

# INSTRUMENTS SPECIFICATION SPECIFICA STRUMENTI

Customer - Cliente :

Plant - Impianto

Job - Commessa

SABIZ 25000 Kg/h 1E35Z Sheet

1E35-80-1120

Specifica N°

Specification N°

Foglio

Rev.

of **5** 

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## MANUAL BALL VALVE FOR HIGH PRESSURE SERVICE

# Valvole manuali a sfera servizio alta pressione

## **Desmet Ballestra Supply**

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| SHEET<br>REV. 0<br>REV. 1           | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |    |    | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52   |
| SHEET<br>REV. 0                     | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |    |    | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52   |
| SHEET<br>REV. 0<br>REV. 1           | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 |    |    | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52   |
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| ·                                      |                   |                          |
|--|-------------------|--------------------------|
|  |                   |                          |
|  |                   |                          |
|  |                   |                          |
| SUE FOR ORDER n. 101606 - ALFA VALVOLE | RCL               | 27.09.10                 |
|  |                   |                          |
| Issue Description                      | Author            | Date                     |
| Descrizione                            | Autore            | Data                     |
|  | Issue Description | Issue Description Author |

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|   | INSTRUMENT SPE  | CIFICATION      | N  |
|---|---|-----------------|--|
| <b>←</b>  |   |                 | DWG. 1E35-80-1120  |
|   | CUSTOMER:   |                 | SH. 2  |
| BALLESTRA BRA                                       | PLANT: SABIZ  |                 | REU. O   |
| MILANO (ITALIA)                                     | JOB: 1E35Z  |                 | Computer code:   |
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| We reserve the ownership under the law of this docu | ment with prohibition of even partial reproduction and to a  HIGH PRESSURE MANUAL O |                 |  |
|   | THOTT REGOOKE MANOAL  | OF EIGHTED VA   |  |
| 1   |   |                 |  |
| · · · · · · · · · · · · · · · · · · ·               | nerali - General characteristic   | S               |  |
| 3<br>4 Sigla della valvola                          | . Valve tan   | : HV 63.3       | Δ  |
|   | valvola - Valve installation line   |                 | 3032.126   |
| 6   |   | . 4.074.04      | 0002.120   |
| 7 Tipo valvola - Valv                               | e type  | : \$148 - S     | ST.46712   |
| 8   |   |                 |  |
| 9 Valvola manuale a                                 | •   |                 |  |
| 10 Manual valve with t                              | ight shut-off   |                 |  |
| 11  |   |                 |  |
|   | cizio - Operating conditions  | * ** *          |  |
| 13 Fluido di processo                               |   | : High pre      | essure slurry  |
|   | zio - Operating pressure  | :               |  |
| · · · · · · · · · · · · · · · · · · ·               | ercizio - Operating temperature   | :               |  |
| 16<br>17 Materiali - <i>Materia</i>                 | in.   |                 | š.   |
|   | <i>is</i>   | · Carban        | 1 steel (ASTM-4105)<br>4 +HARD Chrom Plot (Thk) 35<br>Alsi 316 |
| 18 Corpo - Body<br>19 Stelo - Stem                  |   | . Carbon        | A see (Asim  |
| 19 Stelo - <i>Stem</i><br>20 Sfera - <i>Ball</i>    |   | . Alsi 30       | LHARD Chrom Plot. 1764>35                                      |
| 21 Anello di tenuta - S                             | eal ring  | · 0 - Pero + /  | Nici 31  |
| 21 Anelio di teriuta - 3                            | ear mg  | · Karnea        | -riai 7 (0   |
|   | ss seats for avoiding the ball  | lockina.        |  |
| 24  |   |                 |  |
| 25 Dimensioni - Size                                | and rating  |                 |  |
| <u> </u>  | - Nominal diameter  | : 4"            |  |
| 27 Attacchi - Connecti                              | ions  | : ASA 60        | 00 Large female  |
| 28  |   |                 | •  |
| 29 Accessori - Acces                                | ssoires   |                 |  |
| 30 N° 2 Finecorsa per                               | segnalare le posizioni aperta e   | chiusa della va | Ivola  |
| N° 2 Limit switches                                 | s to signal the positions open-c  | losed of valve  |  |
| 32  |   |                 |  |
| 33 Costruttore - Manu                               | <i>facturer</i>   | : See she       | eet 5  |
| 34 Modello - Model                                  |   | : See she       | eet 5  |
| 35  |   |                 |  |
| 36 Tropicalizzazione                                | - Tropicalization   | : Require       | ed.  |
| 37  |   | A               | 1 Maria =  |
| 38 Costruttore - Manu                               | rfacturer er  | : ALF.          | A VALVULE  |
| 39 Modello - <i>Model</i>                           |   | : A 1           | A VALVOLE<br>O HP  |
| 40  |   | -               | - u  |
| Note :  |   |                 |  |
| 4 Value with seen an end                            | or Mos-   | ) A C2-         |  |
| Valve design condition                              | 01 10 D   | 1/106           |  |
| 2. Valve design condition                           | s: 80 °C - 98 Bar   |                 |  |
|   |   |                 |  |
|   |   |                 |  |
|   |   |                 |  |

