

# CATALOGUE OF PRODUCTS



Zakład Wyrobów Metalowych  
**CARBONEX**



## REGISTERED OFFICE OF THE COMPANY

Zakład Wyrobów Metalowych CARBONEX has been the Polish manufacturer and supplier of extracting tools for mining industry since 1994.

The range of our products is aimed mainly at coal mines, lignite coal mines and copper ore mines.

The wide variety of products we offer includes:

shank cutter bits, shank cutter bit holders, coupling sleeves, drill rods, core cutters, drill bits, connectors and any kind of auxiliary equipment.

Zakład Wyrobów Metalowych CARBONEX cooperates with universities. Research, development and implementation projects are carried out jointly.

In cooperation with universities, we carry out numerous research projects and teaching that help us to build a competitive advantage on the market.

To follow great advance in technology, the production process of Zakład Wyrobów Metalowych CARBONEX is based on a modern machinery park, high quality raw materials and intellectual potential of the personnel.

Due to long-standing presence on the market we have gained considerable experience. Because of it our offer is wide and the quality of our services guarantees our Clients' satisfaction.

### CONTACT DETAILS:

**Pszczyńska 420 Street  
44-336 Jastrzębie-Zdrój  
Poland  
phone: +48 32 471 89 92  
fax: +48 32 471 26 49  
e-mail: sekretariat@zwmcarbonex.pl**

## STEEL CONSTRUCTIONS

The Steel Constructions Department started its operations in 2007.

This department specializes primarily in the production of structural elements and offshore drilling units equipment, including cranes.

We produce components, sub-assemblies and finished products from structural steel for various industries.

Moreover, we provide all kinds of welding services, ranging from minor services to large welding projects for domestic and foreign clients.

### CONTACT DETAILS:

**Kolejowa 1 Street  
46-040 Ozimek  
Poland  
phone: +48 77 540 22 60  
fax: +48 77 540 22 79  
e-mail: ozimek@zwmcarbonex.pl**

## REGENERATION OF TOOLS

In 1996 the company opened its branch in Lubin. The activity of the branch is based mainly on repair and regeneration services of mining tools.

In addition, we provide polishing services by means of diamond grinding machines and small-scale machining with conventional lathes.

### CONTACT DETAILS:

**Księcia Ludwika I 1B Street  
59-300 Lubin  
Poland  
phone: +48 76 847 85 92  
fax: +48 76 841 19 09  
e-mail: lubin@zwmcarbonex.pl**

## TABLE OF CONTENTS



### SHANK CUTTER BITS

- single stage, rotary-tangential round shank cutter bits standard version ..... 4
- single stage, rotary-tangential round shank cutter bits reinforced version ..... 5
- double stage, rotary-tangential round shank cutter bits standard version ..... 6
- single stage, rotary-tangential round shank cutter bits reinforced version ..... 7
- special rotary-tangential round shank cutter bits standard version ..... 8
- special rotary-tangential round shank cutter bits reinforced version ..... 9



### CUTTER HOLDERS ..... 10



### COUPLING SLEEVES ..... 12



### ASSEMBLY DIAGRAM OF DRILLING SYSTEMS ..... 13



### DRILLING RODS ..... 15



### CONNECTORS

- formed clamping ..... 20
- shaped and threaded fastening ..... 22
- screwed clamping (double sided) ..... 24



### DRILL BITS ..... 25



### CORE CUTTERS ..... 28



### CORE BITS ..... 30



### SOLDERED TURNING TOOLS ..... 31



### TOOLS FOR FORESTRY ..... 34



### ACCESSORIES ..... 35

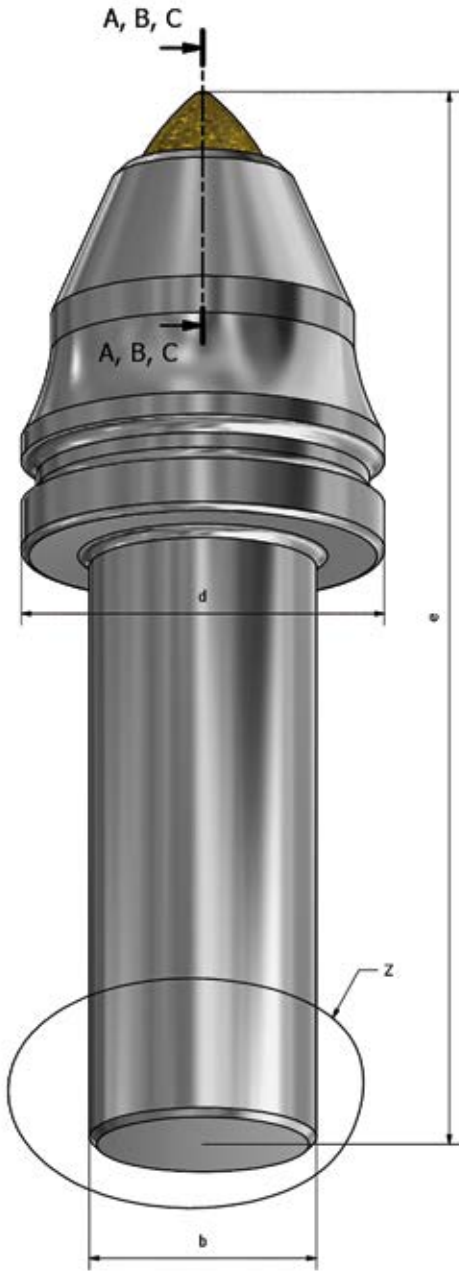
This catalogue contains sample products made by Zakład Wyrobów Metalowych CARBONEX.

Apart from that, our company offers tools designed and manufactured according to individual preferences and specific requirements of our customers.

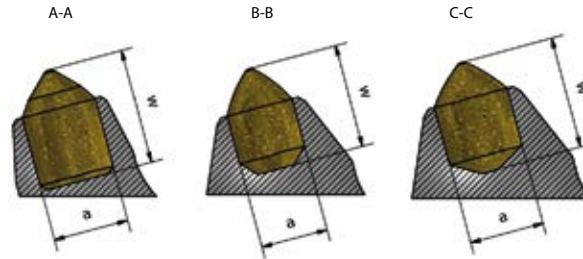


# Single stage, rotary-tangential round shank cutter bits

standard version

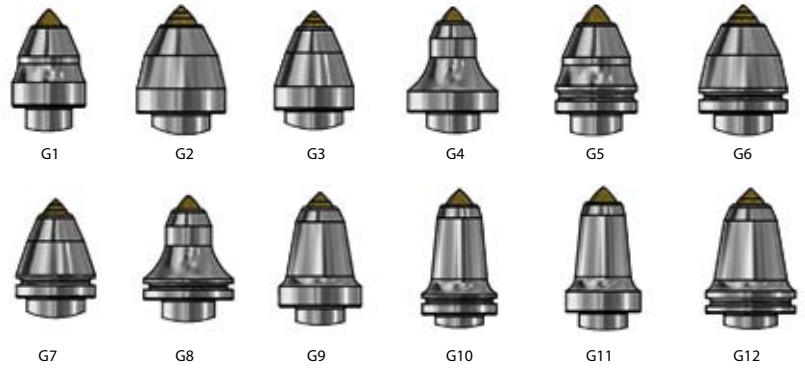


EXAMPLE DIMENSIONS AND SHAPES OF APPLIED INSERTS MADE FROM SINTERED CARBIDES

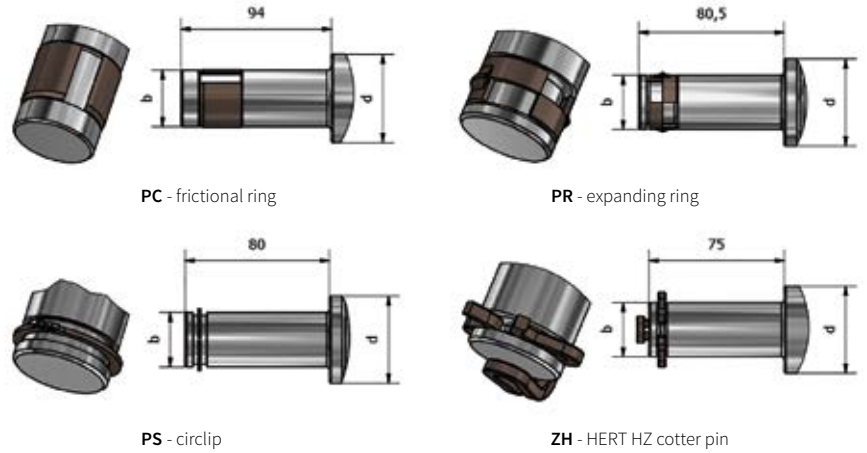


Dimensions of carbide inserts	
a[mm]	w[mm]
15±0.5	20±26
18±0.5	21±30
20±0.5	30±31
22±0.5	30±38
25±0.5	35±40

EXAMPLES OF SHAPES OF THE WORKING PART



DIMENSIONS OF SINGLE-STAGE, ROTARY-TANGENTIAL, ROUND SHANK CUTTER BITS HOLDERS



EXAMPLES OF THE DIMENSIONS OF SINGLE-STAGE, ROTARY-TANGENTIAL ROUND SHANK CUTTER BITS - STANDARD VERSION

a [mm]	b [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	48	169	PR/G8	4CX-222848169
18	30	53	144	PR/G5	4CX-222553144
18	35	55	195	PC/G4	4CX-316455195
19	35	55	183	PC/G10	4CX-317A55183
19	25	48	142	ZH/G4	4CX-857448142
20	30	54	152	PS/G4	4CX-233454152
20	35	55	195	PC/G4	4CX-313455195
22	30	48	144	PR/G5	4CX-224548144

a [mm]	b [mm]	d [mm]	e [mm]	Z/G	Catalogue number
22	30	48	140	PS/G3	4CX-234348140
22	35	55	175	PC/G4	4CX-314455175
22	38	65	175	PS/G4	4CX-488465175
25	35	55	182	PC/G4	4CX-315455182
25	38	65	156	PS/G2	4CX-435265156
25	38	65	165	PS/G2	4CX-435265165
25	30	52	144	PR/G5	4CX-225552144
25	35	55	175	PC/G4	4CX-315455175

## DESCRIPTION

Symbols of single-stage, standard, rotary-tangential round shank cutter bits: CX-a / b / d / e / Z

**a** - diameter of insert made from sintered carbide

**d** - diameter of round shank cutter bit collar

**Z** - protection type

**b** - diameter of round shank cutter bit holder

**e** - overall length of round shank cutter bit

**G** - shape of the working part

# Single stage, rotary-tangential round shank cutter bits

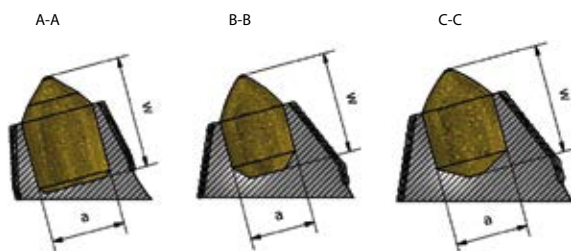
reinforced version



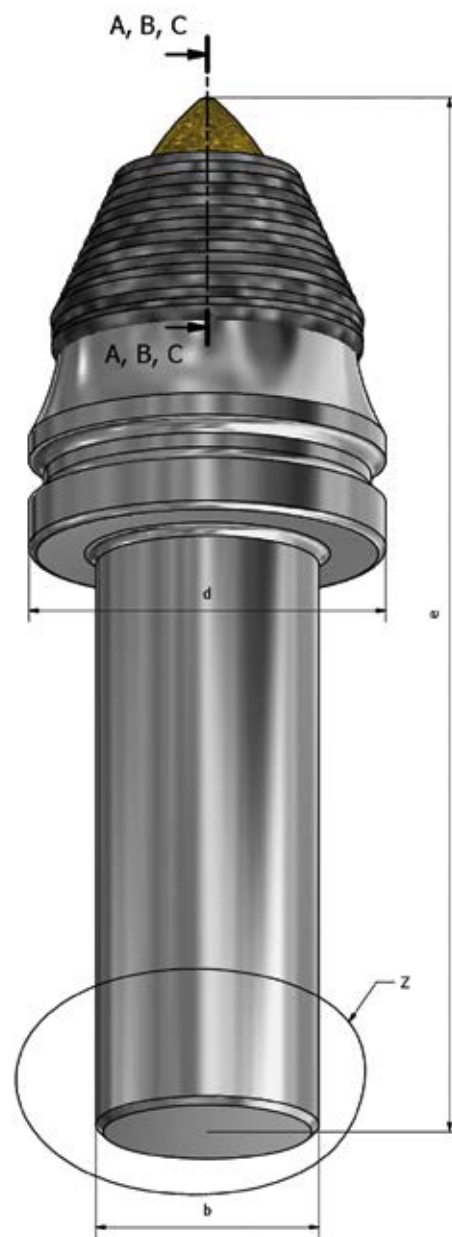
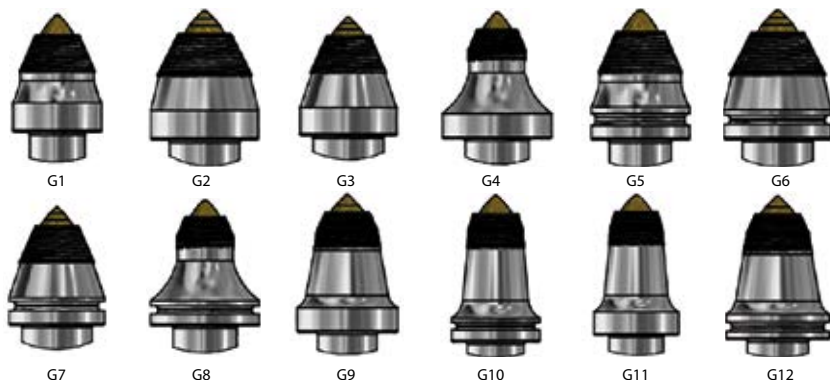
EXAMPLE DIMENSIONS AND SHAPES OF APPLIED INSERTS MADE FROM SINTERED CARBIDES

## Dimensions of carbide inserts

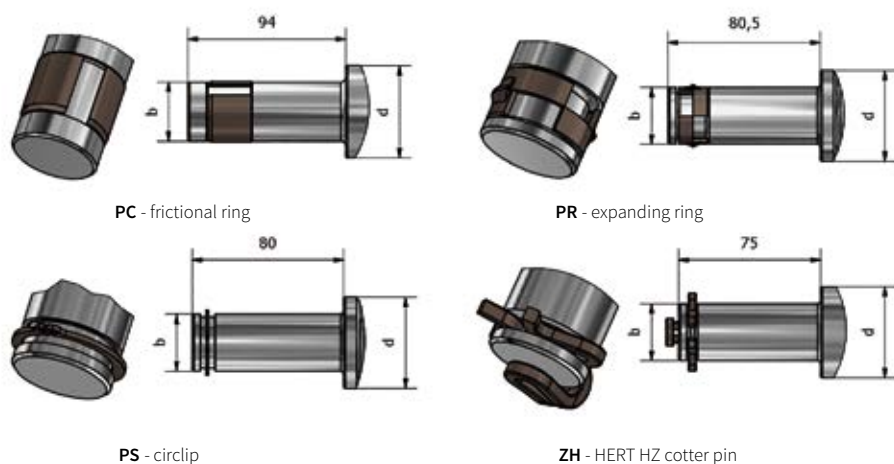
a[mm]	w[mm]
15±0,5	20÷26
18±0,5	21÷30
20±0,5	30÷31
22±0,5	30÷38
25±0,5	35÷40



EXAMPLES OF SHAPES OF THE WORKING PART



DIMENSIONS OF SINGLE-STAGE, ROTARY-TANGENTIAL, ROUND SHANK CUTTER BITS HOLDERS



EXAMPLES OF THE DIMENSIONS OF SINGLE-STAGE, ROTARY-TANGENTIAL ROUND SHANK CUTTER BITS - REINFORCED VERSION

a [mm]	b [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	48	169	PR/G4	4CX-B22448169
18	30	48	144	PR/G5	4CX-B22548144
18	30	48	165	ZH/G9	4CX-B52948165
18	30	53	144	PR/G5	4CX-B22553144
19	35	55	183	PC/G9	4CX-C17955183
19	35	55	194	PC/G11	4CX-C17855194
22	30	48	140	PS/G1	4CX-B34148140
22	35	55	175	PC/G4	4CX-C14455175

a [mm]	b [mm]	d [mm]	e [mm]	Z/G	Catalogue number
22	35	55	195	PC/G4	4CX-C14455195
22	38	58	147	PR/G2	4CX-D74258147
22	38	59	186	PR/G8	4CX-D74859186
22	38	65	147	PR/G2	4CX-D74265147
25	35	60	175	PC/G4	4CX-C1A460175
25	35	55	182	PC/G4	4CX-C15455182
25	38	58	147	PR/G2	4CX-D75258147
25	38	63	156	PS/G4	4CX-D35463156

## DESCRIPTION

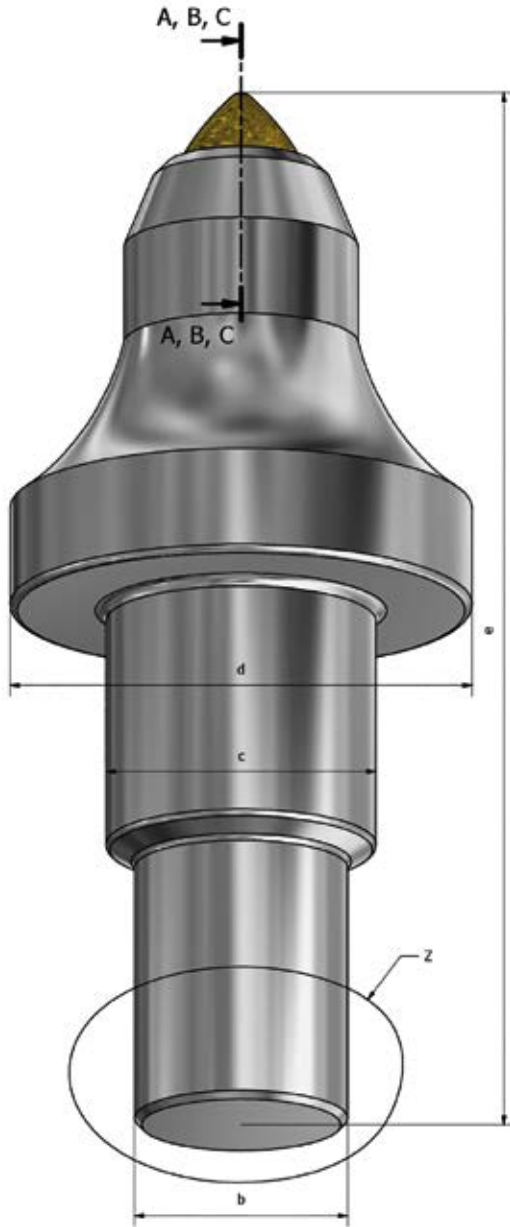
Symbols of single-stage, reinforced, rotary-tangential round shank cutter bits: CX-a / b / d / e / Z / W

