



E - 698 | Inserts code key

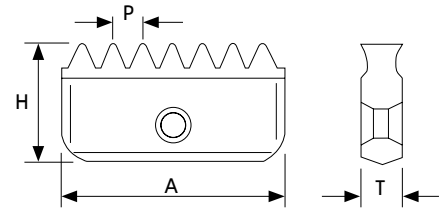
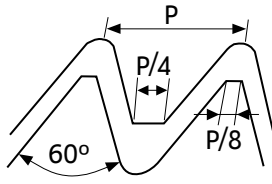
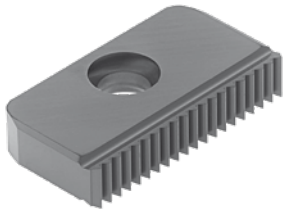
E - 700 | Inserts program

E - 708 | Toolholders code key

E - 709 | Toolholders program

E - 712 | Technical data

THREAD MILLING



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

External

P (Pitch)	Dimensions Dimensões Dimensiones (mm)								Stock grade code ⁽²⁾
	A 14		A 21		A 30		A 40		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	(G4) PH7920
0.75 EXT	2123972	14 E 0.75 ISO							⊗
0.80 EXT	2124202	14 E 0.80 ISO							⊗
1.00 EXT	2123973	14 E 1.00 ISO	2123987	21 E 1.00 ISO					⊗
1.25 EXT	2123974	14 E 1.25 ISO							⊗
1.50 EXT	2123975	14 E 1.50 ISO	2123988	21 E 1.50 ISO	2123999	30 E 1.50 ISO	2124012	40 E 1.50 ISO	⊗
1.75 EXT	2123976	14 E 1.75 ISO							⊗
2.00 EXT	2123977	14 E 2.00 ISO	2123989	21 E 2.00 ISO	2124000	30 E 2.00 ISO	2124013	40 E 2.00 ISO	⊗
2.50 EXT	2123978	14 E 2.50 ISO	2123990	21 E 2.50 ISO					⊗
3.00 EXT			2123991	21 E 3.00 ISO	2124001	30 E 3.00 ISO	2124014	40 E 3.00 ISO	⊗
3.50 EXT					2124002	30 E 3.50 ISO			⊗
4.00 EXT					2124003	30 E 4.00 ISO	2124015	40 E 4.00 ISO	⊗
5.00 EXT							2124016	40 E 5.00 ISO	⊗
6.00 EXT							2124017	40 E 6.00 ISO	⊗

⊗ Stock item | Produto de stock | Itens de stock

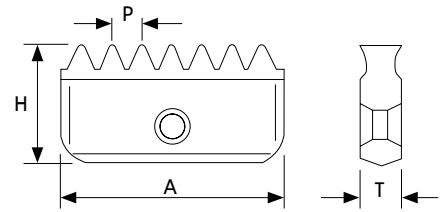
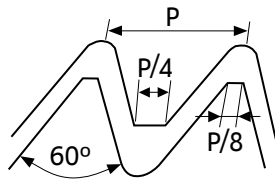
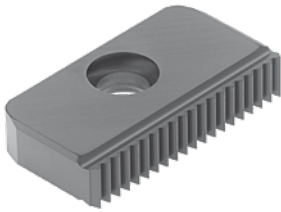
Insert order code = (1) Geometry Code + (2) Grade Code

