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آدرس : تبریز – فلکه دانشگاه – برج بلور – طبقه 14 – واحد E

۳۳۳۴۶۳۷۹ تلفن: Email: info@nikoobazar.com





### شرکت توسعه مهندسی نیکوبازار خاورمیانه (سهامی خاص) - شاره ثبت ۴۴۷۳۳



#### واحد تامین تجهیزات و قطعات صنعتی - نمایندگی آیواز





#### تامين كننده وزارت نفت - عضوفهرست بلند وندور ليست الم

واحد تامین تجهیزات و قطعات صنعتی شرکت توسعه مهندسی نیکو، زیر نظر شرکت بازرگانی نیکوبازار خاورمیانه، با هدف تأمین تجهیزات و قطعات صنعتی مورد نیاز در صنایع نفت، گاز، پتروشیمی، آب و فاضلاب و صنایع غذایی فعالیت مینماید. این شرکت با رویکرد متفاوت خود در تأمین تجهیزات، پروژه های خرید و تأمین کالا، پروژه های متعددی را با موفقیت در صنایع مختلف به انجام رسانیده و در کنار کیفیت بالا و زمان تحویل مناسب اقلام ارائه شده، با کاهش هزینه تامین اقلام، رضایت و مشتری مداری را به مشتریان و همکاران به ارمغان آورده است و همواره سعی در جلب اعتماد مشتری و همکاران این حوزه داشته است. از جمله مشتریان این شرکت میتوان به شرکتهای پالایش، پتروشیمی، گاز، صنایع غذایی، شرکتهای تولید مواد پایه مواد غذایی مانند خمیرمایه و .... اشاره کرد.

| آدرس دفتر ترکیه              |                                | ں دفتر ایران                             | آدرس        |
|------------------------------|--------------------------------|--|-------------|
| Brandium Res<br>D:220 Ataseh | idens R1 Blok<br>ir / ISTANBUL | دانشگاه ، برج تجاری بلور ،<br>۱۴ ، واحدE |             |
| ايميل                        | وبسايت                         | تلگرام و واتساپ                          | تلفاكس      |
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| گواهینامه ها   | دسته بندی محصولات  | نام شرکت                      |
|--|--|-------------------------------|
| •ISO 9001:2000 from Germany •CE certificate •IMQ - Italy certificate •DVGW - Germany certificate •GOST - Russia certificate •GOST - Ukraine certificate •GL - U.K certificate •Gastec - Holland certificate •KVGW - Belgium certificate •LLOYDS certificate •BUREAU VERITAS certificate •VDS certificate | Steam traps  The problem traps  The problem traps  Expansion joints  Expansion joints  Level Controller  Level Controller  Level Surply Surply Surply Surply Surply  Valves  Insulation Jackets  The problem trapy Surply | شرکت آیواز ترکیه AYVAZ TURKEY |
|  | شير آلات، شلنگها، اتصالات و)   |                               |





#### GENERAL













#### معرفی شرکت آیواز:

هاى بين المللى مى باشد.







#### O QUALLE SECURV

**FLEXIBLE METAL HOSES** 

































#### برخی از گواهینامه های این شرکت عبارتند از:

شرکت AYVAZ ترکیه یکی از ۵۰۰ شرکت برتر ترکیه و

یکی از بزرگترین تولیدکنندگان در زمینه تاسیسات نفت و

گاز می باشد. این شرکت به ۹۵ کشور دنیا صادرات داشته

و یکی از تامین کنندگان وزارت دفاع ترکیه ، شرکت گاز

تركيه ، BP و SHELL مي باشد. كيفيت محصولات

AYVAZ با توجه به تست های انجام شده و استفاده از

تكنولوژي مستقيم كشور آلمان جزو بهترين محصولات

موجود در بازار بوده که دارای قیمت مناسب تر نسبت به

محصولات مشابه اروپایی می باشد. تمامی محصولات این

شرکت با تکنولوژی روز دنیا تولید شده و دارای گواهینامه





• IMQ - Italy certificate

• DVGW - Germany certificate

• GOST - Russia certificate

GOST - Ukraine certificate

• GL - U.K certificate

• Gastec - Holland certificate

• KVGW - Belgium certificate

LLOYDS certificate

• BUREAU VERITAS certificate

VDS certificate

FM certificate

#### **EXPANSION JOINTS**



















#### LEVEL CONTROL/STEAM TRAPS













#### **VALVES**







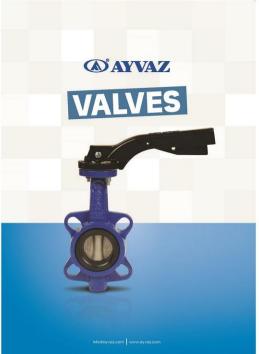
#### **EX-PROOF PRODUCTS**





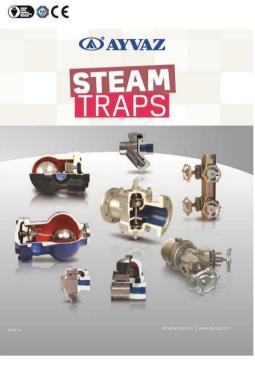




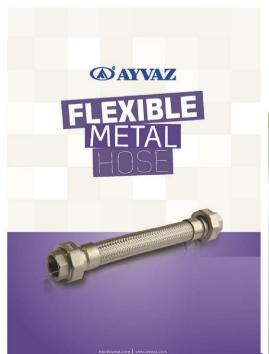
























تامين كننده قطعات صنعتى



















مدير محترم شركت توسعه مهندسي نيكو بازار خاورميانه

#### موضوع: تاييديه رضايتمندي شرح: RZS-9648531

كارشناس خريد

نجف زاده

·F1-FFT1-F11

احتراما عطف به نامه شماره ۳۷۷/۱۰/۱۰۳ مورخه ۹۷/۰۹/۱۴ آن شرکت محترم , گواهی میشود STEAM TRAPS خریداری شده طی تقاضای فوق از آن شرکت محترم با مارک <u>AYVAZ</u> از نظر کارکرد موردتایید میباشند. به امید همکاری در موارد آتی.

و من ا...التونين



بسمەتعالى

qV Y F dust ساره پ ت (۱۳۴۰ · ۲۵ ع ۴ ۲

شركت بالايش نفت تبريز ( سھاسي مام )

مدير محترم شركت نيكو بازارخاورميانه

موضوع: RZS-9547378 شرح: STEAM TRAP

با سلام ؛

احتراما عطف به نامه شماره ۷۷۷/۱۰/۳۶ مورخه ۹۷/۰۱/۱۸ دوعددSTEAM TRAPS ارسالی آن شرکت محترم با مارک AYVAZ به سایزهای 1/2 ، 3/4 بعد از تست های لازم مورد تایید قرار گرفته اند لذا مراتب جهت اقدامات مقتضی به استحضارمیرساند

و مِن ا…التومين الزارات فيض حسينس رنيس تداركات كالإ

A/N

نجف زاده -11-4411-411

آدرس: تبریز –جاده آذر شهر – سه راهی سردرود – شرکت پالایش نفت تیریز – کد پستی ۱۹۷۱۳۱۱۱۱۱ تلفن: ۱۰۵-۱۱۴۸۵ – ۱۶۰ فاکس: ۲۰۰۷-۱۴۲۱ و ۴۲۲۱۳۴۲ – ۴۶۰ و ۴۲

E-MAIL:PROCUREMENT@TRZRFFINERY.CO.IR

ىرتىلى

شماره، پ ت ز/۰۲۴ / ۴۶۲۵۰ پیوست

دمال واست از كالاى ارانى ،

مدير محترم شركت توسعه مهندسي نيكو بازار خاورميانه

موضوع: تاييديه رضايتمندي شرح: RZS-9547378

با سلام ؛

احتراما عطف به نامه شماره ۳۷۷/۱۰/۱۰۳ مورخه ۹۷/۰۹/۱۴ آن شرکت محترم , گواهی میشود STEAM TRAPS خریداری شده طی تقاضای فوق از آن شرکت محترم با مارک AYVAZ از نظر کارکرد موردتایید میباشند. به امید همکاری در موارد آتی .

و من ا...التونين فيض حسينى رنيس تداركات كالا

> كارشناس خريد نجف زاده · F1- TFT1 · F11

(6)00

آدرس: تبریز - جاده آذرشهر سه راهی سردرود- صندوق پستی ٤١٥٦-٥١٣٣٥. علن: ١٠٤١-٢١١٤٨٥٠ فاكس: ٤١-٢٢١١٩٢٢ و ١٥٠٤-٢١-١٦٢٢٨٠ مركز مخابرات: ٥٥٠-١٥٠ فاكس: ٤١-٢١٢١٥٢٣ و المسلمة الماريخان

101-111-1993 پیوست دندارد شمارددت د ۱۸/۰۳۳

مديريت محتره فروش شركت توسعه مهندسي نيكو

موضوع : خريد تجهيزات نله بخار

اخترات!" به استحضار میرساند پیش فاکتور سالی در خصوص تمین اقلام موضوعه به شماره ۴–۱۳/۵۳۹–۱۲ مـورخ ۱/۲۰ مورد نايب ميباشد خواهشمند دستور قرماييد یه مبلغ کا .

اقنامات لازم در این خصوص صورت پذیرد.

یشاییش از همکاریهای صمیمانه آن مجموعه محترم سیاسگزاریم.

همان، بزرگراه آیت امد مدد، قیفرند، بلور اندوزگو کوید دانیل، چاک ۱۰ مکدیتی ۱۹۳۵٬۳۶۱۱۰ کنن ۱۹۳۸٬۳۴۱۲ – ۲۲۱ – ۲۱- ۲۲۱ – ۲۱ میل ۱۹۴۶-۲۲۳ – ۲۱ www.polynar.com info@polynar.com



# STEAM TRAPS





#### **STEAM TRAPS**

#### FLOAT TYPE STEAM TRAPS WITH AIR VENT► SK-50



Body and Cover Internals and float Connection Types Ductile Iron GGG 40.3 Stainless Steel AISI 304 Flanged and threaded

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Max. Differential Pressure (ΔP)

16 bar 250°C 4.5-10-14

| DIMENSIONS |          |
|------------|----------|
| Flanged    | Threaded |
| (DN)       | (inch)   |
| 25         | 1"       |
| 32         | 1 1/4"   |
| 40         | 1 1/2"   |
| 50         | 2"       |

#### FLOAT TYPE STEAM TRAPS WITH AIR VENT ► SK-51 / SK-51C



Body Ductile Iron GGG 40.3 Cast Steel GSC 25 Cover Stainless Steel AISI 304 Internals and float Connection Types Flanged and thread \* SK-51C: The thermostatic unit can be disabled by balance rod. Flanged and threaded

**OPERATING CONDITIONS**Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Differential Pressure (AP)

16 bar 4,5-10-14

| DIMENSIONS |          |
|------------|----------|
| Flanged    | Threaded |
| (DN)       | (inch)   |
| 15         | 1/2"     |
| 20         | 3/4"     |
| 25         | 1"       |

#### FLOAT TYPE STEAM TRAPS WITH AIR VENT ► SK-55 WITH SIGHT GLASS



Body and Cover Internals and float Connection Types

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Differential Pressure ( $\Delta P$ ) Ductile Iron GGG 40.3 Stainless Steel AISI 304 Flanged and threaded

16 bar 250°C 4,5-10-14

| DIMENSIONS |          |
|------------|----------|
| Flanged    | Threaded |
| (DN)       | (inch)   |
| 32         | 1 1/4"   |
| 40         | 1 1/2"   |
| 50         | 2"       |

#### FLOAT TYPE STEAM TRAPS WITH AIR VENT► SK-61/SK-61C



Body and Cover Stainless Steel AISI 316 Stainless Steel AISI 304 Internals and float Connection Types Flanged and threaded SK-61C: The thermostatic unit can be disabled by balance rod.

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) 25 bar Max. Operating Temperature (TMO) 250°C 4.5-10-14 Max. Differential Pressure (ΔP)

| DIMENSIONS     |                    |
|----------------|--------------------|
| Flanged (DN)   | Threaded<br>(inch) |
| 15<br>20<br>25 | 1/2"<br>3/4"<br>1" |

#### FLOAT TYPE STEAM TRAPS WITH AIR VENT► SK-61 WITH SIGHT GLASS



Body and Cover Internals and float Connection Types

**OPERATING CONDITIONS** Max. Operating Pressure (PMO)
Max. Operating Temperature (TMO)

Max. Differential Pressure ( $\Delta P$ )

Stainless Steel AISI 316 Stainless Steel AISI 304

Flanged and threaded

25 bar 250°C

32 bar

40 bar

250°C 4,5-10-14

4,5-10-14

| DIMENSIONS   |                    |
|--------------|--------------------|
| Flanged (DN) | Threaded<br>(inch) |
| 15           | 1/2"               |
| 20           | 3/4"               |
| 25           | 1"                 |



Body Cover Internals and Float Connection Types

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Permissible Pressure Max. Operating Temperature (TMO) Max. Differential Pressure ( $\Delta P$ ) Cast Steel GSC 25 Cast Steel GSC 25 Stainless Steel AISI 304 Flanged and threaded

| DIMENSIONS     |                    |
|----------------|--------------------|
| Flanged (DN )  | Threaded<br>(inch) |
| 15<br>20<br>25 | 1/2"<br>3/4"<br>1" |

FLOAT TYPE STEAM TRAPS WITH AIR VENT► SK-70

#### FLOAT TYPE STEAM TRAPS WITH AIR VENT► SK-70 WITH SIGHT GLASS



Body and Cover Internals and float Connection Types

#### **OPERATING CONDITIONS**

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Differential Pressure (ΔP) Cast Steel GSC 25 Stainless Steel AISI 304 Flanged and threaded

32 bar 250°C 4,5-10-14

| DIMENSIONS |          |
|------------|----------|
| Flanged    | Threaded |
| (DN)       | (inch)   |
| 15         | 1/2"     |
| 20         | 3/4"     |
| 25         | 1"       |

#### INVERTED BUCKET STEAM TRAPS ► BT-16



Body Cover Internals and Float Connection Types

#### **OPERATING CONDITIONS**

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Max. Differential Pressure (ΔP) Cast Iron GG 25 Cast Iron GG 25 Stainless Steel AISI 304 Threaded

16 bar 220°C 5,4-8,5-15,5

| DIMENSIONS      |  |
|-----------------|--|
| Threaded (Inch) |  |
| 1/2"            |  |
| 3/4"            |  |
| 1"              |  |

