Diş açma yenilikleri

zType kesici uçlar ve içten soğutmalı tutucular

ZCC Cutting Tools Europe resmî yenilik yayınlarından operasyona göre seçilmiş teknik sayfalar.

Dönemler en yeniden eskiye sıralanmıştır. Üreticinin ölçü tabloları, ürün kodları ve teknik çizimleri özgün biçimleriyle korunmuştur.

Bu belge Toksan tarafından hazırlanmış bir derlemedir; üreticinin tek bir döneme ait resmî ana kataloğu değildir. Eski yayınlar güncel stok veya ürünün devam ettiğine ilişkin taahhüt sayılmaz.

NASIL KULLANILIR?

Sonraki sayfadan dönemi seçin. PDF yer imleriyle bölümler arasında geçiş yapabilirsiniz. Teknik içerik İngilizcedir.

İhtiyacınız olan döneme geçin

Sayfa numaraları bu derlemeye aittir. “Kaynak yayın” bağlantısı üreticinin özgün PDF dosyasını açar.

Eylül 2023 **3 - 10**

zType içten soğutmalı diş açma tutucuları
Kaynak yayın □ | Özgün PDF sayfaları: 26-33

Eylül 2022 **11 - 25**

zType diş açma uçları ve uygulama tabloları
Kaynak yayın □ | Özgün PDF sayfaları: 10-24

Teknik seçim, tutucu uyumu ve güncel bulunabilirlik için Toksan ile görüşün. Üretici telif ve iletişim sayfaları derlemenin sonundadır.

Threading System code – tool holders

Z	S	E	R	20	20	K	16	(C)
1	2	3	4	5	6	7	8	9

Series

1

Clamping system

Code	Description
S	Screw clamping
C	Top clamping




2

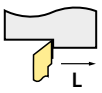
Application

Code	Description
E	External thread tool holder
I	Internal thread tool holder

3

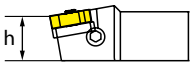
Cutting direction





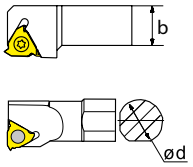
4

Shank height h [mm]



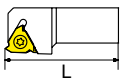
5

Shank width b / Shank diametre d [mm]



6

Shank length L [mm]



Code	L
F	80
H	100
K	125
M	150
P	170
Q	180
R	200
S	250
T	300

7

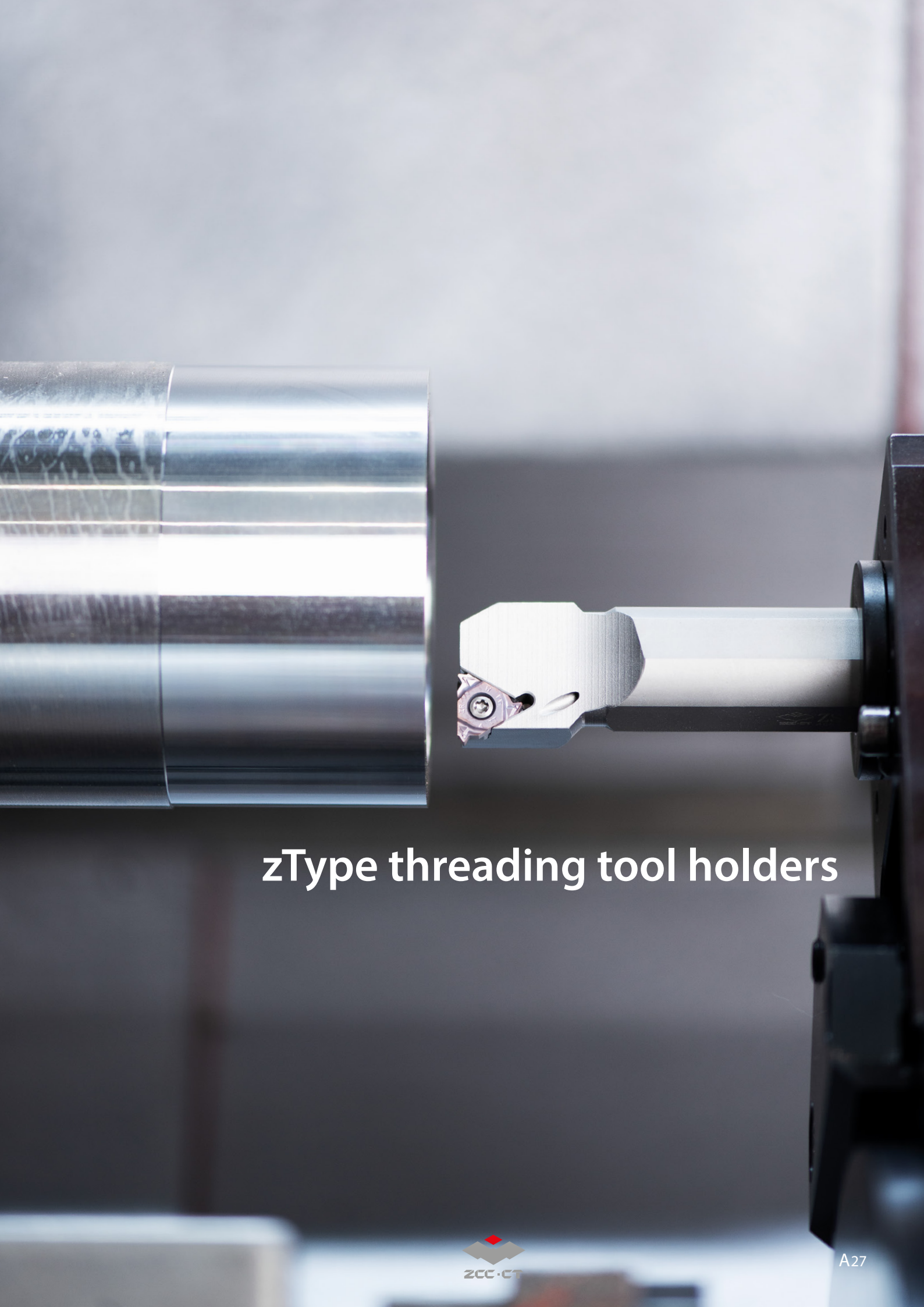
Insert size [mm]