- a** - diameter of insert made from sintered carbide
- b** - diameter of round shank cutter bit holder
- d** - diameter of round shank cutter bit collar
- e** - overall length of round shank cutter bit
- Z** - protection type
- G** - shape of the working part
- W** - symbol of the reinforced working part

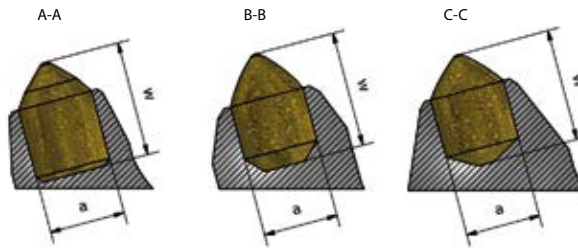


# Single stage, rotary-tangential round shank cutter bits

standard version



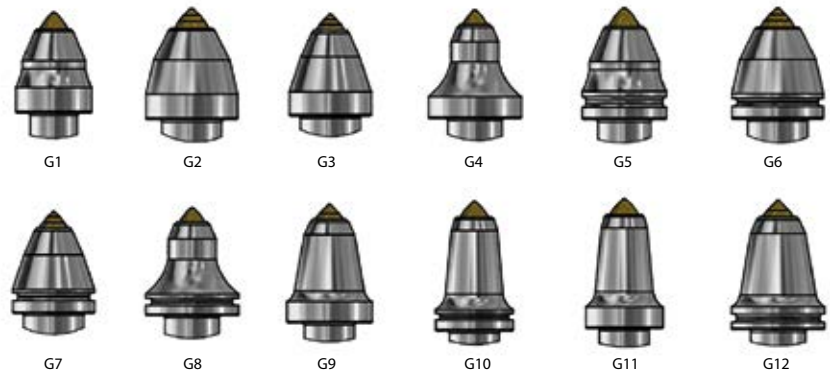
EXAMPLE DIMENSIONS AND SHAPES OF APPLIED INSERTS MADE FROM SINTERED CARBIDES



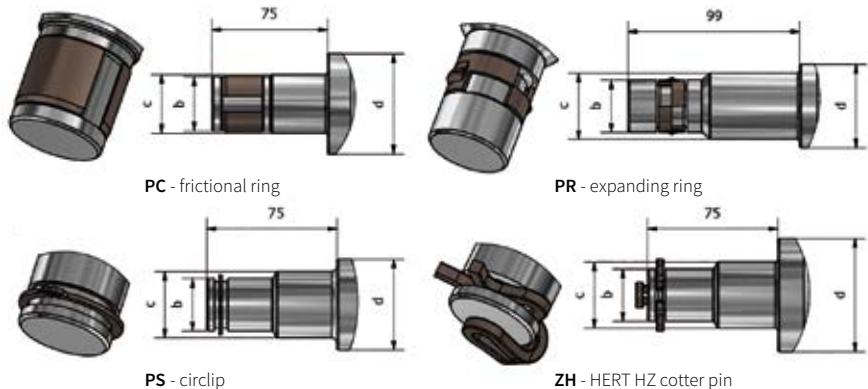
Dimensions of carbide inserts

a[mm]	w[mm]
15±0.5	20±26
18±0.5	21±30
20±0.5	30±31
22±0.5	30±38
25±0.5	35±40

EXAMPLES OF SHAPES OF THE WORKING PART



DIMENSIONS OF TWO-STAGE, ROTARY-TANGENTIAL, ROUND SHANK CUTTER BITS HOLDERS



EXAMPLES OF THE DIMENSIONS OF TWO-STAGE, ROTARY-TANGENTIAL ROUND SHANK CUTTER BITS - STANDARD VERSION

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	38	52	139	PS/G1	4CX-532152139
18	30	38	65	165	ZH/G9	4CX-552965165
18	30	38	52	151	PS/G3	4CX-532352151
18	30	38	52	139	PS/G1	4CX-532152139
18	30	38	65	150	ZH/G4	4CX-552465150
22	30	38	48	139	PS/G1	4CX-534148139
22	30	38	48	160	PS/G4	4CX-534448160
22	30	38	52	151	PS/G3	4CX-538352151

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
22	30	38	53	165	ZH/G9	4CX-558953165
22	30	38	65	139	PS/G1	4CX-538165139
22	35	43	64	234	PC/G9	4CX-K19964234
22	35	43	62	210	PC/G9	4CX-K19962210
25	30	38	65	165	PS/G9	4CX-535965165
25	30	38	65	140	PS/G4	4CX-535465140
25	35	43	64	246	PC/G9	4CX-K19964246
25	35	43	67	221	PC/G9	4CX-K19967221

## DESCRIPTION

Symbols of two-stage, standard, rotary-tangential round shank cutter bits: CX-a / b / c / d / e / Z

- a - diameter of insert made from sintered carbide
- b - diameter of round shank cutter bit holder - stage I
- c - diameter of round shank cutter bit holder - stage II
- d - diameter of round shank cutter bit collar
- e - overall length of round shank cutter bit
- Z - protection type
- G - shape of the working part

# Single stage, rotary-tangential round shank cutter bits

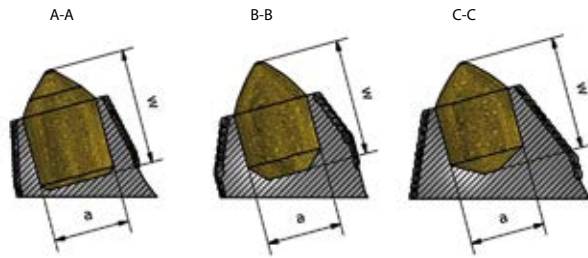
reinforced version



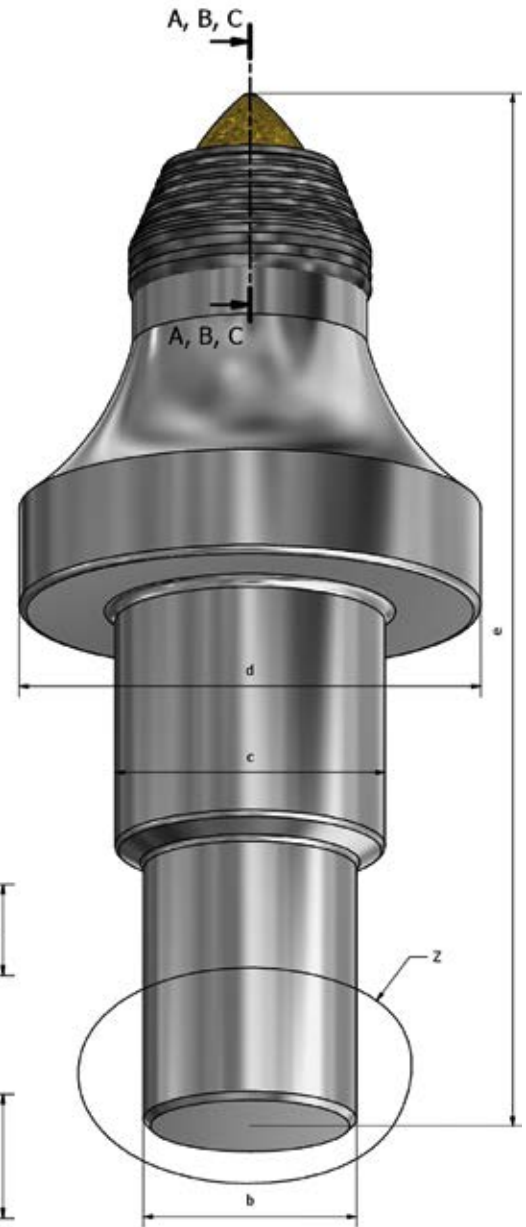
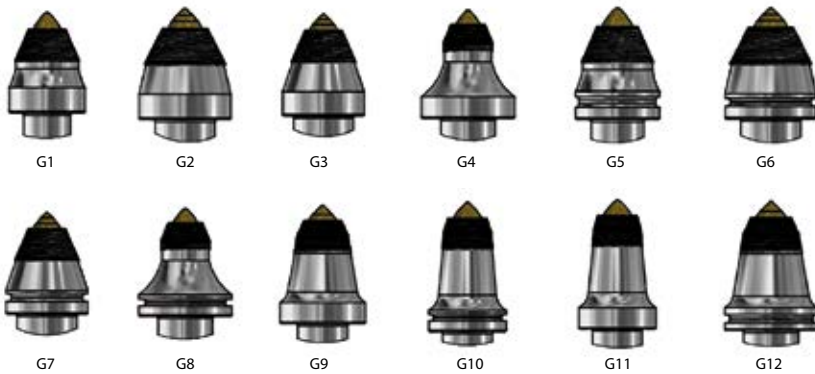
EXAMPLE DIMENSIONS AND SHAPES OF APPLIED INSERTS MADE FROM SINTERED CARBIDES

Dimensions of carbide inserts

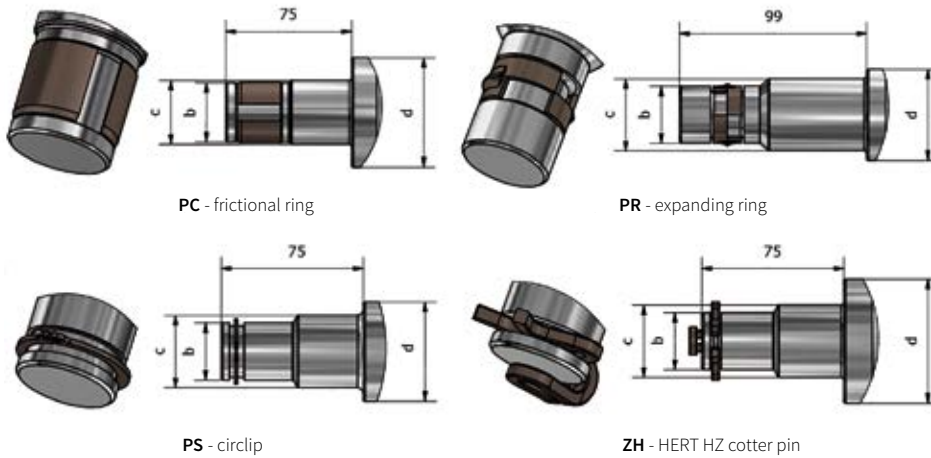
a[mm]	w[mm]
15±0.5	20÷26
18±0.5	21÷30
20±0.5	30÷31
22±0.5	30÷38
25±0.5	35÷40



EXAMPLES OF SHAPES OF THE WORKING PART



DIMENSIONS OF TWO-STAGE, ROTARY-TANGENTIAL, ROUND SHANK CUTTER BITS HOLDERS



EXAMPLES OF THE DIMENSIONS OF TWO-STAGE, ROTARY-TANGENTIAL ROUND SHANK CUTTER BITS - REINFORCED VERSION

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	38	52	139	PS/G1	4CX-E32152139
18	30	38	52	152	PS/G3	4CX-E32352152
18	30	38	65	150	ZH/G4	4CX-E52465150
20	30	38	64	140	ZH/G9	4CX-E53964140
20	30	38	64	156	ZH/G9	4CX-E53964156
22	30	38	48	160	PS/G4	4CX-E34448160
22	30	38	52	139	PS/G1	4CX-E34152139
22	30	38	53	139	PS/G1	4CX-E54153139

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
22	30	38	65	156	ZH/G4	4CX-E34464156
22	30	38	65	153	PS/G1	4CX-E34165153
22	35	43	62	210	PC/G9	4CX-J19962210
22	35	43	64	234	PC/G9	4CX-J19964234
25	30	38	55	139	PS/G1	4CX-E35155139
25	30	38	65	140	PS/G4	4CX-E35465140
25	35	43	67	221	PC/G9	4CX-J19967221
25	35	43	64	246	PC/G9	4CX-J19964246

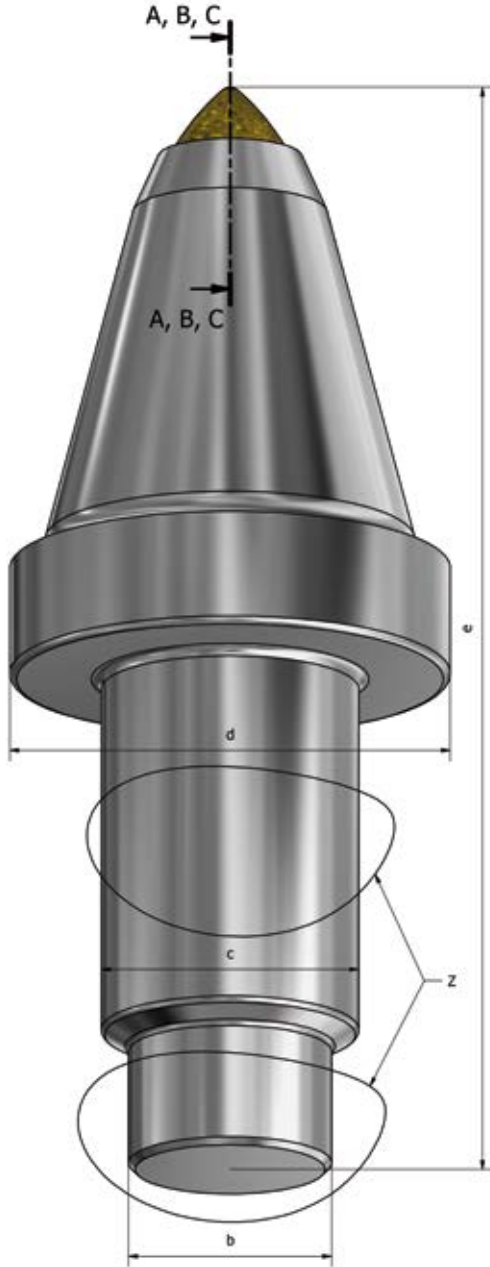
## DESCRIPTION

Symbols of two-stage, reinforced, rotary-tangential round shank cutter bits: CX-a / b / c / d / e / Z / W

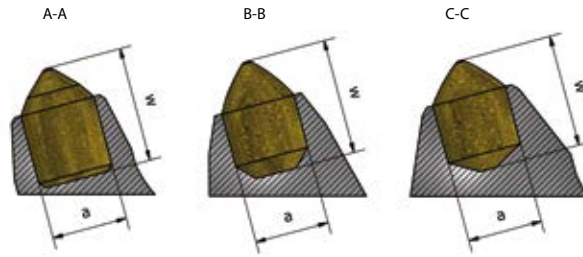
- a** - diameter of insert made from sintered carbide
- b** - diameter of round shank cutter bit holder - stage I
- c** - diameter of round shank cutter bit holder - stage II
- d** - diameter of round shank cutter bit collar
- e** - overall length of round shank cutter bit
- Z** - protection type
- G** - shape of the working part
- W** - symbol of the reinforced working part

# Single stage, rotary-tangential round shank cutter bits

standard version

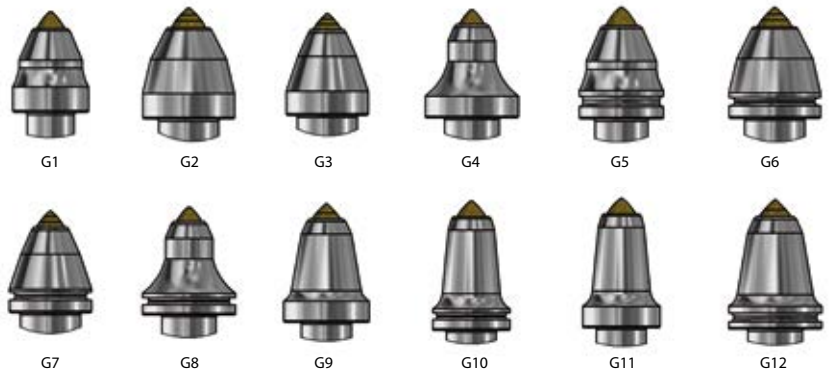


EXAMPLE DIMENSIONS AND SHAPES OF APPLIED INSERTS MADE FROM SINTERED CARBIDES

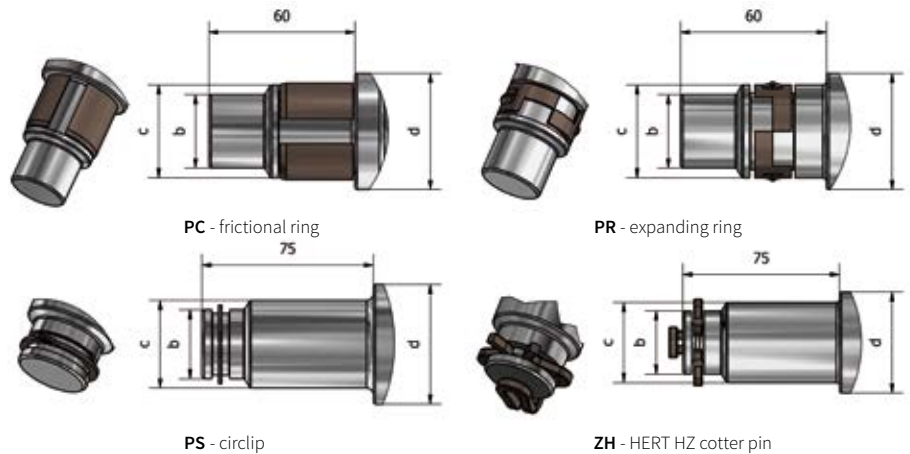


Dimensions of carbide inserts	
a[mm]	w[mm]
15±0.5	20÷26
18±0.5	21÷30
20±0.5	30÷31
22±0.5	30÷38
25±0.5	35÷40

