



# PIPELINE VALVES FOR NPP's





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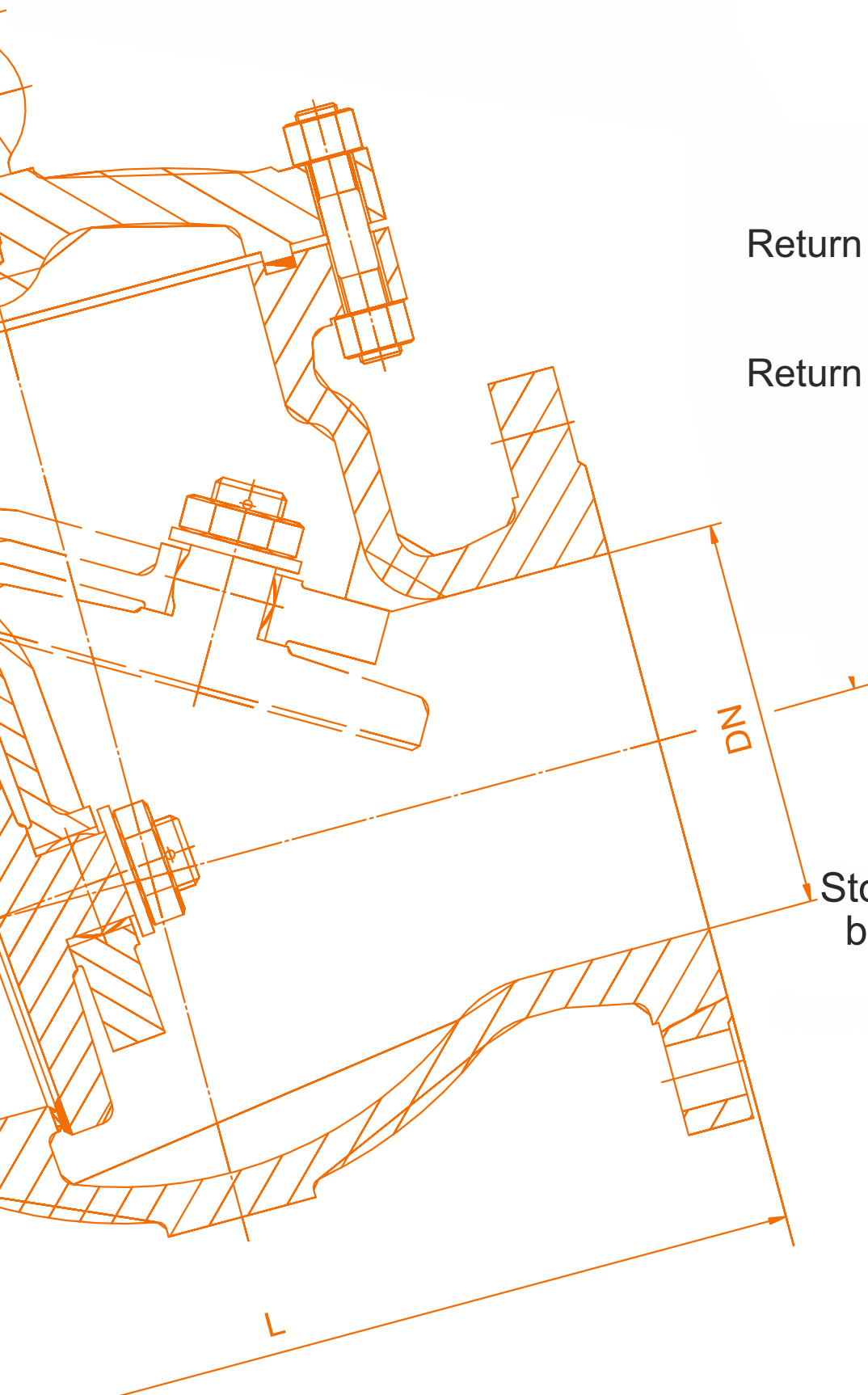
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**SARATOV  
VALVE PLANT**

