Base Load Power Hub (BLPH)

SDV/BDV AND TIGHT SHUT-OFF XV VALVES

FACTORY ACCEPTANCE TEST PROCEDURE

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Fluitek Valves

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1. SCOPE

This procedure is intended to give necessary and adequate instructions so that the hydrostatic tests of the valves are carried out in accordance with the standards and applicable specifications.
Before starting tests, the pneumatic actuator must be installed onto the valves according to applicable GA Drawings Fluitek valves and Rotork actuators and relevant accessories duly checked.

2. APPLICABILITY

This procedure applies to dual plate valves for Fluitek JOB. 240062.

3. REFERENCES

- ASME B16-34 Valves-Flanged, Treaded, and Welding End
- I.ASS.01 – "Serraggio connessioni NPT" – last review available
- API 598 11th Edition – Valve inspection and testing
- PED
- ASME Sec. V Nondestructive examination
- ISO 15848:2015 Industrial valves-Measurement, test and qualification procedures for fugitive emissions
-ASNT SNT-TC-1A or ISO 9712 Personnel Qualification and Certification in Nondestructive Testing
-EN 473 Nondestructive testing. Qualification and certification of NDT personnel - General principles

4. TEST FLUID & EQUIPMENT

Hydrostatic test shall be carried out with potable water containing a corrosion inhibitor and chloride content shall not exceed 30 ppm. Water PH shall lie between 6,5 and 8,5. Water temperature shall be maintained at ambient temperature (+10°C÷+38°C).
Tests shall be carried out prior to any painting of valve bodies.

5. PRESSURE GAUGES

- Pressure gauges and pressure/temperature recorders shall be calibrated according to the Q.A. program (±2% of full scale tolerance according to BS 5781).
- The test pressure shall not be less than 20% nor greater than 80% of the full scale range of the pressure gauge if are used in lieu of pressure transducers.

6. TESTS

The following tests are to be made on the valves, based on the client's requests and on the QSL of the valve (table above):

- Hydrostatic Shell test
- Hydrostatic Seat test at high pressure
- Torque test
- Functional test valve + actuator
- Low pressure Air Seat test

7. ALLOWABLE LEAKAGES

Table 5—Maximum Allowable Leakage Rates for Closure Tests [c]

Valve Size		All Resilient-seated Valves	Metal Seated Valves Except Check		Metal Seated Check Valves		
DN (mm)	NPS (in.)		Liquid Test [a] (drops/min)	Gas Test [a] (bubbles/min)	Liquid Test (cc/min)	Gas Test (m^3/h)	Gas Test (ft^3/h)
≤ 50	≤ 2	0	0 [b]	0 [b]	6	0.08	3
65	$2^1/_2$	0	5	10	7.5	0.11	3.75
80	3	0	6	12	9	0.13	4.5
100	4	0	8	16	12	0.17	6
125	5	0	10	20	15	0.21	7.5
150	6	0	12	24	18	0.25	9
200	8	0	16	32	24	0.34	12
250	10	0	20	40	30	0.42	15
300	12	0	24	48	36	0.50	18
350	14	0	28	56	42	0.59	21
400	16	0	32	64	48	0.67	24
450	18	0	36	72	54	0.76	27
500	20	0	40	80	60	0.84	30
600	24	0	48	96	72	1.01	36
650	26	0	52	104	78	1.09	39
700	28	0	56	112	84	1.18	42
750	30	0	60	120	90	1.26	45
800	32	0	64	128	96	1.34	48
900	36	0	72	144	108	1.51	54
1000	40	0	80	160	120	1.68	60
1050	42	0	84	168	126	1.76	63
1200	48	0	96	192	144	2.02	72

[a] For the liquid test, 1 mL is considered equivalent to 16 drops. For the gas test 1 mL is considered equivalent to 100 bubbles.

[b] There shall be no leakage for the minimum specified test duration (see Table 4). For liquid test, 0 drops means no visible leakage per minimum specified test duration. For standard gas test, 0 bubbles means less than 1 bubble per minimum specified test duration. For high-pressure pneumatic closure test refer to paragraph 5.4.