Internal

P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code ⁽²⁾
	A 12		A 14		A 21		A 30		A 40		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	(G4) PH7920
0.50 INT	2123967	12 0.50 ISO	2123979	14 0.50 ISO							⊗
0.75 INT	2123968	12 0.75 ISO	2123980	14 0.75 ISO							⊗
1.00 INT	2123969	12 1.00 ISO	2123981	14 1.00 ISO	2123992	21 1.00 ISO					⊗
1.25 INT	2123970	12 1.25 ISO	2123982	14 1.25 ISO							⊗
1.50 INT	2123971	12 1.50 ISO	2123983	14 1.50 ISO	2123993	21 1.50 ISO	2124004	30 1.50 ISO	2124018	40 1.50 ISO	⊗
1.75 INT			2123984	14 1.75 ISO	2123994	21 1.75 ISO					⊗
2.00 INT			2123985	14 2.00 ISO	2123995	21 2.00 ISO	2124005	30 2.00 ISO	2124019	40 2.00 ISO	⊗
2.50 INT			2123986	14 2.50 ISO	2123996	21 2.50 ISO					⊗
3.00 INT					2123997	21 3.00 ISO	2124006	30 3.00 ISO	2124020	40 3.00 ISO	⊗
3.50 INT					2123998	21 3.50 ISO	2124007	30 3.50 ISO	2124021	40 3.50 ISO	⊗
4.00 INT							2124008	30 4.00 ISO	2124022	40 4.00 ISO	⊗
4.50 INT							2124009	30 4.50 ISO	2124023	40 4.50 ISO	⊗
5.00 INT							2124010	30 5.00 ISO	2124024	40 5.00 ISO	⊗
5.50 INT							2124011	30 5.50 ISO	2124025	40 5.50 ISO	⊗
6.00 INT									2124026	40 6.00 ISO	⊗

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

External

P (Pitch)	Dimensions Dimensões Dimensiones (mm)								Stock grade code ⁽²⁾
	A 14		A 21		A 30		A 40		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	(G4) PH7920
32.00 EXT	2124033	14 E 32 UN							☉
28.00 EXT	2124034	14 E 28 UN							☉
24.00 EXT	2124035	14 E 24 UN	2124055	21 E 24 UN					☉
20.00 EXT	2124036	14 E 20 UN	2124056	21 E 20 UN	2124072	30 E 20 UN			☉
18.00 EXT	2124037	14 E 18 UN	2124057	21 E 18 UN	2124073	30 E 18 UN			☉
16.00 EXT	2124038	14 E 16 UN	2124058	21 E 16 UN	2124074	30 E 16 UN	2124089	40 E 16 UN	☉
14.00 EXT	2124039	14 E 14 UN	2124059	21 E 14 UN	2124075	30 E 14 UN	2124090	40 E 14 UN	☉
13.00 EXT	2124203	14 E 13 UN							☉
12.00 EXT	2124040	14 E 12 UN	2124060	21 E 12 UN	2124076	30 E 12 UN	2124091	40 E 12 UN	☉
11.00 EXT	2124041	14 E 11 UN							☉
10.00 EXT	2124042	14 E 10 UN	2124062	21 E 10 UN	2124077	30 E 10 UN	2124092	40 E 10 UN	☉
8.00 EXT					2124078	30 E 8.0 UN	2124093	40 E 8.0 UN	☉
6.00 EXT					2124079	30 E 6.0 UN	2124094	40 E 6.0 UN	☉

☉ Stock item | Produto de stock | Itens de stock

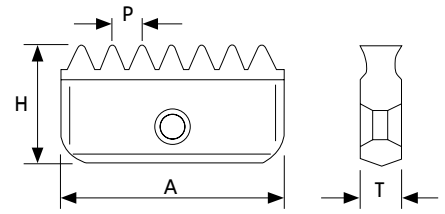
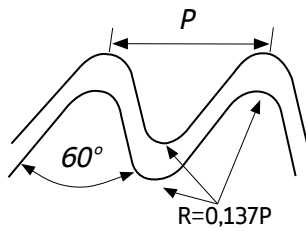
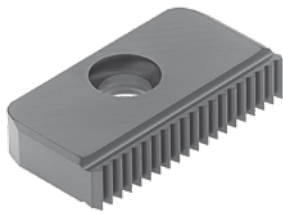
Insert order code = (1) Geometry Code + (2) Grade Code