# SEALED

# VALVES

## KG

**DN**

200, 300, 400, 500, 600,  
700, 800, 1000, 1200, 1400, 1600

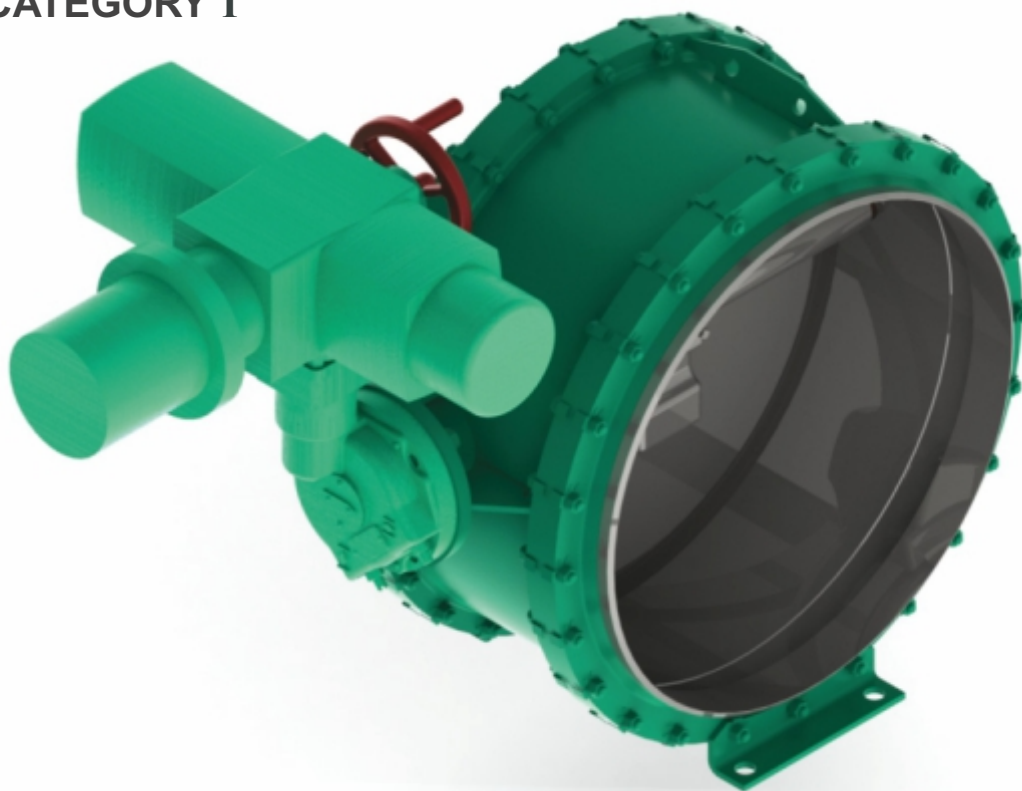
**CLASSIFICATION BY NP-068-05**

DN 200, 400, 600, 1000, 1600 - 2BIIb и 3CIIIc

DN 300, 500, 700, 800, 1200, 1400 - 3CIIIc

**SEISMIC RESISTANCE BY NP-031-01**

**CATEGORY I**



Manufacturing & Delivery  
TU 3742 -014- 55377430-09

## MEDIUM PRESSURE

0,005 MPa

## MEDIUM TEMPERATURE

up to 60 °C

## MEDIUM

Radioactive air without mechanical impurities, volumetric activity up to  $7.4 \times 10^4$  Bq/l, atmospheric air

## BODY MATERIAL

08X18H10T  
steel 20

## SHUTOFF CLASS by GOST 9544 - 2015

DN 200-800 - A  
Allowable leaks during air pressure test, cm<sup>3</sup>/min, max:  
DN 1000 - 0.6  
DN 1200 - 0.72  
DN 1400, 1600 - 0.84

## CONTROL

Electric drive:  
CJSC «Tulaelektroprivod»  
TU 3791-006-05749406-2000;  
Manual

## PIPELINE CONNECTION

Flange, with a set of mating flanges

## MEDIUM FEED DIRECTION

With a pressure drop on a shut-off device up to 0.005 MPa (0.05 kgf/cm<sup>2</sup>), the direction of the medium feed - any. Valves keep the trim tightness in case of emergency ("large break" mode) differential pressure of 0.5 MPa (0.5 kgf/cm<sup>2</sup>), the direction of the medium - to the plate from the shaft side.