Code	Height
11	6,35
16	9,525
22	12,7

8

Internal cooling

9



zType threading tool holders

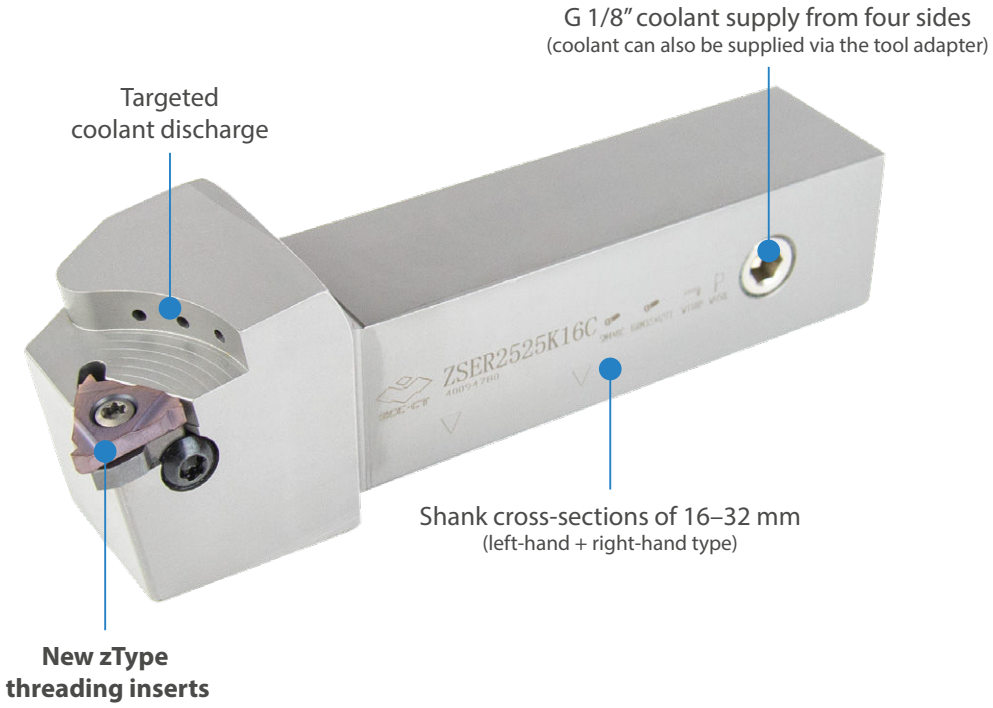
zType threading tool holders with internal cooling

New series for high-quality results in threading operations

YOUR BENEFITS

– Target cooling for **optimum chip removal** and a **long tool life**
– **Higher productivity** thanks to reduced machining temperature
– Wide assortment of zType threading inserts available

ZSER2525R16C external tool holders



Insert grades

YBG205

PVD
P15 – P25
M15 – M25

Inserts

Z16IR1.5ISOPP



The accompanying **threading inserts** from the new **zType series** can be found in **Product Innovations 09/2022**.
Scan the QR code to open and view the brochure.

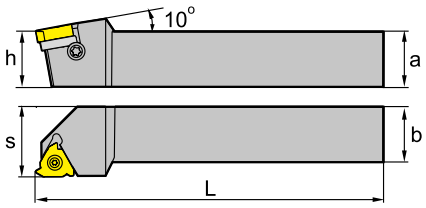
ZSIR0025M16C boring bar



Threading tool holder (external)

ZSER/L





Article	✲	Stock	Dimensions [mm]					Inserts
			a	b	L	h	s	
ZSER1616F16C	✲	○	16	16	80	16	20	Z16ER**
ZSER2020H16C	✲	○	20	20	100	20	25	Z16ER**
ZSER2525K16C	✲	○	25	25	125	25	32	Z16ER**
ZSER3232K16C	✲	○	32	32	125	32	32	Z16ER**
ZSER2525K22C	✲	○	25	25	125	25	40	Z22ER**
ZSER3232K22C	✲	○	32	32	125	32	40	Z22ER**

● Ex stock ○ On demand

✲ With internal cooling

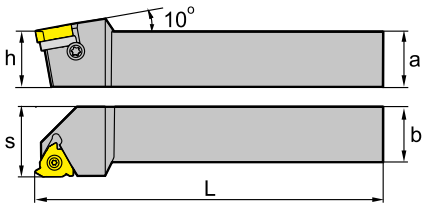
Spare parts

	Insert	**Z16ER****	**Z22ER****
	h	**16-32**	**25-40**
	Grub screw	PT1/8×4	PT1/8×4
	Screw		l60M5×17 (6.7 Nm)
	Screw	l60M3.5×12TT (2.7 Nm)	
	Screw (shim)	SM4×8C (2.6 Nm)	SM5×8.5C (4.0 Nm)
	Shim	MT16-__MN	MT22-__MN
	Wrench (screw)	WT15IP	WT20IP

Threading tool holder (external)

ZSER/L





Article	✲	Stock	Dimensions [mm]					Inserts
			a	b	L	h	s	
ZSEL1616F16C	✲	○	16	16	80	16	20	Z16EL**
ZSEL2020H16C	✲	○	20	20	100	20	25	Z16EL**
ZSEL2525K16C	✲	○	25	25	125	25	32	Z16EL**
ZSEL3232K16C	✲	○	32	32	125	32	32	Z16EL**
ZSEL2525K22C	✲	○	25	25	125	25	40	Z22EL**
ZSEL3232K22C	✲	○	32	32	125	32	40	Z22EL**

● Ex stock ○ On demand

✲ With internal cooling

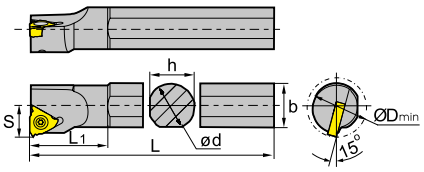
Spare parts

	Insert	**Z16EL****	**Z22EL****
	h	**16-32**	**25-40**
	Grub screw	PT1/8×4	PT1/8×4
	Screw		I60M5×17 (6.7 Nm)
	Screw	I60M3.5×12TT (2.7 Nm)	
	Screw (shim)	SM4×8C (2.6 Nm)	SM5×8.5C (4.0 Nm)
	Shim	MT16-__MN	MT22-__MN
	Wrench (screw)	WT15IP	WT20IP

Threading tool holder (internal)