EXAMPLES OF SHADES OF THE WORKING PART



DIMENSIONS OF SPECIAL ROTARY-TANGENTIAL, ROUND SHANK CUTTER BITS HOLDERS



ZH - HERT HZ cotter pin

EXAMPLES OF THE DIMENSIONS OF SPECIAL ROTARY-TANGENTIAL ROUND SHANK CUTTER BITS - STANDARD VERSION

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	38	60	165	ZH/G9	4CX-652960165
18	30	38	60	165	ZH/G4	4CX-652460165
18	30	38	65	165	ZH/G4	4CX-652465165
19	30	38	65	165	ZH/G4	4CX-657465165
20	30	38	65	165	ZH/G4	4CX-653465165
22	30	38	60	165	ZH/G9	4CX-658960165
22	30	38	65	165	ZH/G4	4CX-654465165
25	30	38	65	165	ZH/G4	4CX-655465165

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	38	60	139	PS/G9	4CX-652960139
18	30	38	60	165	PS/G4	4CX-652460165
18	30	38	65	139	PS/G4	4CX-652465139
19	30	38	65	165	PS/G4	4CX-657465165
20	30	38	65	165	PS/G4	4CX-653465165
22	30	38	60	139	PS/G9	4CX-658960139
22	30	38	65	165	PS/G4	4CX-654465165
25	30	38	65	139	PS/G4	4CX-655465139

## DESCRIPTION

Codes of parameters of special rotary-tangential round shank cutter bits: CX-a / b / c / d / e / Z

- a - diameter of insert made from sintered carbide
- b - diameter of round shank cutter bit holder - stage I
- c - diameter of round shank cutter bit holder - stage II
- d - diameter of round shank cutter bit collar
- e - overall length of round shank cutter bit
- Z - protection type
- G - shape of the working part



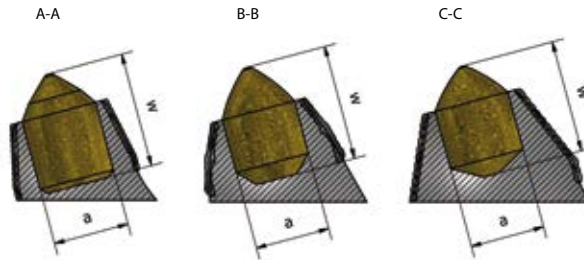
# Single stage, rotary-tangential round shank cutter bits

reinforced version

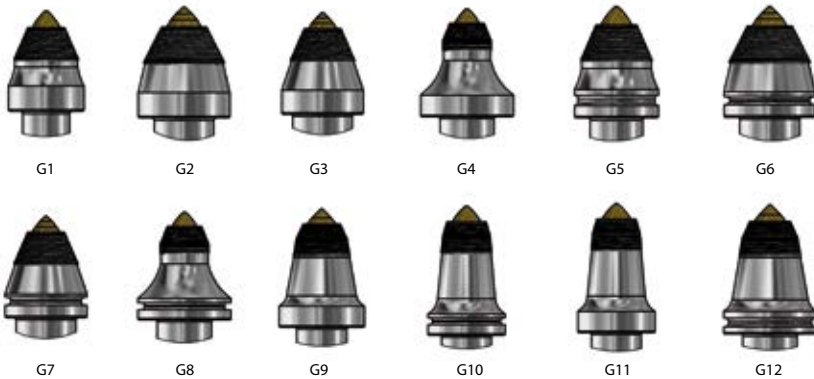


EXAMPLE DIMENSIONS AND SHAPES OF APPLIED INSERTS MADE FROM SINTERED CARBIDES

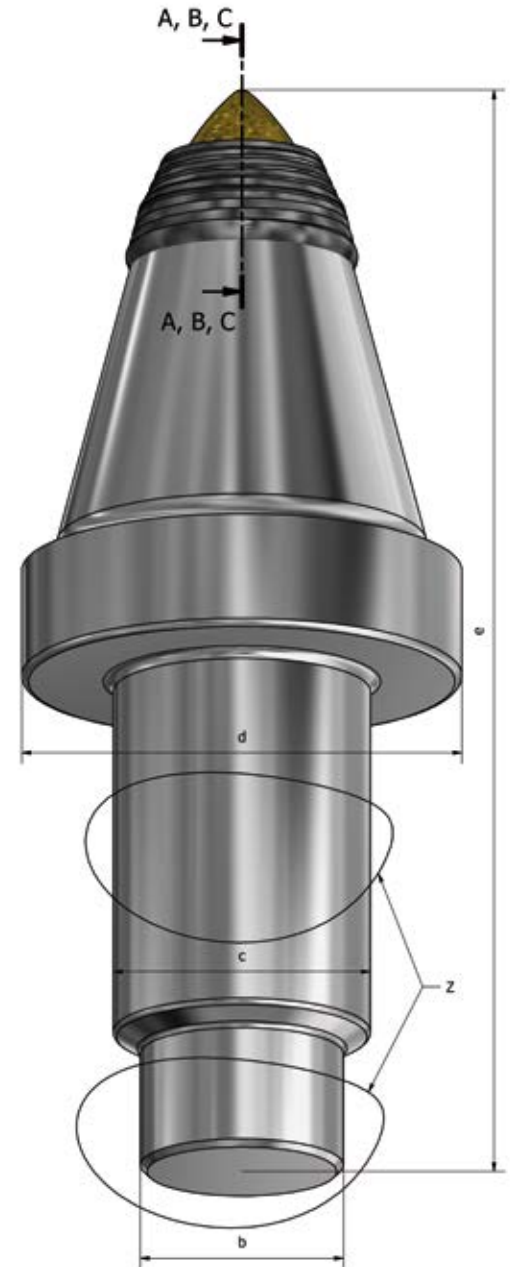
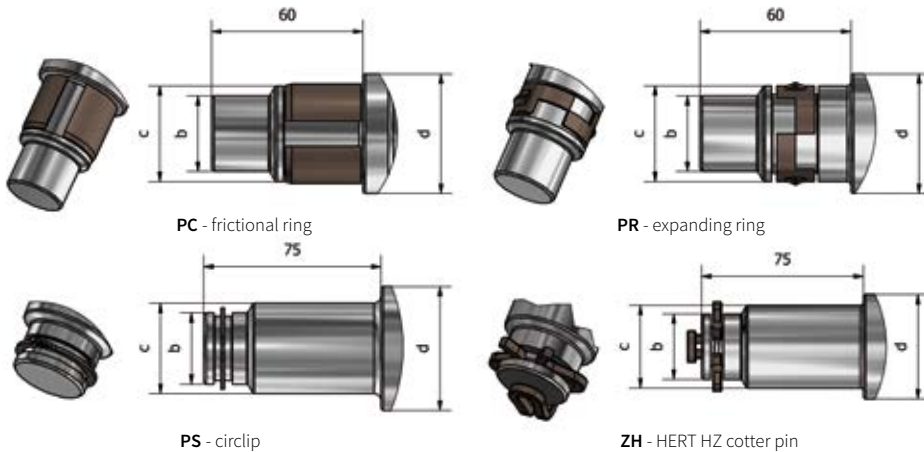
Dimensions of carbide inserts	
a[mm]	w[mm]
15±0.5	20±26
18±0.5	21±30
20±0.5	30±31
22±0.5	30±38
25±0.5	35±40



EXAMPLES OF SHAPES OF THE WORKING PART



EXAMPLES OF THE DIMENSIONS OF SPECIAL ROTARY-TANGENTIAL, ROUND SHANK CUTTER BITS HOLDERS



EXAMPLES OF THE DIMENSIONS OF SPECIAL ROTARY-TANGENTIAL ROUND SHANK CUTTER BITS - REINFORCED VERSION

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	38	60	165	ZH/G4	4CX-F52460165
18	30	38	65	165	ZH/G4	4CX-F52465165
19	30	38	64	165	ZH/G4	4CX-F57464165
20	30	38	65	165	ZH/G4	4CX-F53465165
22	30	38	60	165	ZH/G4	4CX-F54460165
22	30	38	65	165	ZH/G4	4CX-F54465165
25	30	38	65	165	ZH/G4	4CX-F55465165
25	30	38	60	165	ZH/G4	4CX-F55460165

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z/G	Catalogue number
18	30	38	60	139	PS/G4	4CX-F32460139
18	30	38	65	139	PS/G4	4CX-F32465139
19	30	38	64	139	PS/G4	4CX-F37464139
20	30	38	65	139	PS/G4	4CX-F33465139
22	30	38	60	139	PS/G4	4CX-F34460139
22	30	38	65	139	PS/G4	4CX-F34465139
25	30	38	65	139	PS/G4	4CX-F35465139
25	30	38	60	139	PS/G4	4CX-F55460139

## DESCRIPTION

Codes of parameters of special reinforced, rotary-tangential round shank cutter bits: CX-a / b / c / d / e / Z / W

- a** - diameter of insert made from sintered carbide
- b** - diameter of round shank cutter bit holder - stage I
- c** - diameter of round shank cutter bit holder - stage II
- d** - diameter of round shank cutter bit collar
- e** - overall length of round shank cutter bit
- Z** - protection type
- G** - shape of the working part
- W** - symbol of the reinforced working part

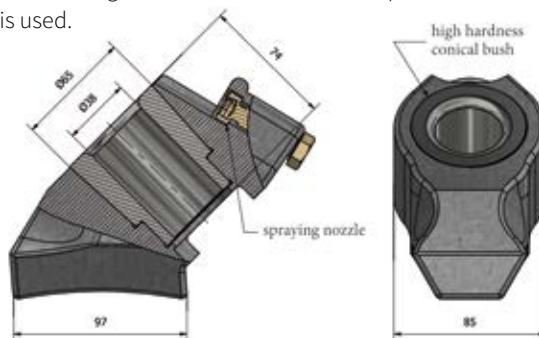


## CUTTER HOLDER CX-U/KR.2

Catalogue number **9CX-150453546**

### TECHNICAL SPECIFICATION:

- The holder used in processing components of longwall-coal cutters in range of cutter diameters between 1600 and 2500 mm and installed power at the arm up to 750 kW,
- The overlaying weld with high wear resistance is used to protect the water nozzle.,
- Spraying nozzle is used.

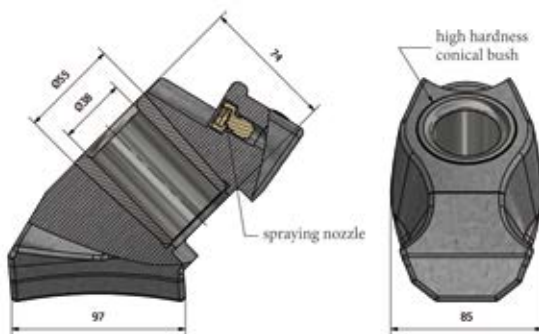


## CUTTER HOLDER CX-U/KR.1

Catalogue number **9CX-150453539**

### TECHNICAL SPECIFICATION:

- The holder used in processing components of longwall-coal cutters in range of cutter diameters between 1600 and 2500 mm and installed power at the arm up to 750 kW,
- The overlaying weld with high wear resistance is used to protect the water nozzle,
- Spraying nozzle is used.

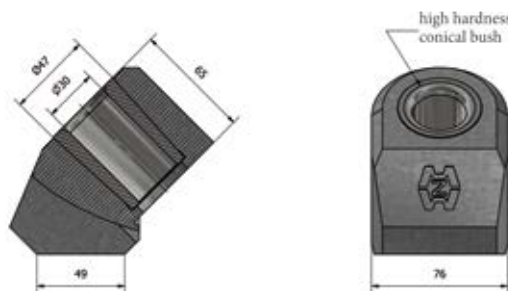


## CUTTER HOLDER CX-U/KOH8.1

Catalogue number **9CX-150453540**

### TECHNICAL SPECIFICATION:

- The holder used in processing components of longwall-coal cutters in range of cutter diameters between 1000 and 2000 mm and installed power at the arm up to 300 kW.



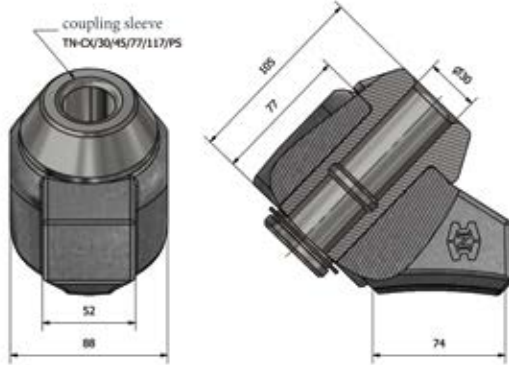


## CUTTER HOLDER CX-U/D04178.1

Catalogue number **9CX-150453543**

### TECHNICAL SPECIFICATION:

- The holder used in processing components of longwall-coal cutters in range of cutter diameters between 1400 and 2200 mm and installed power at the arm up to 500 kW.

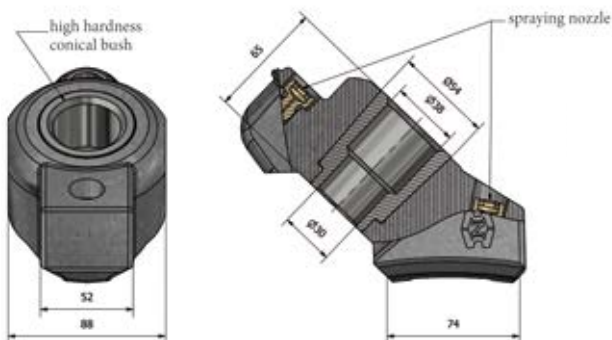


## CUTTER HOLDER CX-U/L04177

Catalogue number **9CX-150453535**

### TECHNICAL SPECIFICATION:

- The holder used in processing components of longwall-coal cutters in range of cutter diameters between 1400 and 2200 mm and installed power at the arm up to 500 kW,
- The overlaying weld with high wear resistance is used to protect the water nozzle,
- Spraying nozzle is used.

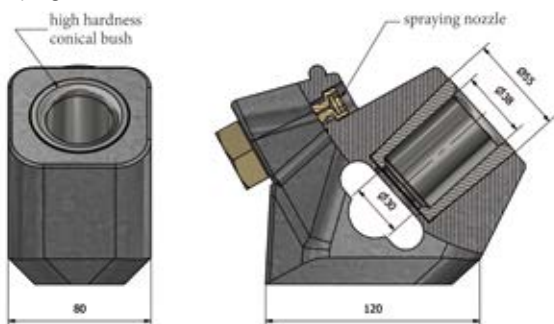


## CUTTER HOLDER CX-U/KO.1

Catalogue number **9CX-150453545**

### TECHNICAL SPECIFICATION:

- The holder used in processing components of longwall-coal cutters in range of cutter diameters between 1600 and 2500 mm and installed power at the arm up to 750 kW,
- The overlaying weld with high wear resistance is used to protect the water nozzle,
- Spraying nozzle is used.





# Coupling sleeves

Single stage/two stage



## EXAMPLE OF THE SHAPE OF ONE-STAGE ROTARY COUPLING SLEEVE

### ACCESSORIES

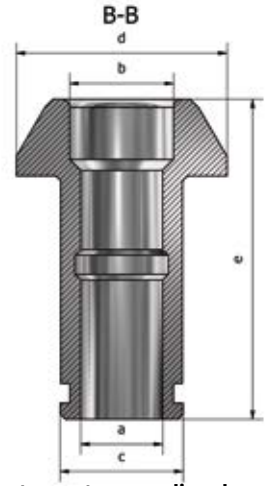
- Circlip as a protection type  $\varnothing 45$   
ACX-010504501
- Circlip as a protection type  $\varnothing 50$   
ACX-010505001



### ONE INNER STAGE



### TWO INNER STAGE



Examples of the dimensions of single-stage rotary coupling sleeves with one inner stage

a [mm]	c [mm]	d [mm]	e [mm]	Z	Catalogue number
30	45	77	117	PS	5CX-111277117
35	50	90	154	PS	5CX-122390154

Examples of the dimensions of single-stage rotary coupling sleeves with two inner stages

a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z	Catalogue number
30	38	45	77	115	PS	5CX-311277117



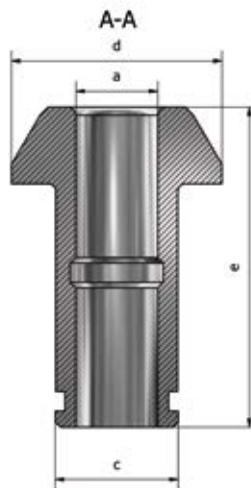
## EXAMPLE OF THE SHAPE OF TWO-STAGE ROTARY COUPLING SLEEVE

### ACCESSORIES

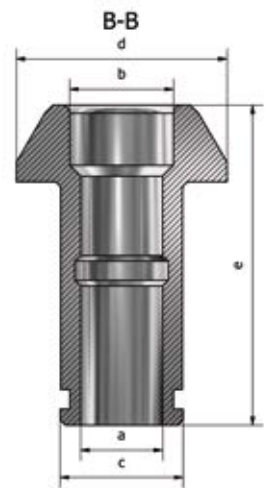
- Circlip as a protection type  $\varnothing 30$   
ACX-010503001



### ONE INNER STAGE



### TWO INNER STAGES



Examples of the dimensions of two-stage rotary coupling sleeves with one inner stage

a [mm]	c [mm]	d [mm]	e [mm]	Z	Catalogue number
30	45	70	105	PS	5CX-211170105
35	50	72	135	PS	5CX-211172135

Examples of the dimensions of two-stage rotary coupling sleeves with two inner stages