#### THERMODYNAMIC STEAM TRAPS ► TDK-45



Body Cover Strainer, Disc, Seat Connection Types

#### **OPERATING CONDITIONS**

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Forged Steel Stainless Steel AISI 304 Stainless Steel AISI 304 Flanged, threaded, socket

40 bar 400°C

| DIMENSIONS     |                               |
|----------------|-------------------------------|
| Flanged (DN)   | Threaded And<br>Socket (Inch) |
| 15<br>20<br>25 | 1/2"<br>3/4"<br>1"            |

#### THERMODYNAMIC STEAM TRAPS►TDK-PS



Body Cover Strainer, Disc, Seat Connection Types

#### OPERATING CONDITIONS

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Stainless Steel AISI 304 Stainless Steel AISI 304 Stainless Steel AISI 304 Threaded, socket

40 bar 400°C

| DIMENSIONS                 |
|----------------------------|
| Threaded and Socket (Inch) |
| 1/2"<br>3/4"<br>1"         |

#### THERMODYNAMIC STEAM TRAPS► TDK-71



Body Cover Strainer, Disc, Seat Connection Types

#### OPERATING CONDITIONS

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Stainless Steel AISI 304 Stainless Steel AISI 304 Stainless Steel AISI 304 Threaded

40 bar 400°C

| DIMENSIONS                 |
|----------------------------|
| Threaded and Socket (Inch) |
| 1/2"<br>3/4"<br>1"         |

#### BI-METALLIC STEAM TRAP ► TK-1



Body Cover Strainer, Disc, Seat Connection Types Socket

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Forged Steel Stainless Steel AISI 304 Stainless Steel AISI 304 Flanged, Threaded,

**OPERATING CONDITIONS** 

40 bar 400°C

| DIMENSIONS                       |  |  |
|----------------------------------|--|--|
| Flanged (DN)                     | Threaded and<br>Socket (inch)                |  |
| 15<br>20<br>25<br>32<br>40<br>50 | 1/2"<br>3/4"<br>1"<br>1 1/4"<br>1 1/2"<br>2" |  |

#### THERMOSTATIC STEAM TRAPS► TKK-2Y



Body and Cover Thermosatic Capsule Check Valve Connections

Stainless Steel AISI 304 Hastelloy Brass MS 58 Flanged, Threaded, Socket

Forged Steel

Threaded And Socket (Inch) Flanged (DN) 1/2" 15 20 25 3/4"

#### OPERATING CONDITIONS

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)

32 bar 250°C

#### THERMOSTATIC STEAM TRAPS ► TKK-2N



Body and Cover Strainer, Seat Thermosatic Capsule Check Valve Connections

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)

Stainless Steel AISI 304 Hastelloy Brass MS 58 Flanged, Threaded Socket

32 bar 250°C

Forged Steel

Threaded and Socket (inch) Flanged (DN) 20 3/4

#### THERMOSTATIC STEAM TRAPS ► TKK-21



Body and Cover Strainer, Seat Thermosatic Capsule Connections

#### **OPERATING CONDITIONS**

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)

Forged Steel Stainless Steel AISI 304 Hastelloy Threaded

32 bar 250°C

| DIMENSIONS      |
|-----------------|
| Threaded (inch) |
| 3/8"<br>1/2"    |

#### THERMOSTATIC STEAM TRAPS ► TKK-41/42



Thermostatic Capsule Strainer, Seat Connection Types

#### **OPERATING CONDITIONS**

Max. Operatina Pressure (PMO) Max. Operating Temperature (TMO)

Stainless Steel AISI 304 (TKK-41) Stainless Steel AISI 316 (TKK-42) Hastelloy Stainless Steel AISI 304 Threaded

45 bar 250°C

| DIMENSIONS      |
|-----------------|
| Threaded (inch) |
| 1/2"<br>3/4"    |

#### THERMOSTATIC STEAM TRAPS▶ HK-23 SUPER CONDENSATE RELEASER



Cover Thermostatic Capsule Internals

**OPERATING CONDITIONS** Max. Operating Pressure (PMO)

Max. Operating Temperature (TMO)

Ductile Iron GGG 40.3 Ductile Iron GGG 40.3 Hastelloy & Stainless Steel Stainless Steel AISI 304 Flanged

21 bar 250°C

| DIMENSIONS   |  |
|--------------|--|
| Flanged (DN) |  |
| 50           |  |
| 65           |  |
| 80           |  |
| 100          |  |

#### THERMOSTATIC STEAM TRAPS ► TKK-3 WITH 3 CAPSULES



Body and Cover Thermostatic Capsule Strainer, Seat Connection Types

Forged Steel Threaded

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)

Stainless Steel AISI 304 Stainless Steel AISI 304

32 bar

| DIMENSIONS      |                                 |
|-----------------|---------------------------------|
| Flanged<br>(DN) | Threaded and Weld-<br>ed (Inch) |
| 15              | 1/2"                            |
| 20              | 3/4"                            |
| 25              | 1"                              |
| 32              | 1 1/4"                          |
| 40              | 1 1/2"                          |
| 50              | 2"                              |

#### VACUUM BREAKERS ► VK-70



Body Cover Internals Connections

Brass Stainless Steel AISI 304 Threaded

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)

16 bar 250°C

DIMENSIONS 1/2"

DIMENSIONS

#### VACUUM BREAKERS ► VK-71



Body Cover Internals and float Connection Types

Stainless Steel AISI 304 Stainless Steel AISI 304 Stainless Steel AISI 304 Threaded

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Max. Differential Pressure (ΔP)

1/2" 25 bar 400°C

#### THERMOSTATIC AIR DRAINERS ► TKK-11 AIR ELIMINATOR



Body and Cover Thermostatic Capsule Internals Connections

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO)
Max. Operating Temperature (TMO)

Hastelloy Stainless Steel AISI 304 Threaded

5,4-8,5-15,5

10 bar 150°C

## 1/2"

#### THERMOSTATIC AIR DRAINERS ► TKK-61 AIR ELIMINATOR



Body and Cover Thermostatic Capsule Internals Connections

**OPERATING CONDITIONS** Max. Operating Pressure (PMO)

Max. Operating Temperature (TMO)

Brass Hastelloy Stainless Steel AISI 304 Threaded

10 bar 150°C

| DIMENSIONS    |
|---------------|
| THREADED (mm) |
| 1/2"          |

#### FLOAT TYPE AIR DRAINERS ► HA-51 AIR DRAINER



Cover Internals and float Connections

**OPERATING CONDITIONS** Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)

Ductile Iron GGG 40.3 Ductile Iron GGG 40.3 Stainless Steel AISI 304 Flanged and Threaded

16 bar 250°C

| DIMENSIONS     |                    |
|----------------|--------------------|
| FLANGED (DN)   | THREADED<br>(inch) |
| 15<br>20<br>25 | 1/2"<br>3/4"<br>1" |

#### FLOAT TYPE AIR DRAINERS ► HA-50 AIR DRAINER



Body Cover Internals and float Connections

**OPERATING CONDITIONS** 

Ductile Iron GGG 40.3 Ductile Iron GGG 40.3 Stainless Steel AISI 304 Flanged and Threaded

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) 250°C

| DIMENSIONS                    |    |  |
|-------------------------------|----|--|
| Flanged (DN)  Threaded (inch) |    |  |
| 25                            | 1" |  |

#### FLOAT TYPE AIR DRAINERS ► HA-52/62



Body and Cover

Internals and float Connections

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Ductile Iron GGG 40.3 (HA-52) Stainless Steel AISI 316 (HA-62) Stainless Steel AISI 304 Threaded

16 bar 250°C

| DIMENSIONS      |  |
|-----------------|--|
| THREADED (inch) |  |
| 3/4" x 1/2"     |  |

#### PRESSURE REDUCING VALVES▶ BDV-25



Body Shaft, Seat, Strainer Internals Connections

**OPERATING CONDITIONS** 

Max Inlet Pressure Max. Outlet Pressure Set Pressure

Max. Operating Temperature

Ductile Iron GGG 40.3 Stainless Steel AISI 304 Stainless Steel AISI 304 Threaded

19 bar 8.6 bar 0,14-1,7 bar 1,4-4,0 bar 3.5-8.6 bar 210°C

1/2" 3/4"

#### FLOAT TYPE LIQUID DRAINERS ► SA-51 LIQUID ELIMINATOR



Body Internals and float Connections By-pass hole (Optional)

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO)
Max. Operating Temperature (TMO)

Ductile Iron GGG 40.3 Ductile Iron GGG 40.3 Stainless Steel AISI 304 Flanged and Threaded

16 bar 250°C

| DIMENSIONS     |                    |  |
|----------------|--------------------|--|
| FLANGED (DN)   | THREADED<br>(inch) |  |
| 15<br>20<br>25 | 1/2"<br>3/4"<br>1" |  |

#### FLOAT TYPE LIQUID DRAINERS ► SA-50 LIQUID ELIMINATOR



Cover Internals and float Connections By-pass hole (Optional)

OPERATING CONDITIONS

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO) Ductile Iron GGG 40.3 Ductile Iron GGG 40.3 Stainless Steel AISI 304 Flanged and Threaded

16 bar 250°C

| DIMENSIONS           |                              |  |
|----------------------|------------------------------|--|
| FLANGED (DN)         | THREADED<br>(inch)           |  |
| 25<br>32<br>40<br>50 | 1"<br>1 1/4"<br>1 1/2"<br>2" |  |

#### STEAM SEPARATORS ► SPR-16/25/40



Internals Connections Condensate output Air output

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)

Carbon Steel / Stainless Steel (Optional) Stainless Steel AISI 304 Flanged

3/4" 1/2"

16/25/40 bar

|                | DIMENSIONS      |                    |  |
|----------------|-----------------|--------------------|--|
| PN             | FLANGED<br>(DN) | THREADED<br>(inch) |  |
| 16<br>25<br>40 | 15-300          | 1/2"<br>3/4"<br>1" |  |

#### CONDENSATE CONNECTION MANIFOLDS ► KT-13



Body Internals Volan Connections

**OPERATING CONDITIONS** Max. Operating Pressure (PMO) Max. Operating Temperature (TMO)
KV Valve

Carbon Steel C 22.8 Stainless Steel Carbon Steel Threaded/Socket

26 bar 250°C

| DIMENSIONS    |  |
|---------------|--|
| THREADED (mm) |  |
| 1/2"<br>3/4"  |  |

#### PIPELINE CONNECTORS ► BK-33 (TD-SK)



Body Seat and Disc Internals Volan Connections

Stainless Steel AISI 304 Stainless Steel AISI 420 Stainless Steel Carbon Steel Threaded/Socket

1/2' 3/4"

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temp. (TMO)

42 bar 315°C

#### PIPELINE CONNECTORS ► BK-33 SK (FLOAT TYPE)



Body and Cover Internals and Float Thermostatic Unit Volan Connections

Stainless Steel AISI 304 Stainless Steel AISI 304 Stainless Steel AISI 304 Carbon Steel Threaded/Socket

OPERATING CONDITIONS

Max. Operating Pressure (PMO) Max. Operating Temp. (TMO) Differential Pressure

32 bar 286°C 4,5/10/14 bar 1/2" 3/4"

#### PIPELINE CONNECTORS ► BK-33 TK (THERMOSTATIC)



Body and Cover Stainless Steel AISI 304 Capsule Stainless Steel Internals Stainless Steel Volan Carbon Steel Connections Threaded/Socket

**OPERATING CONDITIONS** 

Max. Operating Pressure (PMO) Max. Operating Temp. (TMO) Differential Pressure

DIMENSIONS 1/2"

32 bar 240°C 21 bar

#### PIPELINE CONNECTORS ► BK-33 BM (BI-METALLIC)



Body Bi-metallic Plates Internals Volan Connections

Stainless Steel AISI 304 Stainless Steel AISI 304 Stainless Steel AISI 304 Carbon Steel Threaded/Socket

1/2" 3/4"

#### **OPERATING CONDITIONS**

Max. Operating Pressure (PMO) Max. Operating Temp. (TMO) Differential Pressure

32 bar 315°C 32 bar

#### STEAM TRAP TEST VALVE ► KTV-10



Body Material Ball Material Body Gasket Ball Seat Connection Type Nominal Pressure (PN) Max. Operating Temp. Stainless Steel AISI 304 Stainless Steel AISI 304 PTFF R-PTFE (15%) Threaded and Flanged 40 bar -50/+210°C

Stainless Steel AISI 316 Stainless Steel AISI 316 PTFF R-PTFE (15%) Threaded and Flanged 40 bar -50/+210°C

| DIMENSIONS |          |  |
|------------|----------|--|
| FLANGED    | THREADED |  |
| (DN)       | (inch)   |  |
| DN15       | 1/2"     |  |
| DN20       | 3/4"     |  |
| DN25       | 1"       |  |
| DN32       | 11/4"    |  |
| DN40       | 1½"      |  |
| DN50       | 2"       |  |

#### PNEUMATIC CONTROL ON/OFF VALVES ► PKV-50



Body Material Gasket Connection Type Nominal Pressure (PN) Max. Operating Temp. Stainless Steel AISI 316 PTFE Threaded 16 bar 180°C

| DIMENSIONS                                 |  |  |
|--|--|--|
| THREADED (mm)                              |  |  |
| 1/2"<br>3/4"<br>1"<br>11/4"<br>11/2"<br>2" |  |  |

07/01/2018 4:17 PM FAX 00984134210407 TBZ TADAROKAT تاریخ ۱۳۹۷/۰۴/۱۰۰۰ شماره، پ ت (/۳۴۰/ ۱۳۲۶ تسمه تعالى شركت بالايش نفت تبريز ( سخامس عام )

«سال عات از کالای امرانی»

مديريت محترم شركت توسعه مهندسي نيكو بازار خاورميانه

موضوع: استعلام RZS-9648531 شرح: STEAM TRAPS:

با سلام ،

حتراماًعطف به پیشنهاد مالی شماره ۷۷۷/۱۰/۳۸ مورخـه۵۰/۱۰۱۰ آن شـرکت محتـرم به استحضارميرساند كه حائز حداقل قيمت پيشنهادي براي استعلام خريد فوق به مبلغ ریال (بدون ارزش افزوده) مورد تایید می باشید خواهشیمند است

دستور فرمایید دراسرع وقت نسبت به تحویل کالا اقدام مقتضی را مبذول و نتیجه را به این واحد اعلام فرمایند.ضمناً تایید نهایی منوط بر تست چندعدد از کالا به مدت یک هفته در پالایشگاه خواهد بود

لازم به ذکر است رعایت الزامات بازرس فنی که قبلاً به آن شرکت محترم ارسال شده و ارائه فــاکتور فروش در فرمت صادره از اداره دارائی که به پیوست ارسال می گردد، الزامی است.

