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Bonded abrasive products — Dimensions —

Part 17: Spindle mounted wheels (ISO type 52)

Produits abrasifs agglomérés — Dimensions —

Partie 17: Meules sur tige (ISO type 52)

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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation on the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see the following URL: Foreword - Supplementary information

The committee responsible for this document is ISO/TC 29, *Small tools*, Subcommittee SC 5, *Grinding wheels and abrasives*.

ISO 603 consists of the following parts, under the general title *Bonded abrasive products — Dimensions*:

— *Part 1: Grinding wheels for external cylindrical grinding between centres*

— *Part 2: Grinding wheels for centreless external cylindrical grinding*

— *Part 3: Grinding wheels for internal cylindrical grinding*

— *Part 4: Grinding wheels for surface grinding/peripheral grinding*

— *Part 5: Grinding wheels for surface grinding/face grinding*

— *Part 6: Grinding wheels for tool and tool room grinding*

— *Part 7: Grinding wheels for manually guided grinding*

— *Part 8: Grinding wheels for deburring and fettling/snagging*

— *Part 9: Grinding wheels for high-pressure grinding*

— *Part 10: Stones for honing and superfinishings*

— *Part 11: Hand finishing sticks*

— *Part 12: Grinding wheels for deburring and fettling on a straight grinder*

— *Part 13: Grinding wheels for deburring and fettling on a vertical grinder*

— *Part 14: Grinding wheels for deburring and fettling/snagging on an angle grinder*

— *Part 15: Grinding wheels for cutting-off on stationary or mobile cutting-off machines*

— *Part 16: Grinding wheels for cutting-off on hand-held power tools*

— *Part 17: Spindle mounted wheels (ISO type 52)*

— *Part 18: Grinding wheels for flat glass edge grinding machines*

Bonded abrasive products — Dimensions —

Part 17:
Spindle mounted wheels (ISO type 52)

1 Scope

This part of ISO 603 specifies the current shapes, nominal dimensions and limit deviations, in millimetres, of

— Type 52: Spindle mounted wheels.

These bonded abrasive products are intended to be used for hand-held grinding and manually guided or on hand-held power tools guided by hand.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 525, *Bonded abrasive products — General requirements*

3 Shapes and dimensions

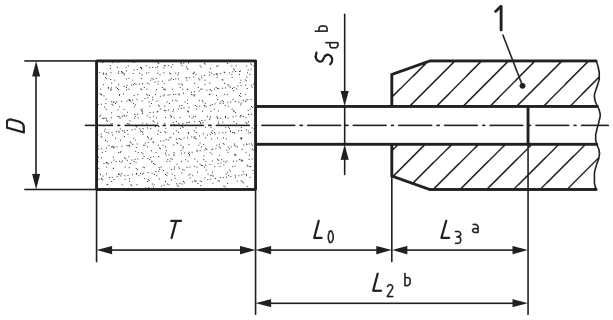
NOTE 1 In all tables below, the "Designation" given in the first column is generated according to the following principle: Shape (= three letter code), D (mm), T (mm), and S_d (mm). For example, the designation for a spindle mounted wheel, shape WPL with D = 10 mm, T = 13 mm, and S_d = 6 mm the designation is "WPL 10 13 06". As an exception, this rule can only be applied equivalently to 3.11, Table 11, because dimension T does not exist for the spherical shape.

NOTE 2 In all tables below, the former code is given in the second column for information only.

3.1 Wheel plain, Shape WPL

See Figure 1 and Table 1.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$ or $S_d = 8$ and $L_2 = 40$.

Figure 1 — Wheel plain, Shape WPL

Table 1 — Wheel plain, Shape WPL, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm or S_d = 8 mm and L_2 = 40 mm

Dimensions in millimetres

Designation	Former code	D	T
WPL 03 06 03	W144	3	6
WPL 03 10 03	W145		10
WPL 03 13 03	W146		13
WPL 05 06 03	W152	5	6
WPL 05 10 03	W153		10
WPL 05 13 03	W154		13
WPL 06 06 03	W160	6	6
WPL 06 10 03 **WPL 06 10 06**	W162		10
WPL 06 13 03 **WPL 06 13 06**	W163		13
WPL 06 20 03	W164		20
WPL 08 10 03 **WPL 08 10 06**	W169	8	10
WPL 08 13 03	W170		13
WPL 08 20 03	W171		20
WPL 10 10 03 **WPL 10 10 06**	W175	10	10
WPL 10 13 03 **WPL 10 13 06**	W176		13
WPL 10 20 03 **WPL 10 20 06**	W177		20
WPL 10 25 03 **WPL 10 25 06**	W178		25
WPL 10 32 06	W179		32