[c] Leakage rates for sizes above DN 1200 (NPS 48) shall be calculated by the following formulas:
Liquid Test for Metal Seated Valves except Check: 2 x NPS (drops/min)
Gas Test for Metal Seated Valves except Check: 4 x NPS (bubbles/min)
Liquid Test for Metal Seated Check Valves: 3 x NPS (cc/min)
Gas Test for Metal Seated Check Valves: 0.042 x NPS (m^3/h)
Gas Test for Metal Seated Check Valves: 1.5 x NPS (ft^3/h)

8. TESTING PROCEDURE

8.1 HYDRAULIC SHELL TEST PROCEDURE (TEST MEDIUM WATER)

- Put the valve on the hydrostatic test bench or close the valve ends with test blind flanges.
- Place the disc in semi-open position
- Fill the valve with water through the valve ends.
- Pressurize at 1.5 rating pressure.
- After a stabilization period, pressure shall be maintained for the time specified in table below.
- Thoroughly examine the entire surface of the valve, making sure that there are no visible drops or humidity traces for all the test duration.
- Relieve the pressure to zero and complete sections of test record.

Duration: Table 4 API 598

ACCEPTANCE CRITERIA: See §7

8.2 HYDROSTATIC HIGH PRESSURE SEAT TEST PROCEDURE (TEST MEDIUM WATER)

- Fill the valve and body cavity with water, purging all the air from the vent of the body (if any)
- Place the valve in closed position.
- Pressurize one side of the valve according to the flow direction at 1.1 rating pressure and, after a period of stabilization, maintain the pressure for the time specified in table below.
- Check for the loss of the seat through the opposite seat.
- Drain completely the valve and proceed with following test.

Duration: Table 4 API 598
ACCEPTANCE CRITERIA: See §7

8.3 torque test (TEST MEDIUM WATER)

The maximum torque or thrust required to operate ball, gate or plug valves shall be measured at the pressure specified by the purchaser for the following valve operations:

a) Open to closed with the bore pressurized and the cavity at atmospheric pressure, if applicable to the valve design;
b) Closed to pen with both sides of the obturator pressurized and the cavity at atmospheric pressure;

c) Closed to open with one side of the obturator pressurized and the cavity at atmospheric pressure;
d) As in item c) but with the other side of the obturator pressurized.

Torque shall be measured with seats free of sealant except where the sealant is the primary means of sealing. If necessary for assembly, a lubricant with a viscosity not exceeding that of SAE 10W motor oil or equivalent may be used.

The measured torque or thrust results shall be recorded and shall not exceed the manufacturer's documented breakaway torque/thrust.

ACCEPTANCE CRITERIA:
The maximum force required at the handwheel or wrench to apply the breakaway torque or thrust shall not exceed 80 lbf (360 N).

8.4 OPERATING FUNCTIONAL TEST ON VALVE WITH ACTUATOR(TEST MEDIUM WATER)
After complete the previous test, assemble the actuator and operate the valve-actuator unit through three complete open/close cycles without differential pressure applied to the valve. Verify the maneuverability of the valve-actuator unit. After with the valve in the fully closed position apply to one side (A) of the valve the MOP (maximum operating pressure), used for sizing the actuator with the other side vented to the atmosphere Operate the valve-actuator unit through three complete open/close cycles and verify the maneuverability of the valve-actuator unit and measure the operating time to open/close the valve. Depressurize the valve and repeat the operations described previous on the other valve side (B).

Open/ close time shall be verified and recorded for each valves.
During functional test shall be verified that all required accessories (e.g. safety valve, position transmitter, filter regulator, etc.) are present.

8.5 LOW PRESSURE PNEUMATIC SEAT TEST (TYPE II)(TEST MEDIUM AIR)
- With the valve in closed position, pressurize one side of the valve according to the flow direction to pressure indicated at §7 (5.5 to 6 barg) and, after a period of stabilization, maintain the pressure for the time specified at §8..
- Check for the loss of the seat through the opposite seat with bubbles method.