ZSIR/L





Article	✲	Stock	Dimensions [mm]							Inserts
			ød	b	L	h	s	L_1	D_{min}	
ZSIR0016K11C	✲	○	16	15.5	125	15	10	20.9	12	Z11IR**
ZSIR0016M11C	✲	○	16	16	150	15	10.5	25.9	16	Z11IR**
ZSIR0016M16C	✲	○	16	15.5	150	15	12	27	20	Z16IR**
ZSIR0020M16C	✲	○	20	19	150	18	14	28.7	25	Z16IR**
ZSIR0020Q16C	✲	○	20	19	180	18	14	34	25	Z16IR**
ZSIR0025M16C	✲	○	25	24	150	23	17	28.8	32	Z16IR**
ZSIR0032R16C	✲	○	32	31	200	30	22	30.9	40	Z16IR**
ZSIR0032S16C	✲	○	32	31	250	30	22	30.9	40	Z16IR**
ZSIR0040T16C	✲	○	40	38.5	300	37	27	31.5	50	Z16IR**
ZSIR0020Q22C	✲	○	20	19	180	18	15	35	25	Z22IR**
ZSIR0025R22C	✲	○	25	24	200	23	19	39	32	Z22IR**
ZSIR0032S22C	✲	○	32	31	250	30	22	36.4	40	Z22IR**
ZSIR0040T22C	✲	○	40	38.5	300	37	27	37.2	50	Z22IR**

● Ex stock ○ On demand

✲ With internal cooling

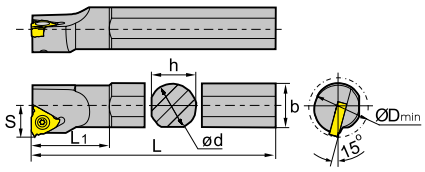
Spare parts

	Insert	**Z11IR****	**Z16IR****	**Z16IR****	**Z22IR****	**Z22IR****
	ød	**16**	**16**	**20-50**	**20**	**25-50**
	Screw	I60M2,5×6,5T (1,0 Nm)			I60M5×13,2 (6,7 Nm)	I60M4×15X (3,4 Nm)
	Screw		I60M3,5×08TT (2,7 Nm)	I60M3,5×12TT (2,7 Nm)		
	Screw (shim)			SM4×8C (2,6 Nm)		SM5×8,5C (4,0 Nm)
	Shim			MT16-__MN		MT22-__MN
	Wrench (screw)	WT08IP	WT10IP	WT10IP	WT15IP	WT15IP

Threading tool holder (internal)

ZSIR/L





Article	✻	Stock	Dimensions [mm]							Inserts
			ød	b	L	h	s	L_1	D_{min}	
ZSIL0016K11C	✻	○	16	15.5	125	15	10	20.9	12	Z11IL**
ZSIL0016M11C	✻	○	16	16	150	15	10.5	25.9	16	Z11IL**
ZSIL0016M16C	✻	○	16	15.5	150	15	12	27	20	Z16IL**
ZSIL0020M16C	✻	○	20	19	150	18	14	28.7	25	Z16IL**
ZSIL0020Q16C	✻	○	20	19	180	18	14	34	25	Z16IL**
ZSIL0025M16C	✻	○	25	24	150	23	17	28.8	32	Z16IL**
ZSIL0032R16C	✻	○	32	31	200	30	22	30.9	40	Z16IL**
ZSIL0032S16C	✻	○	32	31	250	30	22	30.9	40	Z16IL**
ZSIL0040T16C	✻	○	40	38.5	300	37	27	31.5	50	Z16IL**
ZSIL0020Q22C	✻	○	20	19	180	18	15	35	25	Z22IL**
ZSIL0025R22C	✻	○	25	24	200	23	19	39	32	Z22IL**
ZSIL0032S22C	✻	○	32	31	250	30	22	36.4	40	Z22IL**
ZSIL0040T22C	✻	○	40	38.5	300	37	27	37.2	50	Z22IL**

● Ex stock ○ On demand

✻ With internal cooling

Spare parts

	Insert	**Z11IR****	**Z16IR****	**Z16IR****	**Z22IR****	**Z22IR****
	ød	**16**	**16**	**20-50**	**20**	**25-50**
	Screw	I60M2,5×6,5T (1,0 Nm)			I60M5×13,2 (6,7 Nm)	I60M4×15X (3,4 Nm)
	Screw		I60M3,5×08TT (2,7 Nm)	I60M3,5×12TT (2,7 Nm)		
	Screw (shim)			SM4×8C (2,6 Nm)		SM5×8,5C (4,0 Nm)
	Shim			MT16-__MN		MT22-__MN
	Wrench (screw)	WT08IP	WT10IP	WT10IP	WT15IP	WT15IP

Z 16 ER 1.5 ISO PP

1	2	3	4	5	6

Product line

1

Insert size [mm]	
Code	I.C
11	6,35
16	9,252
22	12,70

2

Application	
Code	Description
ER	External thread right
IR	Internal thread right
EL	External thread left
IL	Internal thread left

3

Pitch		
Code	Pitch range (part profile)	
A	0,5 – 1,5 mm	48 – 16 (TPI)
AG	0,5 – 3,0 mm	48 – 8 (TPI)
G	1,75 – 3,0 mm	14 – 8 (TPI)
N	3,5 – 5,0 mm	7 – 5 (TPI)

Pitch range [mm] (full profile)
0.5 0.75 1.0 1.25 1.5
1.75 2.0 2.5 3.0 3.5
4.0 4.5 5.0 5.5 6.0

Pitch range (TPI) (full profile)
4 5 6 8
10 11 11.5 12
14 16 18 19
20 24 27 28

4

Thread profile	
Code	Description
ISO	ISO metric coarse thread 60°
60	Partial profile 60°
55	Partial profile 55°
W	Whitworth
UN	Unified conventional thread
BSPT	Whitworth taper pipe thread
NPT	American taper pipe thread
RD	API round thread
R	Knuckle thread 30°
TR	Metrical trapezoidal thread 30°

5

Chip breaker

6

zType threading inserts

New series for high-quality results in threading operations

YOUR BENEFITS

– **Highly compatible with commercially available systems**
– Tried-and-tested YBG205 grade for use in a wide range of applications
– **Wide assortment of thread types**
– Available with or without chip breaker
– Lower carbide content to conserve resources and save money