Internal

P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code ⁽²⁾
	A 12		A 14		A 21		A 30		A 40		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	(G4) PH7920
32.00 INT	2124027	12 32 UN	2124043	14 32 UN							☉
28.00 INT	2124028	12 28 UN	2124044	14 28 UN							☉
27.00 INT			2124045	14 27 UN							☉
24.00 INT	2124029	12 24 UN	2124046	14 24 UN	2124063	21 24 UN					☉
20.00 INT	2124030	12 20 UN	2124047	14 20 UN	2124064	21 20 UN	2124080	30 20 UN			☉
18.00 INT	2124031	12 18 UN	2124048	14 18 UN	2124065	21 18 UN	2124081	30 18 UN			☉
16.00 INT	2124032	12 16 UN	2124049	14 16 UN	2124066	21 16 UN	2124082	30 16 UN	2124095	40 16 UN	☉
14.00 INT			2124050	14 14 UN	2124067	21 14 UN	2124083	30 14 UN	2124096	40 14 UN	☉
12.00 INT			2124051	14 12 UN	2124068	21 12 UN	2124084	30 12 UN	2124097	40 12 UN	☉
11.00 INT			2124052	14 11 UN							☉
10.00 INT			2124053	14 10 UN	2124069	21 10 UN	2124085	30 10 UN	2124098	40 10 UN	☉
9.00 INT			2124054	14 9.0 UN							☉
8.00 INT					2124070	21 8.0 UN	2124086	30 8.0 UN	2124099	40 8.0 UN	☉
7.00 INT					2124071	21 7.0 UN					☉
6.00 INT							2124087	30 6.0 UN	2124100	40 6.0 UN	☉
5.00 INT							2124088	30 5.0 UN			☉
4.50 INT									2124101	40 4.5 UN	☉
4.00 EXT									2124102	40 4.0 UN	☉

☉ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

Same insert for external and internal thread | Mesma pastilha para rosca externa e interna | Misma plaquita para roscado externo e interno

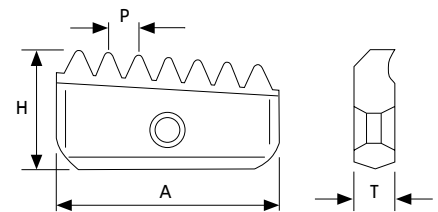
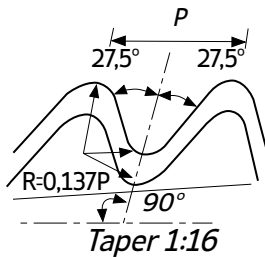
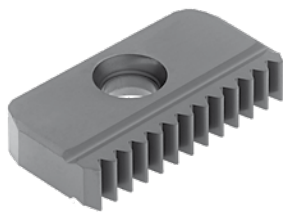
P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code ⁽²⁾	
	A 12		A 14		A 21		A 30		A 40			(G4) PH7920
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.		
24.00			2124104	14 I/E 24 W							⊗	
20.00			2124105	14 I/E 20 W	2124110	21 I/E 20 W					⊗	
19.00	2124103	12 I/E 19 W*	2124106	14 I/E 19 W	2124111	21 I/E 19 W					⊗	
16.00			2124107	14 I/E 16 W	2124112	21 I/E 16 W	2124115	30 I/E 16 W			⊗	
14.00			2124108	14 I/E 14 W	2124113	21 I/E 14 W	2124116	30 I/E 14 W			⊗	
11.00			2124109	14 I/E 11 W	2124114	21 I/E 11 W	2124117	30 I/E 11 W	2124118	40 I/E 11 W	⊗	
8.00									2124119	40 I/E 8 W	⊗	

*One cutting edge | Uma aresta de corte | Un filo de corte

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

BSPT One cutting edge | Uma aresta de corte | Un filo de corte



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

Conical pipe thread milling inserts are one sided and may be used for both external and internal threading | As pastilhas de rosca para tubos cônicos têm uma face e podem ser usadas para rosca externa e interna | Las plaquitas de roscado para tubos cônicos tienen una cara y pueden ser usadas para roscado externo e interno.

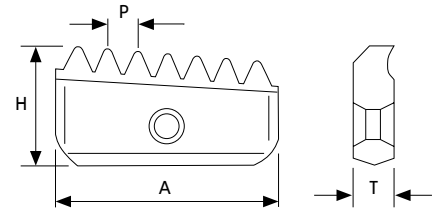
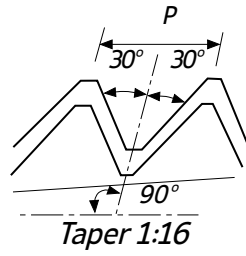
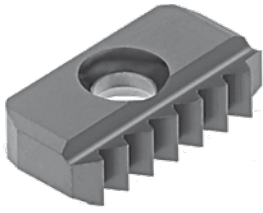
P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code ⁽²⁾	
	A 12		A 14		A 21		A 30		A 40			(G4) PH7920
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.		
19.00	2124120	12 I/E 19 BSPT	2124121	14 I/E 19 BSPT							⊗	
14.00			2124122	14 I/E 14 BSPT	2124123	21 I/E 14 BSPT					⊗	
11.00					2124124	21 I/E 11 BSPT	2124125	30 I/E 11 BSPT	2124126	40 I/E 11 BSPT	⊗	