Duration: Table 4 API 598
ACCEPTANCE CRITERIA: See §7

8.6 FUGITIVE EMISSION TEST (TEST MEDIUM HELIUM)

- Personnel qualification

Experienced personnel with ISO 9712 or ASNT Level II in leak testing will carry out the test.

- Test medium and equipment

Test medium shall be pure Helium, minimum 97%.
Helium Mass Spectrometer LEYBOLD PhoeniXL300 with sniffer probe shall be used for leak detection.

- Test pressure

Test pressures shall be 6 bar, unless otherwise agreed by the manufacturer and the purchaser.

- Test temperature

The test temperature shall be at room temperature as defined in ISO 15848-1.

- Method

The leakage shall be measured both when the valve is static and also in the dynamic condition (i.e. during the valve operation).
The probe shall be kept at a scanning distance of 3 mm or less and maintained in position for duration of 5 sec while checking.
Leakage check points shall be sealed with and adhesive foil tape with a max thickness of 40µm. This foil shall be provided with a hole at the highest point. The leakage shall be measured using sniffer probe.
Measuring frequency for leakage is as follows:
- measure at static;
-for dynamic: during the 5th cycle, measure during the closure member travel from fully - closed to fully open.

- Leakage measurement locations

The following areas shall be checked for leakage:
- Between the stem and packing
- Between the packing outside diameter and stuffing box inside
- Circumference of the body bonnet joint
- Drains plugs and vent plugs (if any) and check valve plug
- Bleeder valve (if any)
- External trunnion (if any)
Seat injector (if any)
Stem injector (if any)

- Measurement of stem (shaft) seal leakages

a. Place the valve in half open position and pressurize at the pressure specified in Par.4.3.
b. Measure the seal leakage using the sniffing method.
c. Then, fully open and close the pressurized test valve five times
d. Place the valve in half open position after the mechanical cycles and measure the stem seal leakage as in point B.
e. If the reading exceeds the values of the required tightness class according to table below, the test shall be considered as having failed. A corrective action shall be proposed and agreed with the purchaser or the lot of valves shall be rejected.

Table 1 — Tightness classes for stem seals

Class	Measured leakage ppmv	Remarks
A	≤50	Typically achieved with bellow seals or equivalent stem (shaft) sealing system for quarter turn valves
B	≤100	Typically achieved with PTFE based packings or elastomeric seals
C	≤200	Typically achieved with flexible graphite-based packings
NOTE Measured by sniffing method as defined in ISO 15848-1:2015, Annex B.		

- Measurement of leakage of body seal

a. Place the valve in half open position and pressurize at the pressure as Par.4.3

b. After the test pressure has been stabilized, detect leakage of the body seal with the sniffing method

c. If the reading exceeds the values of the required tightness class according to table below, the test shall be considered as having failed. A corrective action shall be proposed and agreed with the purchaser or the lot of valves shall be rejected

Table 2 — Leakage from body seals

Measured leakage ppmv
≤50
NOTE Measured by the sniffing method as defined in ISO 15848-1:2015, Annex B.

9. CERTIFICATION

Results of the hydraulic testing shall be certified by the relevant test reports, containing all the details of the valve, the order, the applicable documents, the modalities of the test, the result and signature of the Appointed Inspector.

10. SAMPLE REPORT

Fluitek Valves	PRESSURE TEST REPORT Rapporto di prova di pressatura	Cert. HPT No.