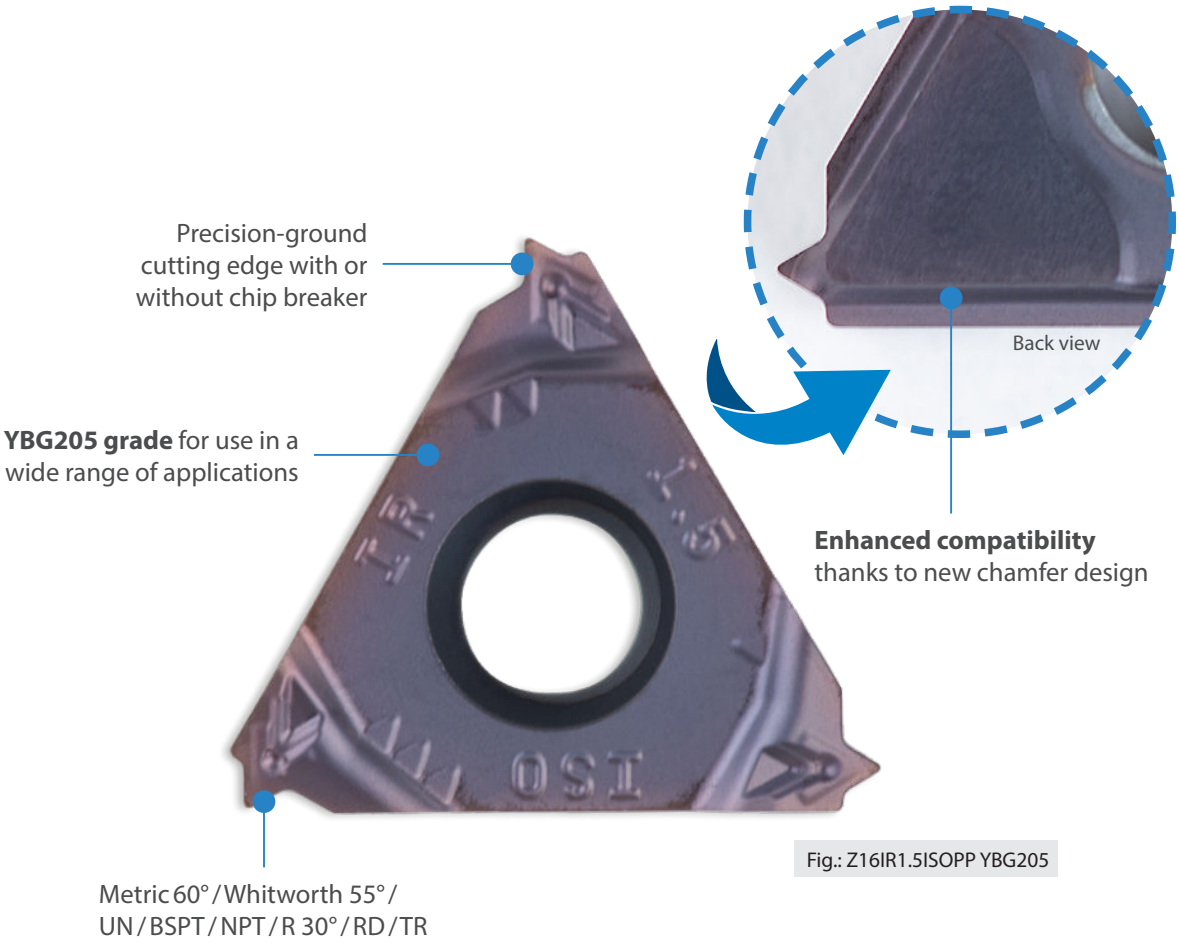
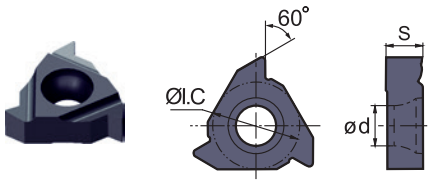


Fig.: Z16IR1.5ISOPP YBG205

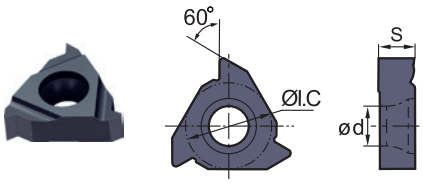
zType threading inserts

Z	I.C	S	d
11	6,35	3,05	3,2
16	9,525	3,52	4,0

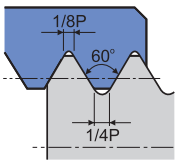
ISO metric coarse thread 60°



External right hand
Internal left hand



Internal right hand
External left hand



ISO 965-1980 DIN 13
GB·T 197-2003 Tolerance: 6g/6H

ISO	Pitch [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
11	1	–		**Z11IR1.0ISO**	●
		–		**Z11IL1.0ISO**	●
	1,25	–		**Z11IR1.25ISO**	●
		–		**Z11IL1.25ISO**	●
	1,5	–		**Z11IR1.5ISO**	●
		–		**Z11IL1.5ISO**	●
	2	–		**Z11IR2.0ISO**	●
		–		**Z11IL2.0ISO**	●
16	1	**Z16ER1.0ISO**	●	**Z16IR1.0ISO**	●
		Z16ER1.0ISOPP	●	**Z16IR1.0ISOPP**	●
		Z16EL1.0ISO	●	**Z16IL10ISO**	●
		Z16EL1.0ISOPP	○	–	
	1,25	**Z16ER1.25ISO**	●	**Z16IR1.25ISO**	●
		Z16ER1.25ISOPP	●	**Z16IR1.25ISOPP**	●
		Z16EL1.25ISO	●	**Z16IL1.25ISO**	●
	1,5	**Z16ER1.5ISO**	●	**Z16IR1.5ISO**	●
		Z16ER1.5ISOPP	●	**Z16IR1.5ISOPP**	●
		Z16EL1.5ISO	●	**Z16IL1.5ISO**	●
	1,75	**Z16ER1.75ISO**	●	**Z16IR1.75ISO**	●
		Z16ER1.75ISOPP	●	**Z16IR1.75ISOPP**	●
		Z16EL1.75ISO	●	**Z16IL1.75ISO**	●
	2	**Z16ER2.0ISO**	●	**Z16IR2.0ISO**	●
		Z16ER2.0ISOPP	●	**Z16IR2.0ISOPP**	●
		Z16EL2.0ISO	●	**Z16IL2.0ISO**	●

● Ex stock ○ On demand
PP*: Inserts with chip-breakers
HC[1] Coated cemented carbide

