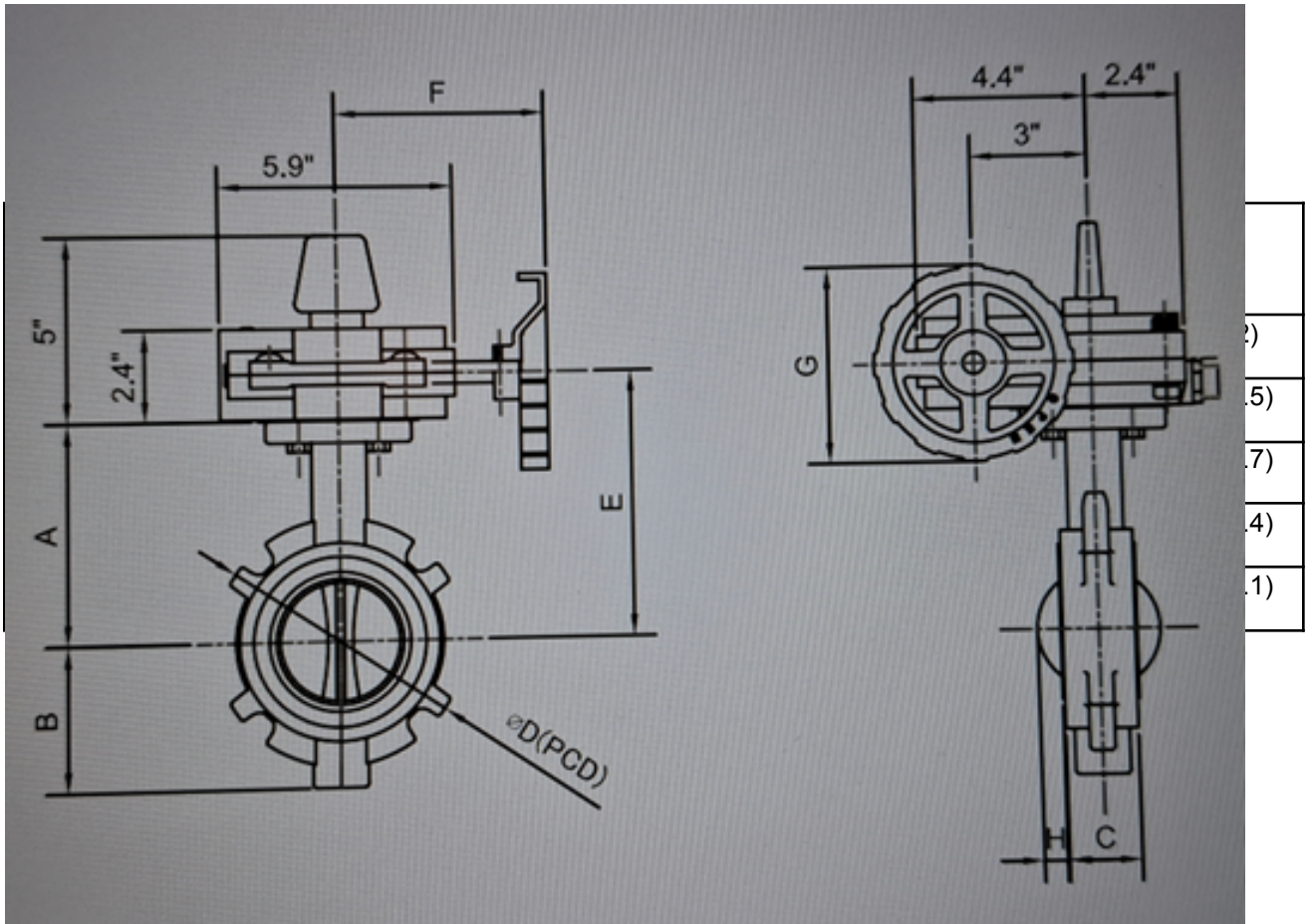
Technical Features

- . Connections: Wafer ends, ANSI Class 125
- . Sizes: 2 1/2", 3", 4", 6", 8"
- . Approvals: UL, ULC, FM, and California State Fire Marshal
- . Maximum Working Pressure: 300 PSI (Max Test Pressure : 600 PSI)
- . Maximum Working Temperature : 250 Deg F (120 Deg C)
- . Application : Indoor and Outdoor Use
- . Double – Seal Disc , Resilient EPDM Coating
- . Factory Installed Supervisory Tamper Switch Assembly

Component	Material	Specification
Body	Ductile Iron	ASTM A536 Nylon-11 Coated
Disc	Ductile Iron	ASTM A536 EPDM Encapsulated
Indicator	Ductile Iron	ASTM A536
Housing	Ductile Iron	ASTM A536
Handwheel	Ductile Iron	ASTM A536
Stem	Stainless Steel	AISI 420
Worm Shaft	Stainless Steel	AISI 410

