



**ГАЗК**  
АРМСЕРВИС

# HIGH TECHNOLOGIES FOR MODERNIZATION AND REPAIR OF ACTIVE PIPELINES



## HOT TAP TIE-IN & LINE ISOLATION EQUIPMENT

**EQUIPMENT CATALOGUE**

NPO GAKS-ARMSERVIS Research and Manufacturing Association present an updated Product Catalog. The Catalog covers a range of equipment designed for hot-tap tie-in operations on pressurized in-service pipelines without relief or loss of product. In addition, the equipment is presented for temporary in-service isolation of pipeline sections and making bypass lines for repair or modernization of the pipeline.

Using high technologies and special-purpose equipment hot-tap tie-in connections or isolation of line sections can be made without pressure relief and service interruption or stoppage. The hot-tap tie-in technology designed by GAKS-ARMSERVIS can be used for maintenance, repair and other operations on gas-, steam-, water-, and gas-transmission and distribution systems with various fluid parameters. The hot-tap tie-in operations can be performed on pressurized distribution and transmission pipelines, water supply lines, chemical processing, oil refinery, iron and steel works, and paper mill lines. The application of our technological equipment allows replacement of worn sections or gas and water supply lines, water pipes and failed shutoff valves, as well as connection of new customers to distribution lines.

The Hot-tap Tie-in Machines offered in the Catalog are designed for in-service tie-in connections to DN 45-1420 mm, PN 6.3 MPa lines. The Line Isolation Fitting is designed for isolating sections of DN 150, 200, 250, 300 mm, PN 10 (max.) MPa lines. Equipment of other application ranges is available.

The hot-tap tie-in machines are designed in compliance with the industry-specific standards:

— STO Gazprom 2-2.3-116-2007 "Instruction on tie-in operations on pressurized lines", which provides regulations for management and standard operation procedures in tie-in connection of isolation valves, pipeline fittings without service interruption;

— RD 153-39.4-130-2002 OAO AK Transneft "Technical Specifications on tie-in/tie-out of "spool" fittings of blank flanges, isolating and control valves and connecting sections to oil pipelines.

The equipment offered in the Catalog is certified and put on the Unified register of Declarations of conformity (Eurasian Economic Community Customs Union/EEU).

The equipment offered meets the EEU requirements:

— TP TC 010/2011 (Declaration TC No. RU Д-РУ.АЮ02.В.00759);

— TP TC 004/2011, TP TC 020/2011 (Declaration TC No. RU Д-РУ.АЮ02.В.00765).

For over 25 years, NPO GAKS-ARMSERVIS Research and Manufacturing Association have been contributing to the development of machine-building industry. Over the period of work, we have cooperated with customers such as Rosснеft, LUKOIL, TNK-BP, Gazprom Neft, Bashneft, Transneft, Novatek, SIBUR, and other major companies.

Our priority is building long-term relationships and individual approach to each Customer. We always take into account the specifics of our clients and therefore are ready to fulfill special requirements. Our company is constantly updating its products and working to improve the quality of service.

We aim at providing our clients with the best "price-to-quality" products and high level of service. We will be glad to see you among our Customers and are ready to help you solve your manufacturing problems at a high professional level.

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PROFILES AND BUSINESS LINES OF NPO GAKS-ARMSERVIS DIVISIONS

NPO GAKS-ARMSERVIS

RESEARCH AND MANUFACTURING ASSOCIATION:

— a leading enterprise of the Scientific & Industrial Valve Manufacturers Association (NPAA) in valve manufacture technologies and repair, as well as in development of scientific and technical documentation;  
 — a fellow, The Russian Union of Oil and Gas.

● **Development and production:**

— equipment and tooling for manufacture, repair and modification of pipelines;  
 — equipment and tooling for manufacture, repair and testing of pipeline valves;  
 — test rigs for blowout preventing and oil/gas field equipment;  
 — package systems for certification testing of gas vessels;  
 — information and control systems to support automatic operation of the equipment produced;  
 — special-purpose equipment for measuring leakage in pipeline valves;  
 — special- and general purpose metrology equipment for measuring surface roughness and other metric parameters.