و من ا...التوفيق رنس تداركات كالا

08/15/2018 11:55AM FAX 00984134210407

شماره. پ ټ ز/۲۴۰ / ۱۹۶۱۶

تاریخ ۱۳۹۷/-۵/۲۴

و من ا...التوفيق فيض حينى رئيس تداركات كالا

کارشناس خرید: نجف زاده -41-4411-411

Ø 0001

باسلام

آدرس: تبريز- جاده آذرشهر سه راهي سردرود-شركت پالايش نفت تبريز- تداركات كالا صندوق پستي ١٥٦٦-١٥٣٥٥ تلفن: ١١٤٨٥٨٠-٤١٠ فاكس: ٣٤٢١١٩٢٢-٤١٠ و ١٦٦٢٢٦-٢١-١٠ مركزمخابرات: ٨٥-٣٤٠-٥١-١٥٠

E-MAIL: PROCUREMENT@TBZREFINERY.CO.IRS 02/12 2018 SUN 4:08 PM [TX/RX NO 5121] 20001

TBZ TADAROKAT

وسال عات از كالاى ارانى ه

RZS- 9648531 : Equipo

Steam trap

Steam trap ارسالی تست و کار کرد آنها مورد تائید می باشد . لطفأ دستور فرمایید نسبت به

احتراماً، پیرو نامه شماره ۷۷۷/۱۰/۶۷ مورخ ۹۷/۴/۳۰ آن شرکت محترم تعداد دو عدد

شركت پالايش نفت تبريز ( سهامس عام)

مديريت محترم شركت نيكو بازار خاورميانه

ارسال كالاي فوق اقدام گردد. .

وسال اقتساد مقاومتي اهدام وعلى ه مديريت محترم شركت توسعه مهندسي بازار خاورميانه موضوع: استعلام RZS-9547378 STEAM TRAPS: 7 : با سلام ، احتراماًعطف به پیشنهاد مالی شماره ۷۷۷/۱۰/۲۷ مورخه ۹۶/۱۱/۱۴ آن شرکت محترم به استحضارمیرساند که حائز حداقل قیمت پیشنهادی برای استعلام خرید فوق به مبلغ: (با احتساب ۹% ارزش افزوده) مورد تایید می باشید خواهشمند است دستور فرماييد در اسرع وقت نسبت به تحويل كالا اقدام مقتضي را مبذول فرمايند. بدیهی است عدم مراجعه و یا تماس به موقع و حداکثر تا ۵ روز کاری از تاریخ وصول این نامه جهت انعقاد قرارداد و یا تحویل کالا به منزله انصراف قطعی از انجام معامله تلقی خواهد شد. لازم به ذکر است ارائه فاکتور فروش در فرمت صادره از اداره دارائی که به پیوست ارسال می گردد، الزامي است. و من ا...التوفيق كارشناس خريد: نجف زاده +41-4411+11

شركت پالايش نفت تبريز ( سشامي عام )

تسمدتعالي

E-MAIL: PROCUREMENT@TBZREFINERY.CO.IRS

1 Nov. 2007 5:25PM P1 دفتر مرکزی ا تهران ـ سعادت آباد بلور دریا ، خیابان مطهری شمالی التهای کوچه ساحل ۲ ، پلاک ۳۲ کدیستی ، ۱۹۹۸۸۷۳۶۶۵ مندوق پستی ، ۲۹۹۸ مندوق تلفن . ۲۱-۳۶-۳۶ مرکزی ۲۱-۸۸۵۶۲۸ ۲۱-۲۱ www.pasargadoil.com Info@.pasargadoil.com

آدرس: تبريز - جاده آذرشهر سه راهي سردرود - صندوق پستي ١٥٦٥-١٣٣٥

تلفن: ١١٤٨٥٨٠-٤١ فاكس: ٣٤٢١١٩٢٢-٤١ و ١٦٦٢٢٦-٢١-مركزمخابرات: ٨٥-٣٤٢-٥٥١-١٤٠

شرکت نفت پاسار گاد (سهامی عام)

FAX NO. :

مديريت محترم شركت توسعه مهندسي نيكوبازار خاورميانه موضوع: تاييد پيش فاكتور

PAGAS jour

احتداماً به استحضار میرساند استعلام قیمت شماره ۵۱۱۲–۹۷/ک پ مورد تابید این شرکت میباشد. نسبت به تهیه و ارسال اقلام اقدامات لازم مبذول فرماثید. ضمناً فرم شناسایی و ارزیابی اولیه تامین کنندگان را تکمیل نموده به همراه مدارک مندرج در فرم مذکور به این شرکت ارسال نمائید.

فرم به پیوست حضورتان ارسال میگردد.

تاريخ ۹۷/۰۵/۰۶

شماره۱۲۵-۹۷/ک پ

تاریخ ۱۳۹۶/۱۲/۲۸

شماره. پ ت ز/۳۴۰ / ۴۵۳۷۴

رونوشت ؛ پروتده

آدراس، تبویز - جاده آدرشهر سه راهی سردرود - شرکت بالایش نفت تبریز - اداره تدارکات کالا کد پستی ۱۹۷۱۳۳۱۱۱ تلفن: ۱۱۰۵۰ - ۱۱۰۵۰ - ۱۱۰۵۰ - ۱۱۰۵۰ - ۱۱۰۵۰ و ۱۱۰۰۵۰ - ۱۱۰۵ - ۱۱۵ - ۱۱

آدرس کارخانه، تبریز، پالایشگاه تبریز، کارخانه قیرسازی باسارگاد

تلفن ۹۷-۱۲۸۹۵ ۳۴۲ - ۹۱۰ فاکس ۱۹۸۸۲۲۲۳۳

29/12 2018 SAT 1:52 PM [TX/RX NO 5148] 20001



# VALVES



#### VALVES

#### GLOBE VALVES ► GV-16, GV-25, GV-40



Body GG-25 Cast Iron
Seat Stainless Steel AISI 304
Disc Stainless Steel
Connection Flanged

GSC-25 Cast Steel
304 Stainless Steel AISI 304
Stainless Steel
Flanged

GV-40 GSC-25 Cast Steel Stainless Steel AISI 304 Stainless Steel Flanged

-FLANGED: DN15 all sizes are available in between DN400

#### NON-RISING STEM, SOFT SEATED GATE VALVE▶ GTK-16



Body
Ductile Iron GGG 40.3
Disc
Rubber Coated Cast Iron
Gasket
NBR/EPDM
Connection
Flanged
Max. Operating Temp.
110°C
Max Operating Pressure
16 bar/10 bar/6 bar/2,5 bar

-FLANGED: DN40 all sizes are available in between DN1200

#### .....



Body Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Bolts and Nuts Cast Iron GG-25 / Ductile Iron GGG 40 & GGG 50 DN100 (4") - DN2200 (88") 16 bar -80°C/+600°C Fixed Flanged Stainless Steel x Cr13

#### WAFER TYPE DISCO CHECK VALVES► CV-10





Body Material Disc Material Centering Hoop Spring Material Connection Type Nominal Pressure (PN) Min. Allowable Temp. Max. Operating Temp. CV-10P
Brass Ms58
Stainless Steel AISI 316
Stainless Steel AISI 302
Stainless Steel AISI 302
Wafer Type
16 bar
-10°C
250°C

CV-10\$1 Stainless Steel AISI 304 Stainless Steel AISI 316 Stainless Steel AISI 302 Stainless Steel AISI 302 Wafer Type 40 bar -10°C 300°C

CV-10S2
Stainless Steel AISI 316
Stainless Steel AISI 316
Stainless Steel AISI 302
Stainless Steel AISI 302
Wafer Type
40 bar
-10°C
300°C

-DN15 all sizes are available in between DN100

-DN125 all sizes are available in between DN200

#### WAFER TYPE DISCO CHECK VALVES► CV-11



Body Material
Disc Material
Centering Part
Spring Material
O-ring
Connection Type
Nominal Pressure (PN)
Min.Allowable Temp
Max. Operating Temperature

CV-11
Cast Iron GG25
Cast Iron GG25
Stainless Steel AISI 316
Stainless Steel AISI 302
EPDM
Wafer Type
16 bar
-10°C
100°C

CV-11S1 Stainless Steel AISI 304 Stainless Steel AISI 304 Stainless Steel AISI 304 Stainless Steel AISI 302

Stainless Steel AISI 302 -Wafer Type 40 bar -10°C 300°C Stainless Steel AISI 316 Stainless Steel AISI 316 Stainless Steel AISI 316 Stainless Steel AISI 302

Wafer Type 40 bar -10°C 300°C

#### DOUBLE PLATE CHECK VALVES ► CV-20/25



Body Material
Disc Material
Resilient Seat
Spring Material
Disc Bearing
Connection Type
Nominal Pressure (PN)
Min.Allowable Temp
Max. Operating Temperature

CV-20
Cast Iron GG25
Stainless Steel AISI 316
EPDM
Stainless Steel AISI 304
Teflon
Wafer Type
10/16 bar
-10°C
110°C

CV-25
Cast Iron GG25
Ductile Iron GGG 40.3
EPDM
Stainless Steel AISI 304
Teflon
Wafer Type
10/16 bar
-10°C
110°C

-FLANGED: DN50 all sizes are available in between DN300 for PN16 -FLANGED: DN350 all sizes are available in between DN600 for PN10

#### WAFER TYPE SWING CHECK VALVES ► CV-33/35



CV-33 Body Material Stainless Steel AISI 316 Disc Material
Disc Bearing Stainless Steel AISI 316 Ni Coated Carbon Steel Eye Bolt Stainless Steel AISI 316 O-ring Connection Type EPDM Flanged Nominal Pressure (PN) Min.Allowable Temp 16 bar -10°C Max. Operating Temperature 110°C

CV-35 Ni Coated Carbon Steel Ni Coated Carbon Steel Ni Coated Carbon St eel Ni Coated Carbon Steel **EPDM** Flanged 16 bar -10°C

110°C

-FLANGED: DN32 all sizes are available in between DN300

#### LIFT TYPE CHECK VALVES ► CLV-50



GG-25 Cast Iron GG-25 Cast Iron Body Material Cover Stainless Steel AISI 304 Stainless Steel AISI 304 Disc Material Spring Material CrNi laminated pure graphite Flanged

Connection Type Nominal Pressure (PN) 9,6 bar 16 bar Max. Operating Temperature 100°C 300°C

-FLANGED: DN15 all sizes are available in between DN300

#### SWING TYPE CHECK VALVES► SC-200



Body Material Stainless Steel AISI 304 Disc Material Stainless Steel AISI 304 Pipe Plug Picking Material Stainless Steel AISI 304 PTFE Connection Type Nominal Pressure (PN) Threaded 16 bar Max. Operating Temperature 180°C

Stainless Steel AISI 316 PTFE Threaded 16 bar 180°C

Stainless Steel AISI 316

Stainless Steel AISI 316

-THREADED: 1/2"all sizes available in between 2"

#### SWING TYPE CHECK VALVES ► SC-400



Brass Ms58 **Body Material** Bonnet Brass Ms58 Sprina Stainless Steel Washer ABS/NBR Connection Type Threaded Nominal Pressure (PN) 16 bar Max. Operating Temperature 11000

-THREADED: 1/2"all sizes available in between 2"

#### **FOOT VALVE**



Brass-CW617N UNI EN 12165 Body Material Seat Disc Holder Brass-CW617N UNI EN 12165 Hostaform Pom-DIN5735 Spring Stainless Steel-UNI 10270-1 Nylon+NBR Disc Filter Filter Stainless Steel Threaded

Connection Type Nominal Pressure (PN) 16 bar Max. Oper. Temp. 110°C

-THREADED: 1/2"all sizes available in between 2"

#### STAINLESS STEEL BALL VALVES► V-2T



**Body Material** Stainless Steel AISI 304 Ball Material Stainless Steel AISI 304 Body Gasket PTFF Ball Seat R-PTFE (15%) Connection Type Threaded Nominal Pressure (PN) 63 bar Max. Operating Temperature -25/+180°C

Stainless Steel AISL 316 Stainless Steel AISI 316 PTFF R-PTFE (15%) Threaded 63 bar -25/+180°C

-THREADED: 1/2"all sizes available in between 4"

#### STAINLESS STEEL BALL VALVES► V-3T



Body Material Ball Material Body Gasket Ball Seat Connection Type Nominal Pressure (PN) Max. Operating Temperature Stainless Steel AISI 304 Stainless Steel AISI 304 PTFE R-PTFE (15%) Threaded 40 bar -25/+180°C Stainless Steel AISI 316 Stainless Steel AISI 316 PTFE R-PTFE (15%) Threaded 40 bar -25/+180°C

-THREADED: 1/4"all sizes available in between 4"

#### STAINLESS STEEL BALL VALVES► V-3F



Body Material Ball Material Body Gasket Ball Seat Connection Type Nominal Pressure (PN) Max. Operating Temperature Stainless Steel AISI 304 Stainless Steel AISI 304 PTFE R-PTFE (15%) Flanged 40 bar -25/+180°C

Stainless Steel AISI 316 Stainless Steel AISI 316 PTEE R-PTEE (15%) Flanged 40 bar -25/+180°C

-FLANGED: DN15 all sizes available in between DN100

#### BALL VALVE WITH MOUNTING PAD ► V-3TP



Body Material Stainless Steel AISI 304
Ball Material Stainless Steel AISI 304
Body Gasket PTFE
Ball Seat R-PTFE (15%)
Connection Type Threaded
Nominal Pressure (PN) 40 bar
Max. Operating Temperature -25/+180°C

- THREADED: 1/2"all sizes available in between 4"

Stainless Steel AISI 316 Stainless Steel AISI 316 PTFE R-PTFE (15%)

PTFE R-PTFE (15%) Threaded 40 bar -25/+180°C

#### BALL VALVES WITH MOUNTING PAD ► V-3FP



Body Material Stainless Ste Ball Material Stainless Ste Body Gasket PTFE Ball Seat R-PTFE (15% Connection Type Flanged Nominal Pressure (PN) 40 bar Max. Operating Temperature -25/+180°C

 Stainless Steel AISI 304
 Stainless Steel AISI 316

 Stainless Steel AISI 304
 Stainless Steel AISI 316

 PTFE
 PTFE

 R-PTFE (15%)
 R-PTFE (15%)

 Flanged
 Flanged

 40 bar
 40 bar

 -25/+180°C
 -25/+180°C

-FLANGED: DN15 all sizes available in between DN100

#### BRASS VALVES FOR WATER► SK-120



Body Material Brass Ms58
Ball Material Ni Coated Brass
Gasket EPDM
Hand Lever St 37
Connection Type Threaded
Nominal Pressure(PN) 16 bar
Max. Operating Temperature 120°C