## INSTALLATION POSITION

The installation position of the valves on a vertical pipeline with the location of the valve axis above the plate in the closed position, on a horizontal pipeline so that the electric actuator is in the upper hemisphere relative to the horizontal plane.

# BUTTERFLY

## VALVES

SAZ 99022

### DN

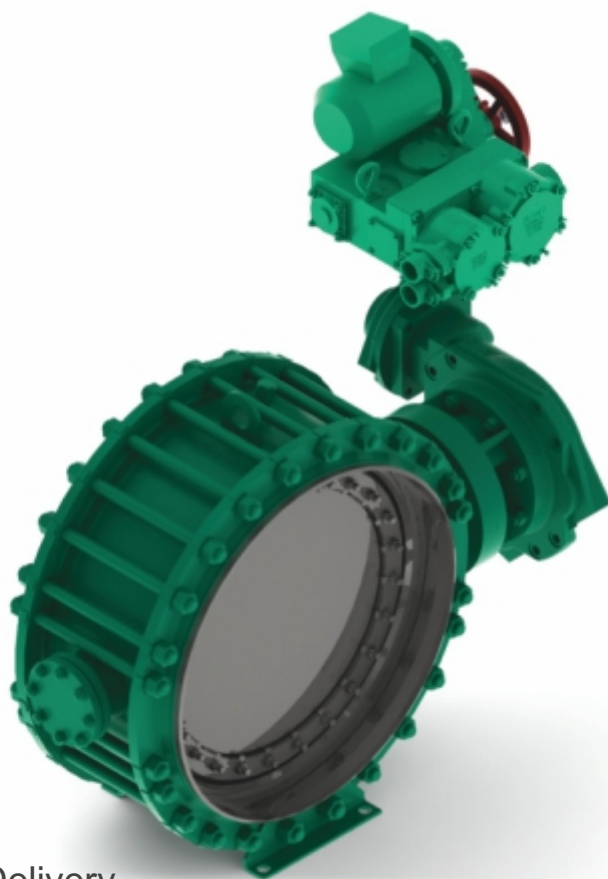
150, 200, 250, 300, 350,  
400, 500, 600, 800, 1000, 1200

### CLASSIFICATION BY NP-068-05

2BIIIc или 3CIIIc

### SEISMIC RESISTANCE BY NP-031-01

CATEGORY I



Manufacturing & Delivery  
TU 3742-021-55377430-10

## MEDIUM PRESSURE

1,0 MPa; 1,6 MPa

## MEDIUM TEMPERATURE

up to 100 °C

## MEDIUM

Water (make-up, process with chloride content up to 300 ml/l, desalinated, chemically treated, shower), decontamination and washing solutions, condensate, nitrogen, other media according to NP-068-05

## BODY MATERIAL

08X18H10T  
10X17H13M2T  
steel 20

## SHUTOFF CLASS by GOST 9544 - 2015

DN 150 - 400 - C  
DN 500 - 1200 - D  
As required by customer - A

## CONTROL

Electric drive:

CJSC «Tulaelektroprivod»  
TU 3791-006-05749406-2000;

AUMA -

TU 3791-003-38959426-2007;

ZPA Pecky -

TU 422-99-008/87A

Manual

## PIPELINE CONNECTION

Welded

Wafer

Flange, with a set of mating flanges

## MEDIUM FEED DIRECTION

The direction of the arrow indicator must coincide with the direction of flow of the process medium in the pipeline

## INSTALLATION POSITION

The installation position of the valves with electric drive on the pipeline - any with the location of the control body in the upper hemisphere relative to the horizontal plane, the recommended position is vertical. The installation position of the gates with manual control - any.