Table 1 *(continued)*

Designation	Former code	*D*	*T*
WPL 13 03 03 **WPL 13 03 06**	W182	13	3
WPL 13 06 03 **WPL 13 06 06**	W183		6
WPL 13 13 03 **WPL 13 13 06**	W185		13
WPL 13 20 03 **WPL 13 20 06**	W186		20
WPL 13 25 03 **WPL 13 25 06**	W187		25
WPL 13 40 06	W188		40
WPL 16 20 03 **WPL 16 20 06**	W195	16	20
WPL 16 25 03 **WPL 16 25 06**	W196		25
WPL 16 50 06	W197		50
WPL 20 06 03 **WPL 20 06 06**	W201	20	6
WPL 20 10 03 **WPL 20 10 06**	W202		10
WPL 20 20 03 **WPL 20 20 06**	W204		20
WPL 20 25 06	W205		25
WPL 20 32 06	W206		32
WPL 20 38 06	W207		38
WPL 20 50 06	W208		50
WPL 25 03 03 **WPL 25 03 06**	W215	25	3
WPL 25 06 03 **WPL 25 06 06**	W216		6
WPL 25 10 06	W217		10
WPL 25 13 06	W218		13
WPL 25 20 06	W219		20
WPL 25 25 06	W220		25
WPL 25 32 06 **WPL 25 32 08**	W221		32
WPL 25 50 06 **WPL 25 50 08**	W222		50
WPL 32 06 06	W225	32	6
WPL 32 10 06	W226		10
WPL 32 20 06	W228		20
WPL 32 32 06 **WPL 32 32 08**	W230		32
WPL 32 50 06	W232		50
WPL 38 06 06	W235	38	6
WPL 38 13 06	W236		13
WPL 38 38 06 **WPL 38 38 08**	W238		38

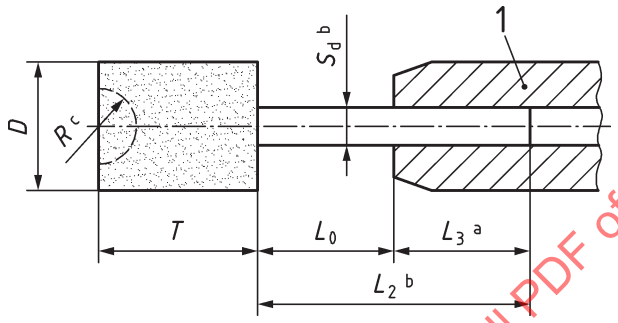
Table 1 *(continued)*

Designation	Former code	*D*	*T*
WPL 40 20 06 **WPL 40 20 08**	W237	40	20
WPL 50 25 06 **WPL 50 25 08**	W242	50	25

3.2 Wheel concave end, Shape WCC

See Figure 2 and Table 2.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

c R is specified by the manufacturer.

Figure 2 — Wheel concave end, Shape WCC

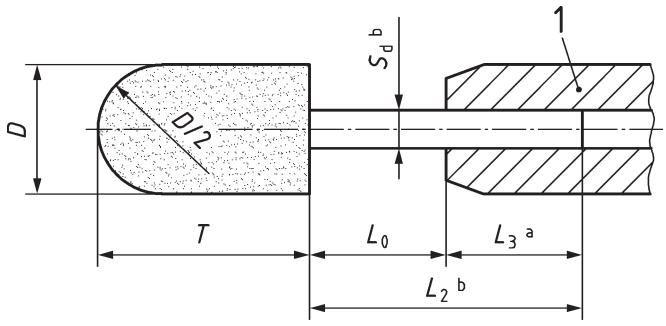
Table 2 — Wheel concave end, Shape WCC, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

Dimensions in millimetres

Designation	Former code	*D*	*T*
WCC 06 13 03	B135	6	13
WCC 10 13 06	B132	10	13
WCC 10 10 03	B133		10
WCC 10 13 03	B132		13
WCC 13 13 03 **WCC 13 13 06**	B131	13	13
WCC 20 30 06	A39	20	30
WCC 25 25 06	A38	25	25

3.3 Wheel round end, Shape WRE

See Figure 3 and Table 3.