Shear Pin	Steel	ATSM A510
Gear Segment	Brass	ATSM B584
Housing Gasket	EPDM	EPDM Grade E
O-Ring (All)	EPDM	EPDM Grade E





3.0 Sprinkler Check Valves

3.1 Technical Specification.

Model Tyco AV-1-300 Alarm Valve With and Without Model RC-1 Retard

Chamber European Conformity Valve Trim



Nominal Valve Sizes	Groove	Flange	Flange
	x	x	x
	Groove	Groove	Flange
DN200	46,3 Kg	54,4 Kg	67,6 Kg
219,1 mm			

ANNEX A

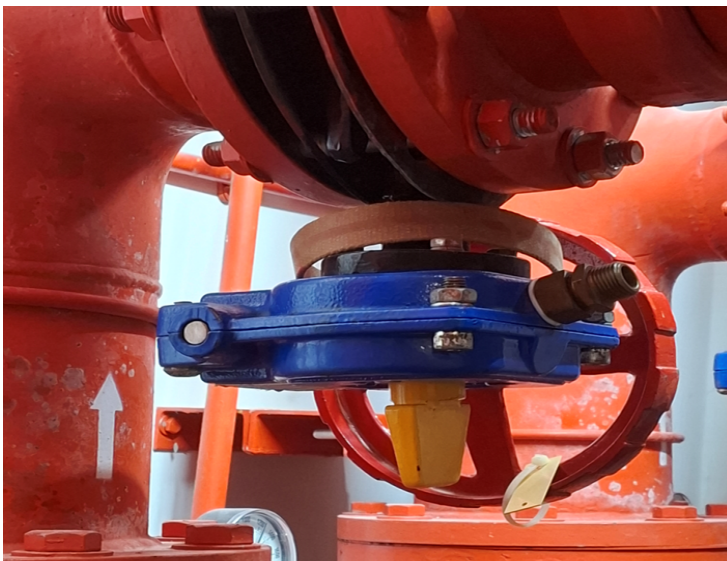
Lists & locations of Sprinkler Control Valves , Check Valves and Drain Valves that need to be replaced.

CV isolation valve list				
S/N	CV number	Size	Location	Remarks
1	CV-02-11	8"	L2(T)south south MB	
2	CV-02-12	8"	L2(T) north MB	
3	CV-B1-EHH-02	8"	B1 (Apron) South MB	

CV Drain valve list				
S/N	CV Number	size	location	Remarks
1	CV-B3-08	6"	B3 public north	
2	CV-B3-10	6"	B3 public north	
3	CV-B2-17	6"	B3 north carpark	
4	CV-B1-14	6"	B1 north carpark	
5	CV-B1-06	6"	B1 south carpark	
6	CV-B1-07	6"	B1 south carpark	
7	CV-01-21	6"	L1 public north	
8	CV-01-22	6"	L1 public north	
9	CV-01-23	6"	L1 public north	
10	CV-01-06	6"	L1 apron south	
11	CV-01-07	6"	L1 apron south	
12	CV-B1-EHH-05	6"	B1 M&E tunnel north	
13	CV-B1-EHH-02	6"	B1 baggage south	
14	CV-02-14	6"	L2 transit north	

15	CV-02-11	6"	L2 transit south	
16	CV-01-09	6"	L1 public north	
17	CV-01-10	6"	L1 public north	
18	CV-01-18	6"	L1 apron north	
19	CV-02-16	6"	L2 transit north	
20	CV-01-20	6"	L1 apron north	

Onsite Photos (Isolation , Drain Valves & Check Valves)





2-11 & CV-02-12 (date to be

-EHH-02 (date to be confirm).

For the replacement of isolation & check valves at CV-02-11 & 12, the successful contractor required to provide 5 nos of fire patrollers to patrol the entire T3 building.

Where as for the replacement of CV-B1-EHH-02, the successful contractor required to provide 2 nos of fire patrollers to cover at B2 Baggage Sorting Area & B2 Driveway (Public Area).

All works have to be completed and charged back the sprinkler water by 6pm on that same day.

The standby fire patroller should have a fire watcher certificate from an accredited training organization (ATO) and to submit their certificate to

CAG Airport Emergency
Services (AES) for their Approval.
Alternatively, successful contractor can send their staffs for a 1 day course
conducted by CAAS at a cost of \$460 per person.

***Successful contractor shall required to engage Engie Services Singapore
Pte Ltd to Escort the fire patroller pattrolling inside the Airside Area (
Costing around \$250 for 1 person per day from 9am to 6pm.**

**Day 1 : Required 1 Engie staff
Day 2 : Required 2 Engie staff**

Total Engie manpower required to escort is 3 persons ($\$250 \times 3 = \750)