# RETURN

## BUTTERFLY VALVES

SAZ 44090

### DN

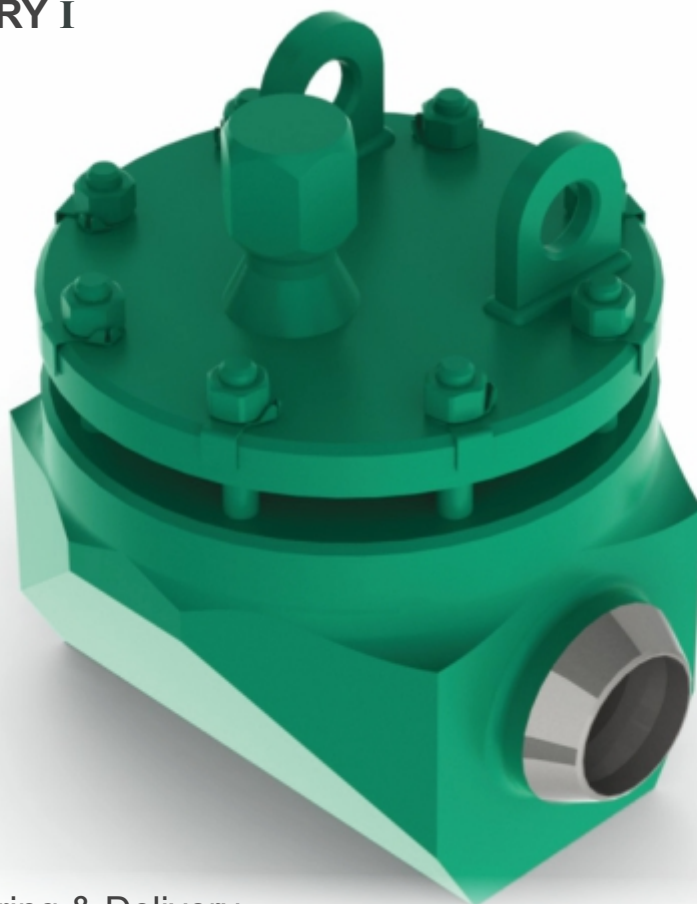
50, 65, 80, 100, 125, 150

### CLASSIFICATION BY NP-068-05

До 4,0 МПа - 2BIIВ, 2BIIIВ, 3CIIIВ;  
6,0 МПа and higher - 2BIIa, 2BIIIa, 3CIIIa

### SEISMIC RESISTANCE BY NP-031-01

CATEGORY I



Manufacturing & Delivery  
TU 3742-022-55377430-11



## MEDIUM PRESSURE

2,5 MPa; 4,0 MPa; 6,0 MPa;  
11,0 MPa; 12,0 Mpa; 14,0 MPa;  
20,0 MPa

## MEDIUM TEMPERATURE

up to 350°C depending on pressure

## MEDIUM

Make-up and process water,  
decontamination and washing  
solutions, condensate, oils,  
nitrogen, steam, steam  
(superheated, wet), steam-air  
mixture, other media according  
to NP-068-05

## BODY MATERIAL

08X18H10T  
steel 20

The maximum allowable leakage  
in the gate is according  
to NP-068-05 item.2.3.8

## CONTROL

With process media flow

## PIPELINE CONNECTION

Welded

## MEDIUM FEED DIRECTION

The direction of the indication  
arrow must coincide with the  
direction of flow of the process  
medium in the pipeline.

## INSTALLATION POSITION

On a horizontal pipeline - with the  
body neck (cover) looking up;  
On a vertical pipeline - with an inlet  
branch pipe looking down.

# RETURN

## BUTTERFLY VALVES

CA3 44077

### DN

150, 200, 250, 300,  
350, 400, 500, 600, 800

### CLASSIFICATION BY NP-068-05

2BII<sub>B</sub>, 2BIII<sub>B</sub>, 3CIII<sub>B</sub>

### SEISMIC RESISTANCE BY NP-031-01

CATEGORY I



Manufacturing & Delivery  
TU 3742-022-55377430-11

## MEDIUM PRESSURE

2,5 MPa; 4,0 MPa

## MEDIUM TEMPERATURE

up to 250 °C

## MEDIUM

Make-up and process water, decontamination and washing solutions, condensate, oils, nitrogen, steam, steam (superheated, wet), steam-air mixture, diesel fuel, other media according to NP-068-05

## BODY MATERIAL

08X18H10T  
steel 20

The maximum allowable leakage in the gate is according to NP-068-05 item.2.3.8

## CONTROL

With process media flow

## PIPELINE CONNECTION

Welded  
Flange, with a set of mating flanges

## MEDIUM FEED DIRECTION

The direction of the indication arrow must coincide with the direction of flow of the process medium in the pipeline.