-THREADED: 1/2" all sizes available in between 2"

#### MONOBLOCK VALVES FOR NATURAL GAS▶ MBK-50



Body Material Carbon Steel
Ball Material Stainless Steel AISI 304
Ball Seat PTFE
Gasket NBR

Gasket NBR
Connection Type Flanged
Nominal Pressure (PN) 40 bar
Max. Operating Temperature -40/+60°C

-FLANGED: DN15 all sizes available in between DN100

#### MONOBLOCK VALVES FOR WATER► MBK-40



Body Material Carbon Steel
Ball Material Stainless Steel AISI 304
Ball Seat PTFE
Gasket EPDM
Connection Type Flanged
Nominal Pressure (PN) 40 bar
Max. Operating Temperature -40/+110°C

-FLANGED: DN15 all sizes available in between DN100

#### MONOBLOCK VALVES FOR LIQUIDS ► MBK-45



Body Material Carbon Steel
Ball Material Stainless Steel AISI 304
Ball Seat PTFE

Gasket EPDM
Connection Type Flanged
Nominal Pressure (PN) 40 bar
Max. Operating Temperature -40/+110°C

-FLANGED: DN15 all sizes available in between DN100

#### **FULL BORE BALL VALVE TGV-10**



Body and Cover Material
Ball Material
Ball Seat
Gasket
Connection Type
Nominal Pressure (PN)
Max. Operating Temperature

Cast Iron GG-25
Stainless Steel
R-PTFE (15%)
FIER
Flanged
Not bar
16 bar
120°C

DN15 all sizes available in between DN200

#### **FULL BORE BALL VALVE** ► **TGV-20**



Body and Cover Material Cast Iron GG-25
Ball Material Stainless Steel
Ball Seat R-PTFE (15%)
Gasket PTFE
Connection Type Flanged
Nominal Pressure (PN) 6/10/16 bar
Max. Operating Temperature 120°C

DN40 all sizes available in between DN300

#### WAFER TYPE BUTTERFLY VALVES ► KV-3



Body Material Liner Material Cast Iron GG-25 **EPDM** Stainless Steel AISI 316 Stainless Steel AISI 416 Disc Material Shaft Material Connection Type Flanged (Wafer Type) Nominal Pressure (PN)
Max. Operating Temperature 10/16 bar

DN25 all sizes available in between DN300 for PN16 DN350 all sizes available in between DN600 for PN10 (comes with worm gear)

#### LUG TYPE BUTTERFLY VALVES▶ KV-4



**Body Material** Cast Iron GG-25 Liner Material EPDM

Stainless Steel AISI 316 Stainless Steel AISI 416 Disc Material Shaft Material Connection Type Nominal Pressure (PN) Flanged (Lug Type) 10/16 bar Max. Operating Temperature 110°C

DN25 all sizes available in between DN300 for PN16 DN350 all sizes available in between DN600 for PN10 (comes with worm gear)

#### WAFER TYPE BUTTERFLY VALVES ► KV-7



Body Material Cast Iron GG-25 Liner Material FPDM Disc Material Ni Coated Ductile Iron GGG 40.3 Shaft Material Connection Type Stainless Steel AISI 416 Flanged (Wafer Type) Nominal Pressure (PN) Max. Operating Temperature 10/16 bar 110°C

DN25 all sizes available in between DN300 for PN16 DN350 all sizes available in between DN600 for PN10 (comes with worm gear)

#### LUG TYPE BUTTERFLY VALVES ► KV-8



Body Material Cast Iron GG-25 Liner Material Disc Material EPDM Ni Coated Ductile Iron GGG 40.3

Shaft Material Stainless Steel AISI 416 Connection Type Flanged (Lug Type) Nominal Pressure (PN) Max. Operating Temperature 110°C

DN25 all sizes available in between DN300 for PN16 DN350 all sizes available in between DN600 for PN10 (comes with worm gear)

#### WAFER TYPE BUTTERFLY VALVES FOR NATURAL GAS▶ KV-9



Body Material Ductile Iron GGG 40.3 Liner Material NBR Disc Material Ni Coated Ductile Iron GGG 40.3

Stainless Steel AISI 416 Flanged (Wafer Type) Shaft Material Connection Type Nominal Pressure (PN) 10/16 bar Max. Operating Temperature 80°C

DN25 all sizes available in between DN300 for PN16 DN350 all sizes available in between DN600 for PN10 (comes with worm gear)

#### WAFER TYPE BUTTERFLY VALVES FOR NATURAL GAS▶ KV-10



Body Material Ductile Iron GGG 40.3
Liner Material NBR
Disc Material Ni Coated Ductile Iron GGG 40.3
Shaft Material Stainless Steel AISI 416
Connection Type Flanged (Lug Type)
Nominal Pressure (PN) 10/16 bar
Max. Operating Temperature 80°C

DN25 all sizes available in between DN300 for PN16 DN350 all sizes available in between DN600 for PN10 (comes with worm gear)

#### WAFER TYPE BUTTERFLY VALVES ► KV-1



Body Material Cast Iron GG-25
Gasket Material PTFE
Disc Material Ni Coated Ductile Iron GGG 40.3
Shaft Material Stainless Steel AISI 416
Connection Type Flanged (Wafer Type)
Max. Operating Temperature 180°C

#### WAFER TYPE BUTTERFLY VALVES ► KV-15



Body Material Ductile Iron GGG 40,3
Gasket Material EPDM
Disc Material Aluminium Bronze
Shaff Material Stainless Steel AISI 416
Connection Type
Max. Operating Temperature 110°C

#### **LUG TYPE BUTTERFLY VALVES** ► KV-16



Body Material Ductile Iron GGG 40.3
Gasket Material EPDM
Disc Material Aluminium Bronze
Shaff Material Stainless Steel AISI 416
Connection Type Hanged (Wafer Type)
Max. Operating Temperature 110°C

#### STRAINERS ► PTY-30



Body Material Ductile Iron GGG 40
Gasket Graphite+Acanthopore Plate
Strainer Stainless Steel AISI 304
Filter Stainless Steel AISI 304
Connection Type Flanged
Nominal Pressure (PN) 16 bar 10 bar

Nominal Pressure (PN) 16 bar 10 bar Max. Operating Temperature 120°C 300°C

DN15 all sizes available in between DN400

#### **YS-600 BRASS STRAINER**



Body Material Brass Ms58
Cover Brass Ms58
Gasket Klingerit
Filter Stainless Steel AISI 304
Connection Type Threaded
Nominal Pressure (PN) 16 bar
Max. Operating Temperature 110°C

1/2" all sizes available in between 2"

#### **YS-800 FOR LIQUIDS STRAINER**



Body Material Stainless Steel AISI 304 Screen Cap Stainless Steel AISI 304 Stainless Steel AISI 304 Gasket PTFE Connection Type Threaded Nominal Pressure (PN) 40 bar

-25/+180°C

1/2" all sizes available in between 2'

Stainless Steel AISI 316 Stainless Steel AISI 316 Stainless Steel AISI 316 PTFE Threaded 40 bar

-25/+180°C

Max. Operating Temperature

#### DYNAMIC BALANCE VALVES▶ DBV-30



Brass Ms58 Body Material Disc Stainless Steel Diaphragm Connection Type EPDM Threaded Nominal Pressure (PN)
Max. Operating Temperature 16 bar 120°C

1/2" all sizes available in between 2'

#### **ASPEN AEROGELS VALVE JACKETS**



Fabric Material Glass Fiber Sewing Thread Flange Ropes Glass Fiber

Insulation Material Pyrogel XT/XTF (0.021 W/mK) Cryogel X201 (0.015 W/mK) 5mm-10mm (Optional) Insulation Thickness 650 °C (Pyrogel XT/XTF) -270 °C (Cryogel X201) Max. Operating Temp. Min. Operating Temp.

DN15 all sizes available in between DN150

#### AYVAZ STATIC BALANCE VALVES ► BVD-16



Body Bronze Cover Brass Disc Disc Gasket Brass PTFE Shaft Brass Gasket **EPDM** Threaded Nominal Pressure (PN)
Max. Operating Temperature 25 bar

1/2" all sizes available in between 2"

#### AYVAZ STATIC BALANCE VALVES► BVF-16



Body and Cover Disc Cover Shaft Cast Iron GG-25 Cast Iron GG-25 Brass FPDM

Gasket Connection Type Flanged (Flanges drilled according to EN 1092-2)

Nominal Pressure (PN)
Max. Operating Temperature 16 bar +120°C

DN65 all sizes available in between DN300

#### MANOMETER VALVES► MV-330



Body and Cover
Shaft
Stainless Steel 1.4104
Valve
Stainless Steel 1.4104
Seat
Connection Type
Nominal Pressure (PN)
Max. Operating Temperature

Brass
Steel 1.4104
Stainless Steel 1.4104
Threaded 1/2"

25 bar
Max. Operating Temperature

#### MANOMETER VALVES ► MV-416



Body and Cover
Shaft
Stainless Steel 1.4104
Valve
Stainless Steel 1.4104
Seat
Connection Type
Nominal Pressure (PN)
Max. Operating Temperature

Brass
Stainless Steel 1.4104
Threaded 1/2"
Naminal Pressure (PN)
25 bar
200°C

#### MANOMETER VALVES► MV-417



Body and Cover
Shaft
Stainless Steel 1.4104
Valve and seat
Sealing
Connection Type
Nominal Pressure (PN)
Max. Operating Temperature

Brass
Stainless Steel 1.4104
PTFE
Threaded 1/2"
25 bar
Max. Operating Temperature
200°C

#### **BRASS SAFETY VALVES** ► SV-254



Body
Seat
Connection Type
Connection Type
Adjustable Pressure
Max. Operating Pressure
Max. Operating Temperature
130°C
Brass
Brass
EPDM
Threaded
1-10 bar
16 bar
Max. Operating Temperature

1/2" all sizes available in between 2"

#### PRESSURE REDUCING VALVE



Body Ni Coated Brass
Gasket EPDM
Connection Type Threaded
Adjustable Pressure 0-6 bar
Nominal Pressure 16 bar
Max. Operating Temperature 90°C

1/2" all sizes available in between 2"

#### **BRASS GATE VALVE**



 Body
 Brass

 Seat
 EPDM

 Connection Type
 Threaded

 Max. Operating Pressure
 16 bar

 Max. Operating Temperature
 120°C

1/2" all sizes available in between 2"

#### BRONZE VALVES▶ BRONZE GLOBE VALVE



Bronze CC491K Bronze CC491K DZR Brass CW602N Stem Packing Nut Brass CW617N Packing PTFF Stem Bush DZR Brass CW602N Bronze CC491K Threaded Disc Connection Type Nominal Pressure (PN) 20 bar Max. Operating Temperature 170°C

1/2" all sizes available in between 4"

#### BRONZE VALVES▶ BRONZE GATE VALVE



Body Bronze CC491K Bronze CC491K DZR Brass CW602N Bonnet Stem Packing Nut Brass CW614N Packing PTFE Clamping Ring Brass CW614N Disc Bronze CC491K Connection Type Threaded Nominal Pressure (PN)
Max. Operating Temperature 20 bar 170°C

1/2" all sizes available in between 4"

#### BRONZE VALVES▶ BRONZE BALL VALVE



Bronze CC491K Body Seat Retainer Bronze CC491K Ball Brass CW617N Seat PTFE Stem DZR Brass CW602N PTFE Packing Brass CW617N Gland Nut Connection Type Nominal Pressure (PN) Threaded 20 bar Max. Operating Temperature 170°C

1/2" all sizes available in between 2'

#### BRONZE VALVES▶ BRONZE CHECK VALVE



Body
Cap
Bronze CC491K
Disc
Bronze CC491K
Hinge
Brass CW617N
Hinge Pin
Stainless Steel 2Cr13
Hinge Nut
Connection Type
Nominal Pressure (PN)
Max. Operating Temperature
Bronze CC491K
Br

1/2" all sizes available in between 2

#### BRONZE VALVES ► BRONZE STRAINER



Body Bronze CC491K
Cap Bronze CC491K
Screen Stainless Steel AISI 304
Gasket PTFE
Connection Type Threaded
Nominal Pressure (PN) 20 bar
Max. Operating Temperature 170°C

1/2" all sizes available in between 2"

#### BELLOW VALVES► MK-16



Grey Cast Iron EN-GJL-250 Nodular Cast Iron EN-GJS-400 Cast Steel Body Seat Ring X12Cr13 X12Cr13 X12Cr13 X12Cr13 X20Cr13 1 4021 Disc X6CrNiTi-18-10 Bellow X6CrNiMoTi-17-12-2 X6CrNiMoTi-17-12-2 Flanged 300 °C Flanged 350 °C Flanged 400 °C Connection Max. Temperature Max. Pressure 16 bar 25 bar 40 bar DN 15-250 DN 15-200 DN 15-150 Nominal Diameter

Tests acc. EN - 12266 - 1 Flanges drilled according to EN 1092-2 for body material A, C Flanges drilled according to EN 1092-1 for body material F Face-to-face dimension according to EN 558-1 series 1

#### BRONZE SAFETY VALVES▶ L9-LB



Cast Bronze Body Seat Disc Forge Brass Forge Brass Spring Steel Brass Sleeve Operating Pressure 2.1-10 kgf/cm2 - 45 °C / 185 °C Operating Temperature

1/2" all sizes available in between 2

#### STAINLESS STEEL SAFETY VALVES ► L9-LS



Stainless Steel CF8 Body Seat Stainless Steel 304 or CF8 Disc Spring Stainless Steel 304 or CF8 Stainless Steel 304 Sleeve Stainless Steel 304

0,3-2 kgf/cm2 - 2,1-10 kgf/cm2 - 11-20 kgf/cm2 - 196 °C / 290 °C Operating Pressure
Operating Temperature

1/2" - 3/4" Angled and straight types are available

#### **KNIFE GATE VALVE BV-16**



O-Ring FPDM Sealing Graphite Stem Sealing Ring A182 F304 GGG-40 Seat Ring EPDM SS304 Knife Body

DN50 all sizes available in between DN400

#### **WORM GEAR**



Body Material Connection Type

Epoxy coated Ductile Iron GGG 40.3 DN40-600 Threaded ISO 5211 -20/+70°C Max. Operating Temperature

#### **DOUBLE ACTING PNEUMATIC ACTUATOR**



Body Material Pistons Shaft Material Tightness Component Valve Connection Connection Type

Max. Operating Temperature

Epoxy Coated Aluminium Injection Aluminium Cast Cadmium Coated Steel Nitrile Rubber Standard Threaded ISO 5211 -20/+80°C