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

NPT One cutting edge | Uma aresta de corte | Un filo de corte

NEW



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

Conical pipe thread milling inserts are one sided and may be used for both external and internal threading | As pastilhas de roscagem para tubos cônicos têm uma face e podem ser usadas para roscagem externa e interna | Las plaquitas de roscado para tubos cônicos tienen una cara y pueden ser usadas para roscado externo e interno.

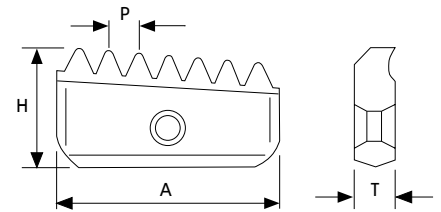
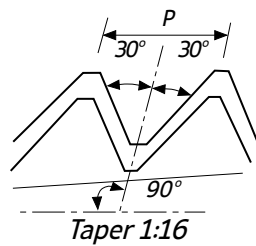
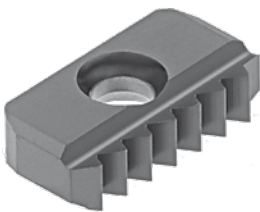
P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code (2)
	A 12		A 14		A 21		A 30		A 40		
	Geometry code (1)	Ref.	Geometry code (1)	Ref.	Geometry code (1)	Ref.	Geometry code (1)	Ref.	Geometry code (1)	Ref.	
18.00	2124127	12 I/E 18 NPT	2124128	14 I/E 18 NPT							⊗
14.00			2124129	14 I/E 14 NPT	2124130	21 I/E 14 NPT					⊗
11.50					2124131	21 I/E 11.5 NPT	2124132	30 I/E 11.5 NPT	2124134	40 I/E 11.5 NPT	⊗
8.00							2124133	30 I/E 8 NPT	2124135	40 I/E 8 NPT	⊗

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

NPTF One cutting edge | Uma aresta de corte | Un filo de corte

NEW



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

Conical pipe thread milling inserts are one sided and may be used for both external and internal threading | As pastilhas de roscagem para tubos cônicos têm uma face e podem ser usadas para roscagem externa e interna | Las plaquitas de roscado para tubos cônicos tienen una cara y pueden ser usadas para roscado externo e interno.

P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code (2)
	A 12		A 14		A 21		A 30		A 40		
	Geometry code (1)	Ref.	Geometry code (1)	Ref.	Geometry code (1)	Ref.	Geometry code (1)	Ref.	Geometry code (1)	Ref.	
18.00	2124136	12 I/E 18 NPTF	2124137	14 I/E 18 NPTF							⊗
14.00			2124138	14 I/E 14 NPTF	2124139	21 I/E 14 NPTF					⊗
11.50					2124140	21 I/E 11.5 NPTF	2124141	30 I/E 11.5 NPTF	2124143	40 I/E 11.5 NPTF	⊗
8.00							2124142	30 I/E 8 NPTF	2124144	40 I/E 8 NPTF	⊗

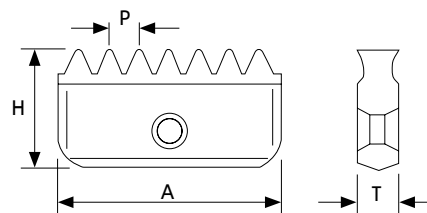
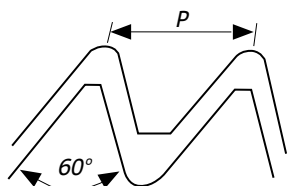
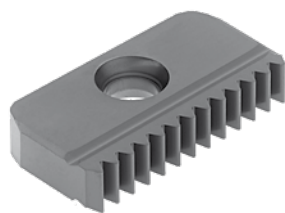
⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