## INSTALLATION POSITION

On a horizontal pipeline - the axis of the clapper must be in the upper hemisphere relative to the axis of the pipeline;

On a vertical pipeline - with the inlet branch pipe looking down.

# RETURN

## BUTTERFLY VALVES

AKШ

**DN**

10, 15, 20, 25,  
32, 50, 65, 80, 100, 150

**CLASSIFICATION BY NP-068-05**

3CIII<sub>B</sub>, 3CIII<sub>C</sub>

**SEISMIC RESISTANCE BY NP-031-01**

**CATEGORY I**



Manufacturing & Delivery  
TU 28.14.13.170-029-55377430-2017

## MEDIUM PRESSURE

1,6 MPa; 2,5 MPa; 4,0 MPa

## MEDIUM TEMPERATURE

up to 200 °C

## MEDIUM

Make-up and process water,  
decontamination and washing  
solutions, condensate, oils,  
nitrogen, steam, steam  
(superheated, wet), steam-air  
mixture, diesel fuel, other media  
according to NP-068-05

## BODY MATERIAL

08X18H10T  
steel 20

SHUTOFF CLASS - A  
by GOST 9544 - 2015

## CONTROL

Electric drive:

CJSC «Tulaelektroprivod»

TU 3791-009-70780838-2016;

OJSC «ABS ZEIМ Avtomatizatsiya»

YaLBI.421321.035TU

Manual

Articulated coupling

## PIPELINE CONNECTION

Welded  
Flange

## MEDIUM FEED DIRECTION

Any

## INSTALLATION POSITION

With manual control - any

With electric drive control - the  
working position of the electric  
drives - any, when the engine is not  
under the reducing gear.



# BALL

# VALVES

**AKShV**

**DN**

10, 15, 20, 25,  
32, 50, 65, 80, 100, 150

**CLASSIFICATION BY NP-068-05**

3CIIIb, 3CIIIc

**SEISMIC RESISTANCE BY NP-031-01**

**CATEGORY I**



Manufacturing & Delivery  
TU 28.14.13.130-030-55377430-2017

## MEDIUM PRESSURE

1,6 MPa; 2,5 MPa; 4,0 MPa

## MEDIUM TEMPERATURE

up to 200 °C

## MEDIUM

Make-up and process water,  
decontamination and washing  
solutions, condensate, oils,  
nitrogen, steam, steam  
(superheated, wet), steam-air  
mixture, diesel fuel, other media  
according to NP-068-05

## BODY MATERIAL

08X18H10T  
steel 20

SHUTOFF CLASS - A  
by GOST 9544 - 2015

## CONTROL

Electric drive:

CJSC «Tulaelektroprivod»  
TU 3791-009-70780838-2016;  
OJSC «ABS ZEiM Avtomatizatsiya»  
YaLBI.421321.035TU

Manual

Articulated coupling

## PIPELINE CONNECTION

Welded

## MEDIUM FEED DIRECTION

Any

## INSTALLATION POSITION

With manual control - any  
With electric drive control - the  
working position of the electric  
drives - any, when the engine is not  
under the reducing gear.



# BALL

# VALVES

Ksh

**DN**

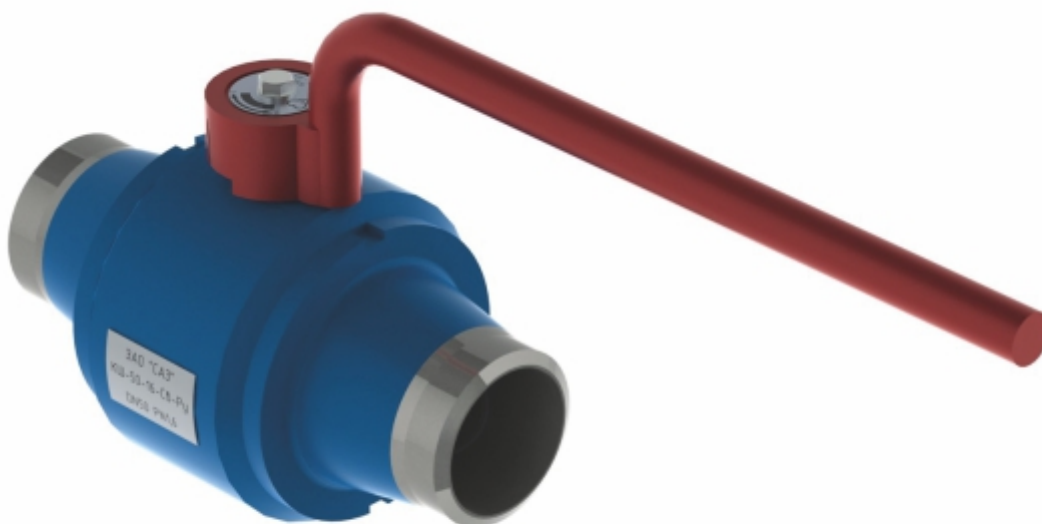
6, 8, 10, 15, 20, 25, 32,  
40, 50, 65, 80, 100, 125, 150, 200