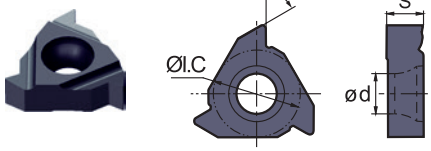
Tool holders

SWR/L	SNR/L
	

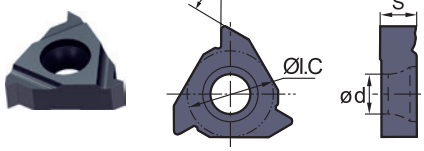
Z	I.C	S	d
16	9,525	3,52	4,0
22	12,7	4,65	5,0

zType threading inserts

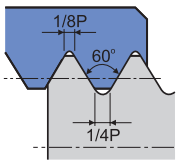
ISO metric coarse thread 60°



External right hand
Internal left hand



Internal right hand
External left hand

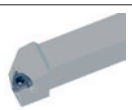


ISO 965-1980 DIN 13
GB·T 197-2003 Tolerance: 6g/6H

ISO	Pitch [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	2,5	**Z16ER2.5ISO**	●	**Z16IR2.5ISO**	●
		Z16ER2.5ISOPP	●	**Z16IR2.5ISOPP**	●
		Z16EL2.5ISO	●	**Z16IL2.5ISO**	●
	3	**Z16ER3.0ISO**	●	**Z16IR3.0ISO**	●
		Z16ER3.0ISOPP	●	**Z16IR3.0ISOPP**	●
		Z16EL3.0ISO	●	**Z16IL3.0ISO**	●
22	3,5	**Z22ER3.5ISO**	●	**Z22IR3.5ISO**	●
		Z22EL3.5ISO	●	**Z22IL3.5ISO**	○
	4	**Z22ER4.0ISO**	●	**Z22IR4.0ISO**	●
		Z22EL4.0ISO	○	**Z22IL4.0ISO**	○
	4,5	**Z22ER4.5ISO**	●	**Z22IR4.5ISO**	●
		Z22EL4.5ISO	○	**Z22IL4.5ISO**	○
	5	**Z22ER5.0ISO**	●	**Z22IR5.0ISO**	●
		Z22EL5.0ISO	●	**Z22IL5.0ISO**	●
	5,5	**Z22ER5.5ISO**	●	**Z22IR5.5ISO**	●
		Z22EL5.5ISO	●	**Z22IL5.5ISO**	●
	6	**Z22ER6.0ISO**	●	**Z22IR6.0ISO**	●
		Z22EL6.0ISO	○	**Z22IL6.0ISO**	●

● Ex stock ○ On demand
HC[1] Coated cemented carbide
PP*: Inserts with chip-breakers

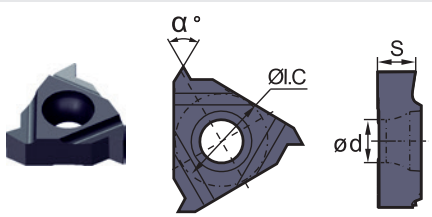
Tool holders

SWR/L	SNR/L
	

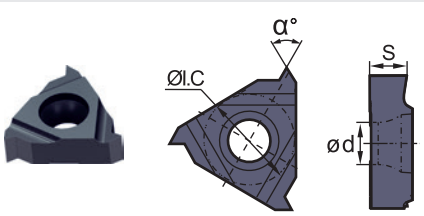
Z	I.C	S	d
11	6,35	3,05	3,2
16	9,525	3,52	4,0
22	12,7	4,65	5,0

zType threading inserts

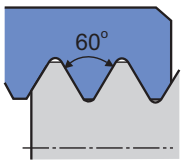
Partial profile 60°



External right hand
Internal left hand



Internal right hand
External left hand



ISO	Pitch [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
11	0,50–1,50	–		**Z11IRA60**	●
		–		**Z11ILA60**	●
16	0,50–1,50	**Z16ERA60**	●	**Z16IRA60**	●
		Z16ERA60PP	●	**Z16IRA60PP**	●
		Z16ELA60	●	**Z16ILA60**	●
	0,50–3,00	**Z16ERAG60**	●	**Z16IRAG60**	●
		Z16ERAG60PP	●	**Z16IRAG60PP**	●
		Z16ELAG60	●	**Z16ILAG60**	●
	1,75–3,00	**Z16ERG60**	●	**Z16IRG60**	●
		Z16ERG60PP	●	**Z16IRG60PP**	●
		Z16ELG60	●	**Z16ILG60**	●
22	3,5–5,00	**Z22ERN60**	●	**Z22IRN60**	●

● Ex stock ○ On demand
HC[1] Coated cemented carbide
PP*: Inserts with chip-breakers

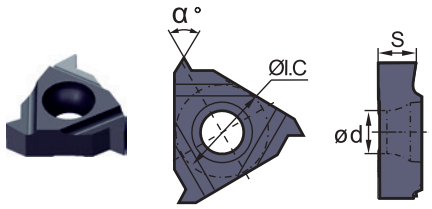
Tool holders

SWR/L	SNR/L
	

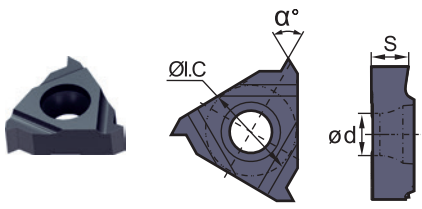
Z	I.C	S	d
11	6,35	3,05	3,2
16	9,525	3,52	4,0
22	12,7	4,65	5,0

zType threading inserts

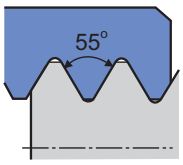
Partial profile 55°



External right hand
Internal left hand



Internal right hand
External left hand



ISO	Thread pitches [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
11	48–16	–		**Z11IRA55**	●
		–		**Z11ILA55**	●
16	48–16	**Z16ERA55**	○	**Z16IRA55**	●
		Z16ERA55PP	●	**Z16IRA55PP**	●
		Z16ELA55	●	**Z16ILA55**	●
	48–8	**Z16ERAG55**	●	**Z16IRAG55**	●
		Z16ERAG55PP	●	**Z16IRAG55PP**	●
		Z16ELAG55	●	**Z16ILAG55**	●
	14–8	**Z16ERG55**	●	**Z16IRG55**	●
		Z16ERG55PP	●	**Z16IRG55PP**	●
		Z16ELG55	●	**Z16ILG55**	●
22	7–5	**Z22ERN55**	●	**Z22IRN55**	●

