SUMITOMO
CARBIDE - CBN - DIAMOND

Economical Indexable Insert Drill

SumiDrill WDX Series

Expanded with the M Type Chipbreaker for Drilling in Stainless Steel

P M K N S H

SUMITOMO ELECTRIC GROUP

SumiDrill
WDX Type

General Features

The SumiDrill WDX type has excellent cutting balance that provides stable hole drilling on a wide range of work materials from general steel to stainless steel and aluminium alloy.
Available in four original chipbreaker styles, the inserts feature improved chip control and reduced cutting force for use in low rigidity contexts.

Series Configuration

Depth of Machined Hole	Holder Diameter (mm)
2D	Ø 13,0 – Ø 68,0
3D	Ø 13,0 – Ø 68,0
4D	Ø 13,0 – Ø 63,0
5D	Ø 13,0 – Ø 55,0

Features and Applications

Design

Cutting force during drilling is balanced between central insert and peripheral insert. The relative position of each insert is optimised to provide stable drilling.

Excellent Chip Control

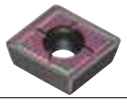
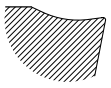
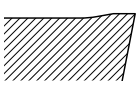
The chip evacuation direction can be controlled with the chip control groove at the centre of the breaker, enabling good chip control.

Versatile Tool for a Variety of Machining Applications

Select among four types of breakers for different applications, allowing optimal drilling for a variety of work materials and conditions. Suitable for a wide range of applications including hole expansion, spot facing, external turning and internal boring.

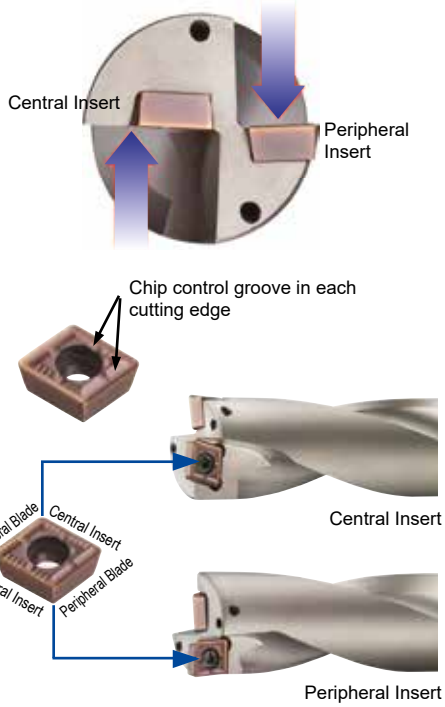
Economical Four-Cornered Insert

Inserts can be used in either central or peropheral positions with two corners for each position - a total of four corners.

Type	L	G		H	M
Features	For low feed with chip control	General Purpose	For non-ferrous metal drilling	Strong edge type	For stainless steel drilling
Appearance					
Figure					

Design

Cutting force of central insert = that periphal insert

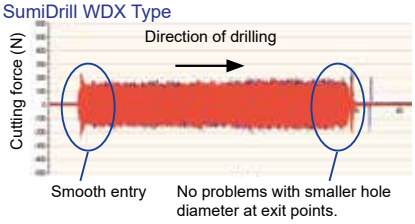


Performance

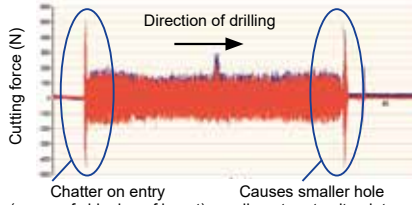
Balanced Design
(Comparison of Horizontal Component Values)

Balance is maintained at the strong hole entry and exit points and drilling is stable.

SumiDrill WDX Type



Conventional and Competitor's Products



Improved Chip Control

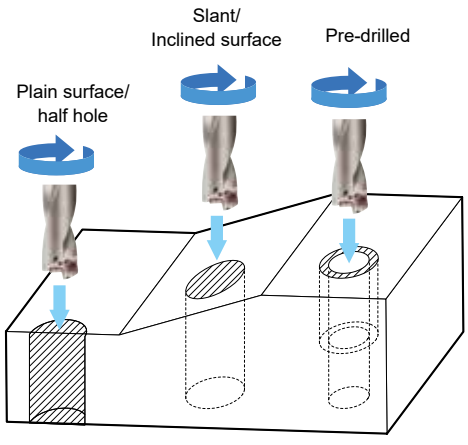
Work Material: X5CrNiS18 10
Holder: WDX 200D3S25 (Ø 20,0)
Cutting Data: v_c = 130 m/min, f = 0,06 mm/rev, H = 50 mm, wet

SumiDrill WDX Type

Conventional and Competitor's Products

Multi-Purpose Functionality

Applications for Machining Centre



Recommended conditions - reduce feed rate to 70 %

ACM300
For Machining of Stainless Steel

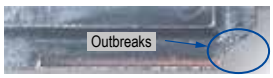
Features
Chip control by the newly developed M chip breaker for stainless steel machining achieves stable hole quality.

	WDX **M** Type	WDX **G** Type	Competitor's Product
Hole			
Chips			

Work Material: X2CrNiMo17 13 2
Holder: WDX200D3S25
Insert: WDXT063006 M (ACM300)
Cutting Data: v_c = 150 m/min, f = 0,08 mm/rev, H = 60 mm, wet

ACP100
For High-speed Drilling of Steel and Cast Iron

Features
Provides excellent wear resistance and high reliability thanks to our coating stress control technology and the ultra-fine crystal grain coating film of the Super FF Coat achieved through our proprietary technology.

		ACP100	Competitor's Product
Peripheral Insert	Rake Face		
	Flank		
Central Insert	Rake Face		
	Flank		

Work Material: C50
Holder: WDX250D3S25
Insert: WDXT063006 G (ACP100)
Cutting Data: v_c = 200 m/min, f = 0,12 mm/rev, H = 50 mm through hole, wet

Drills for Deep Hole Drilling L/D = 5

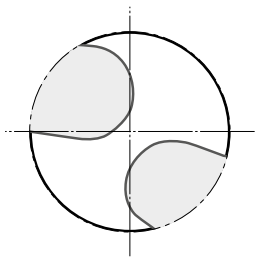
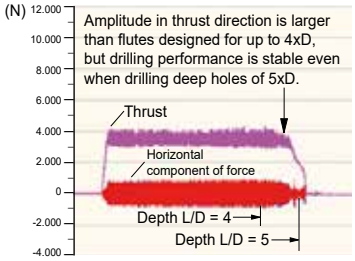
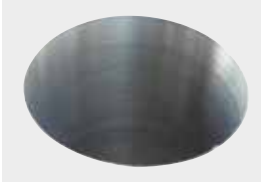
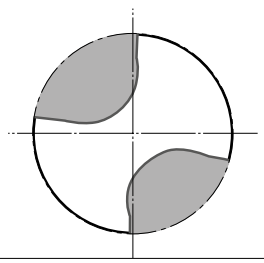
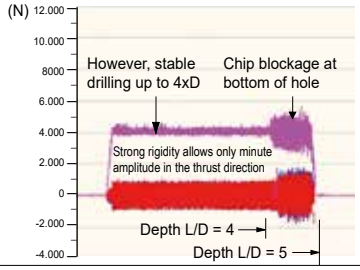
Features
The SumiDrill WDX type for 5xD drilling features a specially designed flute shape and enlarged coolant hole for excellent chip evacuation even during hole drilling.

Large coolant hole

Coolant supply guidehole

Special flute shape for L/D = 5

Performance

Characteristics	Figure	Cutting Resistance	Machined Surface (Exit)
WDX260D5S32 Flutedesign L/D = 5 Designed with emphasis on chip evacuation Expanded flute design improves chip evacuation for stable drilling performance even with holes up to 5xD.			Produces an excellent surface finish - full hole depth 
Comparison Tool Flutedesign L/D = 4 Designed with emphasis on drill rigidity Flute design for greater rigidity of the drill enables stable drilling of deep holes up to 4xD.			Poor machined surface due to chip blockage at bottom of hole (near 5xD) 

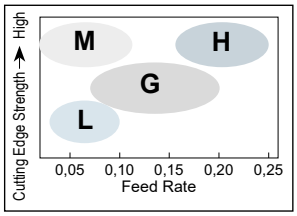
Insert: WDXT073506-G Work Material: X5CrNiS18 10
Cutting Data: v_c = 150 m/min, f = 0,05 mm/rev, H = 130 mm, through hole, wet

Insert Selection Guide – The WDX Insert Series has a Variety of Options

5 Grades

	ACP100	ACP300	ACM300	ACK300	DL1500
P High-speed Drilling	○				
P General Drilling		○			
M Stainless Steel		○	○		
K High-speed Drilling	○				
K General Drilling				○	
N Non-ferrous Metal					○

4 Types of Chipbreakers



11 Combinations

ACP100	ACP300	ACM300	ACK300	DL1500
PK L	P L		PK L	
PK G	PM G		PK G	N G
PK H	P H		K H	
		M M		

2nd Recommendation
P

P For low Feed with Chip Control

L ACP300

For drilling of St 42-3, 15,CrMo5, 20CrMo5, etc.

High speed and low feed is recommended if there are issues with chip control.

Decrease the feed if vibration occurs due to burnt chips.

P Improved chip control (low carbide steel, etc.)

P General Purpose

G ACP100

For drilling of general steel and alloy steel, when prone to significantly large flank wear.

P For low feed with chip control

L ACP100

For low-feed conditions.

P Insufficient wear resistance

P Strong Edge Type

H ACP300

For drilling with interruptions (entry/through) due to slanted entry, reduce the feed rate in the interrupted area (around f = 0,05).

For insufficient cutting edge strength due to drilling of hardened steel (heat treated).

P Initial chipping measures (interruption, high hardness, etc.)

1st Recommendation
P M
K N

General Purpose

G

For general steel and alloy steel drilling
P ACP300

For cast iron drilling
K ACK300

For non-ferrous metal drilling
N DL1500

For stainless steel drilling
M ACM300

Dedicated for Stainless steel

M

K Insufficient wear resistance (high-speed machining)

K Initial chipping measures (interruption, high feed, etc.)

M Lack of chip evacuation (extension)

2nd Recommendation
K M

K General Purpose

G ACP100

When heavy flank wear occurs in cast iron drilling.

To limit wear in high-speed, low to medium feed conditions.

K Strong Edge Type

H ACK300

When interrupted drilling is performed due to slanted entry, etc. as with steel drilling.

For macining of SS400, SCM415, SCM420

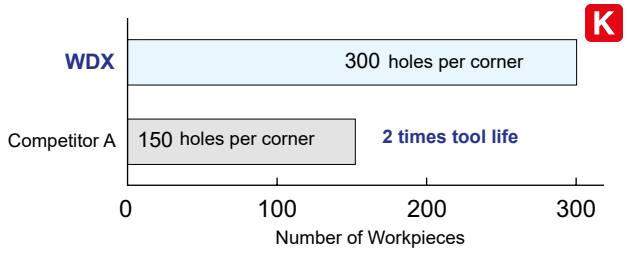
M General Purpose

G ACP300

When chips extend and clog.