Safety Class 4 according to NP-001-15, meeting  
the general requirements of OTT 1.3.3.99.0141-2012

**SEISMIC RESISTANCE BY NP-031**

**CATEGORY II**

I and III are admitted as agreed with the customer



Manufacturing & Delivery  
TU 3712-005-55377430-01



## MEDIUM PRESSURE

1,6 MPa; 2,5 MPa; 4,0 MPa;  
6,3 MPa; 8,0 MPa; 10,0 MPa;  
12,5 MPa; 16,0 MPa

## MEDIUM TEMPERATURE

from -15 to +190 °C

## MEDIUM

Liquid and gaseous media, neutral  
to the materials used

## BODY MATERIAL

10x17H13M2T  
08X18H10T  
steel 20  
09G2S

## SHUTOFF CLASS - A by GOST 9544 - 2015

## CONTROL

Manual  
For electric drive of any  
type as required by Customer

## PIPELINE CONNECTION

Welded, flange, union joint  
(for valves with DN from 6 to 100)  
Nipple (for valves with DN from 6 to 50)  
Combined (for valves with a DN  
from 50 to 200 - flanged on one side,  
welded - on the other; for valves with  
a DN from 6 to 40 - union joint on one  
side, welded - on the other)

## MEDIUM FEED DIRECTION

Any

## INSTALLATION POSITION

With manual control - any  
With electric drive control - any,  
provided that the drive will be  
located in the upper hemisphere  
relative to the horizontal axis. The  
position of the electric drive in the  
vertical position is not regulated



# STOP AND CONTROL BUTTERFLY VALVES

Zd0

## DN

40, 50, 65, 80, 100, 125,  
150, 200, 250, 300, 350, 400, 500, 600, 800

Safety Class 4 according to NP-001-15, meeting  
the general requirements of OTT 1.3.3.99.0141-2012

**SEISMIC RESISTANCE BY NP-031-01**

## CATEGORY II

I and III are admitted as agreed with the customer



Manufacturing & Delivery  
TU 3741-008-55377430-08

## MEDIUM PRESSURE

0,6 MPa; 1,0 MPa; 1,6 Mpa;  
2,5 MPa

## MEDIUM TEMPERATURE

up to +150 °C

## MEDIUM

Aggressive acid and alkaline  
media, partially desalinated  
water, seawater, water,  
demineralized water,  
condensate pH=7.0 - 9.4,  
reclaim sea water, air, vapors  
of flame-resistant turbine oil

## BODY MATERIAL

Carbon,  
Alloy,  
Corrosion-resistant steels

SHUTOFF CLASS - B & C  
A - as required by Customer  
by GOST 9544-2015

## CONTROL

Manual  
For electric drive of any  
type as required by Customer

## PIPELINE CONNECTION

Wafer  
Flange  
Welded

## MEDIUM FEED DIRECTION

Any

## INSTALLATION POSITION

With manual control - any  
With electric drive control - any with  
the location of the control part in the  
upper hemisphere related to the  
horizontal plane, the recommended  
position is vertical.