GENERAL INFORMATION – *INFORMAZIONI GENERALI*

Customer *dsf* *Cliente*			
P. Order *Ordine*		**Item/s** *Item/s*	
FOV Job *Commessa FOV*		**Position/s** *Posizione/i*	
TAG *TAG*		**Quantity** *Quantità*	
Type of valve/s *Tipo di valvola/e*		**Serial Number** *Numero seriale*	
Applicable Standard *Norma applicabile*			
Acceptance criteria *Criteri di accettabilità*			
Date of execution *Data di esecuzione*			

TEST DATA – *INFORMAZIONI SULLA PROVA*

Type of test *Tipo di prova*	**Pressure** *Pressione (bar)*	**Duration** *Durata(min)*	**Acceptable L[1]** *Perdita ammessa*	**L[1] detected** *Perdita rilevata*	**Result** *Esito*
HYDRAULIC SHELL TEST *Prova idraulica del corpo*			No VisibleLeakage	No VisibleLeakage	SATISFACTORY
HIGH-PRESSURE HYDRAULIC SEAT TEST *Prova di tenuta dei seggi ad acqua ad alta pressione*			No VisibleLeakage	No VisibleLeakage	SATISFACTORY

REMARKS – *NOTE*

OTHER TEST – *ALTRE PROVE*

Type of test *Tipo di prova*	**Test procedure** *Procedura di controllo/prova*	**Result** *Esito*
VISUAL CONTROL *Controllo visivo*		SATISFACTORY
DIMENSIONAL CONTROL *Controllo dimensionale*		SATISFACTORY

REMARKS – *NOTE*

Test Final Result ***Esito finale della prova***	☒ SATISFACTORY *Soddisfacente*	☐ UNSATISFACTORY *Non soddisfacente*

SIGNATURE – *FIRME*

Inspection authority *Ente ispettivo*	**Customer Inspector** *Ente Ispettore Cliente*	**Quality Control** *Controllo Qualità*

[1] L=Leakage

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Fluitek Valves	**TORQUE CERTIFICATE** *Certificato di misurazione della coppia di manovra*	Cert. TRQ No.

GENERAL INFORMATION – *INFORMAZIONI GENERALI*			
Customer *Cliente*			
P. Order *Ordine*			
FOV Job *Commessa FOV*			
TAG *TAG*			
Type of valve/s *Tipo di valvola/e*			
Date of execution *Data di esecuzione*			

TEST DATA AND RESULT – *INFORMAZIONI SULLA PROVA ED ESITI*

Torque test performer at *Prova effettuata a* **Bars**

Step *Fase*	**Value (Nm)** *Valore*	
Close To Open Side A		
Close To Open Side B		

REMARKS – *NOTE*

SIGNATURE – *FIRME*

Inspection Authority *Ente Ispettivo*	**Customer Inspector** *Ispettore Cliente*	**Quality Control** *Controllo qualità*

Fluitek Valves	FUGITIVE EMISSION TEST REPORT	Cert. FET No.

GENERAL INFORMATION – *INFORMAZIONI GENERALI*			
Customer *Cliente*			
P. Order *Ordine*		**Item/s** *Item/s*	
FOV Job *Commessa FOV*		**Position/s** *Posizione/i*	
TAG *TAG*		**Quantity** *Quantità*	
Type of valve/s *Tipo di valvola/e*		**Serial Number** *Numero seriale*	
Applicable Specification *Specifica applicabile*			
Date of execution *Data di esecuzione*			
TEST VARIABLE – *DATI DI PROVA*			
Equipment *Strumento di misura*			
Calibrate leak *Fuga calibrata*			
Test medium *Fluido di prova*			
Test temperature *Temperatura di prova*			
Test method *Metodo di prova*			
Background *Sottofondo*		**Background after 5 cycles** *Sottofondo dopo 5 cicli*	
Test pressure *Pressione di prova*			
Acceptance leakage *Perdita ammissibile*			
Leakage detected *Perdita rilevata*			
REMARKS – *NOTE*			
FET LEAKAGE CLASS: < **BH** > Value in atm*cm^3/s , obtained without background noise.			
Test Final Result *Esito finale della prova*	☐ SATISFACTORY *Soddisfacente*	☐ UNSATISFACTORY *Non soddisfacente*	

Step No.		Detected leakage	Acceptance Criteria
1st Step	Body Flange		
0 CYCLES	Stem		
2nd Step	Body Flange		
After 5 CYCLES	Stem		

SIGNATURE – *FIRME*		
Inspection authority *Ente ispettivo*	**Customer Inspector** *Ente Ispettore Cliente*	**Quality Control** *Controllo Qualità*

Fluitek Valves	CONTINUITY TEST	Cert. DDC No.