● Ex stock ○ On demand
HC[1] Coated cemented carbide
PP*: Inserts with chip-breakers

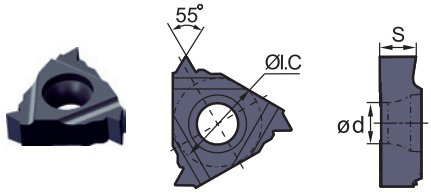
Tool holders

SWR/L	SNR/L
	

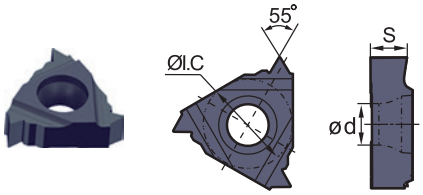
zType threading inserts

Z	I.C	S	d
16	9,525	3,52	4,0

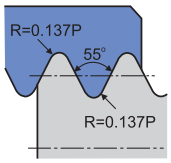
Whitworth



External right hand
Internal left hand



Internal right hand
External left hand



ISO 965-1980 DIN 13
GB·T 197-2003 Tolerance: medium class A

ISO	Thread pitches [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	8	**Z16ER8W**	●	**Z16IR8W**	●
	9	**Z16ER9W**	●	**Z16IR9W**	●
	10	**Z16ER10W**	●	**Z16IR10W**	●
		Z16EL10W	●	**Z16IL10W**	●
	11	**Z16ER11W**	●	**Z16IR11W**	●
		Z16ER11WPP	●	**Z16IR11WPP**	●
		Z16EL11W	●	**Z16IL11W**	●
	12	**Z16ER12W**	●	**Z16IR12W**	●
		Z16EL12W	●	**Z16IL12W**	●
	14	**Z16ER14W**	●	**Z16IR14W**	●
		Z16ER14WPP	●	**Z16IR14WPP**	●
		Z16EL14W	●	**Z16IL14W**	●
	16	**Z16ER16W**	●	**Z16IR16W**	●
		Z16EL16W	●	**Z16IL16W**	●
	18	**Z16ER18W**	●	**Z16IR18W**	●
		Z16EL18W	●	**Z16IL18W**	●
	19	**Z16ER19W**	●	**Z16IR19W**	●
		Z16ER19WPP	●	**Z16IR19WPP**	●
		Z16EL19W	●	**Z16IL19W**	●

● Ex stock ○ On demand
PP*: Inserts with chip-breakers
HC[1] Coated cemented carbide

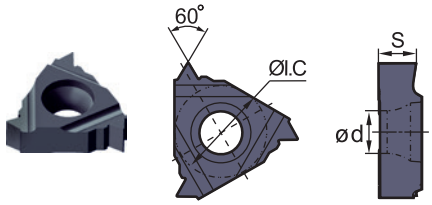
Tool holders

SWR/L	SNR/L
	

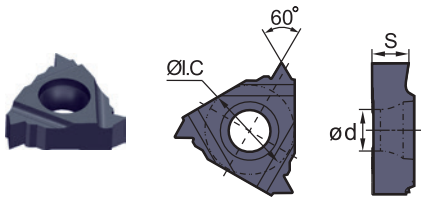
zType threading inserts

Z	I.C	S	d
16	9,525	3,52	4,0

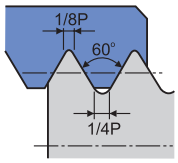
Unified conventional thread UN



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.1-1989
Tolerance: 2A/2B

ISO	Thread pitches [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	8	**Z16ER8UN**	●	**Z16IR8UN**	●
		Z16EL8UN	●	**Z16IL8UN**	○
	10	**Z16ER10UN**	●	**Z16IR10UN**	●
		Z16EL10UN	●	**Z16IL10UN**	○
	12	**Z16ER12UN**	●	**Z16IR12UN**	●
		Z16ER12UNPP	●	**Z16IR12UNPP**	●
		Z16EL12UN	●	**Z16IL12UN**	●
	14	**Z16ER14UN**	●	**Z16IR14UN**	●
		Z16ER14UNPP	●	**Z16IR14UNPP**	●
		Z16EL14UN	●	**Z16IL14UN**	○
	16	**Z16ER16UN**	●	**Z16IR16UN**	●
		Z16ER16UNPP	●	**Z16IR16UNPP**	●
		Z16EL16UN	●	**Z16IL16UN**	●
	18	**Z16ER18UN**	●	**Z16IR18UN**	●
		Z16EL18UN	●	**Z16IL18UN**	●
	20	**Z16ER20UN**	●	**Z16IR20UN**	●
		Z16EL20UN	●	**Z16IL20UN**	●
	24	**Z16ER24UN**	●	**Z16IR24UN**	●
		Z16EL24UN	●	**Z16IL24UN**	○

● Ex stock ○ On demand
PP*: Inserts with chip-breakers

HC[1] Coated cemented carbide

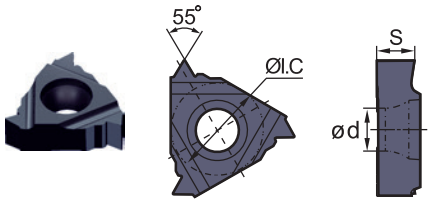
Tool holders

SWR/L	SNR/L
	

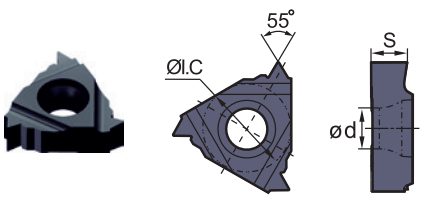
zType threading inserts

Z	I.C	S	d
16	9,525	3,52	4,0

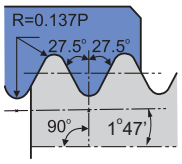
Whitworth taper pipe thread BSPT



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.1-1989
Tolerance: 2A/2B

ISO	Thread pitches [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	11	**Z16ER11BSPT**	●	**Z16IR11BSPT**	●
		Z16ER11BSPTPP	●	**Z16IR11BSPTPP**	●
		Z16EL11BSPT	●	–	
	14	**Z16ER14BSPT**	●	**Z16IR14BSPT**	●
		Z16ER14BSPTPP	●	**Z16IR14BSPTPP**	●
		Z16EL14BSPT	●	–	
	19	**Z16ER19BSPT**	●	**Z16IR19BSPT**	●
		Z16ER19BSPTPP	●	**Z16IR19BSPTPP**	●
		Z16EL19BSPT	●	**Z16IL19BSPT**	●
	28	**Z16ER28BSPT**	●	**Z16IR28BSPT**	●
		Z16EL28BSPT	●	–	