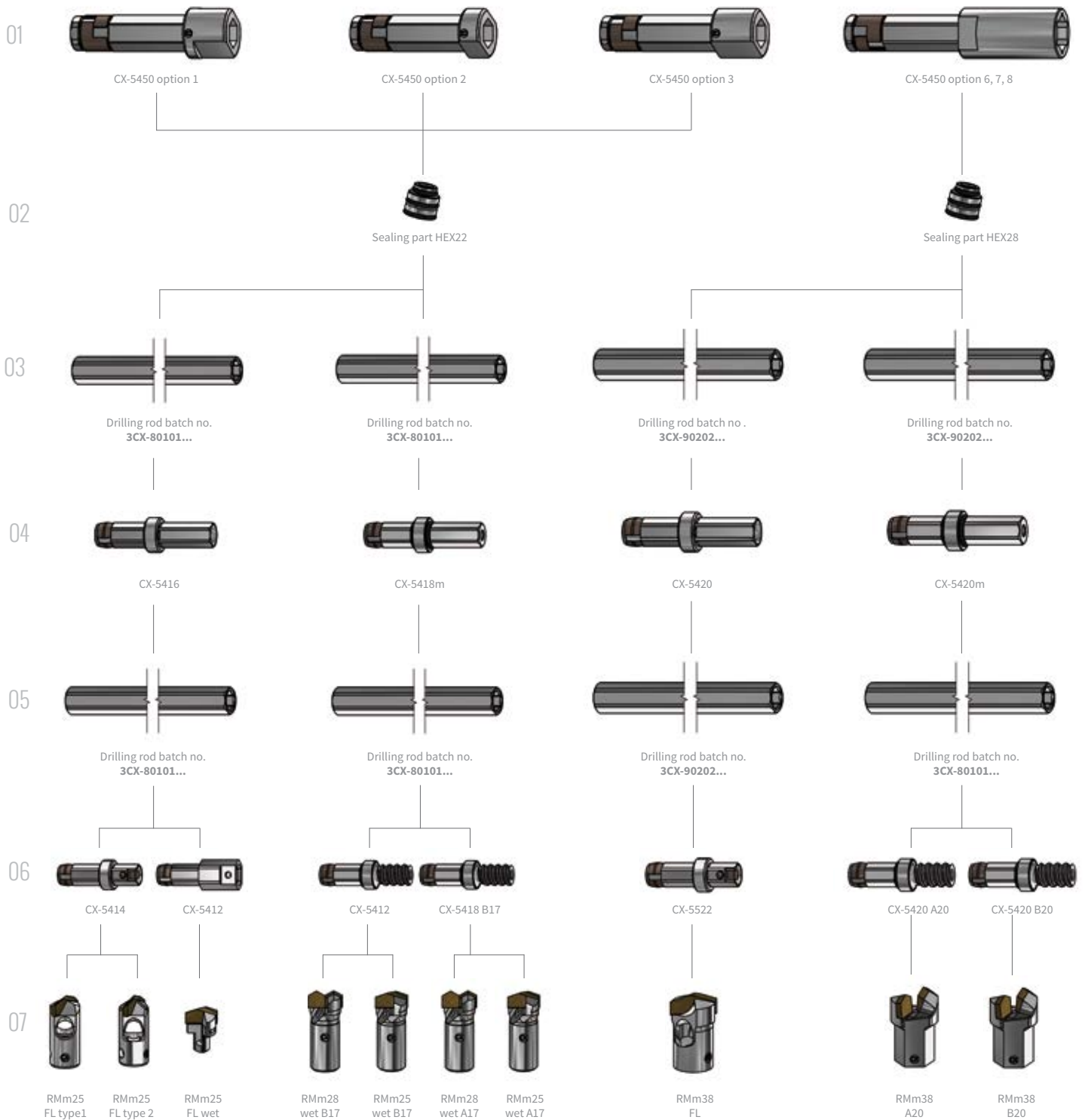
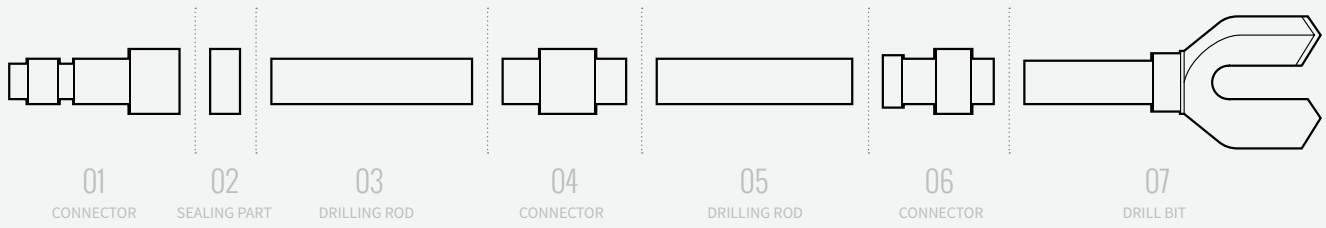
a [mm]	b [mm]	c [mm]	d [mm]	e [mm]	Z	Catalogue number
30	38	45	70	105	PS	5CX-411170105

## DESCRIPTION

Symbols of single-stage rotary coupling sleeves with one inner stage TN-CX-a/c/d/e/Z or with two inner stages: TN-CX-a/b/c/d/e/Z

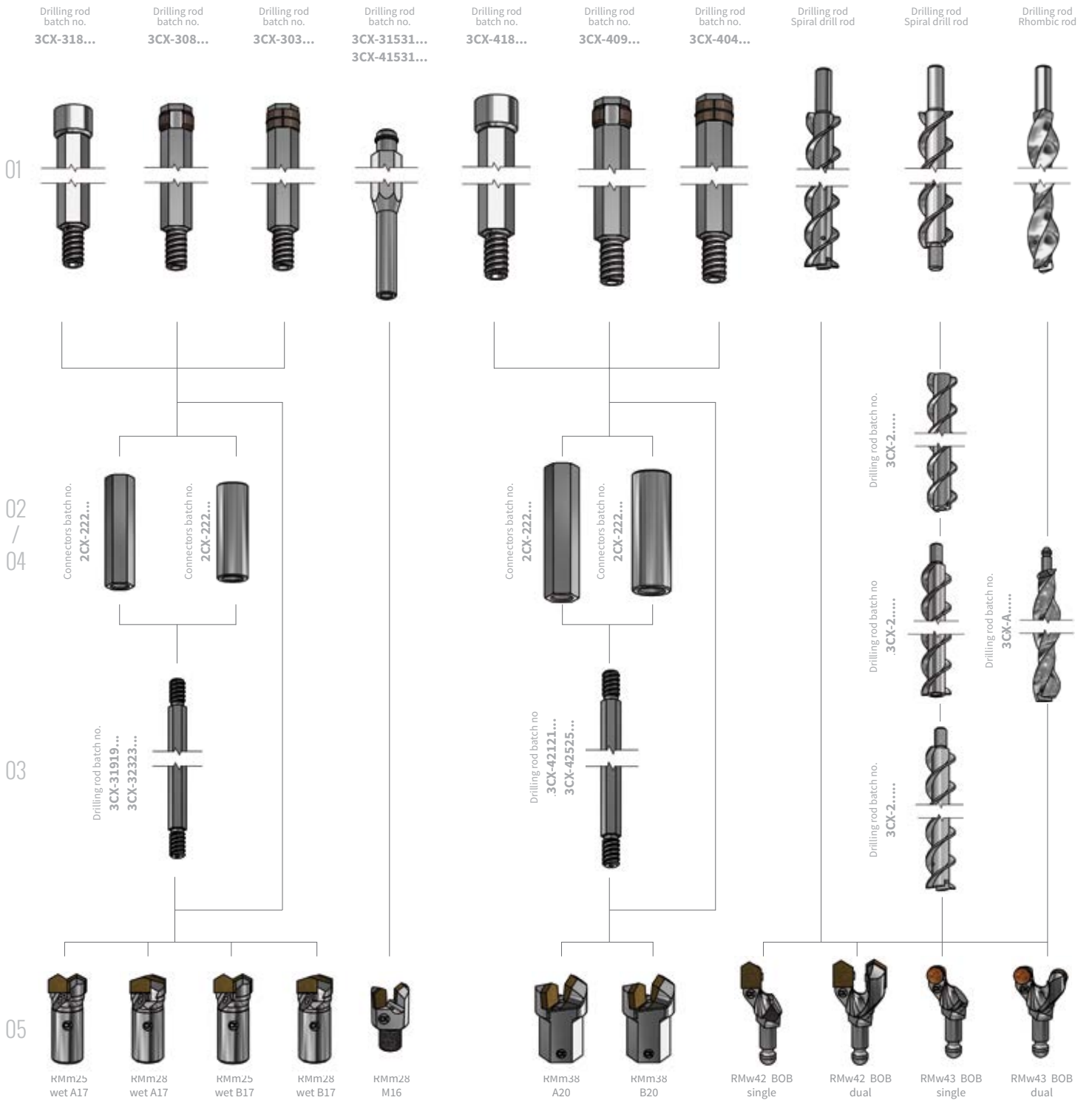
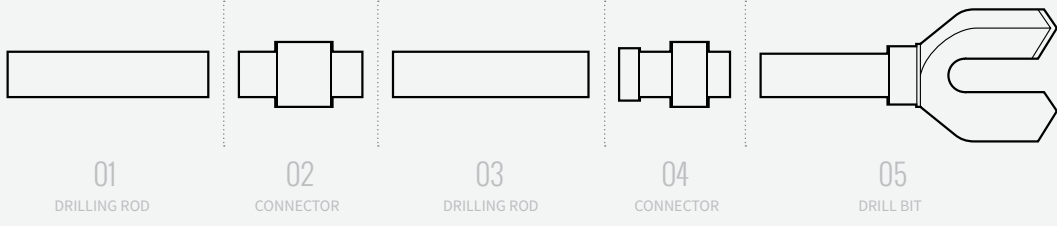
- a - inner diameter of rotary coupling sleeve - stage I
- b - inner diameter of rotary coupling sleeve - stage II
- c - diameter of rotary coupling sleeve shank
- d - diameter of rotary coupling sleeve collar
- e - overall length of rotary coupling sleeve
- Z - protection type

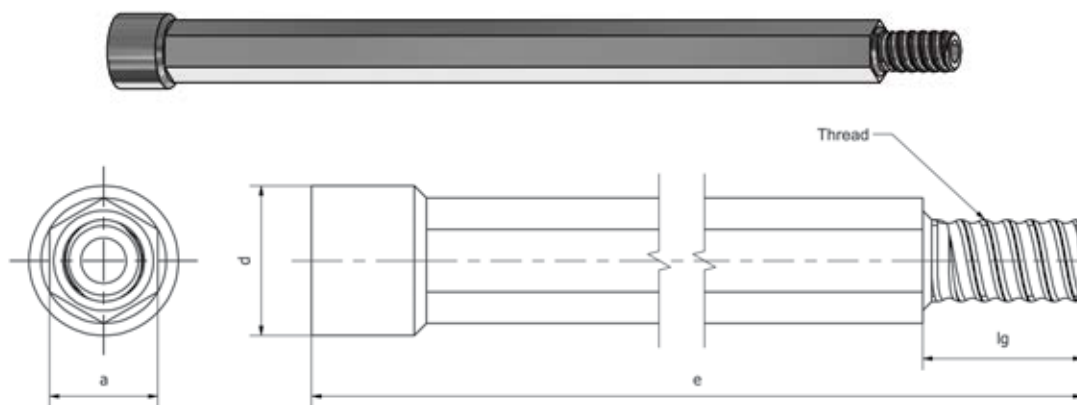
# Assembly diagram of drilling systems





# Assembly diagram of drilling systems





### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Thread	lg [mm]	a [mm]	d [mm]	e [mm]	Catalogue number	Thread	lg [mm]	a [mm]	d [mm]	e [mm]	Catalogue number
A17	29	22	33	1920	3CX-319181920	B17	29	22	33	2060	3CX-323182060
A17L	29	22	33	2060	3CX-320182060	B17L	29	22	33	1920	3CX-324181920
A20	29	25	33	3000	3CX-421183000	B20	29	25	33	2060	3CX-425182060
A20L	29	25	33	2060	3CX-422182060	B20L	29	25	33	3000	3CX-426183000

### DESCRIPTION

a - dimension of hexagon

d - resistance diameter

lg - thread length

e - overall length of drilling rod

### ACCESSORIES:

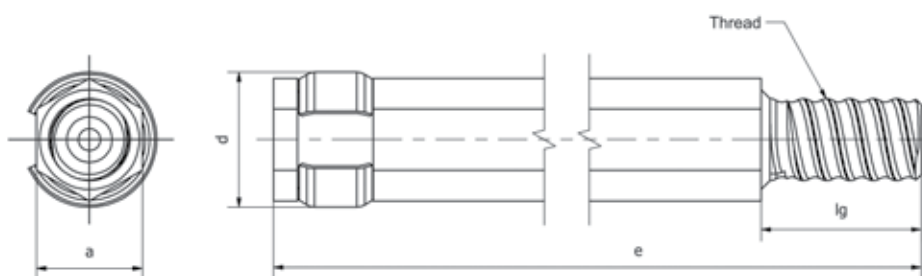
#### Frictional ring as a protection type

##### PC22 L26

ACX-010403101

##### PC25 L24

ACX-010403102



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Thread	lg [mm]	a [mm]	d [mm]	e [mm]	Catalogue number	Thread	lg [mm]	a [mm]	d [mm]	e [mm]	Catalogue number
A17	29	22	33	1920	3CX-308191920	B17	29	22	33	2060	3CX-308232060
A17L	29	22	33	2060	3CX-308202060	B17L	29	22	33	1920	3CX-308241920
A20	29	25	33	3000	3CX-409213000	B20	29	25	33	2060	3CX-409252060
A20L	29	25	33	2060	3CX-409222060	B20L	29	25	33	3000	3CX-409263000

### DESCRIPTION

a - dimension of hexagon

d - diameter of the protection

lg - thread length

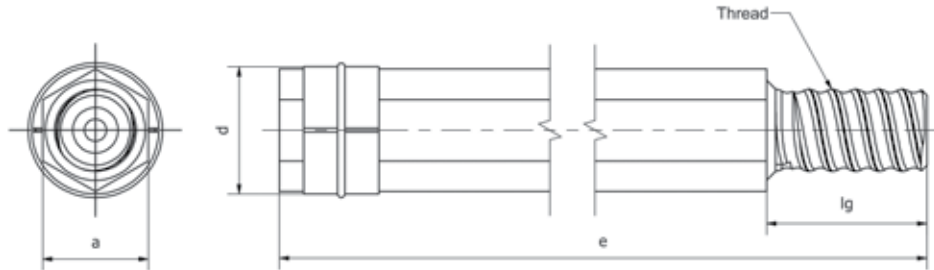
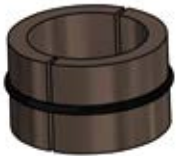
e - overall length of drilling rod



**ACCESSORIES:**

**Frictional ring as a protection type**

- PC22 L10**  
ACX-010603101
- PC25 L10**  
ACX-010603102
- PC22 L25**  
ACX-010603111
- PC25 L25**  
ACX-010603112



**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS**

Thread	lg [mm]	a [mm]	d [mm]	e [mm]	Catalogue number	Thread	lg [mm]	a [mm]	d [mm]	e [mm]	Catalogue number
A17	29	22	33	1920	3CX-319181920	B17	29	22	33	2060	3CX-323182060
A17L	29	22	33	2060	3CX-320182060	B17L	29	22	33	1920	3CX-324031920
A20	29	25	33	3000	3CX-421183000	B20	29	25	33	2060	3CX-425042060
A20L	29	25	33	2060	3CX-422182060	B20L	29	25	33	3000	3CX-426043000

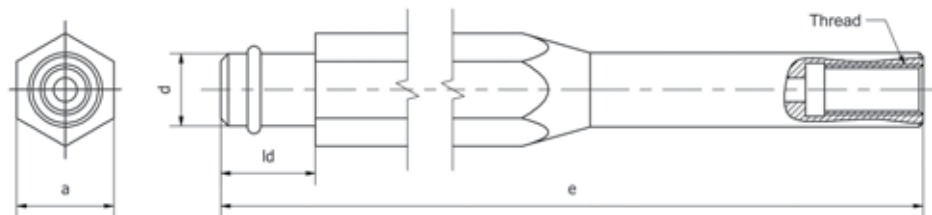
**DESCRIPTION**

lg - thread length                      a - dimension of hexagon                      d - diameter of the protection                      e - overall length of drilling rod

**ACCESSORIES:**

**O-ring as a protection type**

- ACX-020001604



**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS**

Thread	a [mm]	d [mm]	ld [mm]	e [mm]	Catalogue number	Thread	a [mm]	d [mm]	ld [mm]	e [mm]	Catalogue number
M16	22	19	25	2400	3CX-333152400	1/2"	22	19	25	2400	3CX-328152400
M16L	22	19	25	2200	3CX-334152200	3/4"	22	19	25	2200	3CX-329152200
M16	25	19	25	1600	3CX-433151600	1/2"	25	19	25	1600	3CX-428151600
M16L	25	19	25	2200	3CX-434152200	3/4"	25	19	25	2200	3CX-429152200

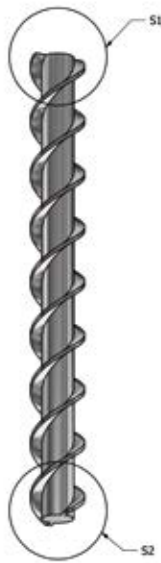
**DESCRIPTION**

a - dimension of hexagon element                      d - diameter of the gripping                      ld - length of the gripping element                      e - overall length of drilling rod

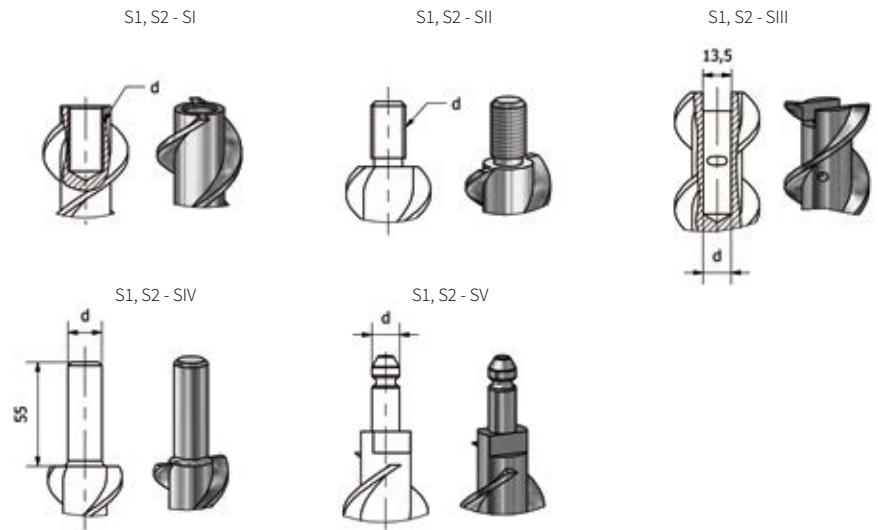




## TYPE S - SPIRAL RODS



### EXAMPLES OF TIPS OF DRILLING RODS TYPE S



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Type	S1	S2	S1 d [mm]	S2 d [mm]	e [mm]	Catalogue number
S	SI	SI	M16w	Rd16w	500	3CX-231470500
S	SI	SII	Rd16w	M16	1500	3CX-247331500
S	SI	SIII	M16w	BOBw	1000	3CX-231131000
S	SI	SIV	Rd16w	18	2000	3CX-247142000
S	SI	SII	Rd16	Rd16	3000	3CX-249493000
S	SII	SIV	Rd16	18	1500	3CX-249141500