GENERAL INFORMATION – *INFORMAZIONI GENERALI*			
Customer Cliente			
P. Order Ordine		**Item/s** Item/s	
FOV Job Commessa FOV		**Position/s** Posizione/i	
TAG TAG		**Quantity** Quantità	
Subject Oggetto		**Serial Number**	
Applicable Standard *Norma applicabile*			
Acceptance criteria *Criteri di accettabilità*			
Date of execution Data di esecuzione			

STATEMENT – *DICHIARAZIONE*

REMARKS – *NOTE*

SIGNATURE – *FIRME*

Inspection Authority *Ente Ispettivo*	Customer Inspector *Ispettore Cliente*	Quality Control *Controllo qualità*

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1. SCOPO

La presente procedura definisce le modalità di controllo e collaudo a cui vengono sottoposti gli attuatori per la verifica dei requisiti espressi dal Cliente.

2. DOCUMENTI RELATIVI

I controlli e i collaudi sono svolti in accordo alla seguente documentazione tecnica (dove applicabile):

- Specifica dati attuatore;
- Schema operativo;
- Schema elettrico;
- Disegno dimensioni di ingombro;
- Disegno costruttivo tronchetto e giunto accoppiamento valvola;
- Specifica del ciclo di verniciatura;
- Performance table (solo se richiesto il rilievo delle prestazioni dell'attuatore);
- PO3.02.02 gestione accessori per assieme PED e ATEX.

3. CONTROLLI E COLLAUDI

I controlli ed i collaudi richiamati nella presente procedura sono condotti con l'ausilio di strumenti ed attrezzature calibrati in accordo all'istruzione operativa FSP07 e FSP07-A_LU.

I fluidi utilizzati per i controlli e collaudi sono:

- Attuatori pneumatici: aria secca e filtrata e/o azoto.

A. COLLAUDI INTERMEDI STANDARD (DOVE APPLICABILE)

I seguenti collaudi intermedi vengono eseguiti sul solo corpo attuatore prima dell'eventuale assemblaggio dei componenti di controllo:

1. SCOPE

The scope of the present procedure is to define the factory acceptance testing to verify the Customer's requirements are fully satisfied.

2. APPLICABLE DOCUMENTATION

Inspections and testing are carried out based on the following documentation (where applicable):

- Actuator data sheet;
- Operative diagram;
- Wiring diagram;
- Actuator overall dimensions drawing;
- Valve top working drawing;
- Painting cycle specification;
- Performance table (only if the actuators performance test is required);
- PO3.02.02 gestione accessori per assieme PED e ATEX.

3. INSPECTIONS AND TESTING

The inspections and controls stated within this document are carried out with the aid of calibrated instrumentation in accordance with the operative instruction FSP07 and FSP07-A_LU.

These inspections and controls shall be carried out using:

- Pneumatic actuator: dry filtered air and/or nitrogen.

A. INTERMEDIATE STANDARD TESTING (WHERE APPLICABLE)

The following tests are performed before the eventual assembly of controls' components, on the actuator body only:

A.1.1 Prova di pressione

Collaudo strutturale pressurizzando entrambe le camere del cilindro pneumatico e/o idraulico secondo le pressioni riportate nella Tabella 1 e indicate sul FAT (Factory Acceptance Test).
In caso di attuatore per il quale la camera di polmonazione non possa essere pressurizzata, il collaudo è eseguito alimentando come da Tabella 1 la sola camera di pressione del cilindro pneumatico e/o idraulico.
Criterio di accettazione: nessuna perdita è ammessa.