(



## INSTRUMENT SPECIFICATION

DWG. 1E35-80-1120

CUSTOMER:

SABIZ

1E35Z

SH.

PLANT: JOB:

Computer code: .

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### HIGH PRESSURE MANUAL OPERATED VALVES

| Countinuistiche neuerill Control                      | ,  |
|---|--|
| Caratteristiche generali - General characteristi      | cs   |
| Sigla della valvola - Valve tag                       | : HV 63.3B   |
| Linea installazione valvola - Valve installation line |  |
|   | . 4 10/100000.120  |
| Tipo valvola - Valve type                             | : S148 - ST.46712  |
|   |  |
| Valvola manuale a tenuta perfetta                     |  |
| Manual valve with tight shut-off                      |  |
|   |  |
| Condizioni di esercizio - Operating conditions        |  |
| Fluido di processo - Process fluid                    | : High pressure slurry   |
| Pressione di esercizio - Operating pressure           | :  |
| Temperatura di esercizio - Operating temperature      | :  |
|   | •  |
| Materiali - <i>Materials</i>                          | - (Actu 1105)  |
| Corpo - Body  | : Carbon steel (ASTM - A 105)<br>: Aisi 304<br>: Aisi 304 + HARD Ch<br>: R-Ptfe + Aisi 316 |
| Stelo - <i>Stem</i><br>Sfera - <i>Ball</i>            | : Aisi 304   |
| Anello di tenuta - Seal ring                          | : Aisi 304 + HARD CA   |
| Allello di teridia - Searring                         | : K-Ptte + Alsi 316  |
| Metallic pocket less seats for avoiding the ball      |  |
| moratile bocker less seats to sanitilitie tile Dali   | rocking.   |
| Dimensioni - Size and rating                          |  |
| Diametro nominale - Nominal diameter                  | : <b>4"</b>  |
| Attacchi - Connections                                | : ASA 600 Large female   |
|   |  |
| Accessori - Accessoires                               |  |
| N° 2 Finecorsa per segnalare le posizioni aperta e    |  |
| N° 2 Limit switches to signal the positions open-     | closed of valve  |
| _   |  |
| Costruttore - Manufacturer                            | : See sheet 5  |
| Modello - Model                                       | : See sheet 5  |
| Tanada di manda da Araba di Araba                     |  |
| Tropicalizzazione - Tropicalization                   | : Required   |
| Costruttore - Manufacturer                            | ALCA STATIONS  |
| Modello - <i>Model</i>                                | : ALFA VALVOLE   |
| Wodello - Wodel                                       | : A-10 HP  |
|   |  |
| Valve with gear operator ₩0⊅                          | R A CO   |
| Valve design conditions : 80 °C - 98 Bar              | R A -62  |
| Tarro design continuons, 00 0 - 30 Bal                |  |