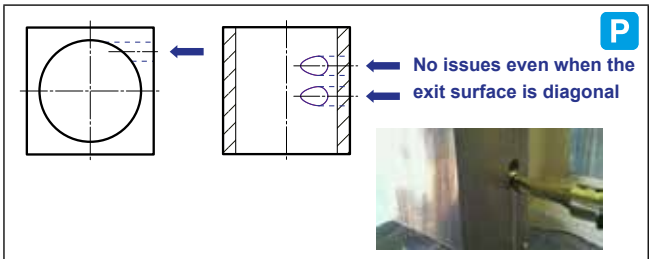
ACP100 is the first recommendation for steel with a hardness of 200HB or greater or for high-speed drilling of steel.

Application Examples



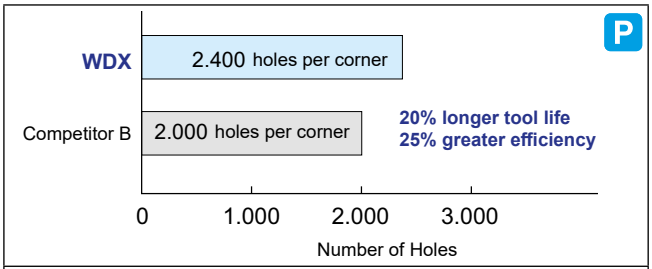
Work Material: Machine component (GGG-40.3)
Holder: WDX205D3S25
Insert: WDXT063006 G (ACK300)
Cutting Data: v_c = 122 m/min, f = 0,15 mm/rev, H = 33 mm, through, wet

Significant increase in tool life; twice that conventional tools.
Stable cutting with minimal cutting force.



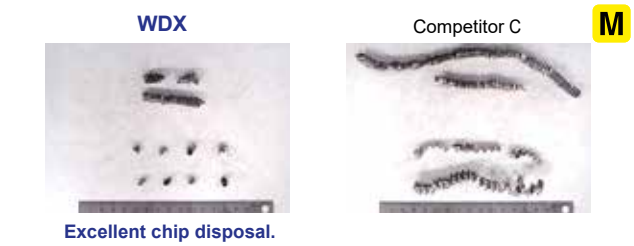
Work Material: Plate (C15)
Holder: WDX430D3S40
Insert: WDXT125012 H (ACP300)
Cutting Data: v_c = 136 m/min, f = 0,15 mm/rev, H = 60+50 mm (semicircle area), through, wet

Enables drilling even in unstable conditions (interrupted cutting at deepest point)
Quieter cutting than conventional tools.



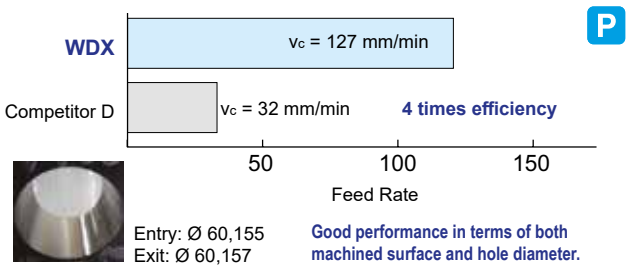
Work Material: Machine component (42CrMo4)
Holder: WDX200D3S25
Insert: WDXT063006 G (ACP300)
Cutting Data: v_c = 157 m/min, f = 0,19 mm/rev, H = 19 mm, through, wet
Competitor B: v_c = 157 m/min, f = 0,15 mm/rev, H = 19 mm, through, wet

Good chip control even in high-efficiency conditions. Good stability with low vibration during cutting. 25% greater efficiency and 20% longer tool life.



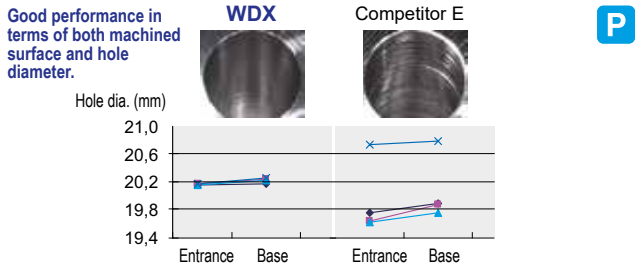
Work Material: Piping parts (X5CrNiS18 10)
Holder: WDX210D3S25
Insert: WDXT063006 M (ACM300)
Cutting Data: v_c = 105 m/min, f = 0,08 mm/rev, H = 34 mm, wet

Improved chip control and better stable machining.



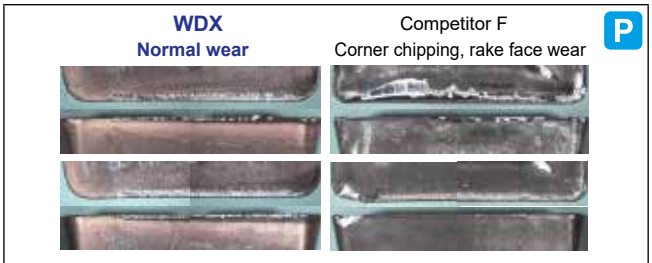
Work Material: Plate (C48)
Holder: WDX600D3S40
Insert: WDXT186012 G (ACP300)
Cutting Data: v_c = 150 m/min, f = 0,16 mm/rev, H = 60 mm, through, wet
Competitor D: v_c = 30 m/min, f = 0,20 mm/rev, H = 60 mm, through, wet

Achieves steady machining even at large diameters.
Achieves 4 times the efficiency of conventional tools.



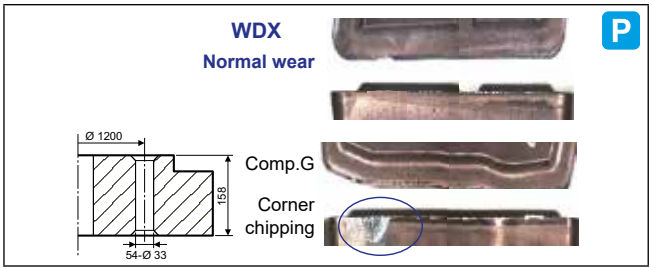
Work Material: Machine component (15CrMo5)
Holder: WDX200D5S25
Insert: WDXT063006 G (ACP300)
Cutting Data: v_c = 185 m/min, f = 0,12 mm/rev, H = 87mm, through, wet

Good machined surface.
Consistent bore diameter.



Work Material: Tractor links (35MnBM)
Holder: WDX205D5S25
Insert: WDXT063006 G (ACP300)
Cutting Data: v_c = 100 m/min, f = 0,11 mm/rev, H = 60 mm, through, wet

Achieves steady machining even at L/D = 5.
Reduces insert chipping and wear for stable tool life.



Work Material: Bearing for wind power generator (equivalent to 42CrMo4)
Holder: WDX330D5S40
Insert: WDXT094008 L (ACP300)
Cutting Data: v_c = 146 m/min, f = 0,10 mm/rev, H = 158 mm, through, wet

Eliminates defects in workpieces caused by insert chipping.

WDX Type (2D)

Max. Depth: 2D

Machining tolerances -0.05 to +0.15 mm

Fig. 1

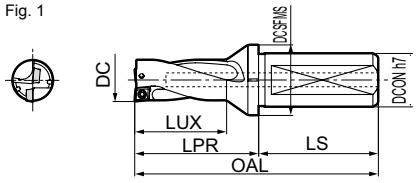


Fig. 2

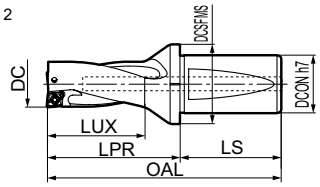
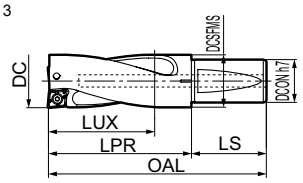


Fig. 3



Holder Diameter Ø 13,0 mm – Ø 45,0 mm

DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
13,0	●	WDX 130D2S20	29	44	88				1
13,5	●	135D2S20	30	45	89				1
14,0	●	140D2S20	31	46	90	44	28,0	20	1
14,5	●	145D2S20	32	47	91				1
15,0	●	150D2S20	33	48	92				1
15,5	●	WDX 155D2S20	34	49	93				1
16,0	●	160D2S20	35	50	94	44	30,0	20	1
16,5	●	165D2S20	36	51	95				1
17,0	●	170D2S20	37	52	96				1
17,5	●	WDX 175D2S25	38	53	109	56	32,0	25	1
18,0	●	180D2S25	39	54	110				1
18,5	●	WDX 185D2S25	40	55	111				1
19,0	●	190D2S25	41	56	112				1
19,5	●	195D2S25	42	57	113				1
20,0	●	200D2S25	43	58	114				1
20,5	●	205D2S25	44	59	115	56	33,0	25	1
21,0	●	210D2S25	45	60	116				1
21,5	●	215D2S25	46	61	117				1
22,0	●	220D2S25	47	62	118				1
22,5	●	225D2S25	48	63	119				1
23,0	●	WDX 230D2S25	49	67	123				1
23,5	●	235D2S25	50	68	124				1
24,0	●	240D2S25	51	69	125	56	37,0	25	1
24,5	●	245D2S25	52	70	126				1
25,0	●	250D2S25	53	71	127				1
25,5	●	WDX 255D2S32	54	74	134				2
26,0	●	260D2S32	55	75	135				2
26,5	●	265D2S32	56	76	136				2
27,0	●	270D2S32	57	77	137	60	41,0	32	2
27,5	●	275D2S32	58	78	138				2
28,0	●	280D2S32	59	79	139				2
28,5	●	285D2S32	60	80	140				2
29,0	●	WDX 290D2S32	62	83	143		50,0		2
29,5	●	295D2S32	63	84	144				2
30,0*	❍	300D2S32	64	88	148	60		32	2
31,0*	●	310D2S32	66	90	150		54,0		2
32,0*	❍	320D2S32	68	92	152				2
30,0*	●	WDX 300D2S40	64	88	158				2
31,0*	●	310D2S40	66	90	160				2
32,0*	●	320D2S40	68	92	162				2
33,0	●	330D2S40	70	94	164	70	54,0	40	2
34,0	●	340D2S40	72	96	166				2
35,0	●	350D2S40	74	98	168				2
36,0	●	360D2S40	76	100	170				2
37,0	●	WDX 370D2S40	79	109	179				2
38,0	●	380D2S40	81	111	181				2
39,0	●	390D2S40	83	113	183				2
40,0	●	400D2S40	85	115	185				2
41,0	●	410D2S40	87	117	187	70	49,5	40	2
42,0	●	420D2S40	89	119	189				2
43,0	●	430D2S40	91	121	191				2
44,0	●	440D2S40	93	123	193				2
45,0	●	450D2S40	95	125	195				2

* Diameter Ø 30, Ø 31, Ø 32 are in stock with shank diameters of Ø 32 and Ø 40.