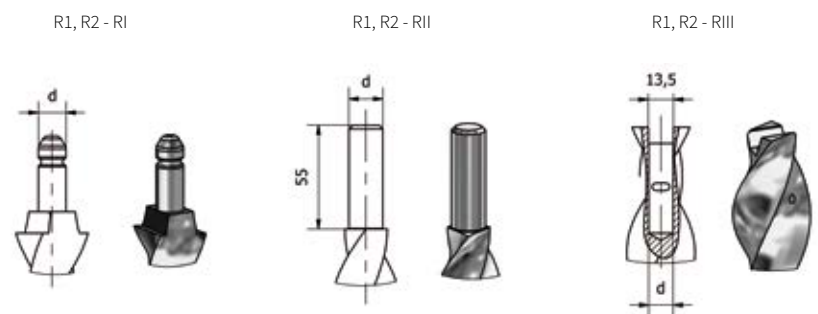
### DESCRIPTION

- S1** - tip 1
- S2** - tip 2
- d S1** - d parameter of S1 tips
- d S2** - d parameter of S2 tips
- e** - overall length of drilling rod

## TYPE R - RHOMBIC RODS



### EXAMPLES OF TIPS OF DRILLING RODS TYPE R

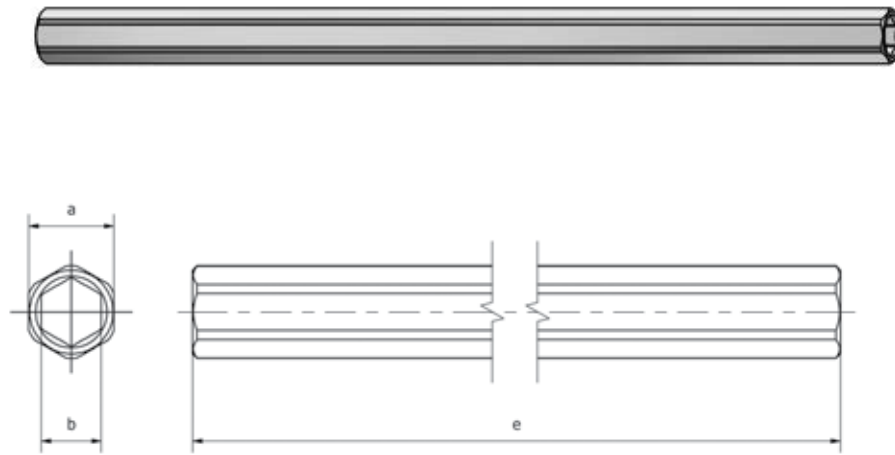


### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Type	R1	R2	R1 d [mm]	R2 d [mm]	e [mm]	Catalogue number
R	RI	RI	12,7	12,7	500	3CX-A57570500
R	RI	RII	12,7	16,6	1500	3CX-A57561500
R	RI	RIII	12,7	BOBw	1000	3CX-A57131000
R	RII	RII	16,6	16,6	2000	3CX-A56562000
R	RII	RIII	16,6	BOBw	1500	3CX-A56131500
R	RIII	RIII	12,8	12,8	500	3CX-A13130500

### DESCRIPTION

- R1** - tip 1
- R2** - tip 1
- d R1** - d parameter of R1 tips
- d R2** - d parameter of R2 tips
- e** - overall length of drilling rod



### EXAMPLES OF THE DIMENSIONS AND CATALOGUE NUMBERS

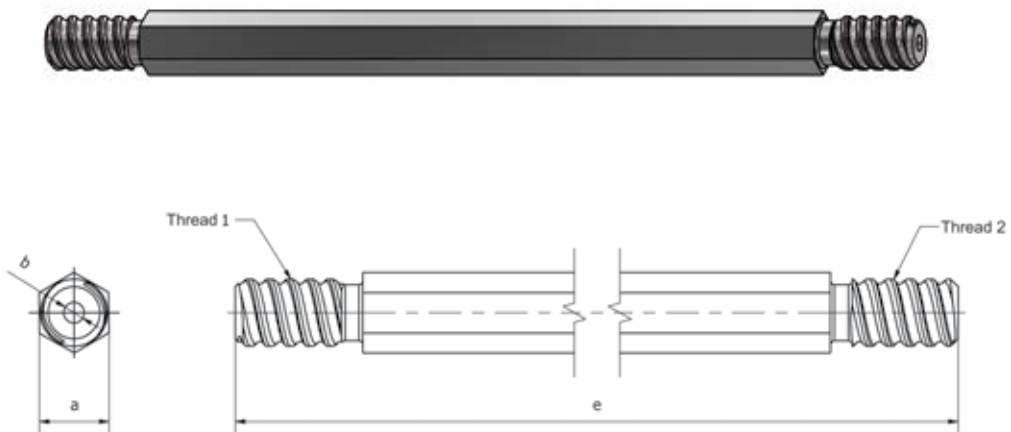
a [mm]	b [mm]	e [mm]	Catalogue number	a [mm]	b [mm]	e [mm]	Catalogue number
22	16	900	3CX-801010900	28	20	900	3CX-902020900
22	16	1350	3CX-801011350	28	20	1350	3CX-902021350
22	16	2200	3CX-801012200	28	20	2200	3CX-902022200
22	16	3000	3CX-801013000	28	20	3000	3CX-902023000

### DESCRIPTION

a - size of external hexagonal rod

b - size of internal hexagonal rod

e - overall length of drilling rod



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

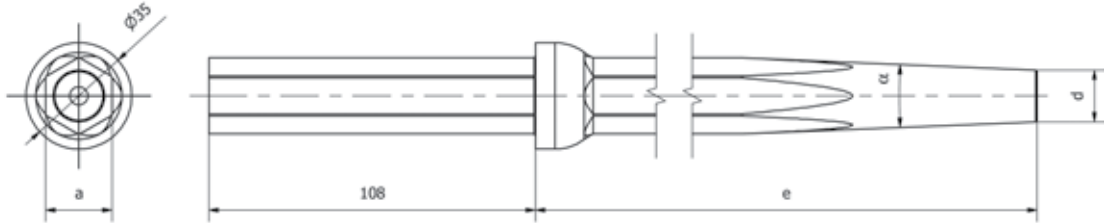
a [mm]	b [mm]	Gwint 1	Gwint 2	e [mm]	Catalogue number	a [mm]	b [mm]	Gwint 1	Gwint 2	e [mm]	Catalogue number
22	6	A17	A17	1920	3CX-319191920	22	6	M16	M16	1500	3CX-333331500
22	6	A20	A20	1920	3CX-321211920	22	6	Rd16	Rd16	1600	3CX-349491600
22	6	B17	B17	2060	3CX-323232060	22	6	Rd20	Rd20	2060	3CX-351512060
22	6	B20	B20	2060	3CX-325252060	22	6	R22	R22	2500	3CX-337372500

### DESCRIPTION

a - dimension of hexagon

b - hole diameter

e - overall length of drilling rod

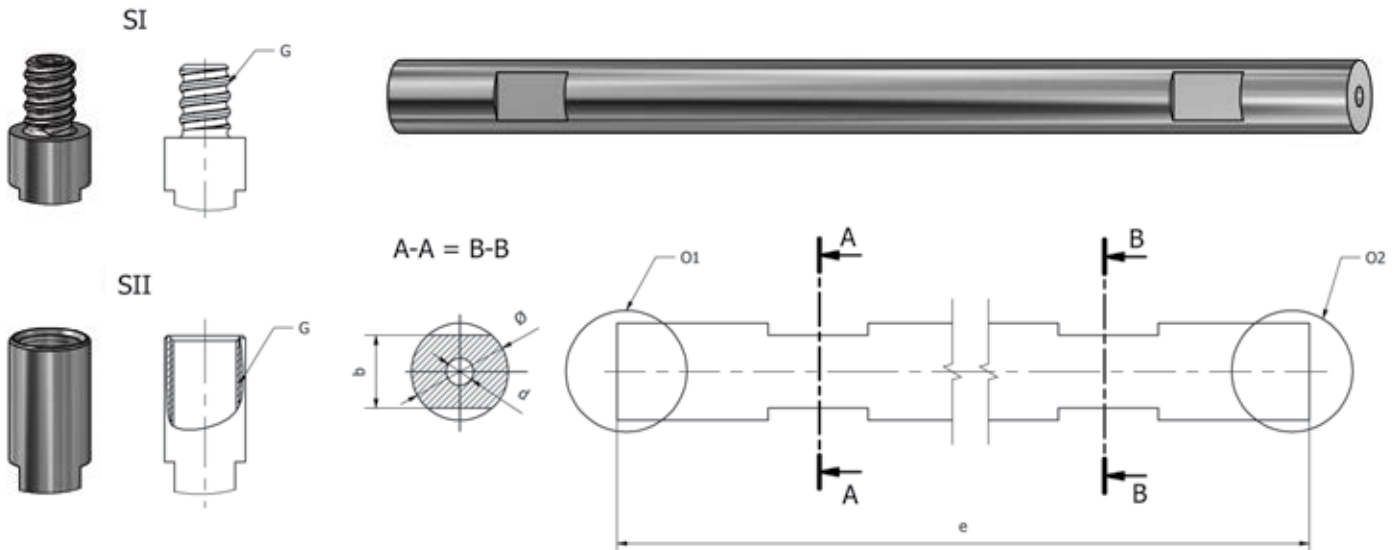


### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

a [mm]	d [mm]	α	e [mm]	Catalogue number	a [mm]	d [mm]	α	e [mm]	Catalogue number
22	16	4°46'	1600	3CX-362161600	22	20,1	7°	3200	3CX-362603200
22	19,1	4°46'	2400	3CX-362172400	22	20,1	7°7'	4000	3CX-362604000
22	16	7°	2400	3CX-362582400	25	16	4°46'	1600	3CX-462161600
22	18	7°	3200	3CX-362593200	25	19,1	4°46'	2400	3CX-462172400

### LEGENDA

**a** - dimension of hexagon      **d** - vertex diameter of the cone      **α** - cone angle      **e** - overall length of drilling rod



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Ø [mm]	01	02	G01	G02	d [mm]	b [mm]	e [mm]	Catalogue number	Ø [mm]	01	02	G01	G02	d [mm]	b [mm]	e [mm]	Catalogue number
22	SII	SII	B17w	M16w	6	19	1100	3CX-B72311100	32	SI	SII	B17	M16w	9	24	1600	3CX-C23311600
22	SII	SII	B17w	B17w	6	19	1700	3CX-B72721700	32	SI	SII	B17	B17w	9	24	1000	3CX-C23721000
32	SI	SI	CR32	CR32	9	24	500	3CX-C69690500	32	SI	SI	R32	R32	9	24	1200	3CX-C44441200
32	SI	SI	Rd16	M16	9	24	1200	3CX-C49331200	32	SI	SII	R32	R25w	9	24	1600	3CX-C43781600

### DESCRIPTION

**Ø** - external diameter of the drilling rod      **02** - tip 2      **G02** - G parameter of the 02 tip      **b** - key size  
**01** - tip 1      **G01** - G parameter of the 01 tip      **d** - internal diameter      **e** - overall length of drilling rod

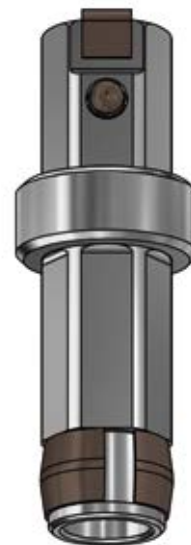
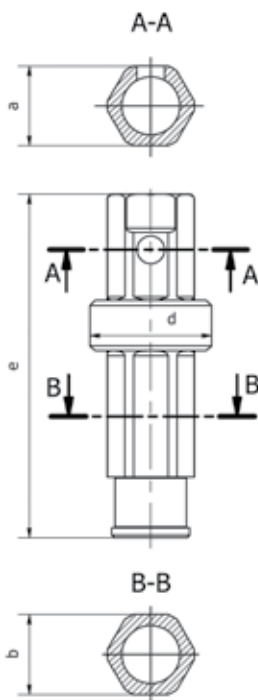


**ACCESSORIES:**

Expanding ring  
as a protection type  
Ø 17 ACX-010301701  
Ø 19 ACX-010301902



FL cotter pin  
as a protection type  
ACX-010109200



EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

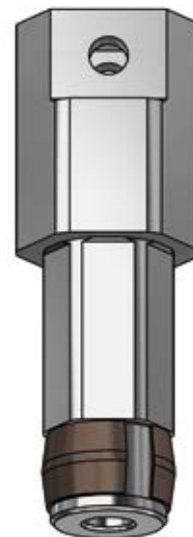
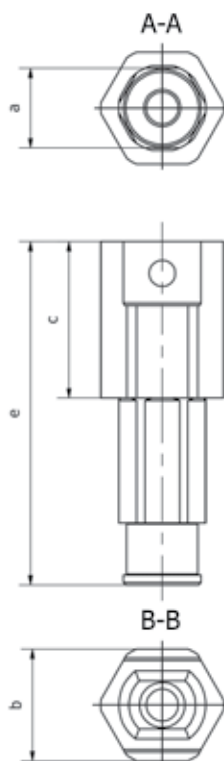
Typ	a [mm]	b [mm]	d [mm]	e [mm]	Catalogue number
5414	6kt16	6kt16	24	68	2CX-311005414
5414r	6kt16	6kt16	22	68	2CX-311015414
5522	6kt22	6kt22	31	86	2CX-311005522

**DESCRIPTION**

- a - size of hexagonal rod entering into drilling rod
- b - size of hexagonal rod entering into drill bit
- d - diameter of connector collar
- e - total length of the connector

**ACCESSORIES:**

Expanding ring  
as a protection ring type  
Ø 17 ACX-010301701

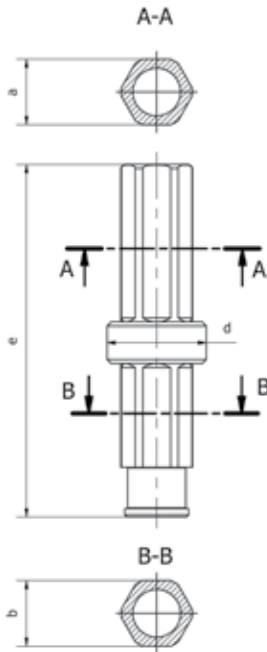


EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Typ	a [mm]	b [mm]	c [mm]	e [mm]	Catalogue number
5412	6kt16	6kt22	31	68	2CX-211005412
5412V	6kt16	6kt22	31	75	2CX-211015412
5412L	6kt16	6kt22	31	85	2CX-211025412

**DESCRIPTION**

- a - size of hexagonal rod entering into drilling rod
- b - dimension of hexagon
- c - length of hexagonal rod
- e - total length of the connector



**ACCESSORIES:**

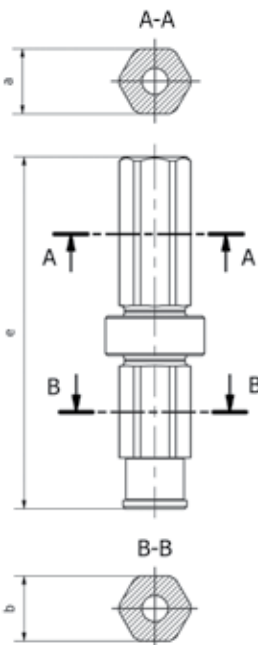
**Expanding ring  
as a protection type**  
Ø17 ACX-010301701  
Ø19 ACX-010301902

**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS**

Type	a [mm]	b [mm]	d [mm]	e [mm]	Catalogue number
5416	6kt16	6kt16	24	85	2CX-321005416
5416V	6kt16	6kt16	22	85	2CX-321015416
5420	6kt22	6kt22	31	129	2CX-321005420

**DESCRIPTION**

- a - dimension of hexagon
- b - dimension of hexagon
- d - diameter of connector collar
- e - total length of the connector



**AKCESORIA:**

**Expanding ring  
as a protection type**  
Ø17 ACX-010301701  
Ø19 ACX-010301902



**O-ring  
as a protection type**  
ACX-020018528  
ACX-020001424

**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS**

Type	a [mm]	b [mm]	d [mm]	e [mm]	Catalogue number
5418m	6kt16	6kt16	24	85	2CX-221005418
5418mV	6kt16	6kt16	22	85	2CX-221015418
5420m	6kt22	6kt22	31	129	2CX-321005420

**DESCRIPTION**

- a - dimension of hexagon
- b - dimension of hexagon
- d - diameter of connector collar
- e - total length of the connector



# Connectors

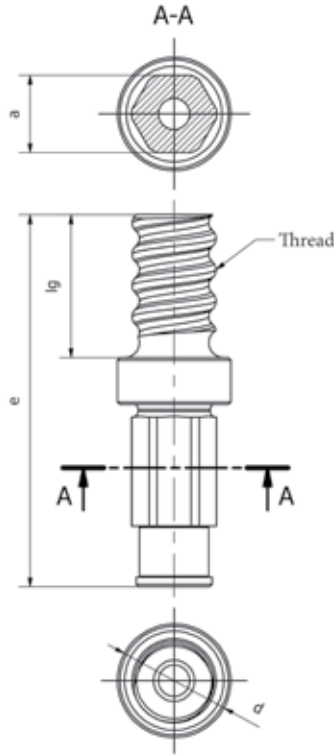
shaped and threaded fastening

## ACCESSORIES:

Expanding ring  
as a protection type  
Ø17 ACX-010301701  
Ø19 ACX-010301902



O-ring  
as a protection type  
ACX-020001424  
ACX-020018528



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Type	a [mm]	d [mm]	lg [mm]	Thread	e [mm]	Catalogue number
5418 B17	6kt16	23	29	B17	75	2CX-213015418
5420 B20	6kt22	31	29	B20	95	2CX-213015420
5418 A17	6kt16	23	29	A17	75	2CX-213025418
5420 A20	6kt22	31	29	A20	95	2CX-213025420