● **Development of standards and process documentation for pipeline valve manufacture and repair:**

— national standards, in-house standards, regulations, routing sheets, operation sheets, rout and operation charts;  
 — recommended practices and guidelines for assessing the feasibility of repair facility management.

● **Research in valve manufacture processes, valve operation and repair, documenting the research data and further preparation of scientific and technical literature to be used for adequate improvement and modernization of production, as well as for training and upgrading of specialists:**

— monographs and technical reference handbooks of "Operation and repair of valves, pipelines and equipment" series.

● **Package supply:**

— pipeline valves that passed the in-plant hydraulic pressure tests and incoming inspection for strength and tightness;  
 — pumping, compressor and welding equipment which enables operation of the equipment produced;  
 — consumables and tools for the equipment produced.

● **Backup and follow-up services:**

— installation on site, start-up and commissioning works;  
 — consulting of maintenance staff on equipment operation;  
 — training and relevant certification of personnel;  
 — on-site assistance service.

**The manufacturer reserves the right to re-engineer its products in order to improve their quality and competitive performance without making any adjustments in this Catalog.**



Tie-in equipment assembly and test area



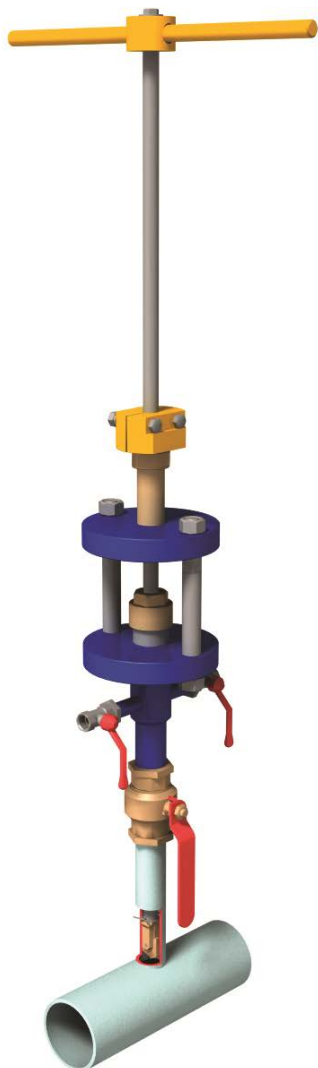
Production shop



Research and production division for valves modification and testing



Assembly area



**GAKS-B-32/50P**

Certified product

### FUNCTIONS

- Hot-tapping for in-service pressurized pipeline connections through a ball valve with no release or loss of product.

### APPLICATION

Hot-tapping for shutoff and control valves installation and pipeline connections to both field and industrial project gas-, oil-, water-, steam transmission and distribution systems.

### BRANCH CONNECTION

- Branch and trunnion mounted ball: screwed connection. Flanged ball valve is available.
- Hot-tap machine seal fitting design enables connection leakage control, blow-down, inert gas purge and pressure release prior to removing the hot-tap machine, and secures:
  - no release or loss of product ;
  - work safety;
  - no product release to the atmosphere

### BRANCH POSITION

- In any three-dimensional position at right angle to the pipeline axis (surface).
- Branch length, max. 500 mm.

### TYPE OF DRIVE

- Manual

### MOUNTING

- Tie-in machine is mounted on a ball valve and connected with G<sup>3</sup>/<sub>4</sub>, G1, G1<sup>1</sup>/<sub>4</sub>, G1<sup>1</sup>/<sub>2</sub>, G2 screwed joint.
- Supplied complete with ball valve adaptors customer-specified according to the tie-in machine base model, valve DN application range and ball valve connection type.
- Hot-tap machine seal fitting design enables emergency breakdown thereof at any hot-tap tie-in stage.

### TOOLS

- Flat bits and special-purpose drills. Customer-specified according to the tie-in machine base model, valve DN application range and ball valve connection type.