Holder Diameter Ø 46,0 mm – Ø 68,0 mm

DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
46,0	●	WDX 460D2S40	97	127	197				2
47,0	●	470D2S40	99	129	199				2
48,0	●	480D2S40	101	131	201		49,5		2
49,0	●	490D2S40	103	133	203				2
50,0	●	500D2S40	105	135	205	70		40	2
51,0	●	510D2S40	107	137	207				3
52,0	●	520D2S40	109	139	209		50,5		3
53,0	●	530D2S40	111	141	211		51,5		3
54,0	●	540D2S40	113	143	213		52,5		3
55,0	●	550D2S40	115	145	215		53,5		3
56,0	❍	WDX 560D2S40	120	152	222		54,0		3
57,0	❍	570D2S40	122	154	224		55,0		3
58,0	❍	580D2S40	124	156	226		56,0		3
59,0	❍	590D2S40	126	158	228		57,0		3
60,0	❍	600D2S40	128	160	230		58,0		3
61,0	❍	610D2S40	130	162	232		59,0		3
62,0	❍	620D2S40	132	164	234	70	60,0	40	3
63,0	❍	630D2S40	134	166	236		61,0		3
64,0	❍	640D2S40	136	168	238		62,0		3
65,0	❍	650D2S40	138	170	240		63,0		3
66,0	❍	660D2S40	140	172	242		64,0		3
67,0	❍	670D2S40	142	174	244		65,0		3
68,0	❍	680D2S40	144	176	246		66,0		3

Parts

Applicable Holder	Flat Screw		Wrench	Wrench
		N·m		
WDX130D2S20–WDX150D2S20	BFTX01604N	**0,3**	TRX06	–
WDX155D2S20–WDX180D2S25	BFTX0204N	**0,5**	TRX06	–
WDX185D2S25–WDX225D2S25	BFTY02206	**1,0**	–	TRD07
WDX230D2S25–WDX285D2S32	BFTX02506N	**1,5**	–	TRD08
WDX290D2S32–WDX360D2S40	BFTX03584	**3,5**	–	TRD15
WDX370D2S40–WDX450D2S40	BFTX0511N	**5,0**	–	TRD20
WDX460D2S40–WDX680D2S40	BFTX0615N	**5,0**	–	TRD25

Identification Details - Holder

WDX 200 D2 S25

- 200: Diameter DC (Ø 20,0 mm)
- D2: Flute Length L/D (2D)
- S25: Shank Diameter DCON (Ø 25,0 mm)

Identification Details - Inserts

WDXT 06 30 06 -G

- 06: Width across Flats (6,0 mm)
- 30: Thickness (3,0 mm)
- 06: Nose Radius (0,6 mm)
- -G: Breaker Type

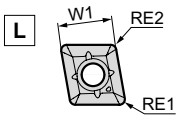
● Euro stock ❍ Japan stock

Inserts

Application	Coated Carbide				
High-Speed / Light	PK				N
General Purpose		P	M		
Roughing		P		K	

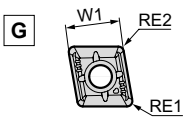
Cat. No.	ACP100	ACP300	ACM300	ACK300	DL1500	Fig	W1	S	RE1	RE2	Applicable Holder
WDXT 042004 L	❍	●		●		1	4,2	2,0	0,4	0,4	WDX130D2S20 – WDX150D2S20
042004 G	●	●		●	●	2					
042004 H	●	●		●		3					
042004 M			●			4				0,8	
WDXT 052504 L	❍	●		●		1	5,0	2,5	0,4	0,4	WDX155D2S20 – WDX180D2S25
052504 G	●	●		●	●	2					
052504 H	●	●		●		3					
052504 M			●			4				1,0	
WDXT 063006 L	●	●		●		1	6,0	3,0	0,6	0,6	WDX185D2S25 – WDX225D2S25
063006 G	●	●		●	●	2					
063006 H	●	●		●		3					
063006 M			●			4				1,4	
WDXT 073506 L	●	●		●		1	7,5	3,5	0,6	0,6	WDX230D2S25 – WDX285D2S32
073506 G	●	●		●	●	2					
073506 H	●	●		●		3					
073506 M			●			4				1,6	
WDXT 094008 L	●	●		●		1	9,6	4,0	0,8	0,8	WDX290D2S32 – WDX360D2S40
094008 G	●	●		●	●	2					
094008 H	●	●		●		3					
094008 M			●			4				2,4	
WDXT 125012 L	●	●		●		1	12,4	5,0	1,2	1,2	WDX370D2S40 – WDX450D2S40
125012 G	●	●		●	●	2					
125012 H	●	●		●		3					
125012 M			●			4				3,2	
WDXT 156012 L	●	●		●		1	15,2	6,0	1,2	1,2	WDX460D2S40 – WDX550D2S40
156012 G	●	●		●	●	2					
156012 H	●	●		●		3					
WDXT 186012 L	●	❍		❍		1	18,0	6,0	1,2	1,2	WDX560D2S40 – WDX680D2S40
186012 G	●	●		●		2					
186012 H	❍	❍		❍		3					

Fig. 1



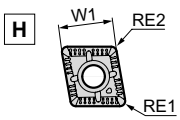
For low feed with chip control

Fig. 2



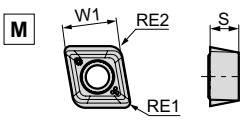
General purpose

Fig. 3



Strong edge

Fig. 4



For stainless steel

Recommended Cutting Conditions (2D)

(min. - **optimal** - max.)

ISO	Material Group / Work material			Hardness (HB)	Chipbreaker	Grade	Cutting Speed (m/min)	Feed rate (mm/rev) Ø 13,0–Ø 18,0	Ø 18,5–Ø 29,0	Ø 29,5– Ø 36,0	Ø 37,0–Ø 55,0	Ø 56,0–Ø 68,0
P	Carbon steel	St 42-3		125	G	ACP300	120–**180**–240	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,11	0,05–**0,08**–0,12	0,06–**0,09**–0,13
		C15		125	L	ACP300	130–**170**–220	0,04–**0,08**–0,12	0,04–**0,08**–0,12	0,04–**0,08**–0,13	0,05–**0,10**–0,15	0,06–**0,11**–0,17
		C45		190	G	ACP300	100–**150**–200	0,08–**0,13**–0,24	0,08–**0,13**–0,24	0,08–**0,14**–0,26	0,09–**0,16**–0,29	0,10–**0,17**–0,32
		C45	Hardened	250	G	ACP100	100–**170**–240	0,05–**0,09**–0,14	0,05–**0,09**–0,14	0,05–**0,09**–0,14	0,05–**0,10**–0,17	0,06–**0,11**–0,18
		C75		270	G	ACP100	120–**180**–240	0,06–**0,10**–0,17	0,06–**0,10**–0,17	0,06–**0,10**–0,17	0,07–**0,12**–0,19	0,08–**0,13**–0,21
		C75	Hardened	300	G	ACP100	80–**150**–210	0,05–**0,09**–0,14	0,05–**0,09**–0,14	0,05–**0,09**–0,14	0,05–**0,10**–0,15	0,06–**0,11**–0,17
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo		180	L	ACP300	100–**140**–180	0,05–**0,08**–0,14	0,05–**0,08**–0,14	0,05–**0,08**–0,16	0,06–**0,09**–0,17	0,07–**0,10**–0,19
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo	Hardened	275	G	ACP100	100–**170**–240	0,06–**0,10**–0,14	0,06–**0,10**–0,14	0,06–**0,10**–0,14	0,07–**0,11**–0,16	0,08–**0,11**–0,17
				300	G	ACP100	90–**150**–210	0,06–**0,10**–0,14	0,06–**0,10**–0,14	0,06–**0,10**–0,14	0,07–**0,11**–0,16	0,08–**0,11**–0,17
				350	G	ACP100	75–**120**–165	0,06–**0,10**–0,14	0,06–**0,10**–0,14	0,06–**0,10**–0,14	0,07–**0,11**–0,16	0,08–**0,11**–0,17
	High alloyed steel		Sintered	200	G	ACP100	120–**180**–240	0,08–**0,12**–0,17	0,08–**0,12**–0,17	0,08–**0,12**–0,18	0,09–**0,12**–0,21	0,10–**0,13**–0,22
				325	G	ACP100	100–**140**–180	0,06–**0,10**–0,15	0,06–**0,10**–0,15	0,06–**0,11**–0,15	0,07–**0,11**–0,16	0,08–**0,11**–0,17
M	Stainless steel	Martensitic/Ferritic		200	M	ACM300	120–**150**–180	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,07–**0,10**–0,16	0,08–**0,12**–0,16
		Martensitic/Hardened		240	M	ACM300	90–**120**–150	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,07–**0,10**–0,16	0,08–**0,12**–0,16
		Austenitic		180	M	ACM300	120–**150**–180	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,07–**0,10**–0,16	0,08–**0,12**–0,16
K	Cast iron				H	ACK300	120–**160**–200	0,09–**0,20**–0,32	0,10–**0,22**–0,36	0,11–**0,24**–0,39	0,12–**0,26**–0,44	0,13–**0,29**–0,48
	Ductile Cast iron				H	ACK300	90–**120**–150	0,09–**0,20**–0,32	0,10–**0,22**–0,36	0,11–**0,24**–0,39	0,12–**0,26**–0,44	0,13–**0,29**–0,48
S	Exotic Alloy (Heat resistant alloy, Super Alloy, etc)			200	G	ACP300	25–**50**–70	0,06–**0,11**–0,18	0,06–**0,11**–0,18	0,06–**0,12**–0,19	0,07–**0,13**–0,22	0,08–**0,14**–0,24
N	Aluminium Alloy				G	DL1500	200–**260**–320	0,06–**0,11**–0,17	0,06–**0,11**–0,17	0,06–**0,12**–0,18	0,07–**0,13**–0,20	0,08–**0,14**–0,22
	Copper Alloy				G	DL1500	180–**230**–280	0,06–**0,11**–0,17	0,06–**0,11**–0,17	0,06–**0,12**–0,18	0,07–**0,13**–0,20	0,08–**0,14**–0,22

*For the P and K grades for which ACP300 and ACK300 are the first recommendation, ACP100 inserts are the second recommendation.
The recommended cutting conditions are a cutting speed v_c of 130% of the above table and a feed rate f of 75%.