### DESCRIPTION

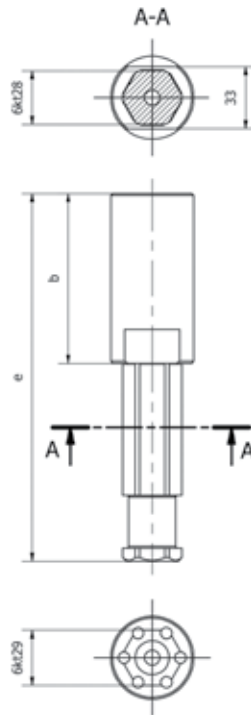
a - size of hexagonal rod entering into drilling rod    lg - thread length  
d - diameter of connector collar    e - total length of the connector

## ACCESSORIES:

Frictional ring  
as a protection type  
Ø30 ACX-010302801



Sealing part  
HEX28  
ACX-030112801



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Type	Option	a [mm]	b [mm]	e [mm]	Catalogue number
5450	6	18	90	195	2CX-230065450
5450	7	18	100	205	2CX-230075450
5450	8	18	120	225	2CX-230085450

### DESCRIPTION

a - length of the cylindrical part milled    e - total length of the connector  
b - length of the cylindrical part



Option 1

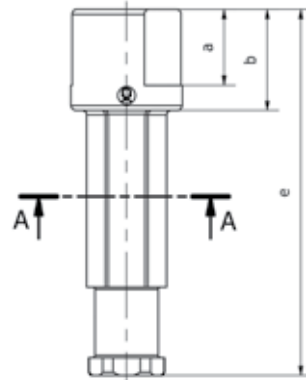
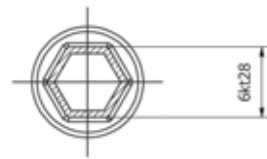


Option 2



Option 3

A-A



**ACCESSORIES:**

Frictional ring  
as a protection type  
Ø30 ACX-010302801



Sealing part HEX22  
ACX-030112201

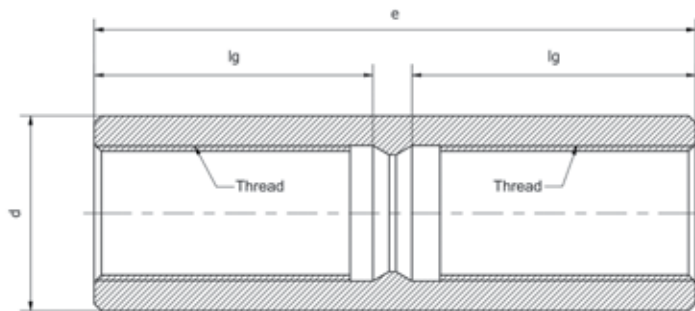


**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS**

Type	Option	a [mm]	b [mm]	e [mm]	Catalogue number
5450	1	30	40	145	2CX-331005450
5450	2	20	20	125	2CX-331015450
5450	3	40	40	145	2CX-231045450

**DESCRIPTION**

a - length of the cylindrical part milled      e - total length of the connector  
b - length of the cylindrical part



**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS - RIGHT-HAND THREAD**

Type	Thread	d [mm]	lg [mm]	e [mm]	Catalogue number
FIA17	A17	24	32	100	2CX-222241002
FIA20	A20	28	32	100	2CX-222281001
FIB17	B17	24	32	100	2CX-222241001
FIB20	B20	28	32	100	2CX-222281000

**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS - LEFT-HAND THREAD**

Type	Thread	d [mm]	lg [mm]	e [mm]	Catalogue number
FIR22L	R22	27	61	140	2CX-222271400
FIR25L	R25	35	61	150	2CX-222351500
FIR32L	R32	45	62	150	2CX-222451500
FIR38L	R38	55	73	170	2CX-222551700

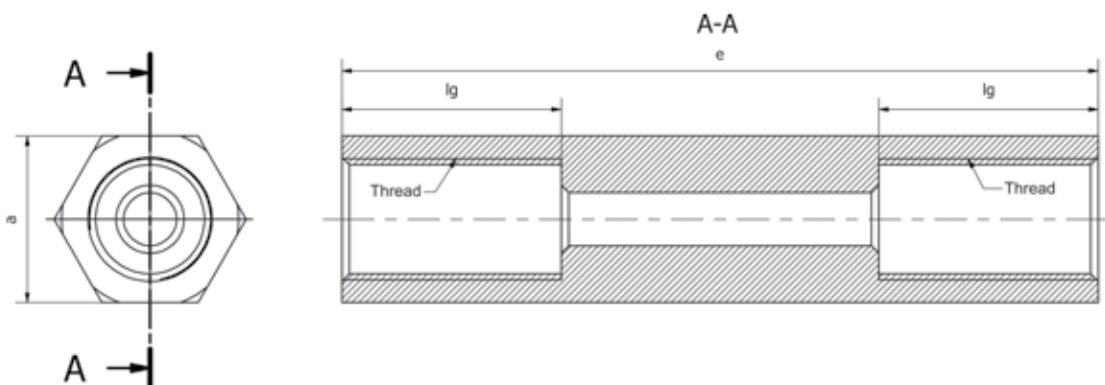
**DESCRIPTION**

d - external diameter of the connector      lg - thread length      e - total length of the connector



# Connectors

screwed clamping (double-sided)



EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Type	a [mm]	lg [mm]	G1/G2	e [mm]	Catalogue number
KA17	22	29	A17/A17	100	2CX-222221000
KA20	25	29	A20/A20	100	2CX-222251000
KA17/20	25	29	A17/A20	100	2CX-222251001

EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Type	a [mm]	lg [mm]	G1/G2	e [mm]	Catalogue number
KB17	22	29	B17/B17	100	2CX-222221001
KB20	25	29	B20/B20	100	2CX-222251002
KB17/20	25	29	B17/B20	100	2CX-222251003

DESCRIPTION

**a** - size of external hexagonal rod

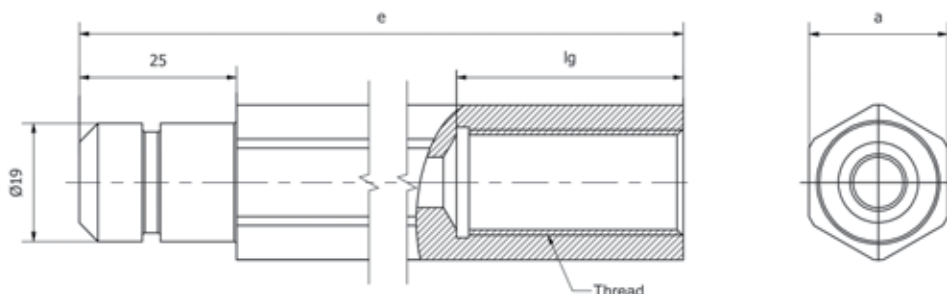
**e** - total length of the connector

**G1/G2** - thread 1/thread 2

**lg** - thread length G1 and G2

ACCESSORIES:

**O-ring as a protection type**  
ACX-020001604



DIMENSIONS AND CATALOGUE NUMBERS

Type	a [mm]	lg [mm]	Thread	e [mm]	Catalogue number
SA17m	6kt22	29	A17	150	2CX-233221500
SA20m	6kt25	29	A20	150	2CX-233251500
SB17m	6kt22	29	B17	150	2CX-233221501
SB20m	6kt25	29	B20	150	2CX-233251501

DESCRIPTION

**a** - dimension of hexagon

**e** - total length of the connector

**lg** - thread length


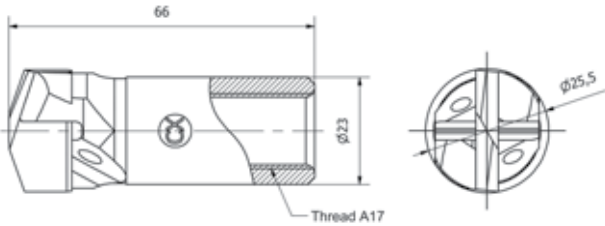

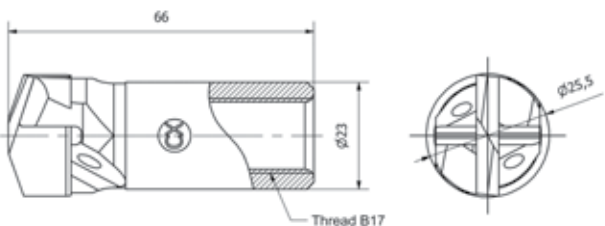

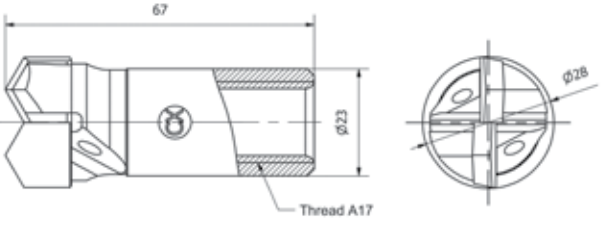

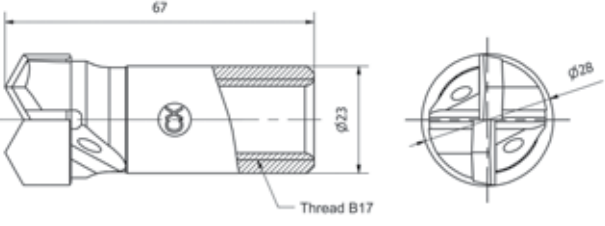

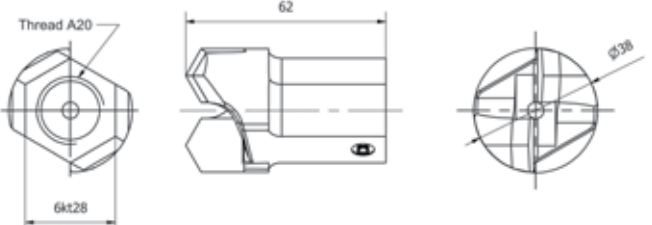

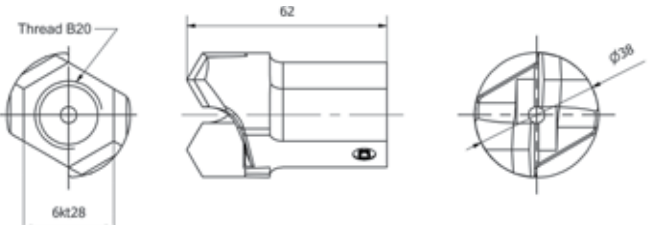




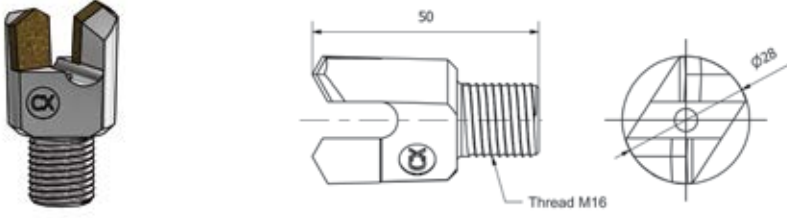
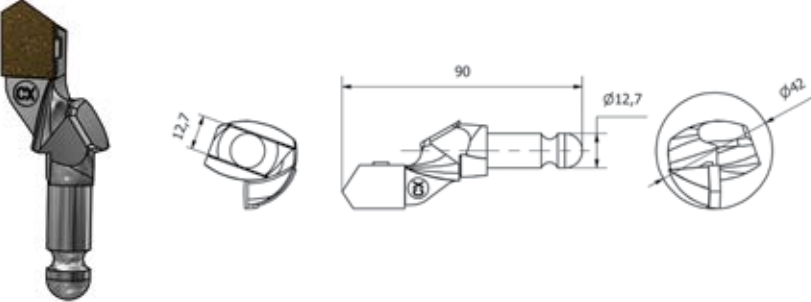
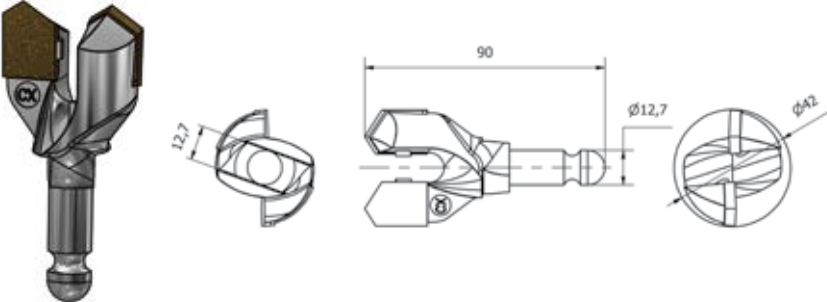
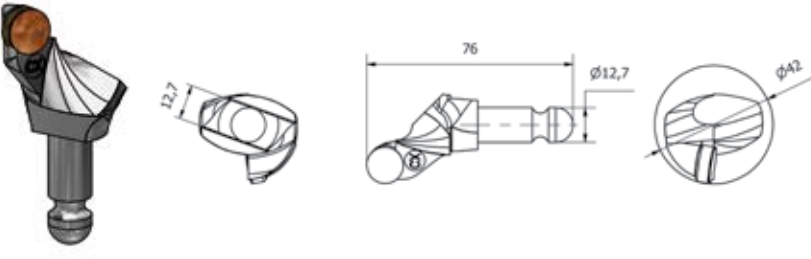
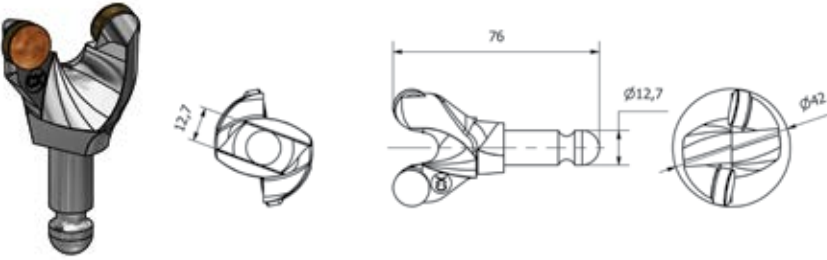
TOOL	OPTIONS	CATALOGUE NUMBER
<p>Drill bit m25 FL Type 1 – with holes <math>\varnothing</math> 13.5 mm</p>	<p>Designed to drill holes in soft rocks</p>	<p>1CX-131210125</p>
	<p>Designed to drill holes in hard and very hard rocks</p>	<p>1CX-131210225</p>
	<p>Designed to drill holes in rocks with good abrasion resistance</p>	<p>1CX-131210325</p>
<p>Drill bit m25 FL Type 2 – with holes <math>\varnothing</math> 16 mm</p>	<p>Designed to drill holes in soft rocks</p>	<p>1CX-131210425</p>
	<p>Designed to drill holes in hard and very hard rocks</p>	<p>1CX-131210525</p>
	<p>Designed to drill holes in rocks with good abrasion resistance</p>	<p>1CX-131210625</p>
<p>Drill bit m25 FL - wet without suction of the material drilled</p>	<p>Designed to drill holes in soft rocks</p>	<p>1CX-121411126</p>
	<p>Designed to drill holes in hard and very hard rocks</p>	<p>1CX-121411226</p>
	<p>Designed to drill holes in rocks with good abrasion resistance</p>	<p>1CX-121411326</p>
<p>Drill bit Rm38 FL</p>	<p>Designed to drill holes in hard and very hard rocks</p>	<p>1CX-131312338</p>



# Drill bits

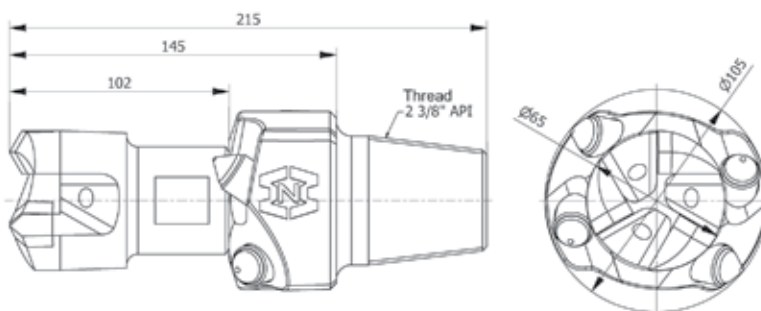
TOOL	OPTIONS	CATALOGUE NUMBER
Drill bit RmM25 FL A17 wet  	Designed to drill holes in soft rocks	1CX-123112126
	Designed to drill holes in hard and very hard rocks	1CX-123112226
	Designed to drill holes in rocks with good abrasion resistance	1CX-123112326
Drill bit RmM25 FL type B17 wet  	Designed to drill holes in soft rocks	1CX-123213126
	Designed to drill holes in hard and very hard rocks	1CX-123213226
	Designed to drill holes in rocks with good abrasion resistance	1CX-123213326
Drill bit RmM28 A17  	Designed to drill holes in hard and very hard rocks	1CX-123110028
	Designed to drill holes in rocks with good abrasion resistance	1CX-123110228
Drill bit RmM25 B17  	Designed to drill holes in hard and very hard rocks	1CX-123211128
	Designed to drill holes in rocks with good abrasion resistance	1CX-123211228
Drill bit RmM38 A20  	Designed to drill holes in soft rocks	1CX-123310138
	Designed to drill holes in hard and very hard rocks	1CX-123310238
	Designed to drill holes in rocks with good abrasion resistance	1CX-123310338
Drill bit RmM38 B20  	Designed to drill holes in soft rocks	1CX-123411138
	Designed to drill holes in hard and very hard rocks	1CX-123411238
	Designed to drill holes in rocks with good abrasion resistance	1CX-123411338