### SPECIFICATIONS

Base model	GAKS-B-20P	GAKS-B-25/32P		
DN application range, mm	20	25, 32	25	32
Diameter of coupon to be cut out, mm	12, 16	20, 27	20	27
Pipeline pressure, max., MPa	1.0...1.6	1.6...6.3		
Pipeline diameter, mm	45...1420	45...1420		
Pipeline wall thickness, mm	4...26	4...26		
Dimensions (LxBxH), mm	500x60x1300	330x495x1210		
Mass (w/o replacement part kit), kg	5.9	21.5		
Base model	GAKS-B-32/50P			
DN application range, mm	32, 40, 50	32	40	50
Diameter of coupon to be cut out, mm	27, 34, 40	27	34	40
Pipeline pressure, max., MPa	1.6...6.3			
Pipeline diameter, mm	45...1420	60...1420	70...1420	
Pipeline wall thickness, mm	4...26			
Dimensions (LxBxH), mm	330x500x1210			
Mass (w/o Replacement Parts Kit), kg	26			

- Machine marking according to the valve DN application range chosen:
  - GAKS-B-25/32P – for DN 25, 32 mm; PN 1.6; 2.5; 4.0; 6.3 MPa – valve PN base application range;
  - [GAKS-B-32P] - for DN 32 mm; PN 1.6; 2.5; 4.0; 6.3 MPa – valve PN extended application range.



**GAKS-B-50/150P**



**GAKS-B-50/150ЭB**

Certified product

### FUNCTIONS

- Hot-tapping for in-service pressurized pipeline connections through a gate valve (ball valve) with no release or loss of product.

### APPLICATION

Hot-tapping for shutoff and control valves installation and pipeline connections to both field and industrial project gas-, oil-, water-, steam transmission and distribution systems.

### BRANCH CONNECTION

- Welded exit branch (branch) and full-opening valve (ball valve): flanged.
- Hot-tap machine seal fitting design enables connection leakage control, blow-down, inert gas purge and pressure release prior to removing, blow-down, inert gas purge and pressure release prior to removing the hot-tap machine, and secures:
  - no release or loss of product;
  - work safety;
  - no product release to the atmosphere.

### BRANCH POSITION

- In any three-dimensional position at right angle to the pipeline axis (surface).
- Flanged branch length, max. 300 mm.

### TYPE OF DRIVE (GAKS-B-50/150P)

- Manual, in-service reequipping with a motor is possible:
  - Option 1: manual hot-tapping feed;
  - Option 2: motor hot-tapping feed, synchronized with spindle rpm.

### TYPE OF DRIVE (GAKS-B-50/150ЭB)

- X-proof motor:
  - XP design mark: 2ExdeIIBT4;
  - Motor 2.2 kW, 380 V;
  - or 220 V with stepless rpm control.
- Option I: XP motor for drill rotation mechanism. Manual hot-tapping feed.
- Option II: XP motor for drill rotation and drill feed. Motor-driven hot-tapping feed, synchronized with spindle rpm.
- Manual override for any type of motor.
- Machines with hydraulic or pneumatic drive are available on customer's request.

### MOUNTING

- Hot-Tap Machine is installed on the valve line flange.
  - Supplied complete with valve adaptors customer-specified according to the valve DN and PN application range.
  - Hot-tap machine seal fitting design enables emergency breakdown thereof at any hot-tap tie-in stage.
- Time of cutting a coupon out of pipe wall by using GAKS-B-50/150P Hot-Tap Machine: 10 to 25 minutes; by using GAKS-B-50/150ЭB Hot-Tap Machine: 10 to 25 minutes at 0.1 mm/rev (max.) drill feed.

### CUTTING TOOLS

- Special-purpose flat bits, DN50, 80 mm.
- Special-purpose annular bits (with pilot drill), DN100, 150, 200 mm. Base design: carbide-tipped drill. Special-purpose design: Solid HHS core drills.
- The coupon is retained after the hot-tap operation and removed during the hot-tap machine removal.
- Cutting tools are customer-specified according to tool design and valve DN, PN application ranges.



### EQUIPMENT SUPPLIED

- Customer-specified according to replacement parts (adapters) kit, cutting tools, and type of machine drive.