#### **ELECTRIC ACTUATORS**





Body Cover Axis Connection Nominal Diameters Max. Operating Temp. UMA 3.5 Plastic AA 66 Plastic AA 66 Chrome Steel Threaded DN40-600 -20/+70°C

UMC 10 Plastic AA 66 Plastic AA 66 Chrome Steel Threaded DN40-600 -20/+70°C

**Aluminium TYPE** Aluminium Steel Bronze Alloy Threaded DN40-600 -20/+70°C

1/2" all sizes available in between 2"





#### **BALANCE VALVES**

#### **VIR VODRV 9505 STATIC BALANCE VALVE**

#### **APPLICATION AREAS**

Heating-cooling lines Industrial plumbing Mechanical building installations Air conditioning plumbing Hot and cold water pipelines













| PRODUCT FEATURES           |          |  |
|----------------------------|----------|--|
| Body                       | Bronze   |  |
| Cover                      | Brass    |  |
| Disc                       | Brass    |  |
| Disc Gasket                | PTFE     |  |
| Shaft                      | Brass    |  |
| Gasket                     | EPDM     |  |
| Connection Type            | Threaded |  |
| Nominal Pressure (PN)      | 25 bar   |  |
| Max. Operating Temperature | +130°C   |  |





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Threaded (inch)

1/2"
all sizes available in between
2"

#### **BALANCE VALVES**

#### **VIR VODRV 9555 STATIC BALANCE VALVE**

#### **APPLICATION AREAS**

Heating-cooling lines Industrial plumbing Mechanical building installations Air conditioning plumbing Hot and cold water pipelines













| PRODUCT FEATURES           |                 |  |
|----------------------------|-----------------|--|
| Body and Cover             | Cast Iron GG-25 |  |
| Disc Cover                 | Cast Iron GG-25 |  |
| Shaft                      | Brass           |  |
| Gasket                     | EPDM            |  |
| Connection Type            | Flanged         |  |
| Nominal Pressure (PN)      | 16 bar          |  |
| Max. Operating Temperature | +130°C          |  |







FLANGED (DN)

DN65

all sizes available in between DN300



# DINAMIK BALANS VANALARI DYNAMIC BALANCE VALVES









AYVAZ DİNAMİK BALANS VANALARI DBV - 40

AYVAZ DYNAMIC BALANCE VALVES DBV-40

Ayvaz DBV-40 dinamik balans vanası, özellikle ısıtma, soğutma sistemlerinde, endüstriyel tesisatlar, bina mekanik tesisatları, iklimlendirme tesisatlarının debilerinin sabit tutulması gibi uygulamalar için dizayn edilmiştir.

Ayvaz DBV-40 is designed especially for the applications of heating, cooling system, industrial installations, building mechanic installations and enable to fix the flow of air conditioning system.

Kartuşlar vasıtasıyla hatta seçilen debiyi otomatik olarak sağlar. Ayvaz DBV-40 basınç dalgalanmaları altında dahi sistemde seçilen debi' nin sabit seviyede kalmasını sağlar.

It provides the selected flow on the line automatically by way of cartridge. Ayvaz DBV-40 provides to remain the selected flow in stable level in system even under 40 pressure fluctuation.

#### Özellikler:

- Debisi ayarlı paslanmaz çelik kartuşlar.
- Sistemde istenilen debi değerleri otomatik olarak sağlanır.
- DBV-40'tan önce veya sonra bir boru uzunluğuna ihtiyaç yoktur.
- Sistemin ayarlanması için gerekli olan tüketime ihtiyaç yoktur.
- DBV-40 balans vanaları DN65-DN250 ölçü aralığında üretilirler.

#### **Features**

- Stainless steel cartridges with adjusted flow
- Required flow value is provided automatically in system
- There is no required length for pipe before and after DBV-40
- There is no need any consumption for system adjustment
- DBV-40 balance valves is produced from DN65 to DN250.







**DBV-30** 

#### OTOMATİK AKIŞ KONTROL VANASI AUTOMATIC FLOW CONTROL VALVE

Çap / *Diameter* : (1/2") - (2")

Akışkan / Fluid : Soğuk su / sıcak su / Cold water/Hot water

Çalışma Basıncı Aralığı / Working Pressure Range : 0,5 - 3
Maks. Çalışma Sıcaklığı / Max. Working Temperature 120° C
Montaj Şekli / Mounting : Dişli / Threaded
Gövde / Body : Pirinc / Brass

Disk / Disc : Paslanmaz Celik / Stainless Steel

Diyafram / Diaphgram : EPDM

Otomatik akış kontrol vanaları, kullanıldıkları sistemlerde istenilen akış miktarını (debiyi) otomatik olarak dengelemektedir. Değişken debili sistemlerde gidiş ve dönüş hatlarında oluşan fark basıncını koruyarak otomatik olarak akışı sağlarlar. Basit bir çalışma mantığı ve yapısı olan bu vanalar, sisteme beraberinde çok büyük kolaylıklar getirmektedir. Yapılarındaki diyafram ve kontrol yayı sayesinde basınç farkı esasına göre, dengeli bir akış sağlamaktadırlar. Basınç farkını algılayarak, istenen akışı ayarlamaları, çalışma anında sistemden kaynaklanan partikül, tortu vb. dezavantajları tolere edebilmeleri ve güvenli bir akış sağlamaları sebebi ile tercih edilirler. Ayrıca sistemdeki eklemelerden ve çıkartmalardan kaynaklanan basınç farkını algılayarak, herhangi bir ayar gerektirmeksizin otomatik olarak yeni sisteme adaptasyon sağlaması en büyük tercih sebeplerindendir.

Automatic control valves, stabilize automatically the reqired flow amount in used systems. Provides automatic flow by keeping the pressure that formed on going and returning lines in unsteady systems. Having simple working and its structure these valves bring huge facilities to system. Provides a balanced flow by way of its diaphrgam and control spring. Bringing some easiness to systems such as required pressure set adjustments with detecting the difference pressures, enabling to tolerate disadvantages of particle, residue etc. that originited in system made them to be preferable and moreover detecting the pressure difference that originited in additions and removals at system, automatic adaptation to system without any extra adjusment is the most preferable reason of it.

#### AYVAZ DİNAMİK BALANS VANALARININ AVANTAJLARI

- AYVAZ DİNAMİK BALANS VANALARI, OTOMATİK DENGELEME ESASINA GÖRE ÇALISMAKTADIR.
- YAYLI TİP BALANS VANALARI, AKIŞ VE BASINCI OTOMATİK OLARAK KONTROL EDER.
- YAPILARINDAKİ DİYAFRAM VE BASINÇ KONTROL YAYI SAYESİNDE, STANDART KARTUŞ TİPİ BALANS VANALARINA ORANLA AKIŞ HATA PAYINI MİNİMİZE EDER.
- AKIŞ DEĞİŞİKLİĞİ AYARI KOLAYCA YAPILABİLMEKTEDİR.
- UYGUN TASARIMLARI NEDENİ İLE SES VE TİTREŞİM ABSORBSİYONLARI YÜKSEKTİR.
- SİSTEMDE SÜREKLİ AKISIN OLMASINDAN DOLAYI, TORTU VE PİSLİK OLUŞUMU AZDIR.
- KOLAYLIKLA SÖKÜLÜP TEMİZLENEBİLMEKTEDİR.

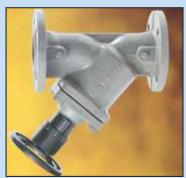
#### ADVANTAGES OF AYVAZ DYNAMIC BALANCE VALVES

- AYVAZ DYNAMIC VALVES WORK ACCORDING TO AUTOMATIC BALANCED BASE.
- SPRING TYPE BALANCE VALVES AUTOMATICALLY CONTROL THE FLOW AND PRESSURE.
- MINIMIZE THE FLOW ERROR MARGIN BY WAY OF HAVING STRUCTURE OF ITS DIAPGHRAM AND PRESSURE CONTROL SPRING AS COMPARED WITH STANDART CARTRIDGE TYPE BALANCE VALVES.
- FLOWCHANGES SET CAN BE MADE EASILY.
- DUE TO APPLICABLE DESIGN, SOUND AND VIBRATION ABSORPTIONS IS HIGH.
- SINCE THERE IS A CONSTANT FLOW IN SYSTEM, RESIDUE AND DIRTINESS.
- FORMATION IS VERY LOW. EASILY DISMANTLING TO BE CLEANED.



## VIR STATIK BALANS VANASI VIR STATIC BALANCE VALVES











## HIDROLIK DENGELEME / HYDRAULIC BALANCE



DRV



VODRV



DRV

Dağıtım kanallarının neredeyse tümünde, her bir kullanıcıya istenen akış miktarının ulaştırılması sağlanmaya çalışılır ve bu sırada sık sık zorluklarla karşılaşılır. Bunların başlıca nedeni, sistemdeki her bir branşman hattının farklı direnç seviyesinde olmasıdır.

Kullanıcılara giden yetersiz akış debisi, sistemin düzgün çalışmamasına neden olmaktadır. Örneğin ısıtma ve havalandırma sistemlerinde bölgeler arasında 5-6 derece sıcaklık farkları oluşmaktadır.

Yetersiz akış debisi, tüketim miktarında artış, sistem elemanlarında erken yıpranma (örneğin pompalar) ve istenmeyen gürültülerin oluşmasına neden olmaktadır. VIR Balans vanaları kullanıldığında, akış debileri dengelenmekte ve bu sayede sistemin düzenli çalışmasını sağlamak için gerekli işletme değerleri sağlanmış olmaktadır.

Çalışan bir sistemde, vananın gövdesindeki pizometrik kafalar uygun aletlerle birlikte kullanıldığında akış debisinin kontrolü yapılabilmektedir.

 $oldsymbol{R}$ equired flow proportions to every user is tried to providing to be transmitted to almost entire delivery channels and at the same time get into difficulty often. The main reason of these, every branches lines at system has different resistance level. Inadequate flow debit that goes users cause not to working properly of system. For instance, in inter-zone at heating and air conditioning systems formed 5-6 degree temperature differences. Inadequate flow debit cause increasing consumption proportion, early abrasion of system elements (For instance pumps) and unwanted noise. When using the VIR Balance Valves, flow debit is balanced and by this means required operation value is provided in order to assure to operate system properly. Control of flow debit can be made in case using piezometric head of valve's body with proper tools at a working system.



#### **OPSIYONLAR** / **OPTIONS**







95VR001 / 95VR001 ALLEN ANAHTARI / ALLEN SCREW

1/2"den-2" e kadar ön ayar için / For preset from





95TP 1 kırmızı / *95TP 1 red* 95TP 2 mavi / 95TP 2 blue

BASINÇ TEST NOKTALARI / PRESSURE TEST POINTS





MANOMETRE / MANOMETER

95MM001 - radyal 1/4" / 95MM001-radyal 95MM002 - eksenel 1/4" / 95MM002-axial

34Q / 34Q **BOSALTMA VANASI 1/4"/ EMPTYING VALVE** 

dişli bağlantı / threaded connection



95DPM / 95DPM

**DIJITAL MANOMETRE / DIGITAL MANOMETER** 

95MS / *95MS* ÖLÇÜM İSTASYONU / **MEASURE STATION** 1/2" 'den 2" 'e kadar / metinover





# FIRE PROTECTION PRODUCTS





#### FIRE PROTECTION PRODUCTS

#### ANGULAR EXPANSION JOINTS ► GIMBAL TYPE SEISMIC EXPANSION JOINTS





Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Flange Material Intermediate Pipe Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) DN15 (1/2") - DN4000 (160") 175 psi -80°C/+600°C Fixed Flanged, Welded Ended, Grooved Carbon Steel St. 37.2 as standard\* Carbon Steel St. 37.2 as standard\*

#### BRAIDED LOOP JOINTS▶ FIRE PROTECTION EXPANSION JOINTS





Bellow Material
Braiding Material
Nominal Diameter
Operating Pressure
Operating Temperature
Connection Types
Fittings Materials
Elbow and Turn Material
Connection Material

Stainless Steel AISI 316L / AISI 321 Stainless Steel AISI 304 DN15 (1/2") - DN300 (12") 175 / 250 psi -80°C/+600°C Flange, Welded ends, Grooved Carbon Steel St. 37.2\* Carbon Steel St. 37.2\*

#### FIRE PROTECTION HOSES▶ SPRINKLER CONNECTION HOSES









#### FM, VdS Approved, UL Type

Hose Type Hose Material Braiding Material Fittings Types Fittings Materials Min. Bending Radius Standard corrugated metal hose Stainless Steel AISI 316L Stainless Steel AISI 304 Male-Internal threaded pipe Carbon Steel St. 37.2/Stainless Steel 200mm

| Conn. Size       | Hose Dia. |
|------------------|-----------|
| 1" x 1/2" - 3/4" | DN20      |
| 1" - 1/2"        | DN25      |

#### FIRE PROTECTION VALVES▶ NRS GATE VALVE (DIN EN 1171)







EN-GJS-450-10 Body Stem SS 420 EN-GJS-450-10 + EPDM Disc O-Ring NBR (EPDM Optional) Flange-Flange, Flange-Grooved, Grooved-Grooved DIN EN 1092-2:1997 Connection Flange Grooved Ends ISO 6182 Max. Operating Temp. 80°C Max. Operating Pressure PN 10/16 Fusion Bonded Epoxy coating in accordance with ANSI/AWWA C550 Coating

DN 40 (1½") - DN 400 (16")

#### FIRE PROTECTION VALVES▶ OS&Y GATE VALVE (DIN EN 1171)











Body
Stem
Disc
O-Ring
Connection
Flange
Grooved Ends
Max. Operating Temp.
Max. Operating Pressure
Coating
Sizes

Sizes

EN-GJS-450-10
SS 420
EN-GJS-450-10 + EPDM
NBR (EPDM Optional)
Flange-Flange, Flange-Grooved, Grooved-Grooved
DIN EN 1092-2:1997
ISO 6182
80 °C
PN 10/16
Fusion Bonded Epoxy coating in accordance with ANSI/AWWA C550

DN 50 (2") - DN 300 (12")

#### FIRE PROTECTION VALVES ► Y-TYPE STRAINER



Body EN-GJS-450-10 Screen SS 304 Perfored, (Perfored double screen in SS 304 and SS 316 available)

Gasket EPDM, (Graphite + Acanthopore plate available) Bonnet EN-GJS-450-10 Connection

Flanged, DIN EN 1092-2:1997 80 °C (Rubber Gasket) Max. Operating Temp. 350 °C (Graphite gasket)

PN 10/16 Max. Operating Pressure

Coating Fusion Bonded Epoxy coating in accordance with ANSI/AWWA C550 DN 40 ( $1\frac{1}{2}$ ") - DN 400 (16") Sizes

#### FIRE PROTECTION VALVES▶ SWING CHECK VALVE DIN EN 12334





Body FN-GJS-450-10 EN-GJS-450-10 + EPDM Disc Washer SS 420

Seat Ring Brass Hpb 59-1 Pressed fit, (Pressed fit or threaded SS 304 or 316 availbale) Flanged, DIN EN 1092-2:1997 80 °C (Rubber Gasket) Connection Max. Operating Temp.