A.1.1 Pressure test

Check of the actuator structure by pressurizing both chambers of the hydraulic a/o pneumatic cylinder according to the pressure values reported in the Table 1 and indicated on the FAT form (Factory Acceptance Test).
In case the breathing chamber could not be pressurized, the test is done by supplying just the pressure side of the hydraulic a/o pneumatic cylinder as per Table 1.
Acceptance criteria: zero leakage.

Tabella 1. Pressioni di prova strutturale:

Table 1. Testing criteria:

ACTUATOR	PRESSURE (BAR)	TIME (MIN)
Pneumatic	1.1 x Design pressure	5

A.2 Prova di tenuta

Collaudo della tenuta del pistone pressurizzando per 5 minuti con aria secca o con olio idraulico una camera del cilindro alla pressione minima di esercizio specificata dal Cliente o minima di dimensionamento (sizing) dell'attuatore mantenendo l'altra camera a pressione atmosferica.
Criterio di accettazione: nessuna perdita è ammessa.

A.2 Leak test

Leak test of the piston seal by pressurizing one side of the cylinder to the minimum working pressure specified by the Customer or to the sizing pressure of the actuator for 5 minutes with air or hydraulic oil with the other side of the cylinder at atmospheric pressure.
Acceptance criteria: zero leakage.

A.3.1 Verifica prestazioni - attuatori singolo effetto

Valutazione delle prestazioni dell'attuatore verificando i valori di pressione all'inizio della compressione e ad inizio ritorno della molla.
Criterio di accettazione: i valori di pressione rilevati a inizio corsa e inizio decompressione molla devono risultare in accordo alle tolleranze indicate nel Certificato FAT finale.

A.3.1 Actuator functional test - single acting actuators

Checking the pressure values at the beginning of stroke (spring starts to compress) and at the return stroke (spring starts to release).
Acceptance criteria: The recorded values have to be in accordance with the range shown on the final FAT certificate.

C. COLLAUDI FINALI (DOVE APPLICABILE)

I seguenti collaudi finali vengono eseguiti con l'attuatore verniciato ed assemblato al proprio eventuale sistema di controllo:

C. FINAL TESTING (WHERE APPLICABLE)

The following tests are performed after the painting with the actuator assembled with a possible control system:

C.1 Verifica verniciatura

Verifica della conformità al ciclo di verniciatura applicabile.

Criterio di accettazione: per le singole misurazioni sono ammessi scostamenti dello spessore finale secco compresi tra -40% e +300% dello spessore totale definito nel ciclo di verniciatura. La media delle misurazioni deve risultare compresa tra -20% e +150%.

C.2 Verifica visiva e dimensionale

Verifica visiva e dimensionale in accordo al disegno delle dimensioni d'ingombro.

Criterio di accettazione: vengono ammesse differenze entro il +30%, se non diversamente indicato nel disegno delle dimensioni d'ingombro.

C.3 Prova di tenuta del circuito pneumatico/idraulico

Collaudo con aria o olio della tenuta del circuito pneumatico e/o idraulico (se non diversamente specificato nella check list di riferimento) alla pressione di settaggio della valvola di sicurezza o alla massima pressione operativa dell'assemblato attuatore / pannello di controllo se non viene fornita una valvola di sicurezza.
Verifica visiva assenza di perdite da tubazioni e raccordi.

Criterio di accettazione: nessuna perdita è ammessa.

C.4 Prova funzionale sistema di controllo

Collaudo funzionale del controllo automatico ed a distanza in accordo alla logica della documentazione tecnica di commessa.
Controllo visivo che i componenti pneumatici e/o idraulici ed i componenti elettrici siano assemblati e connessi in accordo alla documentazione tecnica.

Criterio di accettazione: corretta funzionalità del sistema di controllo.
Quando presenti scarichi convogliati, prevedere la chiusura della/e linea/e di scarico e verificare l'assenza di perdite, mantenendola/e in pressione per 5min.

In caso di attuatori pneumatici il cui pannello di controllo preveda l'istallazione di una relief valve preceduta dal filtro regolatore, applicare la pressione massima (indicata nella summary table) all'ingresso del filtro regolatore e verificare la pressione a valle della relief mantenendo il filtro regolatore completamente aperto.