**SPECIFICATIONS**

Base model	GAKS-B-50/150P	GAKS-B-50/150ЭB
Valves DN application range, mm	50, 80, 100, 150	
Valves DN application range extension, mm	[ 200 ]	
Coupon diameter, mm	46, 70, 90, 135, [ 175 ]	
Valves PN application range, MPa	6.3	
Valves PN application range extension, MPa	[ 1.6 ]; [ 2.5 ]; [ 4.0 ]	
Pipeline pressure (max.), MPa	[ 1.6 ]; [ 2.5 ]; [ 4.0 ]; 6.3	
Pipeline diameter, mm	219...1420	
Pipe wall thickness, mm	4...20	
Dimensions (LxBxH), mm	1000x1000x1770	
Type of drive	manual	motor drive
Hot-tapping tool feed	manual	manual or motor-driven
Mass (w/o Replacement Parts & Tool Kit), kg	74	230

**CUTTING TOOL APPLICATION RANGE**

Cutting tool	Description	DN, mm	Coupon diameter, mm	Pipeline diameter, mm
	Flat bits, special purpose	50	46	100*...1420
		80	70	
	Special-purpose annular bits (with pilot drill) Design: carbide-tipped drill	100	90	219...1420
		150	135	
		200	175	426...1420

\* supports are needed for 100...219 mm pipes

**GAKS-B-50/150P MACHINE MODEL RANGE**

DN, mm	GAKS-B-DN <sub>1</sub> /DN <sub>2</sub> P	GAKS-B-DN <sub>1</sub> /DN <sub>2</sub> -PNP		
	PN 6.3 MPa	PN 1.6 MPa	PN 2.5 MPa	PN 4.0 MPa
<b>50, 80, 100, 150</b>	<b>GAKS-B-50/150P</b>	[ GAKS-B-50/150-1.6P ]	[ GAKS-B-50/150-2.5P ]	[ GAKS-B-50/150-4.0P ]
50, 80, 100, 150, [ 200 ]	[ GAKS-B-50/200P ]	[ GAKS-B-50/200-1.6P ]	[ GAKS-B-50/200-2.5P ]	[ GAKS-B-50/200-4.0P ]
80, 100, 150	GAKS-B-80/150P	[ GAKS-B-80/150-1.6P ]	[ GAKS-B-80/150-2.5P ]	[ GAKS-B-80/150-4.0P ]
50, 80, 100	GAKS-B-50/100P	[ GAKS-B-50/100-1.6P ]	[ GAKS-B-50/100-2.5P ]	[ GAKS-B-50/100-4.0P ]
50	GAKS-B-50P	[ GAKS-B-50-1.6P ]	[ GAKS-B-50-2.5P ]	[ GAKS-B-50-4.0P ]
80	GAKS-B-80P	[ GAKS-B-80-1.6P ]	[ GAKS-B-80-2.5P ]	[ GAKS-B-80-4.0P ]
100	GAKS-B-100P	[ GAKS-B-100-1.6P ]	[ GAKS-B-100-2.5P ]	[ GAKS-B-100-4.0P ]
150	GAKS-B-150P	[ GAKS-B-150-1.6P ]	[ GAKS-B-150-2.5P ]	[ GAKS-B-150-4.0P ]
[ 200 ]	[ GAKS-B-200P ]	[ GAKS-B-200-1.6P ]	[ GAKS-B-200-2.5P ]	[ GAKS-B-200-4.0P ]