TOOL	OPTIONS	CATALOGUE NUMBER
<p data-bbox="70 297 231 324">Drill bit RMw28 M16</p> 	<p data-bbox="989 353 1244 409">Designed to drill holes in hard and very hard rocks</p>	<p data-bbox="1321 383 1460 409">1CX-123512128</p>
<p data-bbox="70 651 292 678">Drill bit RMw42 BOB - single</p> 	<p data-bbox="989 779 1228 857">Designed to drill holes in rocks with good abrasion resistance</p>	<p data-bbox="1321 819 1460 846">1CX-111110142</p>
<p data-bbox="70 1003 280 1030">Drill bit RMw42 BOB - dual</p> 	<p data-bbox="989 1131 1228 1209">Designed to drill holes in rocks with good abrasion resistance</p>	<p data-bbox="1321 1171 1460 1198">1CX-111110242</p>
<p data-bbox="70 1355 331 1382">Diamond bit RMw43 BOB - single</p> 	<p data-bbox="989 1482 1228 1561">Designed to drill holes in rocks with good abrasion resistance</p>	<p data-bbox="1321 1523 1460 1550">1CX-111160142</p>
<p data-bbox="70 1706 320 1733">Diamond bit RMw43 BOB - dual</p> 	<p data-bbox="989 1836 1228 1915">Designed to drill holes in rocks with good abrasion resistance</p>	<p data-bbox="1321 1877 1460 1904">1CX-111160242</p>



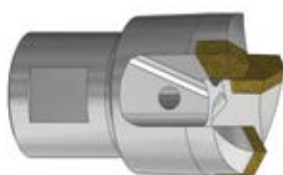
# Core cutter



### ACCESSORIES:

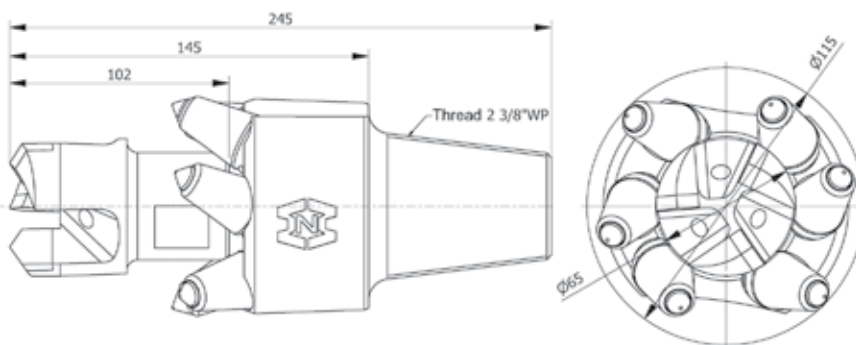
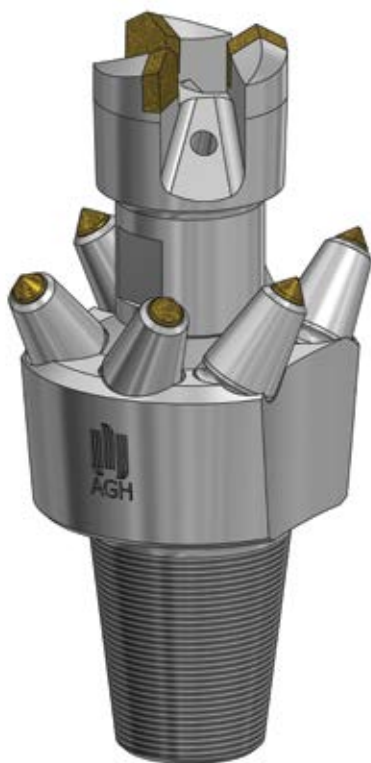
**Pilot for core cutters**  
ACX-040106501

**Cutter for core cutters type 1**  
ACX-040201901



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

Working diameter [mm]	Pilot diameter [mm]	Clamping	Length [mm]	Catalogue number
105	65	Thread 2 3/8" API	215	7CX-114010105



### ACCESSORIES:

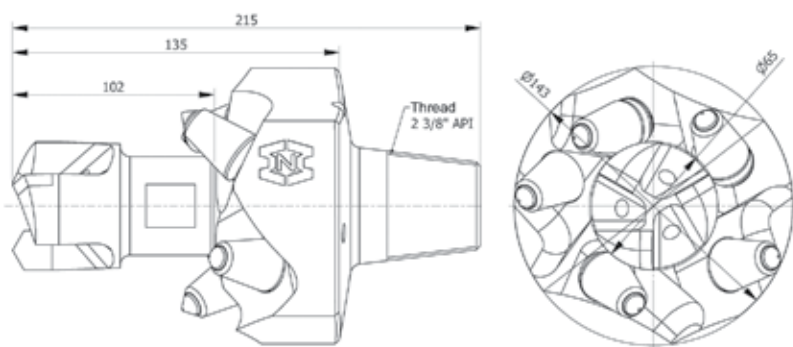
**Pilot for core cutters**  
ACX-040106501

**Cutter for core cutters type 2**  
ACX-040202701



### EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS

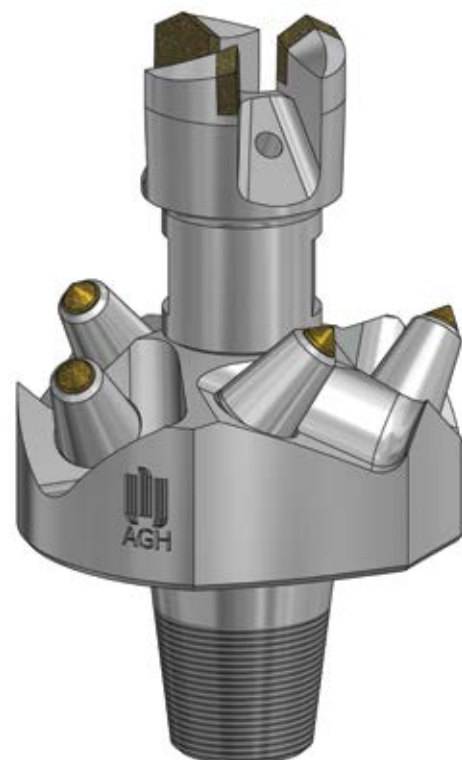
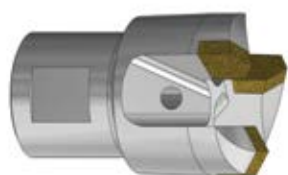
Working diameter [mm]	Pilot diameter [mm]	Clamping	Length [mm]	Catalogue number
115	65	Thread 2 3/8" WP	245	7CX-126020115



**ACCESSORIES:**

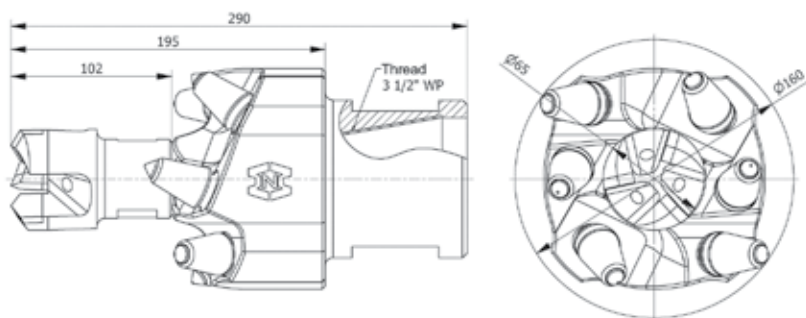
Pilot for core cutters  
ACX-040106501

Cutter for core cutters type 2  
ACX-040202701



**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS**

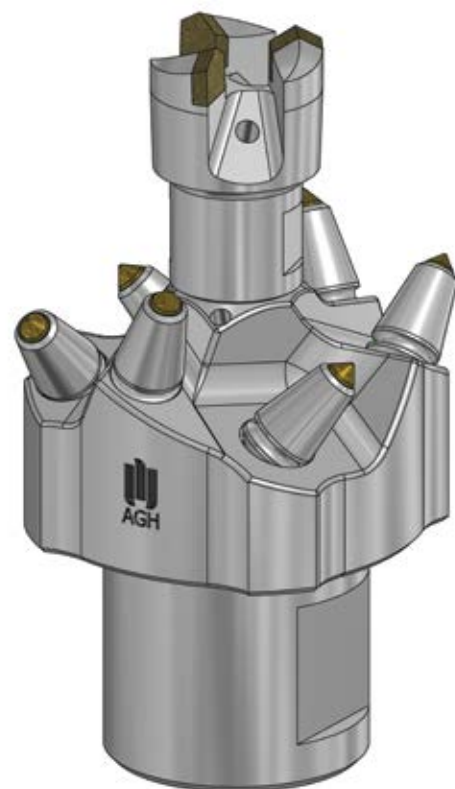
Working diameter [mm]	Pilot diameter [mm]	Clamping	Length [mm]	Catalogue number
143	65	Gwint 2 3/8" API	215	7CX-125010143



**ACCESSORIES:**

Pilot for core cutters  
ACX-040106501

Cutter for core cutters type 2  
ACX-040202701



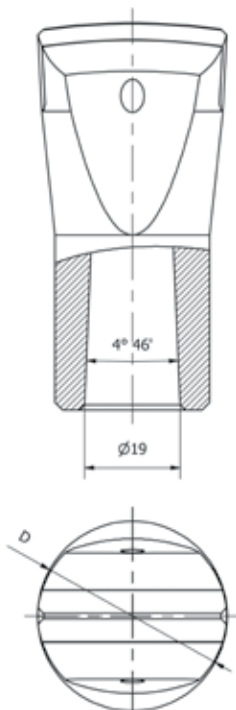
**EXAMPLES OF DIMENSIONS AND CATALOGUE NUMBERS**

Working diameter [mm]	Pilot diameter [mm]	Clamping	Length [mm]	Catalogue number
160	65	Gwint 3 1/2" WP	290	7CX-126030160



ACCESORIES

Single-chisel bit - clamping - cone 4°46' Ø 19

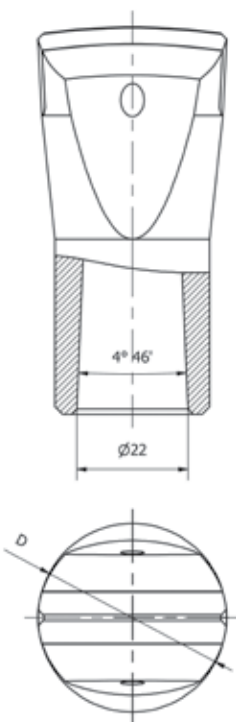


DIAMETER D [mm]

CATALOGUE NUMBERS



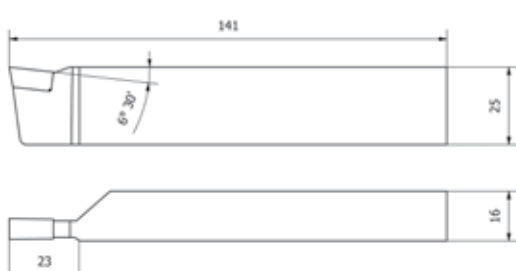

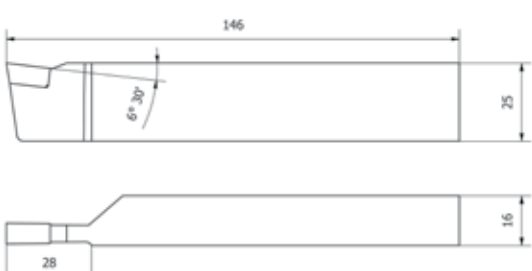
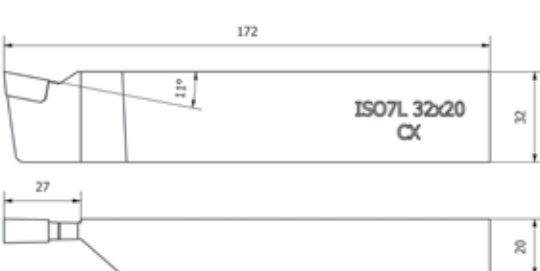
32	1CX-222150132
33	1CX-222150133
34	1CX-222150134
35	1CX-222150135
36	1CX-222150136
37	1CX-222150137
38	1CX-222150138
39	1CX-222150139
40	1CX-222150140
41	1CX-222150141
42	1CX-222150142
43	1CX-222150143
45	1CX-222150145

Single-chisel bit - clamping - cone 4°46' Ø 22





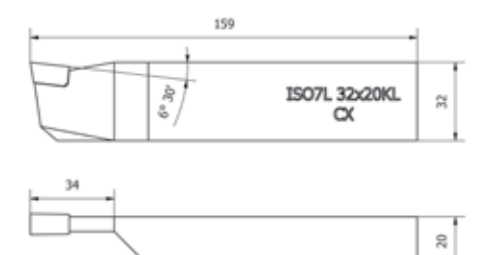

32	1CX-222250232
33	1CX-222250233
34	1CX-222250234
35	1CX-222250235
36	1CX-222250236
37	1CX-222250237
38	1CX-222250238
39	1CX-222250239
40	1CX-222250240
41	1CX-222250241
42	1CX-222250242
43	1CX-222250243
45	1CX-222250245



TOOL		TYPES	CATALOGUE NUMBER	
ISO7L 25x16	 	Steel and cast steel working	S10 (P10)	6CX-111102516
			S20 (P20)	6CX-121102516
			S30 (P30)	6CX-131102516
		Mixed working	H10 (K10)	6CX-211102516
			H20 (K20)	6CX-221102516
ISO7L 25x16L	 	Steel and cast steel working	S10 (P10)	6CX-111302516
			S20 (P20)	6CX-121302516
			S30 (P30)	6CX-131302516
		Mixed working	H10 (K10)	6CX-211302516
			H20 (K20)	6CX-221302516
ISO7P 25x16	 	Steel and cast steel working	S10 (P10)	6CX-111202516
			S20 (P20)	6CX-121202516
			S30 (P30)	6CX-131202516
		Mixed working	H10 (K10)	6CX-211202516
			H20 (K20)	6CX-221202516
ISO7P 25x16L	 	Steel and cast steel working	S10 (P10)	6CX-111402516
			S20 (P20)	6CX-121402516
			S30 (P30)	6CX-131402516
		Mixed working	H10 (K10)	6CX-211402516
			H20 (K20)	6CX-221402516
ISO7L 32x20	 	Steel and cast steel working	S10 (P10)	6CX-111103220
			S20 (P20)	6CX-121103220
			S30 (P30)	6CX-131103220
		Mixed working	H10 (K10)	6CX-211103220
			H20 (K20)	6CX-221103220


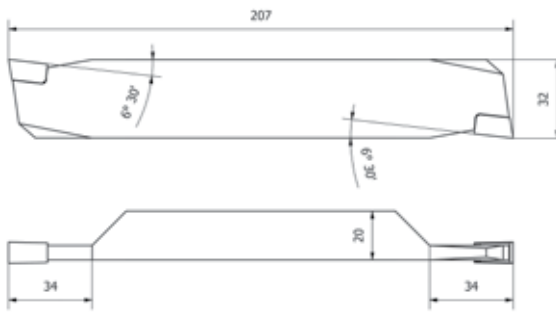

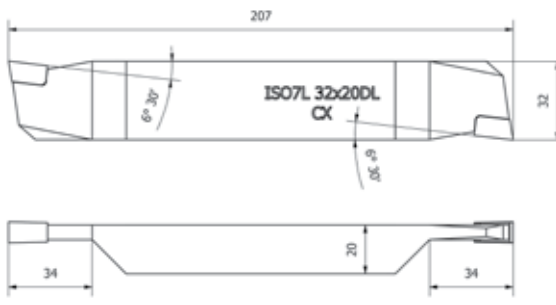


# Soldered turning tools

TOOL		TYPES	CATALOGUE NUMBER	
ISO7P 32x20L 		Steel and cast steel working	S10 (P10)	6CX-111303220
			S20 (P20)	6CX-121303220
			S30 (P30)	6CX-131303220
		Mixed working	H10 (K10)	6CX-211303220
			H20 (K20)	6CX-221303220
ISO7P 32x20 		Steel and cast steel working	S10 (P10)	6CX-111203220
			S20 (P20)	6CX-121203220
			S30 (P30)	6CX-131203220
		Mixed working	H10 (K10)	6CX-211203220
			H20 (K20)	6CX-221203220
ISO7L 32x20L 		Steel and cast steel working	S10 (P10)	6CX-111403220
			S20 (P20)	6CX-121403220
			S30 (P30)	6CX-131403220
		Mixed working	H10 (K10)	6CX-211403220
			H20 (K20)	6CX-221403220
ISO7L 32x20KL 		Steel and cast steel working	S10 (P10)	6CX-111703220
			S20 (P20)	6CX-121703220
			S30 (P30)	6CX-131703220
		Mixed working	H10 (K10)	6CX-211703220
			H20 (K20)	6CX-221703220
ISO7P 32x20KL 		Steel and cast steel working	S10 (P10)	6CX-111803220
			S20 (P20)	6CX-121803220
			S30 (P30)	6CX-131803220
		Mixed working	H10 (K10)	6CX-211803220
			H20 (K20)	6CX-221803220




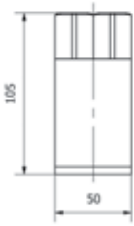

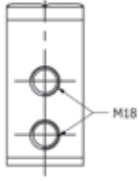
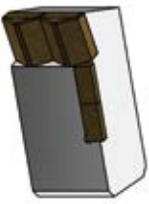


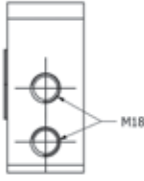

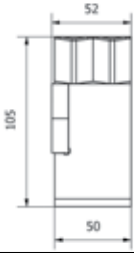

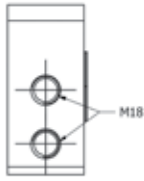
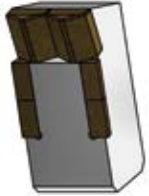