350°C (Graphite gasket) Max. Operating Pressure PN 10/16

Fusion Bonded Epoxy coating in accordance with ANSI/AWWA C550 Coating Sizes DN 40 (11/2") - DN 400 (16")

#### FIRE PROTECTION VALVES▶ BRONZE BUTTERFLY VALVES







ASTM B-505 or SUS 304 Body ASTM B-584 EPDM Encapsulated ASTM A-564 Type XM 12 Disc Upper and Lower Stem O-Rings (All) EPDM Grade E Connection Threaded, BT Max. Operating Temp. 120 °C Max. Operating Pressure 175 Psi DN 25 (1") - DN 65 (21/2") Sizes

#### FIRE PROTECTION VALVES▶ GROOVED BUTTERFLY VALVES







Body ASTM A-536 Nylon-11 or Fpoxy coated ASTM A-536 EPDM Encapsulated Disc Upper and Lower Stem Worm Gear Shaft SS, AISI 420 SS, AISI 410 Connection HPG Grooved End 120 °C Max. Operating Temp. Max. Operating Pressure DN 65 (2½") - DN 300 (12")

#### FIRE PROTECTION VALVES ► WAFER TYPE BUTTERFLY VALVES

Sizes







Body ASTM A-536 Nylon-11 or Epoxy coated with EPDM Gasket ASTM A-536 EPDM Encapsulated Disc Upper and Lower Stem Worm Gear Shaft SS, AISI 420 SS. AISI 410 Wafer 120 °C Connection Max. Operating Temp.

Max. Operating Pressure 300 Psi DN 65 (2½") - DN 200 (8") Sizes

#### FIRE PROTECTION VALVES▶ GROOVED CHECK VALVES







Ductile Iron conforming to ASTM A536, Epoxy coated 2"-5" Type 304 or 302 Stainess Steel acc to ASTM A167 Body Clapper

6"-8" Ductile Iron conforming to ASTM A536 Grade 65-45-12 Seat Ring SS. AISI 304 Type 302 stainless steel to ASTM A 269 Spring Connection Grooved End Max. Operating Temp. 120 °C Max. Operating Pressure 300 Psi

DN 50 (2") - DN 200 (8")

#### FIRE PROTECTION PRODUCTS

#### FIRE PROTECTION VALVES▶ WET ALARM VALVE & SYSTEM







Body (Wet alarm Valve) Seat (Wet alarm Valve) Clapper Bush (Wet alarm Valve) Connection Max. Operating Pressure

Sizes

System Components

Ductile Iron Bronze Brass

Flange-Flange, Flange-Grooved, Grooved-Grooved

DN 80 (3") - DN 200 (8")

Wet Alarm valve Pressure Switch Retarding Chamber Trim Set Sprinkler Alarm

#### FIRE PROTECTION VALVES▶ CLA-VAL PRESSURE RELIEF & REDUCING VALVE







Main valve body & cover Main valve internal trim Pilot control system Adjustment pressure range

Temperature Range Sizes

Flange

Ductile Iron ASTM A-536 Bronze ASTM B61 Bronze ASTM B62 with 303 Stainless Steel trim

150 class - 30-165 psi 300 class - 30-165 psi Water, to +180°F max. Globe: 3" - 8" Angle: 3" - 8"

150 and 300 ANSI B16.42

#### FIRE PROTECTION VALVES ► TEST DRAIN VALVE







Body Ball Seat Connection Max. Operating Pressure Sizes

Forged Brass Chrome Plated Teflon NPT Threaded, Female 300 Psi 1"-11/4"-1 1/2"-2"

#### FIRE PROTECTION EQUIPMENT► SPRINKLERS







Connection Dia Installation Pos. K-Factor Temperature Surface

1/2", 3/4", 1" npt 172 , 3/4", 1" npt Pendent, Upright, Sidewall 40, 80, 115, 160, 200, 242, 320, 363 57 °C, 68 °C, 74 °C, 96 °C ... 260 °C Brass, White, Chrome

#### FIRE PROTECTION EQUIPMENT ► SYSTEM SENSOR FLOW SWITCH







Sizes

Pressure Rating Accessories Minimum Flow Rate for Alarm Maximum Surge Contact Ratings

Conduit Entrances

Steel Pipe schedules 10 to 40, sizes 1" to 8" BS 1387 pipe 50mm thru 200mm Up to 450 PSI (31 bar) A Conventional Trim Trim package for use with the Model F-1 Deluge Valve. 10 GPM (38 LPM) 18 FPS (5,5 m/s) 10.0 Amps at 125/250VAC 2.5 Amps at 6/12/24VDC Resistive Two knockouts provided for 1/2" conduit

#### FIRE PROTECTION EQUIPMENT► 100 TONG GROOVED PIPING PRODUCTS

Body Gasket Bolt and Nuts Temperature Range GGG 40.3 Ductile Iron EPDM (Standard) Galvanized Carbon Steel -50/+150 °C



**CONCENTRIC REDUCERS** 

RIGID COUPLINGS











**FLEXIBLE COUPLINGS** 



**U-BOLTS** 

**GROOVED FLANGES** 

REDUCING COUPLINGS







**FLANGE ADAPTERS** 



**ELBOWS** 



GROOVED MECHANICAL T



THERADED
MECHANICAL T



| Gasket Material | Temperature    | Application Areas  |
|-----------------|----------------|--|
| EPDM            | -34 °C +150 °C | Cold and hot water, non-oil gas, diluted acid, alcaline salt   |
| Silicon         | -40 °C +177 °C | Drinking water, hot water, high-temperature air and some high-temperature chemicals                        |
| Nitrile         | -29 °C +82 °C  | Oil, oil-gas, mineral oil, vegetable oil, hot water, water with temperature of not than 65°C are forbidden |

#### FIRE PROTECTION EQUIPMENT► FIRE HYDRANTS







Body & Elbow Stem Gasket Size Pressure Class

Cast Iron GG-25 Stainless Steel EPDM DN 100 PN 16



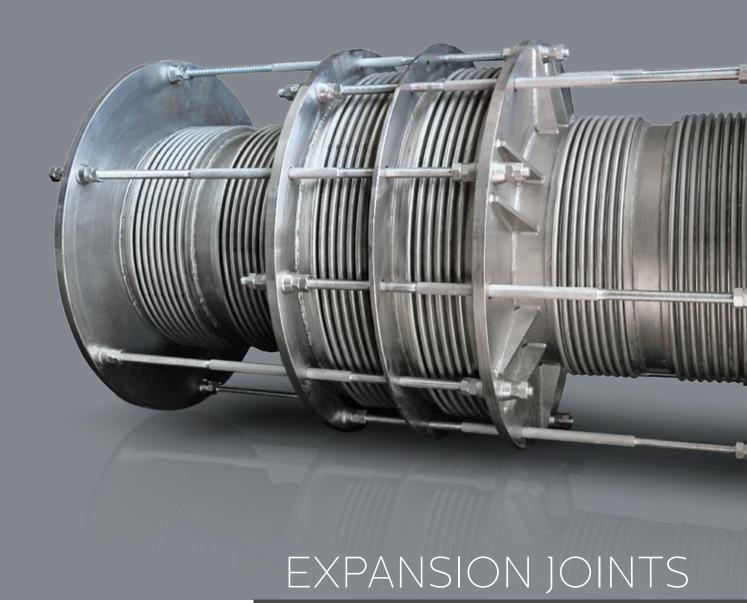
#### FIRE HOSE VALVES

Body Size Accessories Brass 2½" NPT, threaded Storz Coupling (1)

STORZ COUPLINGS







for **POWER GENERATION & ENERGY** 







# PRESSURE BALANCED EXPANSION JOINTS

### FOR GEOTHERMAL ENERGY

Ayvaz uses its extensive experience in producing expansion joints for Geothermal power generation piping systems with a remarkably impressive reference list.

#### **GEOTHERMAL POWER**

One common feature of most of power generation systems is to convert heat to electricity. In geothermal power plants, heat is provided by Earth (Geo) Energy is accessed by drilling water or steam wells by very similar method used for drilling for crude oil.

Geothermal power plants have similar components which are already used for traditional power generation systems likewise turbines, generators, transformers and other equipment.

### PRESSURE BALANCED EXPANSION JOINTS

- Bellows design for Isopentane vapour
- · High pressure&full vacuum
- Combined axial and lateral movements



#### PRESSURE BALANCED EXPANSION JOINTS FOR GEOTHERMAL ENERGY

#### BENEFIT

A pressure balanced expansion joint is used to accommodate and counteract the bellows pressure thrust. An additional bellows joins to the construction to incorporate into the unit and is subject to the line pressure to generate a force equal and opposite to that on the main bellows. Connecting all these bellows together neutralizes the pressure load on the construction.

Pressure balanced expansion joints are generally installed at changes of direction in piping (elbow type) but inline types are also available.

Use of pressure balanced expansion joints helps the piping designers not to create main anchors to accommodate combined movements at the direction changing points

Limited number of manufacturers design and manufacture pressure balanced expansion joints requires a great deal of knowledge and expertise.

Ayvaz is a member of this exclusive group.





#### **DIMENSIONS**

Pressure balanced expansion joints designed and manufactured by Ayvaz are units typically ranging up to DN 1000-2000, 8-10 tons in weight and up to 8 meters in length.

#### **REFERENCE PROJECTS**

Umurlu I - II - 24 MW Geothermal Power Plant

GEX 1200 – 2 x 12 MW Kemaliye Geothermal Power Plant

GEX 2500 – 25MW Ken Kipaş 2&3 Geothermal Power Plant

GEX 2400 - 24 MW Kubilay Geothermal Power Plant

GEX 1300 - 12MW Geothermal Power Plant

### The general capability range for Ayvaz expansion joints is:

- Dimension: DN 15-4000
- Bellows: Rolled, punch- and hydraulic formed bellows
- Design pressure: Up to 150 bar (depending on the diameter and temperature)
- Lifting capacity: Up to 16 ton











# AXIAL & LATERAL EXPANSION JOINTS

### FOR GAS TURBINE OUTLETS

Ayvaz produces, expansion joints with combined axial and lateral movement absorption capacity for the power conversion systems.

Ayvaz has a huge range of single and double bellowed expansion joints are to be used at the exhaust lines of the Gas turbine which are used to absorb the thermal expansion of the exhaust pipelines as a result of produced exhaust gases with high temperature and high velocity.

#### **GAS TURBINES**

The basic operation of the gas turbine is similar to that of the steam power plant except that air is used instead of water. Fresh atmospheric air flows through a compressor that brings it to higher pressure. Energy is then added by spraying fuel into the air and igniting it so the combustion generates a high-temperature flow. This high-temperature high-pressure gas enters a turbine, where it expands down to the exhaust pressure, producing a shaft work output in the process.

#### **POWERSHIPS**

Powership is the name given to a barge or ship mounted fully integrated floating power plants. They deliver fast track, utility size & grade power plants, with no completion or construction risk, ready for power supply directly into the transmission network from its onboard high-voltage substation.

#### **AYVAZ EXPANSION JOINTS**

- Bellows design for exhaust gasses
- · High temperature & high speed
- Combined axial and lateral movements

Expansion joints to be used at Gas turbine exhaust lines are completed with stainless steel internal sleeves in order to maintain service security due to high velocity of the outlet gas.

#### **Reference Projects**

2x225 MW Ghana Project 5x125 MW Indonesia Project 2x125 MW Lebanon Project 1x100 MW Zambia Project





#### **AXIAL & LATERAL EXPANSION JOINTS FOR GAS TURBINE OUTLETS**

#### DESIGN

Generally speaking pressure balanced expansion joints can be divided into 3 main categories:

#### **BELLOWS DESIGN**

Bellows of pressure balanced expansion joints are designed according to EJMA 10 code. For high pressure applications multi layered bellows (5/7 plies) with reinforcing rings.

According to the requested features like type of transported media, spring rate values (axial, lateral, angular) or operation temperature, pressure & life cycle bellows material could be customized.

#### Most commonly used bellows materials are;

\*300 Series stainless stelel (any type of general service:

H=High temperature L=Low carbon content 300, 304L, 316, 316L, 309, 310, 321

\*High Nickel Materials

Monel 400 (Sea water, high corrosive) and inconel 600 (sea water & marine) Inconel 625 LCF (low cycle fatigue): oil refineries & chemical plants in high temperature service due to high strength at high temperatures

Ayvaz cooperates only with the most qualified and experienced material providers.

#### **CONSTRUCTION**

Expansion Joints are the parts of piping system of pressurized equipment. In this respect construction of the expansion joints are designed and produced according to European pressurized equipment directive (PED 97/23/EC) as well as American National Standard for piping process ASME B 31.3.

All components of the expansion joints like, pipes, caps, flanges, tie rods etc... are checked by piping stress analyzing software thus enable us to select material type & thickness according to permissible stress values.

#### **TESTS & CERTIFICATION**

All welding operations for the construction of expansion joints are completed according to European norms. All WPS are issued acc.to EN 15609-1 All POR are issued acc. to EN 15614-1 All welder certifications are issued acc. to EN 9606-1

#### **NDT Controls**

Non-destructive testing for welding controls are completed in house by the TÜV accredited third party inspectors. Following controls and standards are applicable.

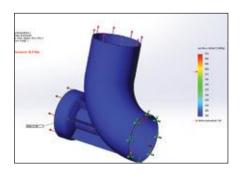
100%PT acc.to EN3452-1,EN23277 100% MT acc.to EN17638, 100%VT for Fillet welds 100%RT acc.to EN ISO 10675-1, EN 17636 100%UT acc. to EN 17640, EN 11666

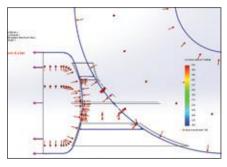
**PRESSURE TEST & LEAK** 

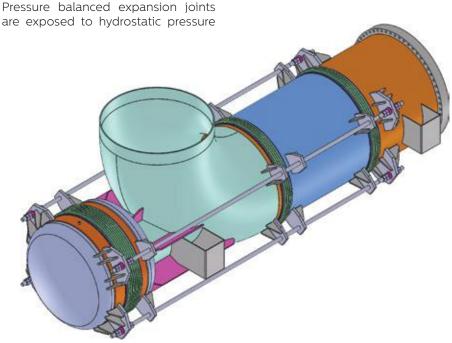
### **DETECTION**

at 1,5 times (acc.to EJMA code) or 1,43 times (acc to. PED 97/23/EC) of the design pressure.