WDX Type (3D)

Max. Depth: 3D

Machining tolerances 0 to +0.20 mm

Fig. 1

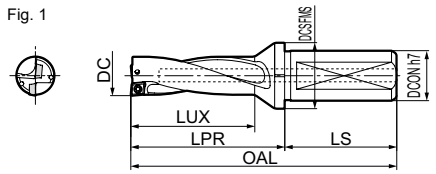


Fig. 2

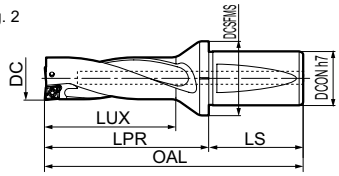
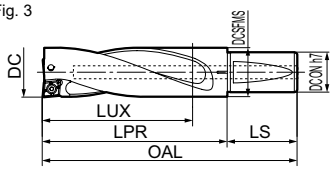


Fig. 3



Holder Diameter Ø 13,0 mm – Ø 45,0 mm

DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
13,0	●	WDX 130D3S20	42,0	57,0	101,0				1
13,5	●	135D3S20	43,5	58,5	102,5				1
14,0	●	140D3S20	45,0	60,0	104,0	44	28,0	20	1
14,5	●	145D3S20	46,5	61,5	105,5				1
15,0	●	150D3S20	48,0	63,0	107,0				1
15,5	●	WDX 155D3S20	49,5	64,5	108,5				1
16,0	●	160D3S20	51,0	66,0	110,0	44	30,0	20	1
16,5	●	165D3S20	52,5	67,5	111,5				1
17,0	●	170D3S20	54,0	69,0	113,0				1
17,5	●	WDX 175D3S25	55,5	70,5	126,5	56	32,0	25	1
18,0	●	180D3S25	57,0	72,0	128,0				1
18,5	●	WDX 185D3S25	58,5	73,5	129,5				1
19,0	●	190D3S25	60,0	75,0	131,0				1
19,5	●	195D3S25	61,5	76,5	132,5				1
20,0	●	200D3S25	63,0	78,0	134,0				1
20,5	●	205D3S25	64,5	79,5	135,5	56	33,0	25	1
21,0	●	210D3S25	66,0	81,0	137,0				1
21,5	●	215D3S25	67,5	82,5	138,5				1
22,0	●	220D3S25	69,0	84,0	140,0				1
22,5	●	225D3S25	70,5	85,5	141,5				1
23,0	●	WDX 230D3S25	72,0	90,0	146,0				1
23,5	●	235D3S25	73,5	91,5	147,5				1
24,0	●	240D3S25	75,0	93,0	149,0	56	37,0	25	1
24,5	●	245D3S25	76,5	94,5	150,5				1
25,0	●	250D3S25	78,0	96,0	152,0				1
25,5	●	WDX 255D3S32	79,5	99,5	159,5				2
26,0	●	260D3S32	81,0	101,0	161,0				2
26,5	●	265D3S32	82,5	102,5	162,5				2
27,0	●	270D3S32	84,0	104,0	164,0	60	41,0	32	2
27,5	●	275D3S32	85,5	105,5	165,5				2
28,0	●	280D3S32	87,0	107,0	167,0				2
28,5	●	285D3S32	88,5	108,5	168,5				2
29,0	●	WDX 290D3S32	91,0	112,0	172,0		50,0		2
29,5	●	295D3S32	92,5	113,5	173,5				2
30,0*	❍	300D3S32	94,0	118,0	178,0	60		32	2
31,0*	●	310D3S32	97,0	121,0	181,0		54,0		2
32,0*	❍	320D3S32	100,0	124,0	184,0				2
30,0*	●	WDX 300D3S40	94,0	118,0	188,0				2
31,0*	●	310D3S40	97,0	121,0	191,0				2
32,0*	●	320D3S40	100,0	124,0	194,0				2
33,0	●	330D3S40	103,0	127,0	197,0	70	54,0	40	2
34,0	●	340D3S40	106,0	130,0	200,0				2
35,0	●	350D3S40	109,0	133,0	203,0				2
36,0	●	360D3S40	112,0	136,0	206,0				2
37,0	●	WDX 370D3S40	116,0	146,0	216,0				2
38,0	●	380D3S40	119,0	149,0	219,0				2
39,0	●	390D3S40	122,0	152,0	222,0				2
40,0	●	400D3S40	125,0	155,0	225,0				2
41,0	●	410D3S40	128,0	158,0	228,0	70	49,5	40	2
42,0	●	420D3S40	131,0	161,0	231,0				2
43,0	●	430D3S40	134,0	164,0	234,0				2
44,0	●	440D3S40	137,0	167,0	237,0				2
45,0	●	450D3S40	140,0	170,0	240,0				2

* Diameter Ø 30, Ø 31, Ø 32 are in stock with shank diameters of Ø 32 and Ø 40.

Holder Diameter Ø 46,0 mm – Ø 68,0 mm

DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
46,0	●	WDX 460D3S40	143,0	173,0	243,0				2
47,0	●	470D3S40	146,0	176,0	246,0				2
48,0	●	480D3S40	149,0	179,0	249,0				2
49,0	●	490D3S40	152,0	182,0	252,0		49,5		2
50,0	●	500D3S40	155,0	185,0	255,0	70		40	2
51,0	●	510D3S40	158,0	188,0	258,0				3
52,0	●	520D3S40	161,0	191,0	261,0		50,5		3
53,0	●	530D3S40	164,0	194,0	264,0		51,5		3
54,0	●	540D3S40	167,0	197,0	267,0		52,5		3
55,0	●	550D3S40	170,0	200,0	270,0		53,5		3
56,0	❍	WDX 560D3S40	176,0	208,0	278,0		54,0		3
57,0	❍	570D3S40	179,0	211,0	281,0		55,0		3
58,0	❍	580D3S40	182,0	214,0	284,0		56,0		3
59,0	❍	590D3S40	185,0	217,0	287,0		57,0		3
60,0	❍	600D3S40	188,0	220,0	290,0		58,0		3
61,0	❍	610D3S40	191,0	223,0	293,0		59,0		3
62,0	❍	620D3S40	194,0	226,0	296,0	70	60,0	40	3
63,0	❍	630D3S40	197,0	229,0	299,0		61,0		3
64,0	❍	640D3S40	200,0	232,0	302,0		62,0		3
65,0	❍	650D3S40	203,0	235,0	305,0		63,0		3
66,0	❍	660D3S40	206,0	238,0	308,0		64,0		3
67,0	❍	670D3S40	209,0	241,0	311,0		65,0		3
68,0	❍	680D3S40	212,0	244,0	314,0		66,0		3

Parts

Applicable Holder	Flat Screw		Wrench	Wrench
		N·m		
WDX130D3S20–WDX150D3S20	BFTX01604N	**0,3**	TRX06	–
WDX155D3S20–WDX180D3S25	BFTX0204N	**0,5**	TRX06	–
WDX185D3S25–WDX225D3S25	BFTY02206	**1,0**	–	TRD07
WDX230D3S25–WDX285D3S32	BFTX02506N	**1,5**	–	TRD08
WDX290D3S32–WDX360D3S40	BFTX03584	**3,5**	–	TRD15
WDX370D3S40–WDX450D3S40	BFTX0511N	**5,0**	–	TRD20
WDX460D3S40–WDX680D3S40	BFTX0615N	**5,0**	–	TRD25

Identification Details - Holder

WDX 200 D3 S25

- 200: Diameter DC (Ø 20,0 mm)
- D3: Flute Length L/D (3D)
- S25: Shank Diameter DCON (Ø 25,0 mm)

Identification Details - Inserts

WDXT 06 30 06 -G

- 06: Width across Flats (6,0 mm)
- 30: Thickness (3,0 mm)
- 06: Nose Radius (0,6 mm)
- -G: Breaker Type

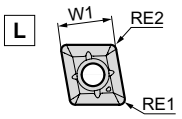
● Euro stock ❍ Japan stock

Inserts

Application	Coated Carbide				
High-Speed / Light	PK				N
General Purpose		P	M		
Roughing		P		K	

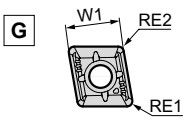
Cat. No.	ACP100	ACP300	ACM300	ACK300	DL1500	Fig	W1	S	RE1	RE2	Applicable Holder
WDXT 042004 L	❍	●		●		1	4,2	2,0	0,4	0,4	WDX130D3S20 – WDX150D3S20
042004 G	●	●		●	●	2					
042004 H	●	●		●		3					
042004 M			●			4				0,8	
WDXT 052504 L	❍	●		●		1	5,0	2,5	0,4	0,4	WDX155D3S20 – WDX180D3S25
052504 G	●	●		●	●	2					
052504 H	●	●		●		3					
052504 M			●			4				1,0	
WDXT 063006 L	●	●		●		1	6,0	3,0	0,6	0,6	WDX185D3S25 – WDX225D3S25
063006 G	●	●		●	●	2					
063006 H	●	●		●		3					
063006 M			●			4				1,4	
WDXT 073506 L	●	●		●		1	7,5	3,5	0,6	0,6	WDX230D3S25 – WDX285D3S32
073506 G	●	●		●	●	2					
073506 H	●	●		●		3					
073506 M			●			4				1,6	
WDXT 094008 L	●	●		●		1	9,6	4,0	0,8	0,8	WDX290D3S32 – WDX360D3S40
094008 G	●	●		●	●	2					
094008 H	●	●		●		3					
094008 M			●			4				2,4	
WDXT 125012 L	●	●		●		1	12,4	5,0	1,2	1,2	WDX370D3S40 – WDX450D3S40
125012 G	●	●		●	●	2					
125012 H	●	●		●		3					
125012 M			●			4				3,2	
WDXT 156012 L	●	●		●		1	15,2	6,0	1,2	1,2	WDX460D3S40 – WDX550D3S40
156012 G	●	●		●	●	2					
156012 H	●	●		●		3					
WDXT 186012 L	●	❍		❍		1	18,0	6,0	1,2	1,2	WDX560D3S40 – WDX680D3S40
186012 G	●	●		●		2					
186012 H	❍	❍		❍		3					

Fig. 1



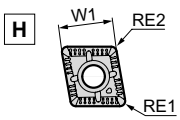
For low feed with chip control

Fig. 2



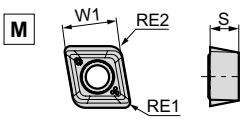
General purpose

Fig. 3



Strong edge

Fig. 4



For stainless steel

Recommended Cutting Conditions (3D)

(min. - **optimal** - max.)