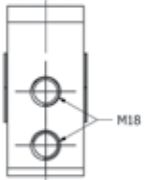





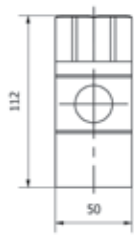










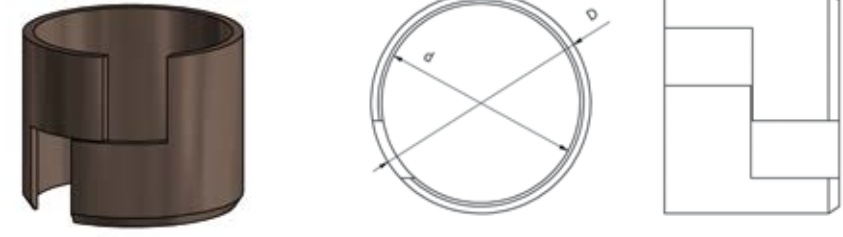


TOOL		TYPES	CATALOGUE NUMBER	
ISO7P 32x20DL  	Steel and cast steel working	S10 (P10)	6CX-111503220	
		S20 (P20)	6CX-121503220	
		S30 (P30)	6CX-131503220	
		Mixed working	H10 (K10)	6CX-211503220
			H20 (K20)	6CX-221503220
ISO7L 32x20DL  	Steel and cast steel working	S10 (P10)	6CX-111603220	
		S20 (P20)	6CX-121603220	
		S30 (P30)	6CX-131603220	
	Mixed working	H10 (K10)	6CX-211603220	
		H20 (K20)	6CX-221603220	

## INTENDED USE OF INDIVIDUAL SINTERED CARBIDES



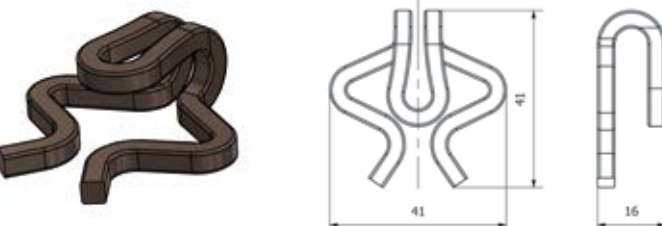
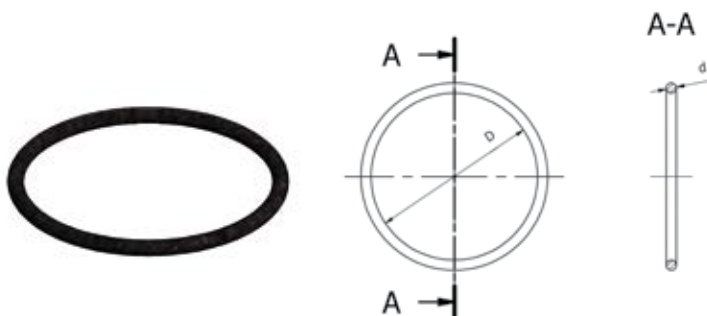
Steel and cast steel working	S10 (P10)	Steel, cast steel. Turning, boring, milling and copy turning, medium and precise, machining with high speed and with high rigidity of the system which consists of machine tool – work-piece – tool, machining with breaks using negative angle of attack.
	S20 (P20)	Steel, cast steel (conditionally malleable cast iron). Turning, boring, milling and copy turning, rough and medium precise, machining with medium speed and with medium rigidity of the system which consists of machine tool – work-piece – tool, machining continuous and with breaks.
	S30 (P30)	Steel, cast steel with contaminations. Turning, planning, chiselling- rough and medium precise, boring, machining with low speed with low rigidity of the system which consists of machine tool – work-piece – tool .
Mixed working	H10 (K10)	Cast iron with hardness ca. 400HB, cast iron with local hardening, malleable cast iron, austenitic steel, aluminium alloy and aluminum-silicon, porcelain, stone, pressed paper, hard rubber, glass. Turning, milling, drilling, enlarge drilling and scraping.
	H20 (K20)	Cast iron with hardness ca. 220HB, copper and copper alloy, light alloy, plastic, wood. Turning, milling, planning, deepening and enlarge drilling.



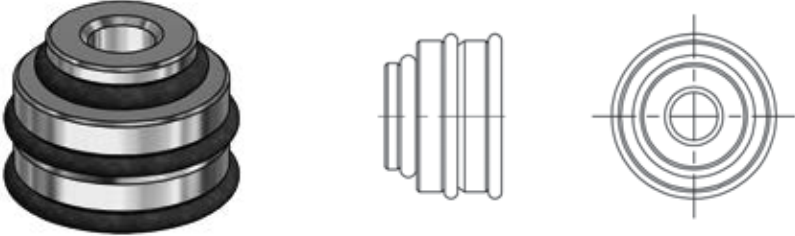

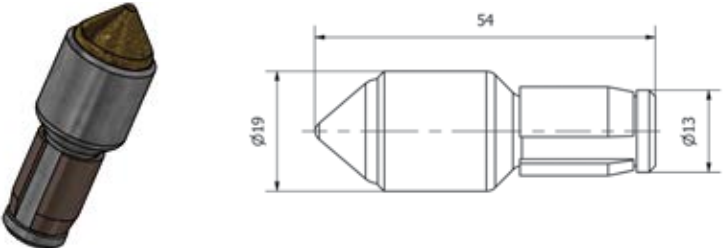
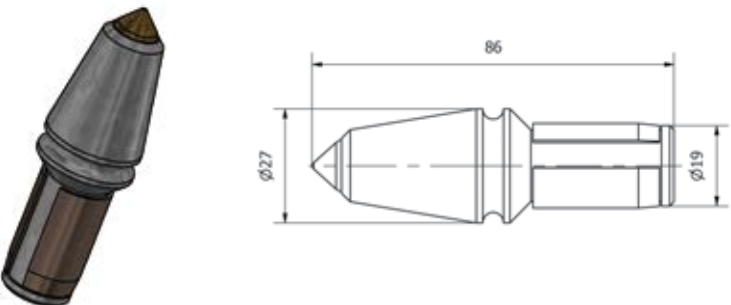
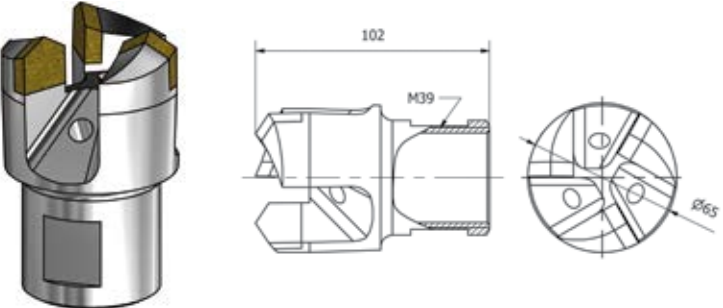
ACCESORIES	DIMENSIONS [mm]	CATALOGUE NUMBER
<p>Tooth M18x2- 2 standard teeth set</p>    	45x50x105	8CX-112011105
<p>Tooth M18x2-2 teeth set-left reinforced</p>    	45x50x105	8CX-112111105
<p>Tooth M18x2-2 teeth set-right reinforced</p>    	45x50x105	8CX-112211105
<p>Tooth M18x2-2 teeth set reinforced</p>    	45x50x105	8CX-112311105
<p>Tooth M24-3 teeth set</p>    	45x55x115	8CX-123011115
<p>Tooth M24-2 teeth set</p>    	45x50x112	8CX-122011112

ACCESORIES	PARAMETERS	CATALOGUE NUMBER
<p>PR Expanding ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 17 mm  <math>d = 15</math> mm  <math>D = 18</math> mm  <math>L = 10</math> mm</p>	<p>ACX-010301701</p>
<p>PR Expanding ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 19 mm  <math>d = 18</math> mm  <math>D = 21</math> mm  <math>L = 13</math> mm</p>	<p>ACX-010301902</p>
<p>PR Expanding ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 19 mm  <math>d = 17</math> mm  <math>D = 22</math> mm  <math>L = 15</math> mm</p>	<p>ACX-010301901</p>
<p>PR Expanding ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 21 mm  <math>d = 20</math> mm  <math>D = 27</math> mm  <math>L = 15</math> mm</p>	<p>ACX-010302101</p>
<p>PR Expanding ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 30 mm  <math>d = 27</math> mm  <math>D = 33</math> mm  <math>L = 15</math> mm</p>	<p>ACX-010303001</p>
<p>PR Expanding ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 38 mm  <math>d = 35</math> mm  <math>D = 42</math> mm  <math>L = 15</math> mm</p>	<p>ACX-010303801</p>
<p>PC Frictional ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 30 mm  <math>d = 28</math> mm  <math>D = 31,5</math> mm  <math>L = 25</math> mm</p>	<p>ACX-010302801</p>
<p>PC Frictional ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 35 mm  <math>d = 32</math> mm  <math>D = 35,5</math> mm  <math>L = 25</math> mm</p>	<p>ACX-010403501</p>
<p>PC Frictional ring as a protection type</p> 	<p>Handle protection <math>\varnothing</math> 40 mm  <math>d = 33,6</math> mm  <math>D = 40,2</math> mm  <math>L = 30</math> mm</p>	<p>ACX-010404001</p>



ACCESORIES	PARAMETERS	CATALOGUE NUMBER
<p>PC22 L10 and PC25 L10 Frictional ring as a protection type</p> 	<p>Protection for 6kt22  <math>d = 19 \text{ mm}</math>  <math>D = 31 \text{ mm}</math>  <math>L = 10 \text{ mm}</math></p>	ACX-010603101
	<p>Protection for 6kt25  <math>d = 23 \text{ mm}</math>  <math>D = 31 \text{ mm}</math>  <math>L = 10 \text{ mm}</math></p>	ACX-010603102
<p>FL latch protection</p> 	<p>Drill bits protection with drilled material suction method</p>	ACX-010109200
<p>HERT HZ cotter pin as a protection type</p> 	<p>Handle protection  30mm</p>	ACX-010203001
<p>O-ring sealing part</p> 	<p><math>D = 13 \text{ mm}</math>  <math>d = 2,4 \text{ mm}</math></p> <p><math>D = 13 \text{ mm}</math>  <math>d = 2,5 \text{ mm}</math></p> <p><math>D = 14 \text{ mm}</math>  <math>d = 2,4 \text{ mm}</math></p> <p><math>D = 16 \text{ mm}</math>  <math>d = 4 \text{ mm}</math></p> <p><math>D = 17 \text{ mm}</math>  <math>d = 3 \text{ mm}</math></p> <p><math>D = 18,5 \text{ mm}</math>  <math>d = 2,8 \text{ mm}</math></p> <p><math>D = 18 \text{ mm}</math>  <math>d = 2,4 \text{ mm}</math></p> <p><math>D = 18 \text{ mm}</math>  <math>d = 2,5 \text{ mm}</math></p> <p><math>D = 23,3 \text{ mm}</math>  <math>d = 2,4 \text{ mm}</math></p> <p><math>D = 23,5 \text{ mm}</math>  <math>d = 2,3 \text{ mm}</math></p>	<p>ACX-020001324</p> <p>ACX-020001325</p> <p>ACX-020001424</p> <p>ACX-020001604</p> <p>ACX-020001703</p> <p>ACX-020018528</p> <p>ACX-020001824</p> <p>ACX-020001825</p> <p>ACX-020023324</p> <p>ACX-020023523</p>



ACCESORIES	PARAMETERS	CATALOGUE NUMBER
<p>Sealing part HEX22 and HEX28</p> 	<p>Sealing part of drilling rod HEX22</p> <p>Sealing part of drilling rod HEX28</p>	<p>ACX-030112201</p> <p>ACX-030112801</p>
<p>Circlip as a protection type</p> 	<p>Handle protection Ø 30 mm</p> <p>Handle protection Ø 45 mm</p> <p>Handle protection Ø 50 mm</p>	<p>ACX-010503001</p> <p>ACX-010504501</p> <p>ACX-010505001</p>
<p>Cutter for core cutters type 1</p> 	<p>Cutter for core cutters type 1 Ø 105 mm</p>	<p>ACX-040201901</p>
<p>Cutter for core cutters type 2</p> 	<p>Cutter for core cutters type 2 Ø 115 mm Ø 143 mm Ø 160 mm Ø 216 mm</p>	<p>ACX-040202701</p>
<p>Pilot for core cutters</p> 	<p>Pilot for core cutters Ø 105 mm Ø 115 mm Ø 143 mm Ø 160 mm</p>	<p>ACX-040106501</p>



## WELDING

We offer welding services by MIG methods with a guarantee of high quality. Obtained welding authorization allows us to weld steel structures in the full range of sizes from 5mm to 120mm, designed to operate at temperatures down to  $-40^{\circ}\text{C}$  and subject to supervisory acceptance. We are certified by DNV. We produce welds which meet the requirements of NDT non-destructive tests.

## SOLDERING

We specialize in joining of steel with cemented carbide during the brazing process. We offer the soldering of various components made of metal. The materials used for the soldering process are of the highest quality. Our employees have the necessary experience to perform even the most precise work.

## POLISHING

We offer a polishing of surfaces and shafts. We carry out one-off jobs and multi-series jobs using our own material or material provided by third parties. We provide grinding services using precise and specialized machines.

We offer:

- centerless grinding in a range of diameters  $\text{Ø}3 - \text{Ø}30$  mm, maximum length of 110 mm,
- surface grinding, maximum dimensions of 500 x 200 mm,
- holes grinding with maximum external diameter of  $\text{Ø}200$  mm, with length of maximum 500 mm, maximum diameter of  $\text{Ø}200$  mm, with length of maximum 250 mm,
- Shaped grinding (e.g. profiled rollers), maximum external diameter  $\text{Ø}120$ mm.



## TURNING

We offer precise turning by means of conventional lathes as well CNC lathes. Our machinery includes the following types of machines:

### CONVENTIONAL LATHES

- machining in range of diameter up to 50 mm and length up to 6000 mm,
- machining in range of diameter up to 1250 mm and length up to 4230 mm,

### CNC LATHES

- machining in range of diameter up to 350 mm and length up to 1500 mm,
- machining with conventional lathes in range of diameter up to 70 mm and length up to 6000 mm.



## **MILLING**

We offer precise milling of various kinds of products using the conventional milling machines and CNC milling machines on 4-axis. We provide the following services:

- milling by means of conventional milling machines for work pieces with maximum dimensions of 750 x 350 x 300 mm,
- milling by means of CNC milling machines for work pieces with maximum dimensions of 1000 x 500 x 600mm,
- milling by means of conventional milling machines for work pieces with maximum dimensions of 4660 x 4230 mm.

## **HEAT TREATMENT**

We offer service of heat enhancing for tool steel, alloy steel and low alloy steels.

Chambers dimensions in our kilns:

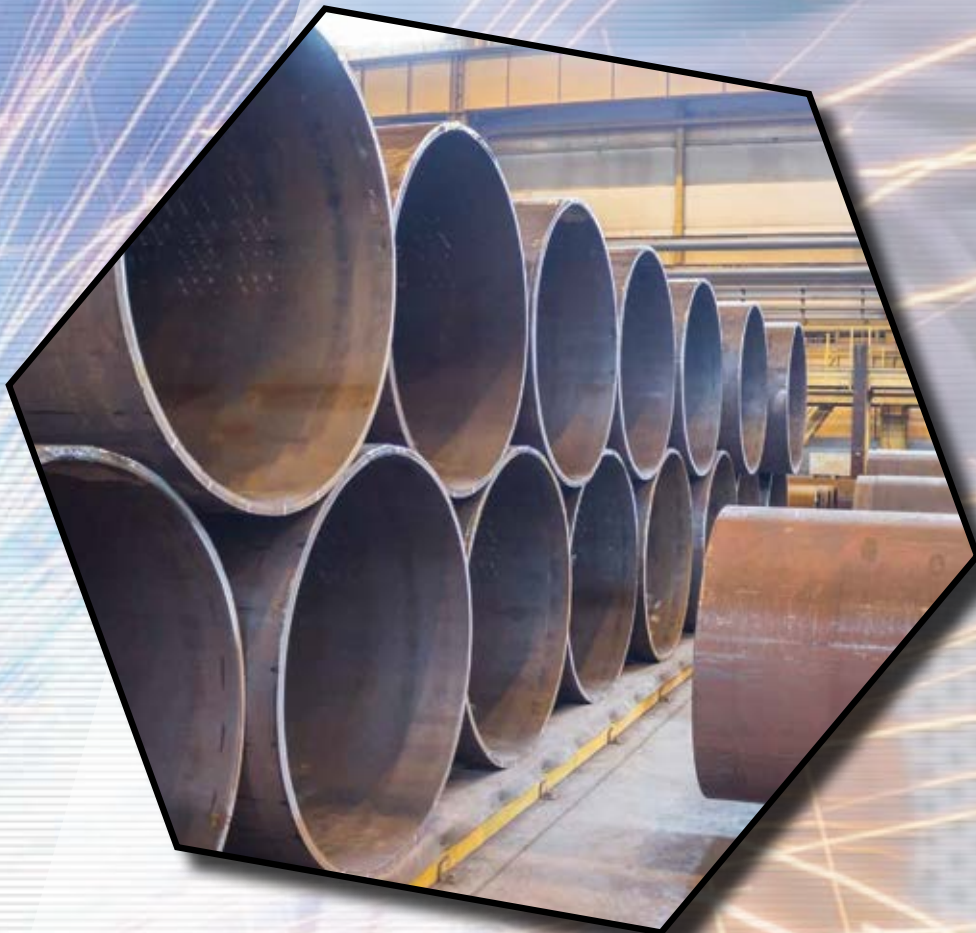
- width 600 mm x height 450 mm x length 1000 mm,
- width 700 mm x height 1200 mm x length 500 mm,
- width 800 mm x height 500 mm x length 1500 mm.

## **SAND BLASTING AND SHOT BLASTING**

We offer sand blasting service for parts with large dimensions. We also specialize in shot blasting in shot blasting chamber with conveyors. Dimensions of the shot blasting chamber: 1100mm x 600 mm.

## **ROLLING**

We offer precise rolling for various kinds of product on the rolling machine. Rolling of parts with thickness up to 30 mm.



**REGISTERED OFFICE  
OF THE COMPANY**

Pszczyńska 420 Street  
44-336 Jastrzębie-Zdrój  
POLAND

phone: +48 32 471 89 92  
phone: +48 32 478 10 00  
fax: +48 32 471 26 49

[sekretariat@zwmcarbonex.pl](mailto:sekretariat@zwmcarbonex.pl)

**[www.zwmcarbonex.pl](http://www.zwmcarbonex.pl)**

VAT EU: PL6330012877