Key

1 collet

a $L_3 \geq 10$.

b $S_d = 6$ and $L_2 = 40$.

Figure 3 — Wheel round end, Shape WRE

Table 3 — Wheel round end, Shape WRE, S_d = 6 mm and L_2 = 40 mm

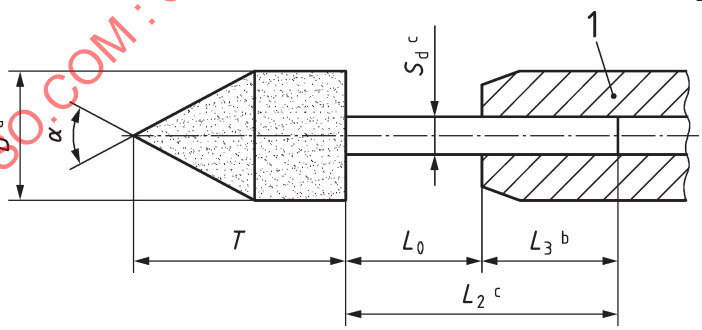
Dimensions in millimetres

Designation	Former code	D	T
WRE 06 20 06	A24	6	20
WRE 25 25 06	A21	25	25

3.4 Wheel conical end, Shape WCE

See Figure 4 and Table 4.

Dimensions in millimetres



Key

1 collet

a For $D \leq 20$ mm is $\alpha = 60°$. For $D > 20$ mm is $\alpha = 90°$.

b $L_3 \geq 10$.

c $S_d = 3$ and $L_2 = 40$ or $S_d = 6$ and $L_2 = 40$.

d α is specified by the manufacturer.

Figure 4 — Wheel conical end, Shape WCE

Table 4 — Wheel conical end, Shape WCE, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

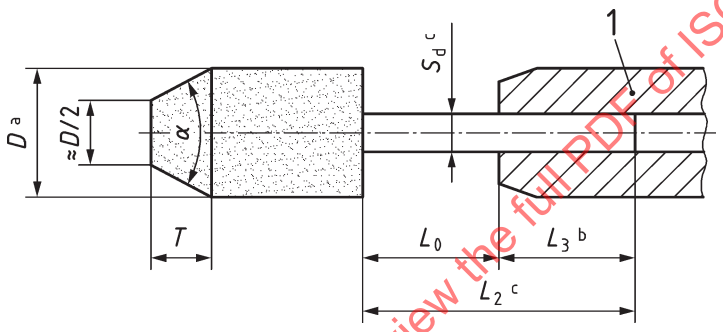
Dimensions in millimetres

Designation	Former code	D	T
WCE 06 10 03	B53	6	10
WCE 06 27 06	A15		27
WCE 20 22 06	A14	20	22
WCE 20 63 06	A1		63
WCE 28 28 06	A13	28	28

3.5 Wheel truncated cone end, Shape WTC

See Figure 5 and Table 5.

Dimensions in millimetres



Key

1 collet

a For $D \leq 20$ mm is $\alpha = 60°$. For $D > 20$ mm is $\alpha = 90°$.

b $L_3 \geq 10$.

c $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

Figure 5 — Wheel truncated cone end, Shape WTC

Table 5 — Wheel truncated cone end, Shape WTC, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

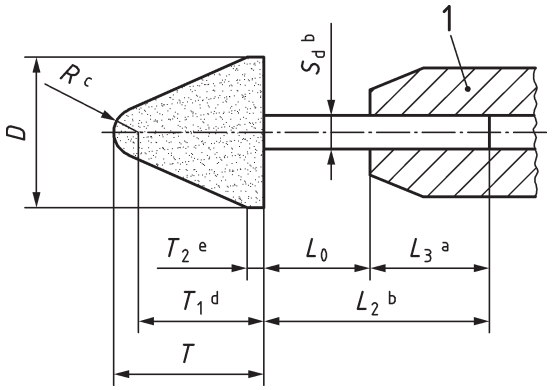
Dimensions in millimetres

Designation	Former code	D	T
WTC 06 10 03	B53	6	10
WTC 06 27 06	A15		27
WTC 20 22 06	A14	20	22
WTC 20 63 06	A1		63
WTC 28 28 06	A13	28	28

3.6 Wheel conical round end, Shape WCR

See Figure 6 and Table 6.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

c R is specified by the manufacturer.

d T_1 is specified by the manufacturer.

e T_2 is specified by the manufacturer.