ISO	Material Group / Work material		Hardness (HB)	Chipbreaker	Grade	Cutting Speed (m/min)	Feed rate (mm/rev) Ø 13,0–Ø 18,0	Ø 18,5–Ø 29,0	Ø 29,5– Ø 36,0	Ø 37,0–Ø 55,0	Ø 56,0–Ø 68,0
P	Carbon steel	St 42-3	125	G	ACP300	120–**180**–240	0,05–**0,07**–0,10	0,05–**0,07**–0,10	0,05–**0,08**–0,11	0,05–**0,08**–0,12	0,06–**0,09**–0,13
		C15	125	L	ACP300	130–**170**–220	0,04–**0,07**–0,10	0,04–**0,07**–0,10	0,04–**0,08**–0,11	0,05–**0,09**–0,12	0,06–**0,10**–0,13
		C45	190	G	ACP300	100–**150**–200	0,08–**0,12**–0,20	0,08–**0,12**–0,20	0,08–**0,13**–0,22	0,09–**0,14**–0,24	0,10–**0,16**–0,27
		C45 Hardened	250	G	ACP100	100–**170**–240	0,05–**0,08**–0,11	0,05–**0,08**–0,11	0,05–**0,08**–0,12	0,05–**0,09**–0,14	0,06–**0,10**–0,15
		C75	270	G	ACP100	120–**180**–240	0,06–**0,09**–0,14	0,06–**0,09**–0,17	0,06–**0,10**–0,14	0,07–**0,11**–0,17	0,08–**0,12**–0,18
		C75 Hardened	300	G	ACP100	80–**150**–210	0,05–**0,08**–0,11	0,05–**0,08**–0,11	0,05–**0,08**–0,11	0,05–**0,09**–0,14	0,06–**0,10**–0,14
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo	180	L	ACP300	100–**140**–180	0,05–**0,07**–0,12	0,05–**0,07**–0,12	0,05–**0,08**–0,13	0,06–**0,08**–0,13	0,07–**0,09**–0,16
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo Hardened	275	G	ACP100	100–**170**–240	0,06–**0,08**–0,11	0,06–**0,08**–0,11	0,06–**0,08**–0,11	0,07–**0,10**–0,12	0,08–**0,10**–0,13
			300	G	ACP100	90–**150**–210	0,06–**0,08**–0,11	0,06–**0,08**–0,11	0,06–**0,08**–0,11	0,07–**0,10**–0,12	0,08–**0,10**–0,13
			350	G	ACP100	75–**120**–165	0,06–**0,08**–0,11	0,06–**0,08**–0,11	0,06–**0,08**–0,11	0,07–**0,10**–0,12	0,08–**0,10**–0,13
	High alloyed steel	Sintered	200	G	ACP100	120–**180**–240	0,08–**0,11**–0,14	0,08–**0,12**–0,15	0,08–**0,12**–0,16	0,09–**0,14**–0,18	0,10–**0,14**–0,19
			325	G	ACP100	100–**140**–180	0,06–**0,09**–0,11	0,06–**0,09**–0,11	0,06–**0,09**–0,11	0,07–**0,10**–0,12	0,08–**0,10**–0,13
M	Stainless steel	Martensitic/Ferritic	200	M	ACM300	120–**150**–180	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,07–**0,10**–0,16	0,08–**0,12**–0,16
		Martensitic/Hardened	240	M	ACM300	90–**120**–150	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,07–**0,10**–0,16	0,08–**0,12**–0,16
		Austenitic	180	M	ACM300	120–**150**–180	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,06–**0,08**–0,15	0,07–**0,10**–0,16	0,08–**0,12**–0,16
K	Cast iron			H	ACK300	120–**160**–200	0,09–**0,18**–0,27	0,10–**0,20**–0,30	0,11–**0,22**–0,32	0,12–**0,24**–0,36	0,13–**0,26**–0,40
	Ductile Cast iron			H	ACK300	90–**120**–150	0,09–**0,18**–0,27	0,10–**0,20**–0,30	0,11–**0,22**–0,32	0,12–**0,24**–0,36	0,13–**0,26**–0,40
S	Exotic Alloy (Heat resistant alloy, Super Alloy, etc)		200	G	ACP300	25–**50**–70	0,06–**0,10**–0,15	0,06–**0,10**–0,15	0,06–**0,11**–0,16	0,07–**0,12**–0,18	0,08–**0,13**–0,20
N	Aluminium Alloy			G	DL1500	200–**260**–320	0,06–**0,11**–0,17	0,06–**0,11**–0,17	0,06–**0,12**–0,18	0,07–**0,13**–0,20	0,08–**0,14**–0,22
	Copper Alloy			G	DL1500	180–**230**–280	0,06–**0,11**–0,17	0,06–**0,11**–0,17	0,06–**0,12**–0,18	0,07–**0,13**–0,20	0,08–**0,14**–0,22

*For the P and K grades for which ACP300 and ACK300 are the first recommendation, ACP100 inserts are the second recommendation.
The recommended cutting conditions are a cutting speed v_c of 130% of the above table and a feed rate f of 75%.

WDX Type (4D)

Max. Depth: 4D

Machining tolerances 0 to +0.25 mm

Fig. 1

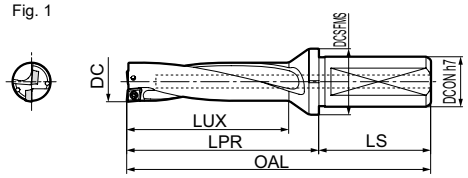


Fig. 2

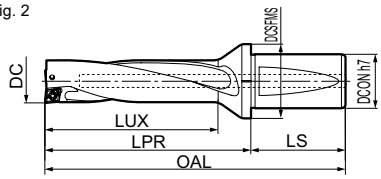
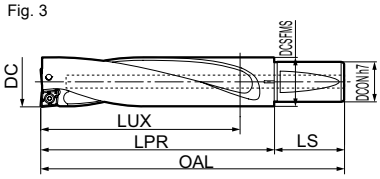


Fig. 3



Holder Diameter Ø 13,0 mm – Ø 45,0 mm

DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
13,0	●	WDX 130D4S20	55	70	114				1
13,5	●	135D4S20	57	72	116				1
14,0	●	140D4S20	59	74	118	44	28,0	20	1
14,5	●	145D4S20	61	76	120				1
15,0	●	150D4S20	63	78	122				1
15,5	●	WDX 155D4S20	65	80	124				1
16,0	●	160D4S20	67	82	126	44	30,0	20	1
16,5	●	165D4S20	69	84	128				1
17,0	●	170D4S20	71	86	130				1
17,5	●	WDX 175D4S25	73	88	144	56	32,0	25	1
18,0	●	180D4S25	75	90	146				1
18,5	●	WDX 185D4S25	77	92	148				1
19,0	●	190D4S25	79	94	150				1
19,5	●	195D4S25	81	96	152				1
20,0	●	200D4S25	83	98	154				1
20,5	●	205D4S25	85	100	156	56	33,0	25	1
21,0	●	210D4S25	87	102	158				1
21,5	●	215D4S25	89	104	160				1
22,0	●	220D4S25	91	106	162				1
22,5	●	225D4S25	93	108	164				1
23,0	●	WDX 230D4S25	95	113	169				1
23,5	●	235D4S25	97	115	171				1
24,0	●	240D4S25	99	117	173	56	37,0	25	1
24,5	●	245D4S25	101	119	175				1
25,0	●	250D4S25	103	121	177				1
25,5	●	WDX 255D4S32	105	125	185				2
26,0	●	260D4S32	107	127	187				2
26,5	●	265D4S32	109	129	189				2
27,0	●	270D4S32	111	131	191	60	41,0	32	2
27,5	●	275D4S32	113	133	193				2
28,0	●	280D4S32	115	135	195				2
28,5	●	285D4S32	117	137	197				2
29,0	●	WDX 290D4S32	120	141	201		50,0		2
29,5	●	295D4S32	122	143	203				2
30,0*	❍	300D4S32	124	148	208	60		32	2
31,0*	●	310D4S32	128	152	212		54,0		2
32,0*	❍	320D4S32	132	156	216				2
30,0*	●	WDX 300D4S40	124	148	218				2
31,0*	●	310D4S40	128	152	222				2
32,0*	●	320D4S40	132	156	226				2
33,0	●	330D4S40	136	160	230	70	54,0	40	2
34,0	●	340D4S40	140	164	234				2
35,0	●	350D4S40	144	168	238				2
36,0	●	360D4S40	148	172	242				2
37,0	●	WDX 370D4S40	153	183	253				2
38,0	●	380D4S40	157	187	257				2
39,0	●	390D4S40	161	191	261				2
40,0	●	400D4S40	165	195	265				2
41,0	●	410D4S40	169	199	269	70	49,5	40	2
42,0	●	420D4S40	173	203	273				2
43,0	●	430D4S40	177	207	277				2
44,0	●	440D4S40	181	211	281				2
45,0	●	450D4S40	185	215	285				2

* Diameter Ø 30, Ø 31, Ø 32 are in stock with shank diameters of Ø 32 and Ø 40.

Holder Diameter Ø 46,0 mm – Ø 63,0 mm

DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
46,0	●	WDX 460D4S40	189	219	289				2
47,0	●	470D4S40	193	223	293				2
48,0	●	480D4S40	197	227	297		49,5		2
49,0	●	490D4S40	201	231	301				2
50,0	●	500D4S40	205	235	305	70		40	2
51,0	●	510D4S40	209	239	309				3
52,0	●	520D4S40	213	243	313		50,5		3
53,0	●	530D4S40	217	247	317		51,5		3
54,0	●	540D4S40	221	251	321		52,5		3
55,0	●	550D4S40	225	255	325		53,5		3
56,0	❍	WDX 560D4S40	232	264	334		54,0		3
57,0	❍	570D4S40	236	268	338		55,0		3
58,0	❍	580D4S40	240	272	342		56,0		3
59,0	❍	590D4S40	244	276	346	70	57,0	40	3
60,0	❍	600D4S40	248	280	350		58,0		3
61,0	❍	610D4S40	252	284	354		59,0		3
62,0	❍	620D4S40	256	288	358		60,0		3
63,0	❍	630D4S40	260	292	362		61,0		3

Parts

Applicable Holder	Flat Screw		Wrench	Wrench
		N·m		
WDX130D4S20–WDX150D4S20	BFTX01604N	**0,3**	TRX06	–
WDX155D4S20–WDX180D4S25	BFTX0204N	**0,5**	TRX06	–
WDX185D4S25–WDX225D4S25	BFTY02206	**1,0**	–	TRD07
WDX230D4S25–WDX285D4S32	BFTX02506N	**1,5**	–	TRD08
WDX290D4S32–WDX360D4S40	BFTX03584	**3,5**	–	TRD15
WDX370D4S40–WDX450D4S40	BFTX0511N	**5,0**	–	TRD20
WDX460D4S40–WDX630D4S40	BFTX0615N	**5,0**	–	TRD25

Identification Details - Holder

WDX 200 D4 S25

- WDX 200: Diameter DC (Ø 20,0 mm)
- D4: Flute Length L/D (4D)
- S25: Shank Diameter DCON (Ø 25,0 mm)

Identification Details - Inserts

WDXT 06 30 06 -G

- 06: Width across Flats (6,0 mm)
- 30: Thickness (3,0 mm)
- 06: Nose Radius (0,6 mm)
- -G: Breaker Type

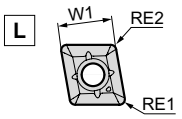
● Euro stock ❍ Japan stock

Inserts

Application	Coated Carbide				
High-Speed / Light	PK				N
General Purpose		P	M		
Roughing		P		K	