THREADING
Thread milling - Inserts
Thread milling - Toolholders
Thread turning - Overview
Thread turning - Inserts
Thread turning - Toolholders
Thread turning - Spare Parts
Technical Data

NPS Two cutting edges | Duas arestas de corte | Dos filos de corte

NEW



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

Same insert for external and internal thread | Mesma pastilha para rosca externa e interna | Misma plaquita para roscado externo e interno

P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code ⁽²⁾
	A 12		A 14		A 21		A 30		A 40		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	
18.00	2124145	12 I/E 18 NPS*	2124147	14 I/E 18 NPS							⊗
14.00			2124148	14 I/E 14 NPS	2124149	21 I/E 14 NPS					⊗
11.50					2124150	21 I/E 11.5 NPS	2124151	30 I/E 11.5 NPS	2124153	40 I/E 11.5 NPS	⊗
8.00							2124152	30 I/E 8 NPS	2124154	40 I/E 8 NPS	⊗

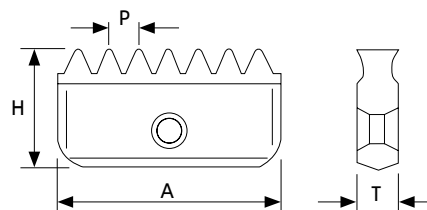
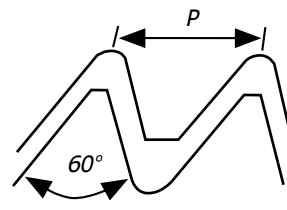
*One cutting edge | Uma aresta de corte | Un filo de corte

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

NPSF Two cutting edges | Duas arestas de corte | Dos filos de corte

NEW



A	T	H
A 12	2,9	6,3
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16
A 40	6,3	20

Same insert for external and internal thread | Mesma pastilha para rosca externa e interna | Misma plaquita para roscado externo e interno

P (Pitch)	Dimensions Dimensões Dimensiones (mm)										Stock grade code ⁽²⁾
	A 12		A 14		A 21		A 30		A 40		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	
18.00	2124155	12 I/E 18 NPSF*	2124156	14 I/E 18 NPSF							⊗
14.00			2124157	14 I/E 14 NPSF	2124158	21 I/E 14 NPSF					⊗
11.50					2124159	21 I/E 11.5 NPSF	2124160	30 I/E 11.5 NPSF	2124162	40 I/E 11.5 NPSF	⊗
8.00							2124161	30 I/E 8 NPSF	2124163	40 I/E 8 NPSF	⊗

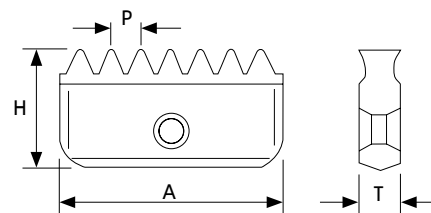
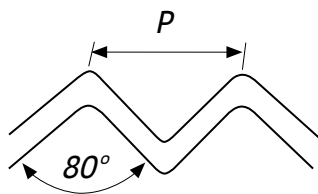
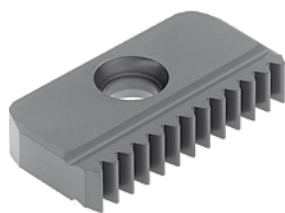
*One cutting edge | Uma aresta de corte | Un filo de corte

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

PG DIN 40430 Two cutting edges | Duas arestas de corte | Dos filos de corte

NEW



A	T	H
A 14	3,1	7,5
A 21	4,7	12
A 30	5,5	16

Same insert for external and internal thread | Mesma pastilha para rosca externa e interna | Misma plaquita para roscado externo e interno

P (Pitch)	Dimensions Dimensões Dimensiones (mm)						Stock grade code ⁽²⁾
	A 14		A 21		A 30		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	(G4) PH7920
18.00	2124164	14 I/E 18 PG	2124165	21 I/E 18 PG			⊗
16.00			2124166	21 I/E 16 PG	2124167	30 I/E 16 PG	⊗