**GAKS-B-50/150ЭB MACHINE MODEL RANGE**

DN, mm	GAKS-B-DN <sub>1</sub> /DN <sub>2</sub> ЭB	GAKS-B-DN <sub>1</sub> /DN <sub>2</sub> -PNЭB		
	PN 6.3 MPa	PN 1.6 MPa	PN 2.5 MPa	PN 4.0 MPa
<b>50, 80, 100, 150</b>	<b>GAKS-B-50/150ЭB</b>	[ GAKS-B-50/150-1.6ЭB ]	[ GAKS-B-50/150-2.5ЭB ]	[ GAKS-B-50/150-4.0ЭB ]
50, 80, 100, 150, [ 200 ]	[ GAKS-B-50/200ЭB ]	[ GAKS-B-50/200-1.6ЭB ]	[ GAKS-B-50/200-2.5ЭB ]	[ GAKS-B-50/200-4.0ЭB ]
80, 100, 150	GAKS-B-80/150PЭB	[ GAKS-B-80/150-1.6ЭB ]	[ GAKS-B-80/150-2.5ЭB ]	[ GAKS-B-80/150-4.0ЭB ]
50, 80, 100	GAKS-B-50/100ЭB	[ GAKS-B-50/100-1.6ЭB ]	[ GAKS-B-50/100-2.5ЭB ]	[ GAKS-B-50/100-4.0ЭB ]
50	GAKS-B-50ЭB	[ GAKS-B-50-1.6ЭB ]	[ GAKS-B-50-2.5ЭB ]	[ GAKS-B-50-4.0ЭB ]
80	GAKS-B-80ЭB	[ GAKS-B-80-1.6ЭB ]	[ GAKS-B-80-2.5ЭB ]	[ GAKS-B-80-4.0ЭB ]
100	GAKS-B-100ЭB	[ GAKS-B-100-1.6ЭB ]	[ GAKS-B-100-2.5ЭB ]	[ GAKS-B-100-4.0ЭB ]
150	GAKS-B-150ЭB	[ GAKS-B-150-1.6ЭB ]	[ GAKS-B-150-2.5ЭB ]	[ GAKS-B-150-4.0ЭB ]
[ 200 ]	[ GAKS-B-200ЭB ]	[ GAKS-B-200-1.6ЭB ]	[ GAKS-B-200-2.5ЭB ]	[ GAKS-B-200-4.0ЭB ]

• Machine marking:

- **GAKS-B-100/300-6.3ЭB** – base model
- GAKS-B-200/300-6.3ЭB - machine model range according to valves PN base application range
- [ GAKS-B-200/300-4.0ЭB ] - machine model range according to valves PN (or DN) extended application range.

Machines of other application ranges and models for 10 MPa (max.) are available.



**GAKS-B-200/500-6.33B**

Certified product

#### FUNCTIONS

Hot-tapping for in-service pressurized pipeline connections through a gate valve (ball valve) with no release or loss of product.

#### APPLICATION

Hot-tapping for shutoff and control valves installation and pipeline connections to both field and industrial project gas-, oil-, water-, steam transmission and distribution systems.

#### BRANCH CONNECTION

- Welded exit branch (branch) and full-opening valve (ball valve): flanged.
- Hot-tap machine seal fitting design enables connection leakage control, blow-down, inert gas purge and pressure release prior to removing the hot-tap machine, and secures:
  - no release or loss of product;
  - work safety;
  - no product release to the atmosphere.

#### BRANCH POSITION

- In any three-dimensional position at right angle to the pipeline axis (surface).
- Flanged branch length, max. 300 mm.

#### TYPE OF DRIVE

- X-proof motor drive:
  - XP design mark: 2ExdeIIBT4;
  - Motor 2.2 kW; 3,0 kW 380 V;
  - Motor 2.2 kW 220 V with stepless rpm control.
- Option I: XP motor for drill rotation mechanism. Manual hot-tapping feed.
- Option II: XP motor for drill rotation and drill feed. Motor-driven hot-tapping feed, synchronized with spindle rpm.
- Manual override for any type of motor.
- Machines with hydraulic or pneumatic drive are available on customer's request.

#### MOUNTING

- Hot-Tap Machine is installed on the valve line flange.
  - Supplied complete with valve adaptors customer-specified according to the valve DN and PN application range.
  - Hot-tap machine seal fitting design enables emergency breakdown thereof at any hot-tap tie-in stage.
- Time of cutting a coupon out of pipe wall: 20 to 60 minutes at 0.1 mm/rev (max.) drill feed.

#### CUTTING TOOLS

- Special-purpose flat bits, DN80 mm.
- Special-purpose annular bits (with pilot drill), DN100...500 mm. Design: carbide-tipped drill.
- The coupon is retained after the hot-tap operation and removed during the hot-tap machine removal.
- Cutting tools are customer-specified according to tool design and valve DN, PN application ranges.