# STOP AND CONTROL

# BUTTERFLY VALVES

ZD2

## DN

40, 50, 65, 80, 100, 125, 150,  
200, 250, 300, 350, 400, 500, 600, 800

Safety Class 4 according to NP-001-15, meeting  
the general requirements of OTT 1.3.3.99.0141-2012

## SEISMIC RESISTANCE BY NP-031-01

## CATEGORY II

I and III are admitted as agreed with the customer



T 3741-008-55377430-08

## MEDIUM PRESSURE

0,6 MPa; 1,0 MPa; 1,6 MPa;  
2,5 MPa

## MEDIUM TEMPERATURE

up to +150 °C

## MEDIUM

Aggressive acid and alkaline  
media, partially desalinated  
water, seawater, water,  
demineralized water,  
condensate pH=7.0-9.4, reclaim  
sea water, air, vapors of flame-  
resistant turbine oil

## BODY MATERIAL

Carbon,  
Alloy,  
Corrosion-resistant steels

SHUTOFF CLASS - B & C  
A - as required by Customer  
by GOST 9544-2015

## CONTROL

Manual  
For electric drive of any type  
as required by Customer

## PIPELINE CONNECTION

Wafer  
Flange  
Welded

## MEDIUM FEED DIRECTION

By arrow indicator on the body

## INSTALLATION POSITION

With manual control - any  
With electric drive control - any with  
the location of the control part in the  
upper hemisphere related to the  
horizontal plane, the recommended  
position is vertical



# REQUEST LIST

Nº \_\_\_\_\_

Customer Company: \_\_\_\_\_

Contact Person: \_\_\_\_\_

Workshop, installation: \_\_\_\_\_

Symbolic representation: \_\_\_\_\_ designation: \_\_\_\_\_

**Valve type:** Ball valve  
 dismountable all-welded positioning  
 scrapper (pigging) top-entry design body  
 cryogenic pressure gauge compatible

Butterfly valve  
 with a symmetrical disc  
 with a double offset  
 with a triple offset

**Body material** \_\_\_\_\_

**Nominal diameter DN, mm** \_\_\_\_\_ **Nominal pressure, kgf/cm<sup>2</sup>** \_\_\_\_\_

**Media** name (chemical composition) \_\_\_\_\_  
 physical state: liquid gas vapor  
 density, kg/m<sup>3</sup> \_\_\_\_\_ temperature, °C from \_\_\_\_\_ to \_\_\_\_\_  
 additional information: \_\_\_\_\_

**Environment** ambient temperature, °C from \_\_\_\_\_ to \_\_\_\_\_ additional information: \_\_\_\_\_

**Process parameters** flow: min / rated / max \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
 conventional capacity Kvy, m<sup>3</sup>/hour \_\_\_\_\_  
 flow characteristics: linear equal percentage  
 operating pressure Pp, kgf/cm<sup>2</sup> \_\_\_\_\_  
 minimum pressure differential, kgf/cm<sup>2</sup> \_\_\_\_\_  
 leakage class, GOST \_\_\_\_\_ other \_\_\_\_\_

**Connection** wafer union  
 screwed fitting coupling flange welded combined

**Accessories** mating flanges, gaskets, hardware

**Installation** indoor outdoor  
 additional information: \_\_\_\_\_  
 pipe size, Dн x S, mm \_\_\_\_\_

**Drive** manual (flywheel , handle , reducer gear ) air-driven hydraulic  
 electric (general purpose industrial grade , flameproof )

**Number (ea.)** \_\_\_\_\_

**Additional requirements** \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

**ФЕДЕРАЛЬНАЯ СЛУЖБА  
ПО ЭКОЛОГИЧЕСКОМУ, ТЕХНОЛОГИЧЕСКОМУ И АТОМНОМУ НАДЗОРУ**

**ЛИЦЕНЗИЯ**

Регистрационный номер: **ВО-12-101-2750** от **7 мая 2014 г.**

Лицензия выдана Закрытому акционерному обществу "Саратовский атомный завод" (ЗАО "СААЗ")

Местонахождение лицензиата: 410017, г. Саратов, ул. Шолоховича, д.37/45А

Основной государственный регистрационный номер юридического лица (ОГРН): 1026403390038  
Идентификационный номер налогоплательщика: 6454051590

Лицензия дает право на эксплуатацию оборудования для ядерной установки

Объект, на котором или в отношении которого осуществляется деятельность: атомная станция

Основание для выдачи лицензии: заявление ЗАО "СААЗ" от 13.03.2014 № 51, решение зам. руководителя Волжского МТУ по надзору за ЯРБ Регистратора от 07.05.2014 № В.Л.3652

Срок действия лицензии: до **7 мая 2019 г.**

И.А. руководитель органа лицензирования

М.П.