For full vacuum applications, vacuum test at 760 Hg/mm is also applicable. Additionally, gas leakage detection with helium is advised for proper tightness.











# QUALITY & SERVICES

We are very much involved in projects, where expansion joints are a part of a critical piping systems, we are aware of the importance of the supporting documentation.

#### **QUALITY ASSURANCE**

We are very much involved in projects, where expansion joints are a part of a critical piping systems, we are aware of the importance of the supporting documentation. Thus detailed quotation, supporting calculations, extensive quality control and testing procedures will generally be a part of the project documentation.

This also includes a study of provided specifications, close dialogue with the customer, inspection of welding consumables, materials and a sub-supplies audit, test, documentation and initial inspection.

#### **DOCUMENTATION AND TESTS**

Complete traceability and welding docu mentation. Among others: WPS WPQR PQR NDT

We undertake the required tests such as: Positive material identification (PMI), radiographic examination, dye pen-etrant, magnetic particle examination, hardness testing, ultra sound, pressure testing and leak detection.

#### **SERVICE**

#### **Engineering services**

We are used working with complex specifications and advanced technical solutions and as part of our service we provide: CAD, 3D parametric design and pipe stress analysis.

#### **ON-SITE SERVICES**

Installation of expansion joints is complex and calls for experienced installers.

Therefore customers often require our assistance and advice. In addition to design and manufacture pressure balanced expansion joints in general, we have an experienced service team that assists customers on all kinds of onsite work including:

- Full installation
- Supervision of installation
- · Repair/refurbishment





# EXPANSION JOINT





#### **EXPANSION JOINTS**

#### **AXIAL EXPANSION JOINTS**



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Connection Material

Optional

Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) DN15 (1/2") - DN3800 (152") PN 2,5/6/16/25/40/64 -80°C/+600°C Fixed and Floating Flanged and Welded Ended Carbon Steel St. 37.2 as standard, The material can be customized on request Inner Sleeve Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309)

#### AXIAL EXPANSION JOINTS ► EXTERNALLY PRESSURIZED



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Flange Material

Optional

Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) DN15 (1/2") - DN3800 (152") PN 2.5/6/16/25/40/64 -80°C/+600°C Fixed and Floating Flanged and Welded Ended Carbon Steel St. 37.2 as standard, The material can be customized on request Inner Sleeve Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309)

#### AXIAL EXPANSION JOINTS ► PIPE EXPANSION JOINTS



Bellow Material Body Material Nominal Diameter Operating Pressure Operating Temperature Connection Types

Stainless Steel AISI 316L Aluminium (Opt. Stainless Steel) DN15 (1/2") - DN250 (10") PN 16 Max 100°C Threaded and Welded Ended

#### AXIAL EXPANSION JOINTS▶ VIBRATION ABSORBER



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Connection Material Tie Rod Material Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) Double Plied DN15 (1/2") - DN3800 (152") PN 2,5/6/16/25/40/64 -80°C/+600°C Fixed Flanged Carbon Steel St. 37.2 as standard\* Carbon Steel St. 37.2 as standard\*

#### AXIAL EXPANSION JOINTS▶ BRAIDED VIBRATION ABSORBER



Bellow Material Braiding Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Connection Material Stainless Steel AISI 321
Stainless Steel AISI 304
DN15 (1/2") - DN300 (12")
16 bar
-80°C/+600°C
Fixed and Floating Flanged and Welded Ended
Carbon Steel St. 37.2 as standard\*

#### LATERAL EXPANSION JOINTS▶ HINGED



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Flange Material Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) DN15 (1/2") - DN3800 (152") PN 2,5/6/16/25/40/64 -80°C/+600°C Fixed and Floating Flanged and Welded Ended Carbon Steel St. 37.2 as standard\*

#### ANGULAR EXPANSION JOINTS► HINGED



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Flange Material Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) DN15 (1/2") - DN3800 (152") PN 2,5/6/16/25/40/64 -80°C/+600°C Fixed and Floating Flanged and Welded Ended Carbon Steel St. 37.2 as standard\*

#### ANGULAR EXPANSION JOINTS ► GIMBAL TYPE SEISMIC EXPANSION JOINTS





Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Flange Material Intermediate Pipe Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) DN15 (1/2") - DN2600 (102") PN 2.5/6/16/25/40/64 -80°C/+600°C Fixed Flanged, Welded Ended, Grooved Carbon Steel St. 37.2 as standard\*, Carbon Steel St. 37.2 as standard\*

#### LATERAL EXPANSION JOINTS ▶ DILATATION EXPANSION JOINTS WITH TIE RODS



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Flange Material Tie Rod Material Intermediate Pipe Stainless Steel AISI 321 (Opt. 304, 316L, 316TI, 309) DN15 (1/2") - DN2600 (102") PN 2,5/6/16/25/40/64 -80°C/+60°C Fixed Flanged, Welded Ended, Grooved Carbon Steel St. 37.2 as standard\*, Carbon Steel St. 37.2 as standard\*, Carbon Steel St. 37.2 as standard\*,

#### BRAIDED LOOP JOINTS ► FIRE PROTECTION EXPANSION JOINTS





Bellow Material
Braiding Material
Nominal Diameter
Operating Pressure
Operating Temperature
Connection Types
Fittings Materials
Elbow and Turn Material
Connection Material

Stainless Steel AISI 316L Stainless Steel AISI 304 DN15 (1/2") - DN1250 (10") 175, 250 psi -80°C/+600°C Flange, Welded ends, Grooved Carbon Steel St. 37.2\* Carbon Steel St. 37.2\*

#### RUBBER EXPANSION JOINTS► THREADED



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Connection Material Special Synthetic Rubber DN20 (3/4") - DN100 (4") 10 bar Max, 90°C Threaded Cast Iron

#### RUBBER EXPANSION JOINTS▶ FLANGED



Bellow Material Nominal Diameter Operating Pressure Operating Temperature Connection Types Connection Material Special Synthetic Rubber DN32 (3/4") - DN400 (16") 16 bar Max. 90°C Floating Flanged Ductile Iron GGG 40.3 (Optional composite)



# LEVEL CONTROL







#### LEVEL CONTROLLERS

#### LEVEL CONTROLLERS FOR STEAM BOILERS▶ FANTINI COSMI LEVEL REGULATORS



Float

Shaft Bellow Connection Types Ductile Iron GGG 40.3 Stainless Steel AISI 316 Teflon Coated (Optional) Stainless Steel AISI 316 Stainless Steel AISI 316L Flanged and threaded

| DIMENSIONS        |    |  |
|-------------------|----|--|
| FLANGED<br>(DN)   | 25 |  |
| SCREWED<br>(inch) | 1" |  |

#### LEVEL CONTROLLERS FOR STEAM BOILERS ► ELK-4/ELK-4F



Box Panel Body Flange Electrodes Electrode Insulation Intermediate Disc Connections Max. Operating Pressure Max. Operating Temperature

Control Type

Aluminium Injection Stainless Steel 1.4517 Forged Steel 1.0460 Stainless Steel 1.4517 PTFF PTFE Flanged and threaded 32 bar 238°C

On/Off

|                | DIMENSIONS                  |                                 |
|----------------|-----------------------------|---------------------------------|
|                | (Threaded)<br>DIN ISO 228/1 | (Flanged)<br>PN 40,<br>DIN 2635 |
| Size           | 1"                          | DN50                            |
| Length<br>(mm) | 500<br>1000<br>1500         | 436<br>936<br>1436              |

#### LEVEL CONTROLLERS FOR STEAM BOILERS ► KP-01 CAPACITIVE LEVEL ELECTRODE



Body Box Panel Flange Electrodes Electrode Insulation Intermediate Disc Connections Analog Output Max. Operating Pressure Max. Operating Temperature Stainless Steel 1.4517 Aluminium Injection Forged Steel 1.0460 Stainless Steel 1.4517 PTFF PTFE Flanged and threaded 4-20 mA or (0-10V) 32 bar 238°C

Cast Iron GG-25

|                | DIMENSIONS                       |  |
|----------------|----------------------------------|--|
|                | KP01 (Threaded)<br>DIN ISO 228/1 | KP01-F<br>(Flanged)<br>PN 40,DIN<br>2635 |
|                | 3/4"                             | DN50                                     |
| Length<br>(mm) | 300 - 2000                       | 275 - 1975                               |

#### LEVEL CONTROLLERS FOR STEAM BOILERS ▶ RC-11 LEVEL GAUGE WITH SIGHT GLASS



Body Frame Drain Plug and Liquid main Body Connections Max. Operating Pressure

A105 Cast Iron GG-25 Flange 16 bar/40 bar Max. Operating Temperature 250°C

| DIMENS                    | IONS          |
|---------------------------|---------------|
| (Flanged)<br>PN 16, PN 40 | DN20          |
| Length (mm)               | 300 -<br>3000 |

#### MAGNETIC LEVEL GAUGES ► MGK-33



Float Magnetic Disc Flange Material

Connections Max. Operating Pressure Max. Permissible Temperature Contact Signal Drain Plug

Stainless Steel AISI 316 Stainless Steel AISI 316L Aluminium Carbon Steel St. 37.2 / Stainless Steel (Optional) Flange 200°C Yes 3/4

| DIMENS             | DIMENSIONS                                   |  |  |
|--------------------|--|--|--|
| (Flanged)<br>PN 16 | DN15<br>DN20<br>DN25<br>DN32<br>DN40<br>DN50 |  |  |
| Length (mm)        | 300 -<br>5000                                |  |  |

#### MAGNETIC LEVEL GAUGES ► MG-33



Float Magnetic Disc Flange Material

Connections Max. Operating Pressure Max. Permissible Temperature Contact Signal Drain Plug

Stainless Steel AISI 316 Stainless Steel AISI 316L Plastic Carbon Steel St. 37.2 (Opt. Stainless Steel) Flange 16 bar 160°C Yes 3/4"

| DIMENS             | DIMENSIONS                                   |  |  |
|--------------------|--|--|--|
| (Flanged)<br>PN 16 | DN15<br>DN20<br>DN25<br>DN32<br>DN40<br>DN50 |  |  |
| Length (mm)        | 300 -<br>5000                                |  |  |

#### MAGNETIC LEVEL GAUGES ► MG-33P (PVC)



Body and Float Magnetic Disc Flange Material Connections Max. Operating Pressure Max. Permissible Temperature Contact Signal PVC Plastic PP-V Flange 6 bar 70°C Yes

| DIMENSIONS        |               |
|-------------------|---------------|
| (Flanged)<br>PN 6 | DN20          |
| Length (mm)       | 300 -<br>3000 |

#### MAGNETIC LEVEL GAUGES► MG-33S



Float Magnetic Disc Flange Material

Connections
Max. Operating Pressure
Max. Permissible Temperature
Contact Signal
Drain Plug

Stainless Steel AISI 316 Stainless Steel AISI 316L Plastic Carbon Steel St. 37.2 (Opt. Stainless Steel) Flange 10 bar 160°C No DIMENSIONS

(Flanged)
PN 10

Length (mm) 300 - 3000

#### MAGNETIC LEVEL GAUGES ► MG-33SC WITH SCALE



Body Float Magnetic Disc Flange Material

Connections
Max. Operating Pressure
Max. Permissible Temperature
Contact Signal
Drain Plug

Stainless Steel AISI 316 Stainless Steel AISI 316L Plastic Carbon Steel St. 37.2 (Opt. Stainless Steel) Flange 10 bar 160°C Yes 3/8"



#### DIGITAL LEVEL SENSING ELEMENTS► EG-11



Body and Float Supply Voltage Flange Material Max. Permissible Temperature Analog Output Max. Operating Pressure Connections Stainless Steel AISI 304 220 VAC (24 V optional) Carbon Steel St. 37.2/Stainless Steel -10/+125°C 4-20 mA or (0-10V) 16 bar Flange, BSP or NPT Threaded Control Panel and D.Display



#### ANALOGUE LEVEL SENSING ELEMENTS► AU-22



Body and Float Max. Permissible Temperature Flange Material Max. Switch Voltage Max. Operating Pressure Connections Accessories Contact Types Switch Capacity Switch Circuit Contact Quantity Stainless Steel AISI 304
-10/+125°C
Carbon Steel St. 37.2/Stainless Steel
400 VAC/DC
16 bar
Flange, BSP or NPT Threaded
Control Panel with 4 contacts
N.O (Normally Open) - C.O (Change Over)
N.O 60 VA - C.O 60 VA
N.O 3.0 VA - C.O 1.0 VA

2 max

| DIMENSIONS               |            |  |
|--------------------------|------------|--|
| (Threaded)<br>BSP or NPT | 2"         |  |
| (Flanged)                | DN50       |  |
| PN 10                    | DN100      |  |
| Length (mm)              | 300 - 3000 |  |

#### ANALOGUE LEVEL SENSING ELEMENTS ► AU-21



Body and Float Max. Permissible Temperature Max. Switch Voltage Max. Operating Pressure Connections Min Density Contact Types

Switch Capacity Switch Circuit Stainless Steel AISI 304 -10/+125°C 400 VAC/DC 16 bar 3/8" Threaded 0.8 kg/m³ N.O (Normally Open) C.O (Change Over) 60 VA 1.0 VA

6 max - C.O

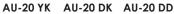
| DIMENSIONS               |           |
|--------------------------|-----------|
| (Threaded)<br>BSP or NPT | 3/8"      |
| Length (mm)              | 100 - 700 |

#### LEVEL CONTROLLERS

#### ANALOGUE LEVEL SENSING ELEMENTS ► AU-20



#### AU-20 YD





Body and Float Max. Permissible Temperature Max. Switch Voltage Max. Operating Pressure Connections Min Density Contact Types Switch Capacity Switch Circuit

Stainless Steel AISI 304 -10/+125°C 400 VAC/DC 10/16 bar 3/8" Threaded 0.8 kg/m³ N.O (Normally Open) 60 VA

| DIMENSIONS  |      |  |
|-------------|------|--|
|             | 3/8" |  |
| Length (mm) | 100  |  |

#### FLOW SWITCHES ► AK-100



Sheet Body Cover Gasket Fittings Type Fittings Material Max. Liquid Pressure Max. Liquid Temperature Micro Switches Max. Pipe Diameter