#### INSTRUMENT SPECIFICATION DWG. 1E35-80-1120 CUSTOMER: PLANT: SABIZ REV. MILANO (ITALIA) JOB: 1F35Z Computer code: Ci riserviamo la proprietà a termine di legge di questo documento con divieto di riprodurlo anche in parte o di renderlo a terzi senza nostra autorizzazione scritta. We reserve the ownership under the law of this document with prohibition of even partial reproduction and to make it known to third persons without our written authorization HIGH PRESSURE MANUAL OPERATED VALVES Caratteristiche generali - General characteristics 2 3 4 Sigla della valvola - Valve tag HV 63.3C Linea installazione valvola - Valve installation line 5 4".SA.63039.126 6 Tipo valvola - Valve type 7 S148 - ST.46712 Valvola manuale a tenuta perfetta Q 10 Manual valve with tight shut-off 11 Condizioni di esercizio - Operating conditions 12 Fluido di processo - Process fluid 13 High pressure slurry Pressione di esercizio - Operating pressure 14 Temperatura di esercizio - Operating temperature 15 16 17 Materiali - Materials Carbon steel (ASTM-A 105) Aisi 304 Corpo - Body 18 19 Stelo - Stem : Aisi 304 + HARD ch. Sfera - Ball 20 21 Anello di tenuta - Seal ring 22 Metallic pocket less seats for avoiding the ball locking. 23 24 25 Dimensioni - Size and rating Diametro nominale - Nominal diameter 26 Attacchi - Connections 27 ASA 600 Large female 28 Accessori - Accessoires 29 N° 2 Finecorsa per segnalare le posizioni aperta e chiusa della valvola 30 N° 2 Limit switches to signal the positions open-closed of valve 31 32 Costruttore - Manufacturer 33 See sheet 5 Modello - Model 34 See sheet 5 35 Tropicalizzazione - Tropicalization 36 Required 37 ALFA VALVOLE Costruttore - Manufacturer 38 Modello - Model 39 A-10HP 40 Note: MOD - RA-62 Valve with gear operator Valve design conditions : 80 °C



| INST     | FRUMENT SPECIFICATION |                         |
|----------|-----------------------|-------------------------|
|          |                       | DWG. 1E35-80-1120       |
| CUSTOMER | <b>:</b>              | SH. 5                   |
| PLANT:   | SABIZ 25000 Kg/h      | REU, O                  |
| IOB.     | 15357                 | Computer code: BOXE.xis |

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## **BOX MICRO - SWITCHES FOR SIGNALING VALVE POSITION**

| 1        |     | THEORICAL CHARACTERISTICS                          |   |                                 |
|----------|-----|--|---|---------------------------------|
| 2        |     | THECNICAL CHARACTERISTICS                          |   |                                 |
| 3 4      |     | Box protection degrre                              |   | IP 66                           |
| 5        |     | Material —   | • | ALUMINIUM PRESS. DIE-CASTING    |
| 6        |     | Colour   | : | BLACK                           |
| 7        |     | Electrical execution                               | : | WATERPROOF                      |
| 8        |     | Electrical connection                              | : | N° 2 - PG 13,5                  |
| 9        |     |  |   |                                 |
| 10       |     | COMPLETE WITH THE FOLLOWING                        |   |                                 |
| 11       |     | COMPONENTS   |   |                                 |
| 12       | a.  | DOCITION INDICATOR                                 |   |                                 |
| 13       | 1.  | POSITION INDICATOR                                 | - | RED - CLOSED / GREEN - OPEN     |
| 14<br>15 |     | Two colours Material                               | : | POLICARBONATE                   |
| 15<br>16 |     | Material Mechanically integral with                | • | . water to distribute           |
| 17       |     | the shaft of the valve                             |   |                                 |
| 18       |     |  |   |                                 |
| 19       | 2.  | ACTUATING CAMS                                     | • |                                 |
| 20       |     | With rotation angles from 0 to 90°                 |   |                                 |
| 21       |     | ·  |   |                                 |
| 22       | 3.  | TERMINAL BOARD                                     |   |                                 |
| 23       |     | Prewired with N° 9 terminals of 2,5 mm2            |   | OTANDA TO                       |
| 24       | ļ   | Colour   | : | STANDARD                        |
| 25       |     | MICDOSWITCHES                                      |   | 75 o/o                          |
| 26<br>27 | 4.  | MICROSWITCHES Will have to be installed in the box |   | ZS o/c                          |
| 27<br>28 | 1   | and connected to the                               |   |                                 |
| 28       | 1   | terminal board N° 2                                | - | PROXIMITY SWITCH                |
| 30       | 1   | Manufacturer                                       | : | PEPPERL + FUCHS                 |
| 31       |     | Model  | : | NCN4 - 12GM - 40Z0 ( with led ) |
| 32       |     | Electrical certification                           | : |                                 |
| 33       | 1   | ELedr. FEEDING:                                    | : | 24 V DC FROM PLC                |
| 34       | 5.  | FIXING BRACKET OF THE BOX                          | Í | <del>-</del>                    |
| 35       | •   | COMPLETE OF THE BOLTS FOR                          |   |                                 |
| 36       |     | FIXING NAMUR MECHANICAL                            |   |                                 |
| 37       | 1   | CONNECTION Material                                |   | CTAINII ECC CTEE                |
| 38<br>30 |     | Material   | : | STAINLESS STEEL                 |
| 39<br>40 | •   | Manufacturer                                       |   | AUTOMAX ,                       |
| 41       | 1   | Model  | • | WOCO217201 QQBT/PTA             |
| 42       | 1   | Supplier   | : | WWCULIFOUT 4401/11/4            |
| 43       | 1   | - ·  | • |                                 |
| 44       | 1   |  |   |                                 |
| 45       |     |  |   |                                 |
| Note     | Tro | picalization required                              |   |                                 |
| 2        |     |  |   |                                 |