● Ex stock ○ On demand
PP*: Inserts with chip-breakers

HC[1] Coated cemented carbide

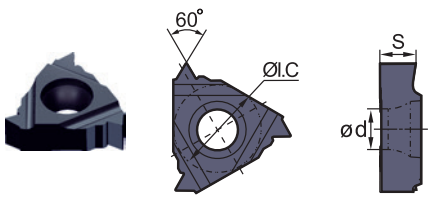
Tool holders

SWR/L	SNR/L
	

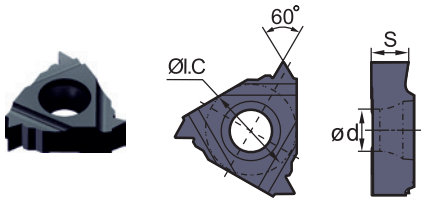
zType threading inserts

Z	I.C	S	d
16	9,525	3,52	4,0

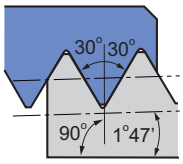
American taper pipe thread NPT



External right hand
Internal left hand



Internal right hand
External left hand



ASME B1.20.1-1983
Standard NPT

ISO	Thread pitches [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	8	**Z16ER8NPT**	●	**Z16IR8NPT**	○
		Z16EL8NPT	●	–	
	11,5	**Z16ER11.5NPT**	●	**Z16IR11.5NPT**	●
		Z16ER11.5NPTPP	●	**Z16IR11.5NPTPP**	●
		Z16EL11.5NPT	●	–	
	14	**Z16ER14NPT**	●	**Z16IR14NPT**	●
		Z16ER14NPTPP	●	**Z16IR14NPTPP**	●
		Z16EL14NPT	●	–	
	18	**Z16ER18NPT**	●	**Z16IR18NPT**	●
		Z16ER18NPTPP	●	**Z16IR18NPTPP**	●
		Z16EL18NPT	●	**Z16IL18NPT**	●
	27	**Z16ER27NPT**	●	**Z16IR27NPT**	●
		Z16EL27NPT	●	–	

● Ex stock ○ On demand
HC[1] Coated cemented carbide
PP*: Inserts with chip-breakers

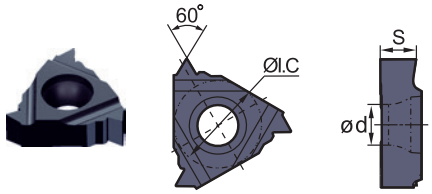
Tool holders

SWR/L	SNR/L
	

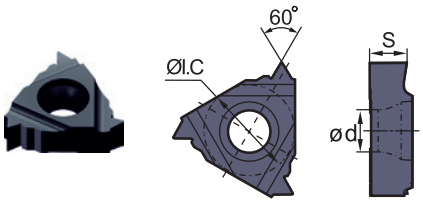
zType threading inserts

Z	I.C	S	d
16	9,525	3,52	4,0

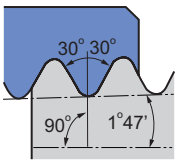
API round thread



External right hand
Internal left hand



Internal right hand
External left hand



API spec.5B
Tolerance: API RD

ISO	Thread pitches [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	8	**Z16ER8RD**	●	**Z16IR8RD**	●
	10	**Z16ER10RD**	●	**Z16IR10RD**	●

● Ex stock ○ On demand

HC[1] Coated cemented carbide

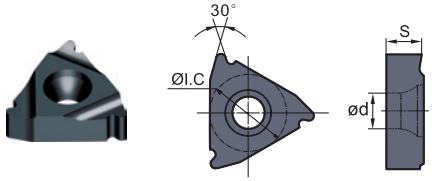
Tool holders

SWR/L	SNR/L
	

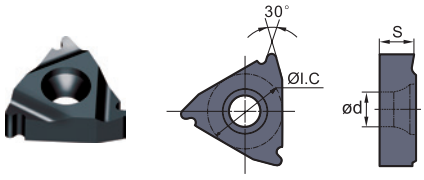
zType threading inserts

Z	I.C	S	d
16	9,525	3,52	4,0

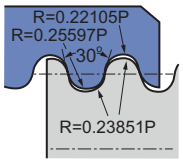
Knuckle thread 30°



External right hand
Internal left hand



Internal right hand
External left hand



DIN 405
Tolerance: 7

ISO	Thread pitches [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	8	**Z16ER8R**	●	–	
	10	**Z16ER10R**	●	–	

● Ex stock ○ On demand

HC[1] Coated cemented carbide

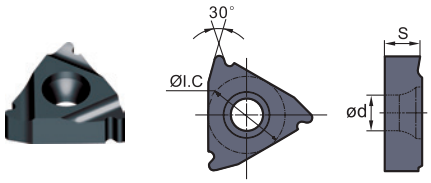
Tool holders

SWR/L	SNR/L
	

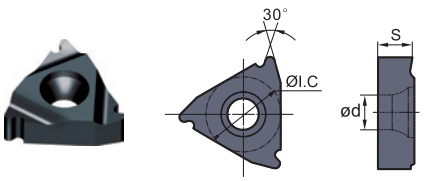
zType threading inserts

Z	I.C	S	d
16	9,525	3,52	4,0

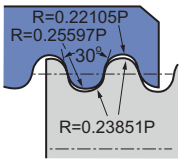
Metrical trapezoidal thread 30°



External right hand
Internal left hand



Internal right hand
External left hand



DIN 405
Tolerance: 7

ISO	Pitch [mm]	External machining	HC[1] (PVD) YBG205	Internal machining	HC[1] (PVD) YBG205
16	2	**Z16ER2.0TR**	●	–	