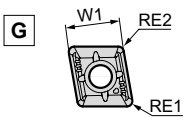
Cat. No.	ACP100	ACP300	ACM300	ACK300	DL1500	Fig	W1	S	RE1	RE2	Applicable Holder
WDXT 042004 L	❍	●		●		1	4,2	2,0	0,4	0,4	WDX130D4S20 – WDX150D4S20
042004 G	●	●		●	●	2					
042004 H	●	●		●		3					
042004 M			●			4				0,8	
WDXT 052504 L	❍	●		●		1	5,0	2,5	0,4	0,4	WDX155D4S20 – WDX180D4S25
052504 G	●	●		●	●	2					
052504 H	●	●		●		3					
052504 M			●			4				1,0	
WDXT 063006 L	●	●		●		1	6,0	3,0	0,6	0,6	WDX185D4S25 – WDX225D4S25
063006 G	●	●		●	●	2					
063006 H	●	●		●		3					
063006 M			●			4				1,4	
WDXT 073506 L	●	●		●		1	7,5	3,5	0,6	0,6	WDX230D4S25 – WDX285D4S32
073506 G	●	●		●	●	2					
073506 H	●	●		●		3					
073506 M			●			4				1,6	
WDXT 094008 L	●	●		●		1	9,6	4,0	0,8	0,8	WDX290D4S32 – WDX360D4S40
094008 G	●	●		●	●	2					
094008 H	●	●		●		3					
094008 M			●			4				2,4	
WDXT 125012 L	●	●		●		1	12,4	5,0	1,2	1,2	WDX370D4S40 – WDX450D4S40
125012 G	●	●		●	●	2					
125012 H	●	●		●		3					
125012 M			●			4				3,2	
WDXT 156012 L	●	●		●		1	15,2	6,0	1,2	1,2	WDX460D4S40 – WDX550D4S40
156012 G	●	●		●	●	2					
156012 H	●	●		●		3					
WDXT 186012 L	●	❍		❍		1	18,0	6,0	1,2	1,2	WDX560D4S40 – WDX630D4S40
186012 G	●	●		●		2					
186012 H	❍	❍		❍		3					

Fig. 1



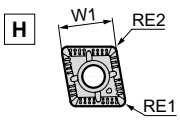
For low feed with chip control

Fig. 2



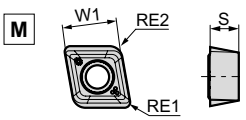
General purpose

Fig. 3



Strong edge

Fig. 4



For stainless steel

Recommended Cutting Conditions (4D)

(min. - **optimal** - max.)

ISO	Material Group / Work material			Hardness (HB)	Chipbreaker	Grade	Cutting Speed (m/min)	Feed rate (mm/rev) Ø 13,0–Ø 18,0	Ø 18,5–Ø 29,0	Ø 29,5– Ø 36,0	Ø 37,0–Ø 55,0	Ø 56,0–Ø 63,0
P	Carbon steel	St 42-3		125	G	ACP300	120–**180**–240	0,05–**0,07**–0,10	0,05–**0,07**–0,10	0,05–**0,07**–0,10	0,05–**0,08**–0,10	0,06–**0,09**–0,11
		C15		125	L	ACP300	130–**170**–220	0,04–**0,07**–0,09	0,04–**0,07**–0,09	0,04–**0,07**–0,09	0,05–**0,08**–0,10	0,06–**0,09**–0,11
		C45		190	G	ACP300	100–**150**–200	0,08–**0,11**–0,17	0,08–**0,11**–0,17	0,08–**0,12**–0,18	0,09–**0,14**–0,21	0,10–**0,15**–0,23
		C45	Hardened	250	G	ACP100	100–**170**–240	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,11	0,05–**0,08**–0,11	0,06–**0,09**–0,13
		C75		270	G	ACP100	120–**180**–240	0,06–**0,08**–0,11	0,06–**0,08**–0,11	0,06–**0,09**–0,13	0,07–**0,11**–0,14	0,08–**0,11**–0,15
		C75	Hardened	300	G	ACP100	85–**150**–210	0,05–**0,07**–0,09	0,05–**0,07**–0,09	0,05–**0,08**–0,10	0,05–**0,08**–0,11	0,06–**0,09**–0,12
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo		180	L	ACP300	100–**140**–180	0,05–**0,07**–0,10	0,05–**0,07**–0,10	0,05–**0,07**–0,11	0,06–**0,08**–0,12	0,07–**0,09**–0,14
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo		275	G	ACP100	100–**170**–240	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,11	0,06–**0,08**–0,11
			Hardened	300	G	ACP100	90–**150**–210	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,11	0,06–**0,08**–0,11
				350	G	ACP100	75–**120**–165	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,11	0,06–**0,08**–0,11
	High alloyed steel			200	G	ACP100	120–**180**–240	0,06–**0,10**–0,13	0,07–**0,11**–0,14	0,07–**0,11**–0,15	0,08–**0,12**–0,16	0,09–**0,13**–0,17
			Sintered	325	G	ACP100	100–**140**–180	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,10	0,05–**0,08**–0,11	0,06–**0,08**–0,11
M	Stainless steel	Martensitic/Ferritic		200	M	ACM300	120–**150**–180	0,06–**0,08**–0,13	0,06–**0,08**–0,13	0,06–**0,08**–0,14	0,07–**0,09**–0,14	0,06–**0,11**–0,14
		Martensitic/Hardened		240	M	ACM300	90–**120**–150	0,06–**0,08**–0,13	0,06–**0,08**–0,13	0,06–**0,08**–0,14	0,07–**0,09**–0,14	0,06–**0,11**–0,14
		Austenitic		180	M	ACM300	120–**150**–180	0,06–**0,08**–0,13	0,06–**0,08**–0,13	0,06–**0,08**–0,14	0,07–**0,09**–0,14	0,06–**0,11**–0,14
K	Cast iron				H	ACK300	120–**160**–200	0,09–**0,17**–0,23	0,10–**0,19**–0,26	0,11–**0,21**–0,28	0,12–**0,23**–0,31	0,13–**0,25**–0,34
	Ductile Cast iron				H	ACK300	90–**120**–150	0,09–**0,17**–0,23	0,10–**0,19**–0,26	0,11–**0,21**–0,28	0,12–**0,23**–0,31	0,13–**0,25**–0,34
S	Exotic Alloy (Heat resistant alloy, Super Alloy, etc)			200	G	ACP300	25–**50**–70	0,06–**0,10**–0,13	0,06–**0,10**–0,13	0,06–**0,10**–0,14	0,07–**0,11**–0,15	0,08–**0,12**–0,17
N	Aluminium Alloy				G	DL1500	200–**260**–320	0,05–**0,10**–0,15	0,05–**0,10**–0,15	0,06–**0,11**–0,16	0,06–**0,12**–0,18	0,07–**0,13**–0,20
	Copper Alloy				G	DL1500	180–**230**–280	0,05–**0,10**–0,15	0,05–**0,10**–0,15	0,06–**0,11**–0,16	0,06–**0,12**–0,18	0,07–**0,13**–0,20

*For the P and K grades for which ACP300 and ACK300 are the first recommendation, ACP100 inserts are the second recommendation.
The recommended cutting conditions are a cutting speed v_c of 130% of the above table and a feed rate f of 75%.

WDX Type (5D)

Max. Depth: 5D

Machining tolerances 0 to +0.25 mm

Fig. 1

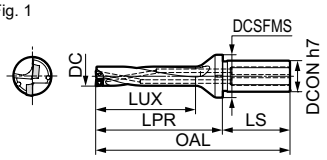


Fig. 2

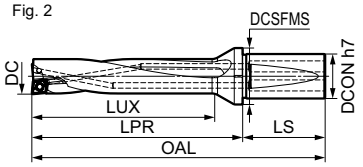
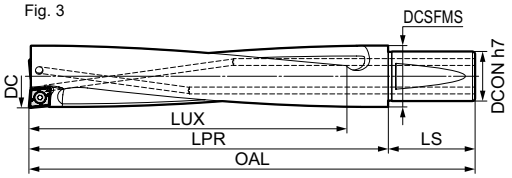


Fig. 3



Holder Diameter Ø 13,0 mm – Ø 45,0 mm

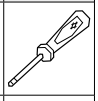
DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
13,0	●	WDX 130D5S20	68,0	83,0	127,0				1
13,5	●	135D5S20	70,5	85,5	129,5				1
14,0	●	140D5S20	73,0	88,0	132,0	44	28,0	20,0	1
14,5	●	145D5S20	75,5	90,5	134,5				1
15,0	●	150D5S20	78,0	93,0	137,0				1
15,5	●	WDX 155D5S20	80,5	95,5	139,5				1
16,0	●	160D5S20	83,0	98,0	142,0	44	30,0	20,0	1
16,5	●	165D5S20	85,5	100,5	144,5				1
17,0	●	170D5S20	88,0	103,0	147,0				1
17,5	●	WDX 175D5S25	90,5	105,5	161,5	56	32,0	25,0	1
18,0	●	180D5S25	93,0	108,0	164,0				1
18,5	●	WDX 185D5S25	95,5	110,5	166,5				1
19,0	●	190D5S25	98,0	113,0	169,0				1
19,5	●	195D5S25	100,5	115,5	171,5				1
20,0	●	200D5S25	103,0	118,0	174,0				1
20,5	●	205D5S25	105,5	120,5	176,5	56	33,0	25,0	1
21,0	●	210D5S25	108,0	123,0	179,0				1
21,5	●	215D5S25	110,5	125,5	181,5				1
22,0	●	220D5S25	113,0	128,0	184,0				1
22,5	●	225D5S25	115,5	130,5	186,5				1
23,0	●	WDX 230D5S25	118,0	136,0	192,0				1
23,5	●	235D5S25	120,5	138,5	194,5				1
24,0	●	240D5S25	123,0	141,0	197,0	56	37,0	25,0	1
24,5	●	245D5S25	125,5	143,5	199,5				1
25,0	●	250D5S25	128,0	146,0	202,0				1
26,0	●	WDX 260D5S32	133,0	153,0	213,0				2
27,0	●	270D5S32	138,0	158,0	218,0	60	41,0	32,0	2
28,0	●	280D5S32	143,0	163,0	223,0				2
29,0	●	WDX 290D5S32	149,0	170,0	230,0		50,0		2
30,0*	●	300D5S32	154,0	178,0	238,0	60		32,0	2
31,0*	●	310D5S32	159,0	183,0	243,0		54,0		2
32,0*	❍	320D5S32	164,0	188,0	248,0				2
30,0*	●	WDX 300D5S40	154,0	178,0	248,0				2
31,0*	●	310D5S40	159,0	183,0	253,0				2
32,0*	●	320D5S40	164,0	188,0	258,0				2
33,0	●	330D5S40	169,0	193,0	263,0	70	54,0	40,0	2
34,0	●	340D5S40	174,0	198,0	268,0				2
35,0	●	350D5S40	179,0	203,0	273,0				2
36,0	●	360D5S40	184,0	208,0	278,0				2
37,0	❍	WDX 370D5S40	190,0	220,0	290,0				2
38,0	❍	380D5S40	195,0	225,0	295,0				2
39,0	❍	390D5S40	200,0	230,0	300,0				2
40,0	❍	400D5S40	205,0	235,0	305,0				2
41,0	❍	410D5S40	210,0	240,0	310,0	70	49,5	40,0	2
42,0	❍	420D5S40	215,0	245,0	315,0				2
43,0	❍	430D5S40	220,0	250,0	320,0				2
44,0	❍	440D5S40	225,0	255,0	325,0				2
45,0	❍	450D5S40	230,0	260,0	330,0				2

* Diameter Ø 30, Ø 31, Ø 32 are in stock with shank diameters of Ø 32 and Ø 40.