#### EQUIPMENT SUPPLIED

- Customer- specified according to:
  - Hot-Tap Machine design chosen
  - replacement parts (adapters) kit and cutting tools
  - motor drive design (manual or Motor-driven hot-tapping feed)
  - motor drive voltage (380 V; or 220 V with rpm stepless control).



**SPECIFICATIONS**

GAKS-B-200/300-1,63B Base Model	
Valves DN application range, mm	200, 250, 300
Valves DN application range extension, mm	[ 80 ], [ 100 ], [ 150 ]
Coupon diameter, mm	[ 70 ], [ 90 ], [ 135 ], 175, 230, 280
Valves PN application range, MPa	1.6
Pipeline pressure (max.), MPa	1.6
Pipe diameter, mm	530...1420
Pipe wall thickness, mm	4...16
XP motor drive:	2.2 kW; 380 V
- with stepless rpm control	2.2 kW; 220 V
RPM	22.5
Cutting tool feed	manual or motor-driven
Dimensions (LxBxH), mm	1000x1000x1990
Mass (w/o Replacement Parts), kg	355

GAKS-B-100/300-6,33B Base Model	
Valves DN application range, mm	100, 150, 200, 250, 300
Coupon diameter, mm	90, 135, 175, 230, 280
Valves PN application range, MPa	6.3
Valves PN application range extension, MPa	[ 2.5 ]; [ 4.0 ]
Pipeline pressure (max.), MPa	[ 2.5 ]; [ 4.0 ]; 6.3
Pipe diameter, mm	530...1420
Pipe wall thickness, mm	10...26
XP motor drive	3.0 kW; 380 V
RPM	18.0
Hot-tapping tool feed	manual or motor-driven
Dimensions (LxBxH), mm	1100x680x2300
Mass (w/o Replacement Parts), kg	485

GAKS-B-400/500-6,33B Base Model	
Valves DN application range, mm	400, 500
Valves DN application range extension, mm	[ 200 ], [ 250 ], [ 300 ]
Coupon diameter, mm	[ 175 ], [ 230 ], [ 280 ], 325, 426
Valves PN application range, MPa	6.3
Valves PN application range extension, MPa	[ 2.5 ]; [ 4.0 ]
Pipeline pressure (max.), MPa	6.3
Pipe diameter, mm	820...1420; [ 530...1420 ]
Pipe wall thickness, mm	10...26
XP motor drive	3.0 kW; 380 V
RPM	18.0
Hot-tapping tool feed	manual or motor-driven
Dimensions (LxBxH), mm	1100x680x3000
Mass (w/o Replacement Parts), kg	510

GAKS-B-400/500-1,63B Base Model	
Valves DN application range, mm	400, 500
Coupon diameter, mm	325, 426
Valves PN application range, MPa	1.6
Pipeline pressure (max.), MPa	1.6
Pipe diameter, mm	820...1420
Pipe wall thickness, mm	10...26
XP motor drive	3.0 kW; 380 V
RPM	18.0
Hot-tapping tool feed	manual or motor-driven
Dimensions (LxBxH), mm	1100x680x2500
Mass (w/o Replacement Parts), kg	500



• Machine marking:

- GAKS-B-200/300-6.33B - machine model range according to valves PN base application range
- [ GAKS-B-200/300-4.03B ] - machine model range according to valves PN (or DN) extended application range.