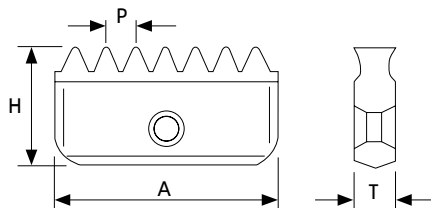
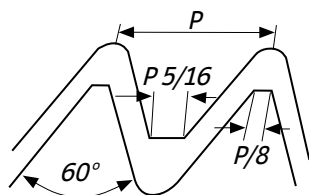
*One cutting edge | Uma aresta de corte | Un filo de corte

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

UNJ Two cutting edges | Duas arestas de corte | Dos filos de corte

NEW



A	T	H
A 14	3,1	7,5
A 21	4,7	12

Same insert for external and internal thread | Mesma pastilha para rosca externa e interna | Misma plaquita para roscado externo e interno

P (Pitch)	Dimensions Dimensões Dimensiones (mm)				Stock grade code ⁽²⁾
	A 14		A 21		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	(G4) PH7920
24.00	2124168	14 E 24 UNJ	2124174	21 E 24 UNJ	⊗
20.00	2124169	14 E 20 UNJ	2124175	21 E 20 UNJ	⊗
18.00	2124170	14 E 18 UNJ	2124176	21 E 18 UNJ	⊗
16.00	2124171	14 E 16 UNJ	2124177	21 E 16 UNJ	⊗
14.00	2124172	14 E 14 UNJ			⊗
12.00	2124173	14 E 12 UNJ	2124179	21 E 12 UNJ	⊗

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

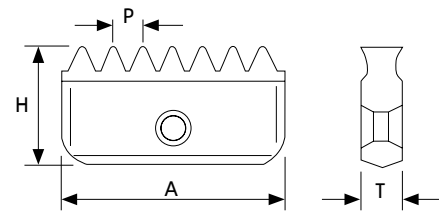
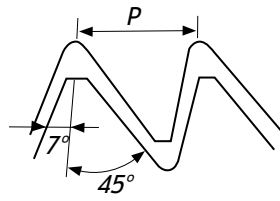
Note: For internal UNJ threads it is common to use UN inserts as partial profile tool | Para rosca interna UNJ é comum utilizar pastilhas UN como ferramenta de perfil parcial | Para roscado interno UNJ é usual utilizar plaquitas UN como ferramenta de perfilado parcial

THREADING - Inserts
Thread milling - Toolholders
Thread turning - Overview
Thread turning - Inserts
Thread turning - Toolholders
Thread turning - Spare Parts
Technical Data

AMERICAN BUTTRESS

Two cutting edges | Duas arestas de corte | Dos filos de corte

NEW



A	T	H
21	4,7	12
30	5,5	16

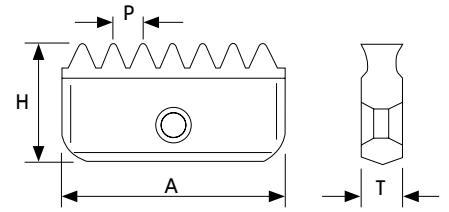
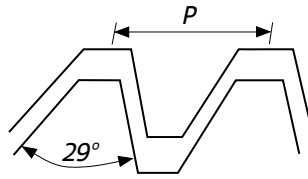
Same insert for external and internal thread | Mesma pastilha para roscagem externa e interna | Misma plaquita para roscado externo e interno

P (Pitch)	Dimensions Dimensões Dimensiones (mm)				Stock grade code ⁽²⁾
	A 21		A 30		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	(G4) PH7920
16.00	2124180	21 I/E 16 ABUT	2124184	30 I/E 16 ABUT	⊗
12.00	2124181	21 I/E 12 ABUT	2124185	30 I/E 12 ABUT	⊗
10.00	2124182	21 I/E 10 ABUT	2124186	30 I/E 10 ABUT	⊗
8.00	2124183	21 I/E 8 ABUT	2124187	30 I/E 8 ABUT	⊗
6.00			2124188	30 I/E 6 ABUT	⊗
4.00			2124189	30 I/E 4 ABUT	⊗