Holder Diameter Ø 46,0 mm – Ø 55,0 mm

DC	Stock	Cat. No.	LUX	LPR	OAL	LS	DCSFMS	DCON	Fig
46,0	❍	WDX 460D5S40	235,0	265,0	335,0				2
47,0	❍	470D5S40	240,0	270,0	340,0				2
48,0	❍	480D5S40	245,0	275,0	345,0		49,5		2
49,0	❍	490D5S40	250,0	280,0	350,0				2
50,0	❍	500D5S40	255,0	285,0	355,0	70		40,0	2
51,0	❍	510D5S40	260,0	290,0	360,0				3
52,0	❍	520D5S40	265,0	295,0	365,0		50,5		3
53,0	❍	530D5S40	270,0	300,0	370,0		51,5		3
54,0	❍	540D5S40	275,0	305,0	375,0		52,5		3
55,0	❍	550D5S40	280,0	310,0	380,0		53,5		3

Parts

Applicable Holder	Flat Screw		Wrench	Wrench
		N·m		
WDX130D5S20–WDX150D5S20	BFTX01604N	**0,3**	TRX06	–
WDX155D5S20–WDX180D5S25	BFTX0204N	**0,5**	TRX06	–
WDX185D5S25–WDX225D5S25	BFTY02206	**1,0**	–	TRD07
WDX230D5S25–WDX280D5S32	BFTX02506N	**1,5**	–	TRD08
WDX290D5S32–WDX360D5S40	BFTX03584	**3,5**	–	TRD15
WDX370D5S40–WDX450D5S40	BFTX0511N	**5,0**	–	TRD20
WDX460D5S40–WDX550D5S40	BFTX0615N	**5,0**	–	TRD25

Identification Details - Holder

WDX 200 D5 S25

- 200: Diameter DC (Ø 20,0 mm)
- D5: Flute Length L/D (5D)
- S25: Shank Diameter DCON (Ø 25,0 mm)

Identification Details - Inserts

WDXT 06 30 06 -G

- 06: Width across Flats (6,0 mm)
- 30: Thickness (3,0 mm)
- 06: Nose Radius (0,6 mm)
- -G: Breaker Type

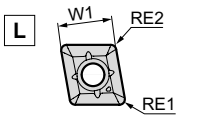
● Euro stock ❍ Japan stock

Inserts

Application	Coated Carbide				
High-Speed / Light	PK				N
General Purpose		P	M		
Roughing		P		K	

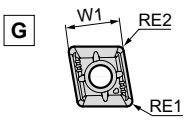
Cat. No.	ACP100	ACP300	ACM300	ACK300	DL1500	Fig	W1	S	RE1	RE2	Applicable Holder
WDXT 042004 L	❍	●		●		1	4,2	2,0	0,4	0,4	WDX130D5S20 – WDX150D5S20
042004 G	●	●		●	●	2					
042004 H	●	●		●		3					
042004 M			●			4				0,8	
WDXT 052504 L	❍	●		●		1	5,0	2,5	0,4	0,4	WDX155D5S20 – WDX180D5S25
052504 G	●	●		●	●	2					
052504 H	●	●		●		3					
052504 M			●			4				1,0	
WDXT 063006 L	●	●		●		1	6,0	3,0	0,6	0,6	WDX185D5S25 – WDX225D5S25
063006 G	●	●		●	●	2					
063006 H	●	●		●		3					
063006 M			●			4				1,4	
WDXT 073506 L	●	●		●		1	7,5	3,5	0,6	0,6	WDX230D5S25 – WDX280D5S32
073506 G	●	●		●	●	2					
073506 H	●	●		●		3					
073506 M			●			4				1,6	
WDXT 094008 L	●	●		●		1	9,6	4,0	0,8	0,8	WDX290D5S32 – WDX360D5S40
094008 G	●	●		●	●	2					
094008 H	●	●		●		3					
094008 M			●			4				2,4	
WDXT 125012 L	●	●		●		1	12,4	5,0	1,2	1,2	WDX370D5S40 – WDX450D5S40
125012 G	●	●		●	●	2					
125012 H	●	●		●		3					
125012 M			●			4				3,2	
WDXT 156012 L	●	●		●		1	15,2	6,0	1,2	1,2	WDX460D5S40 – WDX550D5S40
156012 G	●	●		●	●	2					
156012 H	●	●		●		3					

Fig. 1



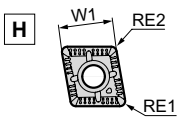
For low feed with chip control

Fig. 2



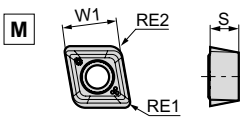
General purpose

Fig. 3



Strong edge

Fig. 4



For stainless steel

Recommended Cutting Conditions (5D)

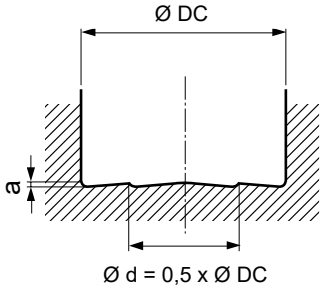
(min. - **optimal** - max.)

ISO	Material Group / Work material		Hardness (HB)	Chipbreaker	Grade	Cutting Speed (m/min)	Feed rate (mm/rev) Ø 13,0–Ø 18,0	Ø 18,5–Ø 29,0	Ø 29,5– Ø 36,0	Ø 37,0–Ø 55,0
P	Carbon steel	St 42-3	125	G	ACP300	120–**180**–240	0,05–**0,06**–0,09	0,05–**0,06**–0,09	0,05–**0,06**–0,09	0,05–**0,07**–0,09
		C15	125	L	ACP300	130–**170**–220	0,04–**0,06**–0,08	0,04–**0,06**–0,08	0,04–**0,06**–0,08	0,05–**0,07**–0,09
		C45	190	G	ACP300	100–**150**–200	0,07–**0,10**–0,15	0,07–**0,10**–0,15	0,08–**0,11**–0,17	0,09–**0,12**–0,19
		C45 Hardened	250	G	ACP100	100–**170**–240	0,04–**0,07**–0,08	0,04–**0,07**–0,08	0,05–**0,07**–0,09	0,05–**0,08**–0,11
		C75	270	G	ACP100	120–**180**–240	0,05–**0,08**–0,11	0,05–**0,08**–0,11	0,06–**0,08**–0,11	0,07–**0,09**–0,13
		C75 Hardened	300	G	ACP100	80–**150**–210	0,04–**0,07**–0,08	0,04–**0,07**–0,08	0,05–**0,07**–0,09	0,05–**0,08**–0,10
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo	180	L	ACP300	100–**140**–180	0,05–**0,06**–0,09	0,05–**0,06**–0,09	0,05–**0,06**–0,10	0,05–**0,07**–0,11
	Low alloyed steel	Cr-Mo, Ni-Cr-Mo Hardened	275	G	ACP100	100–**170**–240	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,05–**0,07**–0,10
			300	G	ACP100	90–**150**–210	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,05–**0,07**–0,10
			350	G	ACP100	75–**120**–165	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,05–**0,07**–0,10
	High alloyed steel		200	G	ACP100	120–**180**–240	0,05–**0,08**–0,12	0,06–**0,09**–0,12	0,06–**0,09**–0,13	0,07–**0,10**–0,14
		Sintered	325	G	ACP100	100–**140**–180	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,04–**0,06**–0,09	0,04–**0,06**–0,09
M	Stainless steel	Martensitic/Ferritic	200	M	ACM300	120–**150**–180	0,05–**0,08**–0,11	0,05–**0,08**–0,12	0,05–**0,08**–0,12	0,06–**0,09**–0,12
		Martensitic/Hardened	240	M	ACM300	90–**120**–150	0,05–**0,08**–0,11	0,05–**0,08**–0,12	0,05–**0,08**–0,12	0,06–**0,09**–0,12
		Austenitic	180	M	ACM300	120–**150**–180	0,05–**0,08**–0,11	0,05–**0,08**–0,12	0,05–**0,08**–0,12	0,06–**0,09**–0,12
K	Cast iron			H	ACK300	120–**160**–200	0,08–**0,15**–0,21	0,09–**0,17**–0,23	0,09–**0,18**–0,25	0,11–**0,20**–0,28
	Ductile Cast iron			H	ACK300	90–**120**–150	0,08–**0,15**–0,21	0,09–**0,17**–0,23	0,09–**0,18**–0,25	0,11–**0,20**–0,28
S	Exotic Alloy (Heat resistant alloy, Super Alloy, etc)		200	G	ACP300	25–**50**–70	0,05–**0,09**–0,11	0,05–**0,09**–0,11	0,06–**0,09**–0,12	0,06–**0,10**–0,14
N	Aluminium Alloy			G	DL1500	200–**260**–320	0,05–**0,10**–0,15	0,05–**0,10**–0,15	0,06–**0,11**–0,16	0,06–**0,12**–0,18
	Copper Alloy			G	DL1500	180–**230**–280	0,05–**0,10**–0,15	0,05–**0,10**–0,15	0,06–**0,11**–0,16	0,06–**0,12**–0,18

*For the P and K grades for which ACP300 and ACK300 are the first recommendation, ACP100 inserts are the second recommendation.
The recommended cutting conditions are a cutting speed v_c of 130% of the above table and a feed rate f of 75%.

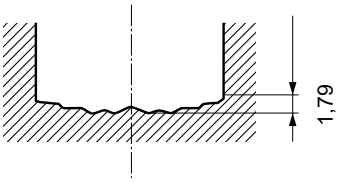
Hole Profile

Bottom of hole after drilling with
WDX200D3S25



Drill Diameter DC (mm)	a (mm)
Ø 13,0– Ø 18,0	0,4
Ø 18,5– Ø 28,5	0,6
Ø 29,0– Ø 36,0	0,8
Ø 37,0– Ø 55,0	1,2
Ø 56,0– Ø 68,0	1,4

Bottom of hole after drilling with
conventional tool

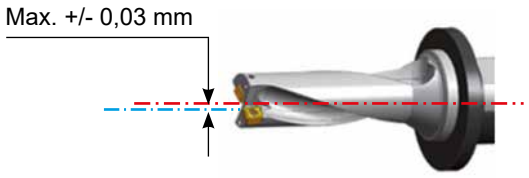


Finishing is easy because the hole bottom is almost flat.

Applications for Lathes

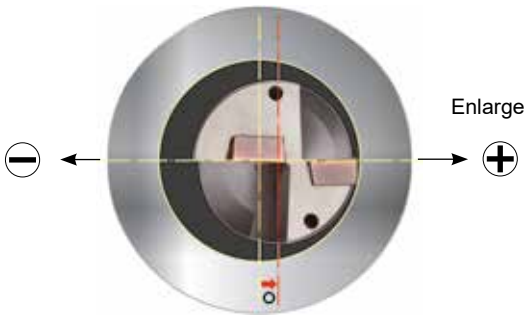
Setting Instruction

Ensure the face of the drill flange is hard against the face of the tool holder.
Axis offset: Difference between workpiece axis and the Y-axis.
Align the centreline of the drill to the centreline of the lathes Y axis.