Figure 6 — Wheel conical round end, Shape WCR

Table 6 — Wheel conical round end, Shape WCR, $S_d = 3$ mm and $L_2 = 30$ mm or $S_d = 6$ mm and $L_2 = 40$ mm

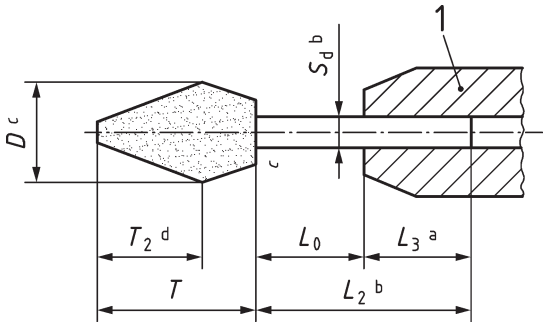
Dimensions in millimetres

Designation	Former code	D	T
WCR 16 16 03 **WCR 16 16 06**	B41	16	16
WCR 20 30 06	A5	20	30
WCR 32 32 06	A4	32	32

3.7 Conical double taper, Shape CDT

See Figure 7 and Table 7.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

c D is specified by the manufacturer.

d T_2 is specified by the manufacturer.

Figure 7 — Conical double taper, Shape CDT

Table 7 — Conical double taper, Shape CDT, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

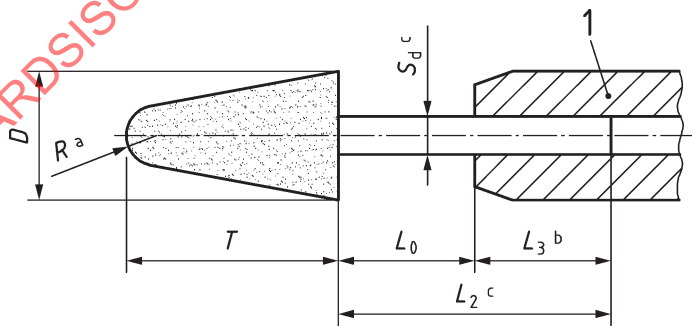
Dimensions in millimetres

Designation	Former code	D	T
CDT 11 20 03 **CDT 11 20 06**	B51	11	20

3.8 Conical round end, Shape CRE

See Figure 8 and Table 8.

Dimensions in millimetres



Key

1 collet

a R is specified by the manufacturer.

b $L_3 \geq 10$.

c $S_d = 6$ and $L_2 = 40$.

Figure 8 — Conical round end, Shape CRE

Table 8 — Conical round end, Shape CRE, S_d = 6 mm and L_2 = 40 mm

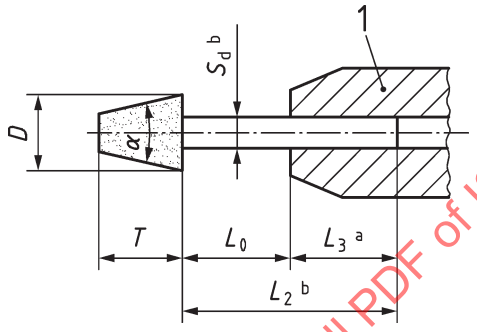
Dimensions in millimetres

Designation	Former code	D	T
CRE 16 45 06	A3mini	16	45
CRE 25 70 06	A3	25	70

3.9 Conical truncated end, Shape CTE

See Figure 9 and Table 9.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

c α is specified by the manufacturer.