MACHINE MODEL RANGE

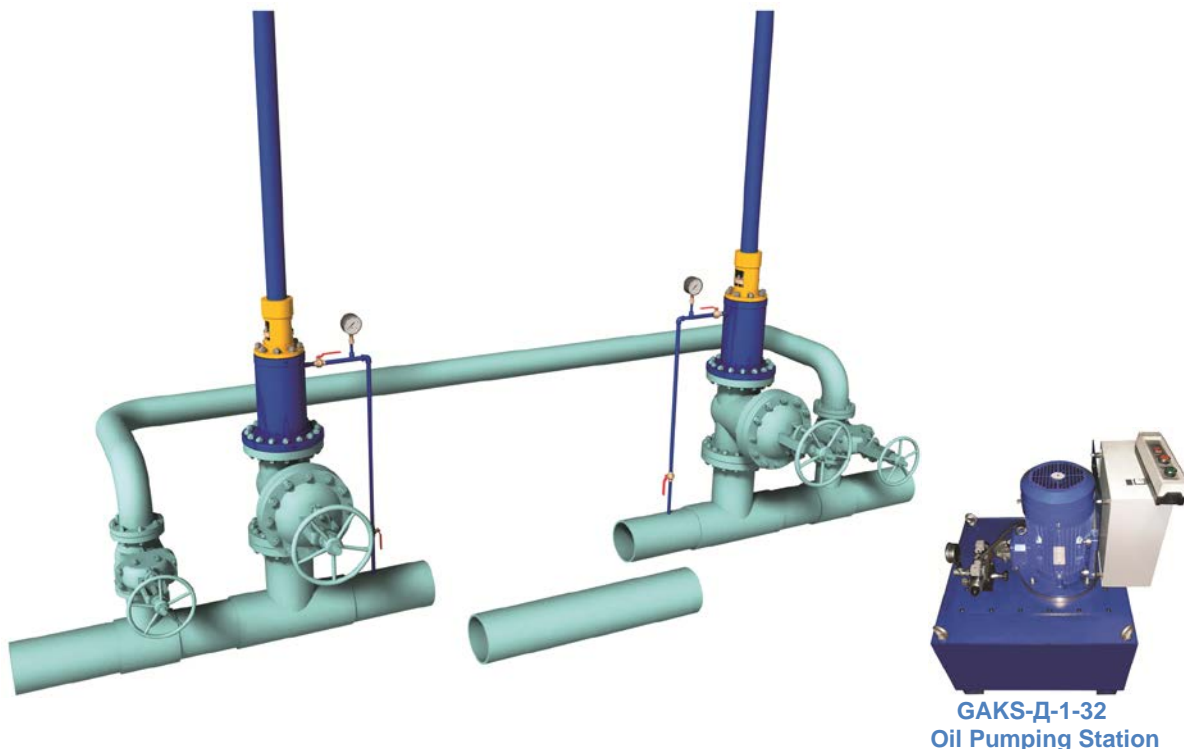
DN, mm	GAKS-B-DN <sub>1</sub> /DN <sub>2</sub> -PNЭБ			
	PN 1.6 МПа	PN 2.5 МПа	PN 4.0 МПа	PN 6.3 МПа
<b>200, 250, 300</b>	<b>GAKS-B-200/300-1.6ЭБ</b>			
200, 300	GAKS-B-200/300-1.6ЭБ			
[80],[100],[150],200,250,300	[GAKS-B-80/300-1.6ЭБ]			
200	GAKS-B-200-1.6ЭБ			
250	GAKS-B-250-1.6ЭБ			
300	GAKS-B-300-1.6ЭБ			
<b>100, 150, 200, 250, 300</b>		[GAKS-B-100/300-2.5ЭБ]	[ГAKC-B-100/300-4.0ЭБ]	<b>ГAKC-B-100/300-6.3ЭБ</b>
200,300		[GAKS-B-200/300-2.5ЭБ]	[GAKS-B-200/300-4.0ЭБ]	GAKS-B-200/300-6.3ЭБ
100		[GAKS-B-100-2.5ЭБ]	[GAKS-B-100-4.0ЭБ]	GAKS-B-100-6.3ЭБ
150		[GAKS-B-150-2.5ЭБ]	[GAKS-B-150-4.0ЭБ]	GAKS-B-150-6.3ЭБ
200		[GAKS-B-200-2.5ЭБ]	[GAKS-B-200-4.0ЭБ]	GAKS-B-200-6.3ЭБ
250		[GAKS-B-250-2.5ЭБ]	[GAKS-B-250-4.0ЭБ]	GAKS-B-250-6.3ЭБ
300		[GAKS-B-300-2.5ЭБ]	[GAKS-B-300-4.0ЭБ]	GAKS-B-300-6.3ЭБ
<b>400, 500</b>		[GAKS-B-400/500-2.5ЭБ]	[GAKS-B-400/500-4.0ЭБ]	<b>GAKS-B-400/500-6.3ЭБ</b>
400		[GAKS-B-400-2.5ЭБ]	[GAKS-B-400-4.0ЭБ]	GAKS-B-400-6.3ЭБ
500		[GAKS-B-500-2.5ЭБ]	[GAKS-B-500-4.0ЭБ]	GAKS-B-500-6.3ЭБ
200, 250, 300, 400, 500		[GAKS-B-200/500-2.5ЭБ]	[GAKS-B-200/500-4.0ЭБ]	[GAKS-B-200/500-6.3ЭБ]
<b>400, 500</b>	<b>GAKS-B-400/500-1.6ЭБ</b>			
400	GAKS-B-400-1.6ЭБ			
500	GAKS-B-500-1.6ЭБ			
[600]	[GAKS-B-150/600-1.6ЭБ]	[GAKS-B-150/600-2.5ЭБ]	[GAKS-B-150/600-4.0ЭБ]	[GAKS-B-150/600-6.3ЭБ]