Drilling Over Holes

Offset the lathes X axis within the maximum amount stated in the table.

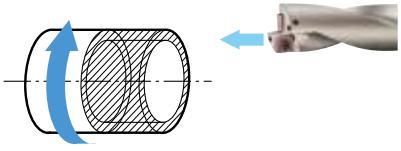


Drill	Max. Offset (mm)	Drill	Max. Offset (mm)
WDX130...	0,35	WDX330...	0,55
WDX135...	0,30	WDX340...	0,45
WDX140...	0,25	WDX350...	0,35
WDX145...	0,20	WDX360...	0,20
WDX150...	0,15	WDX370...	1,00
WDX155...	0,40	WDX380...	1,00
WDX160...	0,40	WDX390...	0,90
WDX165...	0,35	WDX400...	0,80
WDX170...	0,30	WDX410...	0,70
WDX175...	0,25	WDX420...	0,60
WDX180...	0,20	WDX430...	0,50
WDX185...	0,50	WDX440...	0,50
WDX190...	0,45	WDX450...	0,40
WDX195...	0,40	WDX460...	1,50
WDX200...	0,30	WDX470...	1,40
WDX205...	0,30	WDX480...	1,30
WDX210...	0,20	WDX490...	1,20
WDX215...	0,15	WDX500...	1,10
WDX220...	0,10	WDX510...	1,00
WDX225...	0,05	WDX520...	0,90
WDX230...	0,70	WDX530...	0,80
WDX235...	0,70	WDX540...	0,60
WDX240...	0,60	WDX550...	0,50
WDX245...	0,50	WDX560...	2,00
WDX250...	0,50	WDX570...	1,80
WDX255...	0,45	WDX580...	1,70
WDX260...	0,40	WDX590...	1,60
WDX265...	0,35	WDX600...	1,50
WDX270...	0,25	WDX610...	1,40
WDX275...	0,20	WDX620...	1,30
WDX280...	0,15	WDX630...	1,20
WDX285...	0,10	WDX640...	1,00
WDX290...	1,00	WDX650...	0,90
WDX295...	0,95	WDX660...	0,70
WDX300...	0,90	WDX670...	0,60
WDX310...	0,80	WDX680...	0,50
WDX320...	0,70		

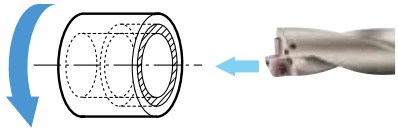
Recommended conditions - reduce feed rate to 30 %

Turning by Lathes

Outer turning (max. 2xD)



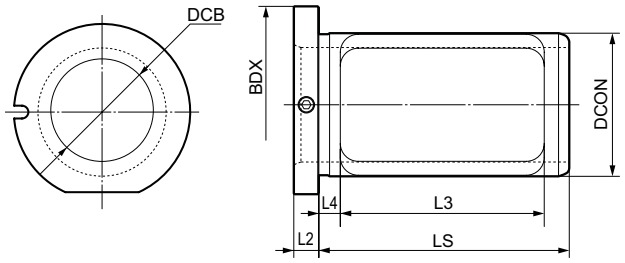
Inner turning (max. 2xD)



Recommended conditions - reduce feed rate to 50 %

Eccentric Sleeve WAS Type

The Eccentric Sleeve WAS Type, exclusively designed for "SumiDrill" WDX Type, provides up to ± 0,3 mm of hole size adjustment.



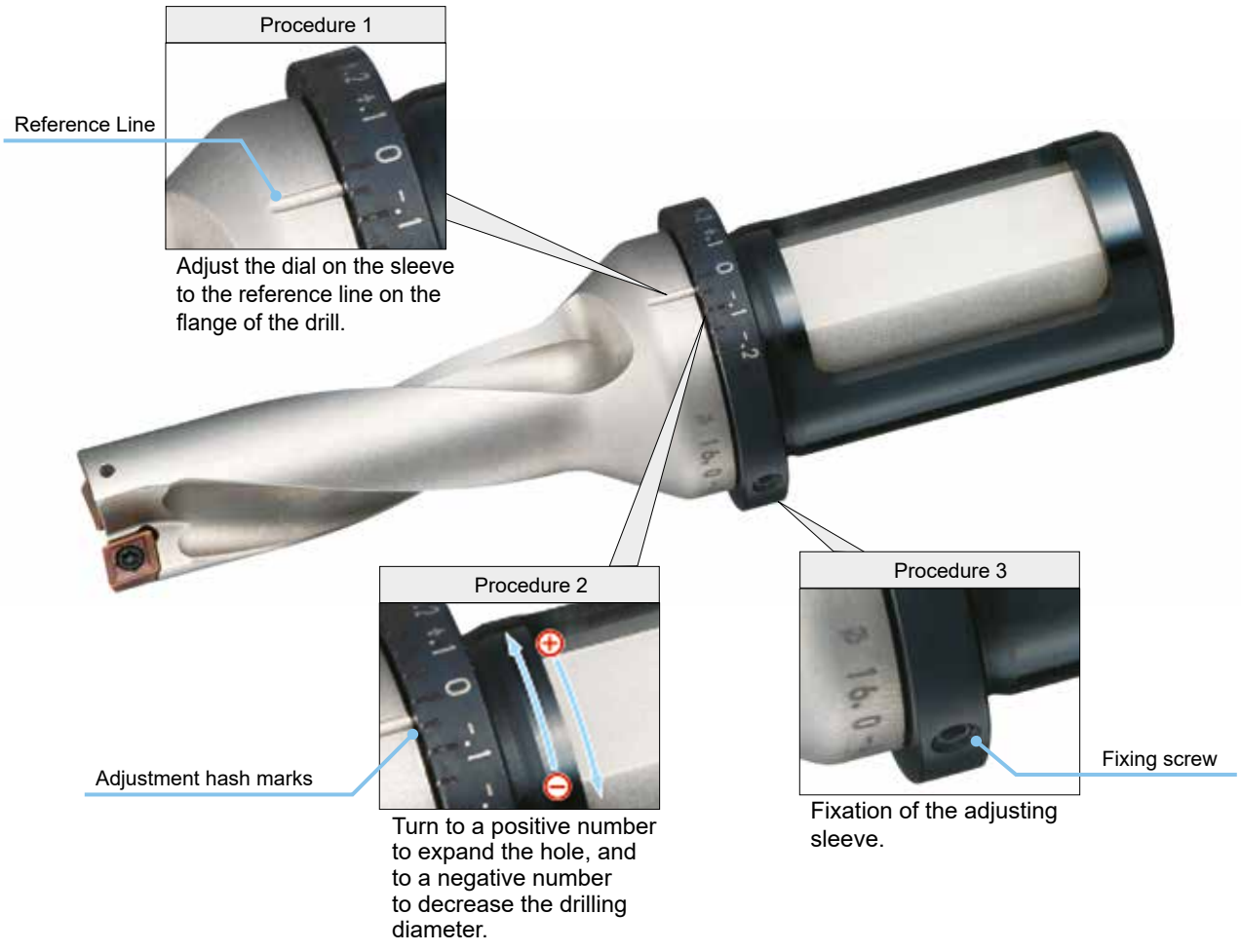
Dimensions

Parts

Dimensions (mm)

Cat. No.	Stock	DCB	DCON	BDX	LS	L2	L3	L4	Diameter Adjustment Range (max.)	Screw	Wrench
WAS 2025-48	●	20	25	33	43	5	32	5	+0,3 – -0,2	BT306	LH015
WAS 2532-60	●	25	32	42	60	7	46	6	+0,3 – -0,3	BT406	LH020
WAS 3240-70	●	32	40	55	70	7	57	6	+0,3 – -0,3	BT408	LH020
WAS 4050-85	●	40	50	60	70	7	54	6	+0,5 – -0,5	BT408	LH020

Diameter Adjustment



Note 1: The dial is for reference purposes. Always measure the actual drilling diameter and adjust accordingly.
Note 2: Not usable with collet chuck type holders. Only use with a side-locking holder like Weldon.

SumiDrill
WDX Type

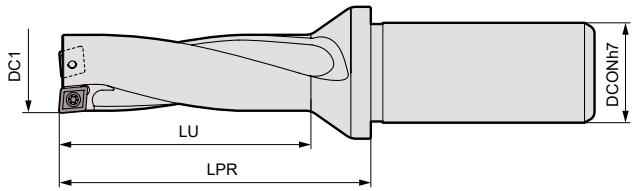
Special Drill Design Check List

Please fill in the required specifications below.
Please send the completed form to either our sales office or distributor.
For other special drill requirements not stated below, please feel free to consult our staff.

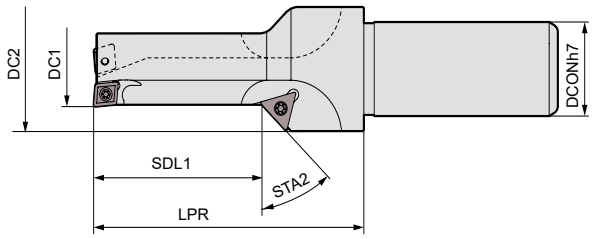
Company / Contact Person

Drill Type

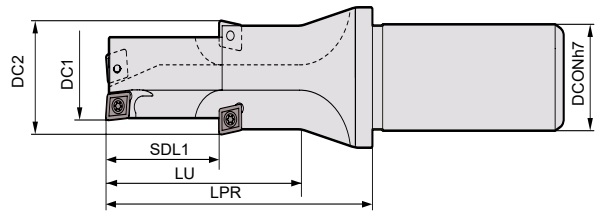
WDX type



WDX type with chamfering insert



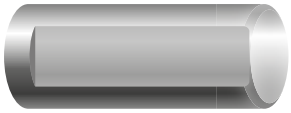
WDX type with counter boring insert



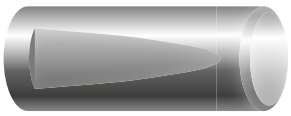
Shank Type

Cylindrical type

Rectangular type

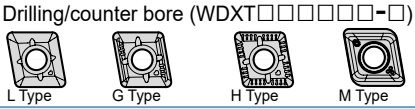


Whistle notch type

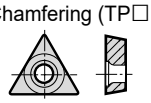


Insert

Drilling/counter bore (WDXT□□□□□□-□)



Chamfering (TP□□ □□□□□□□ □□)



DC1	(Cutting diameter)	Ø 13–Ø 68 mm	mm
DCONh7	(Connection diameter)	Ø 20–Ø 40 mm	mm
DC2	(Counter bore diameter)	Ø D mm	mm
LU	(Usable length (max. recommended))		mm
LPR	(Protruding length)	≤ 200 mm	mm

SDL1	(Step diameter length)		mm
STA2 (*)	(Chamfer angle)	15–60°	°

(*) Please note that some restrictions apply

Additional Requests:

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