**ФЕДЕРАЛЬНАЯ СЛУЖБА  
ПО ЭКОЛОГИЧЕСКОМУ, ТЕХНОЛОГИЧЕСКОМУ И АТОМНОМУ НАДЗОРУ**

**ЛИЦЕНЗИЯ**

Регистрационный номер: **ВО-12-101-2750** от **7 мая 2014 г.**

Лицензия выдана Закрытому акционерному обществу "Саратовский атомный завод" (ЗАО "СААЗ")

Местонахождение лицензиата: 410017, г. Саратов, ул. Шолоховича, д.37/45А

Основной государственный регистрационный номер юридического лица (ОГРН): 1026403390038  
Идентификационный номер налогоплательщика: 6454051590

Лицензия дает право на эксплуатацию оборудования для ядерной установки

Объект, на котором или в отношении которого осуществляется деятельность: атомная станция

Основание для выдачи лицензии: заявление ЗАО "СААЗ" от 13.03.2014 № 51, решение зам. руководителя Волжского МТУ по надзору за ЯРБ Регистратора от 07.05.2014 № В.Л.3652

Срок действия лицензии: до **7 мая 2019 г.**

И.А. руководитель органа лицензирования

М.П.

**ОЦЕНКА СООТВЕТСТВИЯ В ОБЛАСТИ ИСПОЛЬЗОВАНИЯ АТОМНОЙ ЭНЕРГИИ**

№ 0000563

**СЕРТИФИКАТ СООТВЕТСТВИЯ**

№ ОВАС.ИИ.01.0003.00035

Срок действия с **31.05.2014 г.** до **30.03.2019 г.**

**ОРГАН ПО СЕРТИФИКАЦИИ** Автономная некоммерческая организация «Центр по оценке соответствия и подтверждению качества оборудования, изделий и технологий» (Центр по сертификации АНО «АтомТехноТест»). Юридический адрес: 107078, г. Москва, Сардиния - Славянская ул., д.10, к.2. Фактический адрес: 123022, г. Москва, ул. 2-ая Звонкоградская, д.13, стр.37. Тел./факс: +7 (499) 370-01-45, e-mail: info@atomtehtest.ru. Аттестат аккредитации рег. № ОВАС.ИИ.01.0003.00035

**ЗАЯВИТЕЛЬ** Закрытое акционерное общество «Саратовский атомный завод» (ЗАО «СААЗ»), Юридический/фактический адрес: 410017, г. Саратов, ул. Шолоховича, д.37/45А, Тел./факс: +7(8452) 20-80-25, e-mail: info@saaz.ru

**ИЗГОТОВИТЕЛЬ** Закрытое акционерное общество «Саратовский атомный завод» (ЗАО «СААЗ»), Адрес: Россия, 410017, г. Саратов, ул. Шолоховича, д.37/45А

**ПРОДУКЦИЯ** «Горелки паровые СААЗ-49/820 DN 25, 100; Рр 1,0 МПа, Тр 180°С со техническими условиями ТУ 2142-020-5537430-15, серийный выпуск»

**КОД ТИПОД** КОД ОКП 37-4220

**СООТВЕТСТВУЕТ ТРЕБОВАНИЮ** см. Приложение 1 (Бланк №000551, 000552)

**СЕРТИФИКАТ ВЫДАН НА ОСНОВАНИИ** см. Приложение 2 (Бланк №000553, 000554, 000555, 000556, 000557)

**ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ** см. Приложение 3 (Бланк № 000558)

**РУКОВОДИТЕЛЬ ОРГАНА ПО СЕРТИФИКАЦИИ** А.В. Агеев

М.П.

**GENERAL DEALER  
SARATOVENERGOMASHKOMPLEKT CJSC**



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**SARATOV VALVE PLANT**

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[WWW.EMK.RU](http://WWW.EMK.RU)