● Ex stock ○ On demand

HC[1] Coated cemented carbide

Tool holders

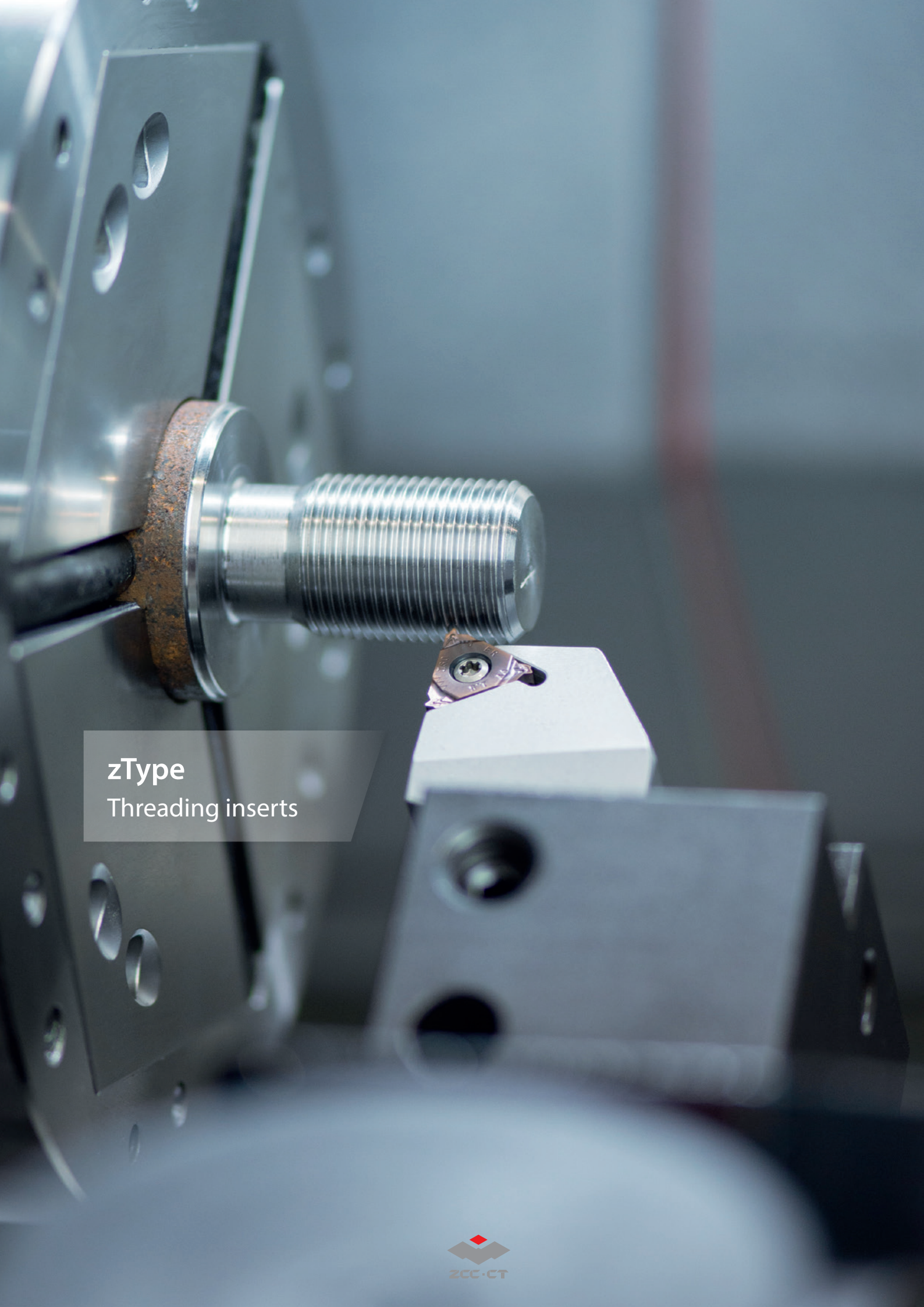
SWR/L	SNR/L
	

Threading inserts

	Material group	Composition / structure / heat treatment		Brinell hardness HB	Machining group	Starting values for cutting speed v_c [m/min]		
						HC (PVD)		
						YBG205		
P	Unalloyed steel	approx. 0,15 % C	annealed	125	1	190		
		approx. 0,45 % C	annealed	190	2	175		
		approx. 0,45 % C	tempered	250	3	145		
		approx. 0,75 % C	annealed	270	4	140		
		approx. 0,75 % C	tempered	300	5	135		
	Low-alloyed steel		annealed	180	6	170		
			tempered	275	7	125		
			tempered	300	8	115		
			tempered	350	9	105		
	High-alloyed steel and high-alloyed tool steel		annealed	200	10	125		
			hardened and tempered	325	11	95		
M	Stainless steel	ferritic/martensitic	annealed	200	12	165		
		martensitic	tempered	240	13	135		
		austenitic	quench hardened	180	14	155		
		austenitic-ferritic		230	15	135		
K	Grey cast iron	perlitic/ferritic		180	16	240		
		perlitic (martensitic)		260	17	185		
	Cast iron with spheroidal graphite	ferritic		160	18	220		
		perlitic		250	19	165		
	Malleable cast iron	ferritic		130	20	175		
		perlitic		230	21	165		
N	Aluminium wrought alloys	cannot be hardened		60	22	800		
		hardenable	hardened	100	23	600		
	Cast aluminium alloys	≤ 12% Si, cannot be hardened		75	24	320		
		≤ 12% Si, hardenable	hardened	90	25	240		
		> 12% Si, cannot be hardened		130	26	160		
	Copper and copper alloys (bronze/brass)	machining steel, PB> 1%		110	27	160		
		CuZn, CuSnZn		90	28	600		
		CuSn, Pb-free copper, electrolytic copper		100	29	200		
S	Heat-resistant alloys	Fe-based alloys	annealed	200	30	95		
			hardened	280	31	50		
		Ni or Co bass	annealed	250	32	80		
			hardened	350	33	70		
			cast	320	34	70		
	Titanium alloys	pure titanium		R_m 400	35	145		
		α and β alloys	hardened	R_m 1050	36	50		
H	Hardened steel		hardened and tempered	55 HRC	37			
			hardened and tempered	60 HRC	38			
	Hard cast iron		cast	400	39			
	Hardened cast iron		hardened and tempered	55 HRC	40			
X	Non-metallic materials	Thermoplasts			41			
		Thermosetting plastics			42			
		Plastic, glass-fibre reinforced GFRP			43			
		Plastic, carbon fibre reinforced CFRP			44			
		Graphite			45			
		Wood			46			

Note: The given cutting values are guide values, which were determined under ideal conditions.
The values have to be adapted in individual cases.
For examples of material for cutting tool groups view page D11.

HC Coated carbide



zType
Threading inserts

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735 | PNK | v1 | 2.0 | 09.23

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