Figure 9 — Conical truncated end, Shape CTE

Table 9 — Conical truncated end, Shape CTE, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

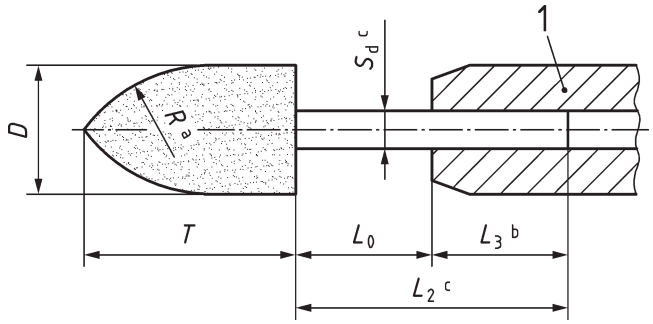
Dimensions in millimetres

Designation	Former code	D	T
CTE 03 06 03	B96	3	6
CTE 03 10 03	B97		10
CTE 06 06 03	B92	6	6
CTE 13 16 03 **CTE 13 16 06**	B91	13	16

3.10 Wheel ogival end, Shape WOE

See Figure 10 and Table 10.

Dimensions in millimetres



Key

1 collet

a $R = 1$ to 2,5 D.

b $L_3 \geq 10$.

c $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

Figure 10 — Wheel ogival end, Shape WOE

Table 10 — Wheel ogival end, Shape WOE, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

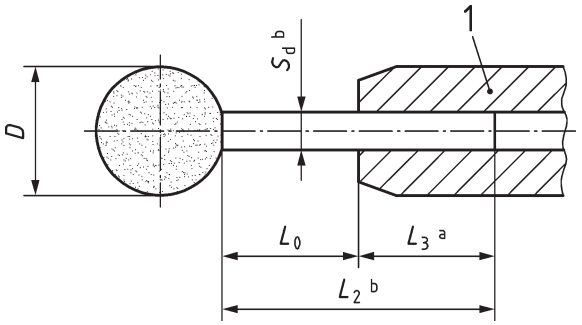
Dimensions in millimetres

Designation	Former code	D	T
WOE 06 08 03	B43	6	8
WOE 10 20 03 **WOE 10 20 06**	B52	10	20
WOE 13 20 03 **WOE 13 20 06**	B42	13	
WOE 20 32 06	A12	20	32
WOE 22 50 06	A11	22	50

3.11 Spherical, Shape SPH

See Figure 11 and Table 11.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

Figure 11 — Spherical, Shape SPH

Table 11 — Spindle mounted wheels spherical shape, Shape SPH, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

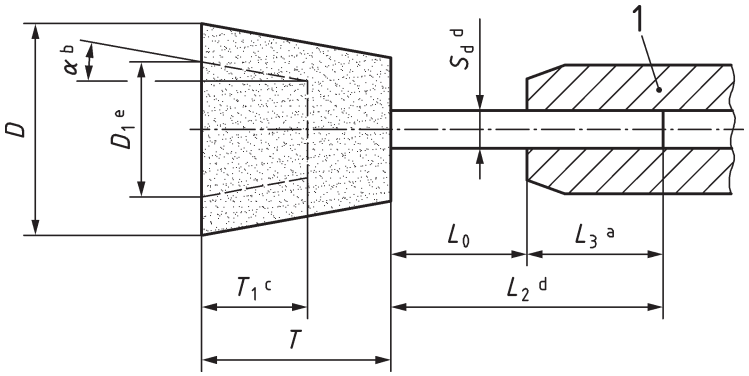
Dimensions in millimetres

Designation	Former code	*D*
SPH 03 03	B124	3
SPH 05 03	B123	5
SPH 13 03 **SPH 13 06**	B121	13
SPH 16 06	A26	16
SPH 25 06	A25	25

3.12 Conical inverse cup, Shape CIC

See Figure 12 and Table 12.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b $\alpha = 10°$ to $16°$.

c $T_1 = 0{,}4$ to $0{,}55\ T$.

d $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

e D_1 approximately $0{,}6\ D$.