CUTTING TOOL APPLICATION RANGE

Cutting tool	Description	DN, mm	Coupon diameter, mm	Pipeline diameter, mm
	Flat bits, special purpose	80	70	530...1420
	Special-purpose annular bits (with pilot drill) Design: carbide-tipped drill	100	90	
		150	135	
		200	175	
		250	230	
		300	280	
		400	325	
		500	426	820...1420

- Machine marking:
  - **GAKS-B-100/300-1.6ЭБ** – base model
  - GAKS-B-200/300-1.6ЭБ - machine model range according to valves PN base application range
  - [GAKS-B-200/300-2.5ЭБ] - machine model range according to valves PN (or DN) extended application range.

Machines of other application ranges are available.



**GAKS-Д-1-32**  
Oil Pumping Station

**FUNCTION**

- Temporary leak-free isolation of pipe sections to be repaired — both downstream and upstream — in pressurized pipelines containing fluids (water, gas, oil).

**APPLICATION**

- Scheduled maintenance and emergency operations on pipelines – line piping, tie-in interconnection, repair on the existing lines, replacement or making of new sections, line relaying, or other maintenance operations.

**MOUNTION ON THE PIPELINE**

- Mounted on a 300 mm branch (T-branch) высотой 300 mm through a full-opening wedge gate.

**TYPE OF DRIVE** • Hydraulic.

**POWER SOURCE**

- GAKS-Д-1-30PM Oil Pumping Station, 30.0 MPa (max.) • Electricity mains, 380 V 50 Hz

**DESIGN FEATURES**

- Line Isolation Fitting consists of three parts: a hydraulic drive, a sealing assembly и and a sealing blank plug.
- Line Isolation Fitting allows replacements to be made on line damaged sections without fluid pressure relief and service interruption.
- Line Isolation Fitting can be used in Class “2” EX-areas “2” (GOST P 51330.9).
- The isolation process is monitored via the Oil Pumping Station control panel.
- Gaging and monitoring instruments on the Oil Pumping Station control panel provide means for easy measurement and monitoring of the process.
- Benefits of the Line Isolation Fitting:
  - removal of line section without service interruption;
  - modular design of the Line Isolation Fitting allows reconfiguration of modules according to various line sizes.

**SPECIFICATIONS**

Parameters	Values
<b>GAKS-C-150/300 Line Isolation Fitting</b>	
Pipeline operating pressure, MPa	up to 10
Nominal size of line to be isolated, mm	150; 200; 250; 300
Pipe wall thickness, mm	up to 20
Branch nominal size, mm	150; 200; 250; 300
Wedge gate nominal passage, mm	150; 200; 250; 300
Hydraulic cylinder piston displacement, mm	1700
Dimensions, mm / Mass, kg	622x585x2960 / 650
<b>GAKS-Д-30PM Oil Pumping Station</b>	
Rated operating pressure, MPa	32
Oil supply, l/min	up to 12
Power supply	380 V, 50 Hz
Tank volume, l	100
Dimensions, mm / Mass, kg	680x620x860 / 130

**RECOMMENDED EQUIPMENT**

- Oil pumping station

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