Criterio di accettabilità: valori di pressione inferiori o uguali alla pressione di settaggio della relief x 1.1.

C.1 Painting check

Check of the conformity to the applicable painting cycle.

Acceptance criteria: for the single thickness measurements, values between -40% and 300% of the total dry film thickness are acceptable. The average of the measurements shall be between -20% and +150%.

C.2 Visual and dimensional check

Visual and dimensional check according to the overall dimensions drawing.

Acceptance criteria: dimensions must be within +30% if not differently specified in the overall dimensions drawing.

C.3 Leak test of pneumatic/hydraulic circuit

Leak test of the pneumatic a/o hydraulic circuit by pressurizing it (if not differently specified in the reference check list) with air or oil at the safety relief valve setting pressure or at the maximum operative pressure of the actuator / control panel assembly if no relief valve is provided.
Visual check of any leakage from tubing and fittings

Acceptance criteria: zero leakage.

C.4 Control system functional test

Functional test with automatic a/o remote control according to technical documentation of the job.
Visual Check that the pneumatic or hydraulic and electric components are assembled and connected according to the technical documents.

Acceptance criteria: correct functional operation.
When channelled exhaust ports are present, close the discharge line/es and check the absence of any leakage, keeping the discharge tubing in pressure for 5 min.

In case of pneumatic actuators where the control panel includes the installation of a relief valve with a filter regulator, apply the maximum pressure (indicated in the summary table) to the filter regulator and check the pressure at the output connection of the control panel assembly, maintaining the filter regulator completely open.

Acceptance criteria: pressure values =< 1.1x relief pressure setting

C.6 Tempi di manovra

Verifica dei tempi di intervento dell'attuatore in apertura e chiusura alla minima pressione di esercizio specificata dal Cliente o minima di dimensionamento (sizing).
Criterio di accettazione: i tempi devono risultare minori o uguali alle richieste del Cliente (Come riportato nel Summary Sheet).

C.6 Actuator stroking time

Actuator opening and closing time check at the minimum pressure specified by the Customer or at the minimum sizing pressure of the actuator.
Acceptance criteria: Times recorded shall be lower or equal to times specified by the Customer (as detailed in the summary sheet).

4. ISPEZIONE FINALE

Ciascun attuatore è soggetto ad ispezione finale (dove applicabile) in termini di:

- Controllo che il grado di protezione delle custodie dei componenti elettrici sia in accordo alle richieste contrattuali;
- Controllo che la stampigliatura della targa dati sia corretta;

Controllo che l'imballo per la spedizione sia in accordo alla specifica contrattuale.

4. FINAL INSPECTION

Each actuator is submitted to the final inspection (where applicable) in terms of:

- Check the protection rating of electric equipments is according to the contractual requirements;
- Check the correct tag stamping;

Check that packing is according to the requirements of the contractual specifications.

5 ETICHETTE

Prima della fase di imballaggio viene controllata la presenza di tutte le etichette previste e la correttezza dei dati riportati, a fronte della documentazione di riferimento.

5 LABELS

Prior to packing, the presence of all the foreseen labels and the accuracy of the information is checked according to the reference documentation.

6. CERTIFICATO DI COLLAUDO E DI CONFORMITÀ

I controlli ed i collaudi intermedi e finali sono documentati dal certificato di collaudo FAT - factory acceptance test certificate. Il FAT attesta il rilascio dell'attuatore.
Laddove previsto, inoltre, viene predisposta e rilasciata al Cliente una Dichiarazione di conformità (DoC) alle normative di riferimento.

6. FACTORY ACCEPTANCE TEST CERTIFICATE AND DECLARATION OF CONFORMITY

The intermediate and final Inspections and testing are documented into the FAT - factory acceptance test certificate. The FAT states the actuator release. Where applicable, a Declaration of conformity to the applicable Standards is issued and released to the Customer.