BALLESTRA SAA. MILANO (ITALIA)

VALVOLA A SFERA BALL VALVE

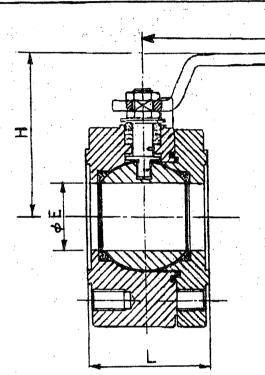
TIPO TYPE

5148

ST. 46712

CORPO **PASSAGGIO** TENUTA INTEGRALE METALLICA PRESSIONE NOM 600<sup>#</sup> TOTALE BODY PER EVITARE IL BLOCCAGGIO DELLA SFERA ACCOPPIAMENTO **ASA 600** METALLIC POCKET LESS SEATS FOR RATING FULL BORE ASSEMBLING LARGE FEMALE AVOIDING THE BALL LOCKING CORPO ACCIAIO AL CARBONIO STELO AISI 304 MATERIALI BODY CARBON STEEL STEM SFERA AISI 304 + HARD CHROMIUM PLATING SEDI MATERIALS PTFE + AISI (Thk. > 35 µm) SEATS BALL

NOTE: WHEN THE VALVE IS CLOSED, THE BALL SHOULD REMAIN WITHIN THE LIMITS OF VALVE BODY (DIMENSION "L")
A VALVOLA CHRISA LA SFERA NON DEVE SPORGERE DAL CORPO VALVOLA (DIMENSIONE "L")



USE: SLURRY 20% SURFACTANT

SULPHATE,

SILICATE,

TRIPOLYPHOSPHATE SOLIDS

30% WATER

DESIGN COND: 80°C - 98 Kg/cm2

|                | ·     | <del></del> |         | _      |      |      | ,     |       |       |   |   |   |   |  |
|----------------|-------|-------------|---------|--------|------|------|-------|-------|-------|---|---|---|---|--|
| ייאם           | Zu    | 3/4"        | 18      | 11/4"  | 1½"  | 2"   | 2½"   | 3"    | 4"    | ] |   |   |   |  |
| φE             | 15    | 19          | ත       | 30     | 38   | 51   | 64    | 76    | 101   |   |   |   | - |  |
| L              | 68    | 70          | 82      | 86     | 105  | 115  | 135   | 150   | 190   |   | · | ; |   |  |
| Н              | 104   | 106         | 100     | 104    | 128  | 138  | 151   | 160   | 223   |   |   | ٠ |   |  |
| V              | 185   | 185         | 280     | 280    | 370  | 370  | 470   | 470   | 600   |   |   |   |   |  |
| peso<br>weight | 3,0   | 4.9         | 6,2     | 7.B    | 13,0 | 15,5 | 23,8  | 32,0  | 66,8  |   |   |   |   |  |
| viti (1)       | N°8   | N°8         | и•8     | N°8    | . №8 | N°16 | N°16  | N°16  | N°16  |   |   |   |   |  |
| screws         | 넃× 45 | 5"×45       | 5,4× 50 | 5 x 50 | ₹×55 | ş×55 | ₹× 65 | ³7×65 | 7€×75 |   |   |   |   |  |

(\*) NOTA: MANOVRA CON RIDUTTORE - WITH GEAR OPERATOR

(1) SCREWS: ANSI B 18.2.1 / H.C.S. - ASTM'A 193 B 7

# NOTE I ALL GASKETS HAVE TO BE ASBESTOS FREE TUTTE LE GUARNIZIONI DEVONO ESSERE ESENTI AMIANTO

|      |                           |       | <i>i</i>          | 111  |              |
|------|---------------------------|-------|-------------------|------|--------------|
| 1    | GENERAL REVISION          | BM    | 144               | 114  | 25.03-95     |
| 0    | ISSUED                    | D. V. | 13111             | M    | 21.12.94     |
| REV. | DESCRIZIONE - DESCRIPTION | COMP. | CONTR.<br>CONTR.D | APPR | DATA<br>DATE |