Stainless Steel ABS NBR Female 1' Brass MS 56 11 bar -30/+120°C 15 (8) A-220V 10" (12" Optional)

| DIMENSIONS                          |       |  |
|-------------------------------------|-------|--|
| Threaded                            | 1"    |  |
| Quantity of<br>Adjustment<br>Plates | 5 pcs |  |

#### FLOW SWITCHES ► C-4



Float Connections Flange Material Shaft Micro switches Max. Operating Pressure Max. Operating Temperature Stainless Steel AISI 316L Square Flange
Carbon Steel St. 37.2/Stainless Steel
Aluminium Injection 16A (Normally open or closed) 6/16 bar -20/+150°C

| DIMENSIONS            |   |  |
|-----------------------|---|--|
| Square Flange<br>(mm) | 94x94x15  |  |
| Length (mm)           | From<br>flange<br>to the<br>end of<br>the float<br>250 mm |  |

#### FLOW SWITCHES ► C-4 WITH CONTROL UNIT



Float Connections Flange Material Shaft Micro switches Max. Operating Pressure Max. Operating Temperature

Teflon Coated Stainless Steel Square Flange Carbon Steel St. 37.2/Stainless Steel Aluminium Injection 16A (Normally open or closed) 6 bar -20/+150°C

| DIMENSIONS            |   |  |
|-----------------------|---|--|
| Square Flange<br>(mm) | 94x94x15  |  |
| Length (mm)           | From<br>flange<br>to the<br>end of<br>the float<br>250 mm |  |

#### FLOW SWITCHES ► C-2



Float Connections Cover Gasket Micro switches Max. Operating Pressure Max. Operating Temperature Stainless Steel AISI 316L BSP Threaded (Female) ABS NBR 16A (Normally open or closed) 6 bar -20/+150°C

| DIMENSIONS               |   |  |
|--------------------------|---|--|
| BSP Threaded<br>(Female) | 1"  |  |
| Length (mm)              | From<br>flange<br>to the<br>end of<br>the float<br>170 mm |  |

#### FLOAT VALVE► KTS-50



Float Body Movement Parts O-Ring Closing Valve Gasket Max. Operating Pressure Max. Operating Temperature Connection

Stainless Steel AISI 316L Carbon Steel Stainless Steel 304 EPDM PTFE 6/8 bar 90°C 3/4" Male

| DIMENSIONS |                   |                |
|------------|-------------------|----------------|
| Float Type | Standard<br>Float | Large<br>Float |
| ØD0 (mm)   | 150               | 220            |
| ØD (mm)    | 156               | 245            |
|            | 6                 | 8              |

#### BOTTOM BLOWDOWN VALVE▶ DBV-10



3 Pieced Ball Valve (V-3FP)
Timer (Controller)
Pnuematic Actuator
Single Actuation (Standard, NC)
Spring Controlled
Selenoid Valve
Limit Switch
Double Actuation (Optional)

#### Flanged

DN40 (Standard) DN15-20-25-32-50-65 (Optional)

Please contact our sales team for customized dimensions.

|                       | PRODU                        |
|-----------------------|------------------------------|
| BALL VALVE            |                              |
| Body Material         | Stainless Steel AISI 304/316 |
| Ball Material         | Stainless Steel AISI 304/316 |
| Stem                  | Stainless Steel AISI 304/316 |
| Body Gasket           | PTFE                         |
| Ball Seat             | R-PTFE (15%)                 |
| Nominal Pressure (PN) | 40 bar                       |
| Max. Operating Temp.  | -50/+210°C                   |

| T FEATURES DBV-10 |                     |                                  |  |
|-------------------|---------------------|----------------------------------|--|
|                   | PNEUMATIC ACTUATOR  |                                  |  |
|                   | Body Material       | Epoxy Coated Aluminium Injection |  |
|                   | Pistons             | Aluminium Cast                   |  |
|                   | Shaft Material      | Cadmium Coated Steel             |  |
|                   | Tightness Component | Nitrile Rubber                   |  |
|                   | Valve Connection    | Standard                         |  |

#### SURFACE BLOWDOWN SYSTEM▶ YBS-10



Conductivity Measuring Probe Conductivity Transmitter (with LCD screen) Digital Regulator Surface Control Valve with Electric Motor Service Support Before Installation DN20 PN40 Metal Bellows Valve DN20 PN40 Disco Check Valve

#### El-...

DN20 (Standard) DN15-25-32-50-65 (Optional)

Please contact our sales team for customized dimensions.







# Valve and Steam Trap Jackets



تاریخ: ۱۲۹۷/۰۲/۰۴ شماره: پ ت ز// ۲۴۷۴ سمه تعالی



شركت بالايش نفت تبريز ( سهامي عام )-

مدير عامل محترم شركت نيكو بازار خاورميانه

### موضوع: تائيد كاورهاي حرارتي

با سلام،

احتراماً عطف به نامه شماره ۷۷۷/۱۰/٤۰ مورخ ۹۷/۱/۲۱ باستحضار میرساند نمونه کاورهای حرارتی ارسالی آن شرکت محترم، از نظر مقاومت در برابر اتلاف انرژی، قابلیت نصب در فضای آزاد، سهولت نصب و استفاده مورد تائید می باشد.

و من ا...التوافيق

A Selection of the land

مدیر تدارکات کالا و انبارها



# Why Should I Use a Jacket?

If, armatures like valves and steam jackets are not insulated, THEY CAUSE HUGE ENERGY LOSES!

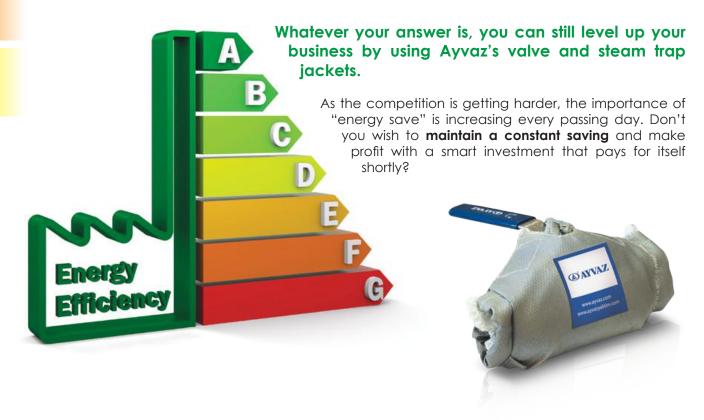
Minimising the energy loses through proper insulation **REDUCES THE ENERGY COST OF YOUR BUSINESS!** 

Easily removable and re-attachable valve and steam trap jackets **PROVIDE EASY MAINTENANCE!** 



# What mark

would you rate your business in terms of **energy efficiency?** 



By the way, if you mark your business with **A**, we can increase it up to **A+**:)



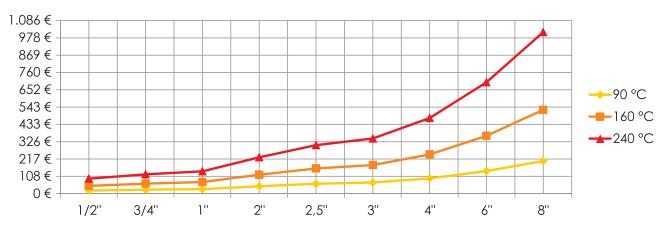
# What is the cost of each un-insulated valve to you?

Each valve or steam trap with no insulation in your business, causes thermal loss as much **AS ITS SURFACE AREA.** But, what does that really mean? Let's explain it by an example.



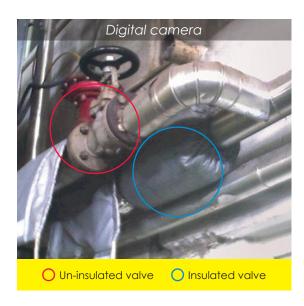
In case that an un-insulated globe valve (4", DN 100) is used in an fluid system at 160 °C; it causes 1.199 watt energy loss hourly, this is equal to 629 m³ natural gas consumption and loss of 245 Euro annularly.

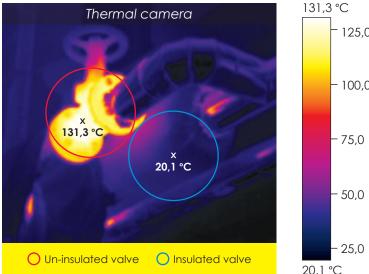
#### ANNULAR COST OF THE ENERGY LOSS OF A GLOBE VALVE

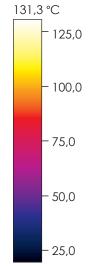


# Thermal camera images proove the difference!

The best way of discovering the thermal losses in your business is to use a thermal camera. We are aware of the superior performance of Ayvaz's valve and steam trap jackets and would like to share it with you.







save 90%

You can save up to 90%\* thanks to the insulation performance of Ayvaz's valve and steam trap jackets. Your investment pays for itself very quickly and you'd start making profit!

<sup>\*</sup> Calculations are done for globe valve (DN 150), fluid at 160 °C and Ayvaz's valve jacket with Cryogel insulation with 20 mm thickness.



# Would you like to take a look at the features

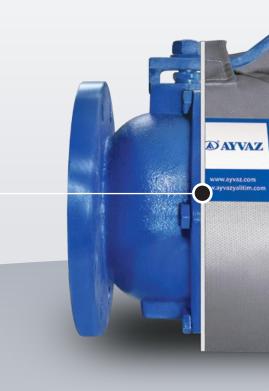
#### Insulation



Ayvaz's valve and steam trap jackets are designed to minimise the energy losses.

Aspen aerogels hydrophobic insulation materials with low thermal conductivity are used in our jacket designs.

Cryogel X201 is used for the applications between 0 °C and 200 °C and Pyrogel XT is used between, 200 °C - 650 °C.





# **Pyrogel XT** (200 °C - 650 °C)

#### Specially formulated for high-temperature applications



- Pyrogel XT is used for **extremely high temperature** applications up to 650 °C. Pyrogel XT is the most effective high-temperature insulation material in the industrial market.
- Pyrogel XT is especially preferred for the valve and steam trap jackets that are used for the systems where the temperature is above 200 °C.

| Physical Properties                                   |                  |       |  |
|---|------------------|-------|--|
| Feature   | Value            |       |  |
| Thickness   | 5 mm             | 10 mm |  |
| Operating Temperature Range                           | -40 °C / +650 °C |       |  |
| Thermal Conductivity Value<br>At 37.5 °C / ASTM C 177 | 0.021 W/mK       |       |  |
| Density   | 0,18 g/cm³       |       |  |
| Hydrophobia   | Yes              |       |  |



#### **Application Areas**

- Hot water and steam lines
- Refineries and gas processing plants
- Petro- chemical plants
- Military establishments
- Food and oil mills
- Textile industry
- Plastic plants
- Oil and gas processing industry
- Pharmaceutical plants

#### Scan the barcode!



# Cryogel X201 (Up to 200 °C)

#### Ultimate solution for the temperatures, up to 200°C



- Cryogel X201's unique properties; low thermal conductivity, superior flexibility, compression resistance, hydrophobicity, make it essential for those seeking the ultimate in thermal protection the applications up to 200 °C.
- Cryogel X201 is used at Ayvaz's valve and steam trap jackets that are used for the temperature is below 200 °C

| Physical Properties                                   |                   |       |  |
|---|-------------------|-------|--|
| Feature   | Value             |       |  |
| Thickness   | 5 mm              | 10 mm |  |
| Operating Temperature Range                           | -270 °C / +200 °C |       |  |
| Thermal Conductivity Value<br>At 37.5 °C / ASTM C 177 | 0.015 W/mK        |       |  |
| Density   | 0,13 g/cm³        |       |  |
| Hydrophobia   | Evet              |       |  |



#### **Application Areas**

- Hot water and steam lines
- Refineries and gas processing plants
- Petro- chemical plants
- Military establishments
- Food and oil mills
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## The advantages of

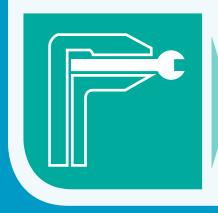
Ayvaz Valve Jackets over Other Valve Jackets made by

Classic Insulation Materials



#### **High Thermal Benefit**

Ayvaz's valve and steam trap jackets produced with hi-tech insulation materials with **low thermal conductivity** reduce the heat losses and provide high thermal and economic benefits.



#### **Easy Installation**

Aspen Aerogel's insulation materials (Pyrogel XT, Cryogel X201) are typically **2-4 times thinner** than other widely used insulation products.

That provides more compact designs to our valve jackets and makes the installation easier.



#### **Physically Robust**

Despite of their soft and flexible structures, Ayvaz's valve and steam trap jackets recover their thermal performance even after extremely high compression events with their **excellent spring back features**. High water resistance of the jackets offer a level of protection against damp.



#### **Size**

**Reduced material volume**, high packing density and low scrap rates can reduce the jacket sizes with a factor of 3 or more compared to the other jackets made by classic insulation materials.



#### Long Life and Respect to the Nature

Aspen Aerogels insulation materials have **high tensile and compressive strength.** 

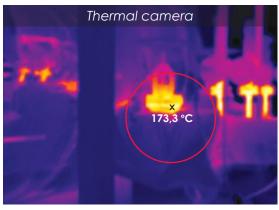
Jackets can be applied and removed over and over again with no deformation for a long time. Landfill disposable, shot free, with no respirable fibre content.

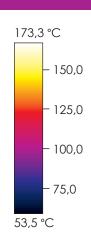
# Thermal Camera Images Show The Truth!

Rock wool jackets are easily affected from the moisture and mechanical compulsions that drop their performances down. However, Ayvaz's Valve and Steam Trap Jackets always keep their high performance!

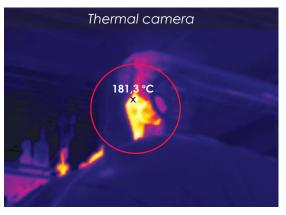
#### You're not saving as much as you think by rock wool jackets. Here is the proof!













# Thinner and stronger than rock wool!

Ayvaz's valve and steam trap jackets offers high performance with an ultra-thin structure. High-tech jackets could be three times thinner especially for the small sized products.

#### SIZE COMPARISON OF VALVE JACKETS FOR 1" BALL VALVE (ACTUAL SCALE)





A thinner jacket enables you to assembly at very narrow and limited spaces. That **saves on time and labouring** during installation and maintenance. That is because, our jackets are **highly resistant against physical deformations**, and they keep their superior performance after many times of disassembly and re-assembly.

# We have jackets for all of your products!

We deal with manufacturing insulation jackets for **all types of valves, steam traps, check valves, strainers and expansion joints** at all sizes. Whatever the size and working conditions of your products, we offer you the most appropriate solutions.





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# **®AYVAZ**

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