Figure 12 — Conical inverse cup, Shape CIC

Table 12 — Conical inverse cup, Shape CIC, S_d = 3 mm and L_2 = 30 mm or S_d = 6 mm and L_2 = 40 mm

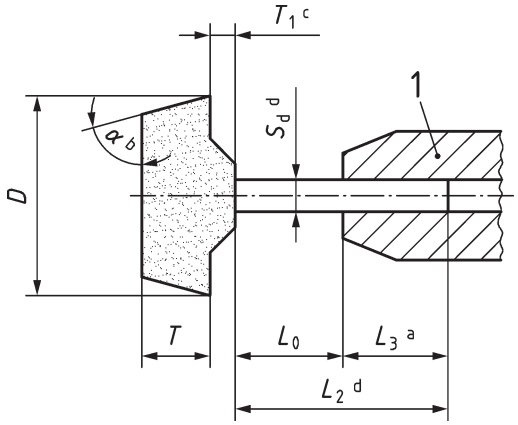
Dimensions in millimetres

Designation	Former code	D	T
CIC 16 18 03 **CIC 16 18 06**	B101	16	18
CIC 25 18 06	A32	25	
CIC 35 37 06	A31	35	37

3.13 Profiled periphery tapered, Shape PPT

See Figure 13 and Table 13.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b α is specified by the manufacturer.

c T_1 is specified by the manufacturer.

d $S_d = 6$ and $L_2 = 40$.

Figure 13 — Profiled periphery tapered, Shape PPT

Table 13 — Profiled periphery tapered, Shape PPT, S_d = 6 mm and L_2 = 40 mm

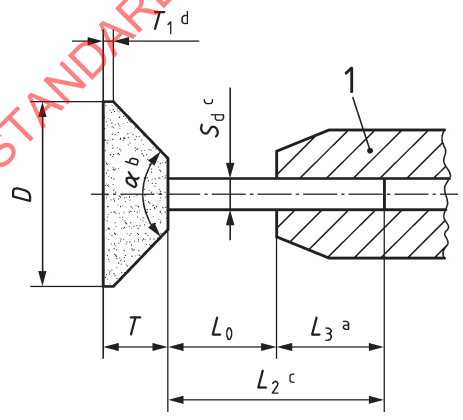
Dimensions in millimetres

Designation	Former code	*D*	*T*
PPT 25 10 06	A35	25	10
PPT 38 10 06	A34	38	

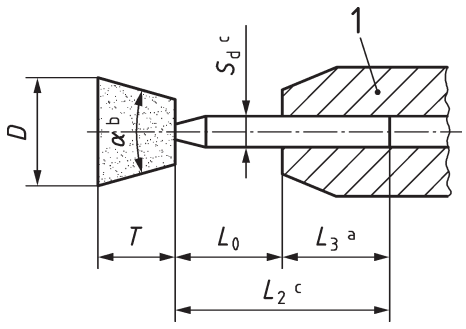
3.14 Conical inverse flat end, Shape CIF

See Figure 14 and Table 14.

Dimensions in millimetres



a) Variant A



b) Variant B

Key

1 collet

a $L_3 \geq 10$.

b α is specified by the manufacturer.

c $S_d = 3$ and $L_2 = 30$.

d T_1 is specified by the manufacturer.

Figure 14 — Conical inverse flat end, Shape CIF (Form A)

Table 14 — Conical inverse flat end, Shape CIF, S_d = 3 mm and L_2 = 30 mm

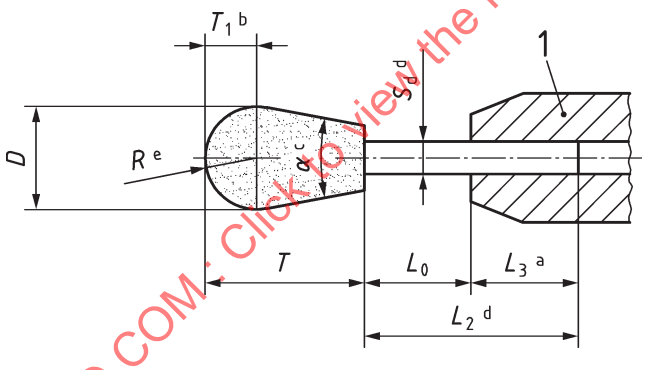
Dimensions in millimetres

Designation	Former code	D	T
CIF 08 10 03	B104	8	10
CIF 16 05 03	B103	16	5

3.15 Conical inverse round end, Shape CIR

See Figure 15 and Table 15.

Dimensions in millimetres



Key

1 collet

a $L_3 \geq 10$.

b T_1 is specified by the manufacturer.

c α is specified by the manufacturer.

d $S_d = 3$ and $L_2 = 30$ or $S_d = 6$ and $L_2 = 40$.

e R is specified by the manufacturer.

Figure 15 — Conical inverse round end, Shape CIR