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

Note: ABUT thread milling inserts are one-sided and it can be used only on Multi-insert toolholders | As pastilhas de roscagem ABUT são de uma face e só podem ser utilizadas nos suportes de múltiplas pastilhas | Las plaquitas de roscado ABUT son de una cara y sólo se pueden utilizar en las herramientas de múltiples plaquitas



A	T	H
21	4,7	12
30	5,5	16
40	6,3	20

Same insert for external and internal thread | Mesma pastilha para roscagem externa e interna | Misma plaqueta para roscado externo e interno

P (Pitch)	Dimensions Dimensões Dimensiones (mm)						Stock grade code ⁽²⁾ (G4) PH7920
	A 21		A 30		A 40		
	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	Geometry code ⁽¹⁾	Ref.	
12.00	2124191	21 12 ACME	2124194	30 12 ACME			⊗
10.00	2124192	21 10 ACME	2124195	30 10 ACME			⊗
8.00	2124193	21 8.0 ACME	2124196	30 8.0 ACME			⊗
6.00			2124197	30 6.0 ACME			⊗
4.00			2124198	30 4.0 ACME*	2124199	40 4.0 ACME	⊗
3.50					2124200	40 3.5 ACME	⊗
3.00					2124201	40 3.0 ACME* **	⊗

*One cutting edge | Uma aresta de corte | Un filo de corte

⊗ Stock item | Produto de stock | Itens de stock

Insert order code = (1) Geometry Code + (2) Grade Code

** Inserts to be used only on Multi-insert toolholders | Pastilhas que só podem ser utilizadas nos suportes de múltiplas pastilhas | Plaquetas que sólo se pueden utilizar en las herramientas de múltiples plaquetas

THREAD MILLING TOOLHOLDERS CODE KEY

Codificação ISO para suportes de fresagem de roscar | Codificación ISO para herramientas de fresado de roscar

NEW

A	S	S	N	063	050	A21	-	5
1	2	3	4	5	6	7		8

1 - Mounting type

A	Arbor
E	Cylindrical
W	Weldon

2 - Toolholder material

S	Steel
C	Carbide

3 - Clamping

S	Screw
----------	-------

4 - Operation type

N	Internal+External
E	External

5 - Cutting diameter ($\varnothing D_c$ - mm)

Example : 063 = 63 mm

6 - Toolholder length (L - mm)

Example : 050 = 50 mm

7 - Insert Pocket Size

A12	12 mm
A14	14 mm
A21	21 mm
A30	30 mm
A40	40 mm

8 - Number of inserts

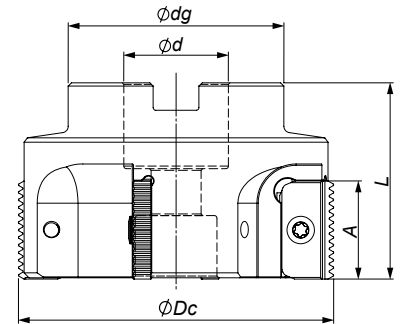
1	2	3	4	5
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MULTI INSERT TOOLHOLDERS

Suportes de múltiplas pastilhas | Herramientas de múltiples plaquitas

NEW

INTERNAL TOOLHOLDERS | Suportes internos | Herramientas internas

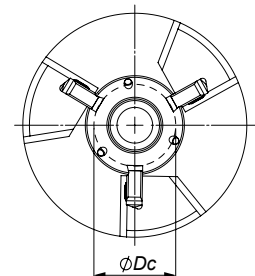
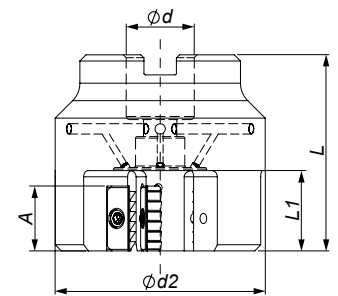


Order Code Código	Reference Referência Referencia	Dimensions Dimensões Dimensiones (mm)				Number of inserts	Stock
		A	ϕDc	ϕd	L		
212393200	ASSN 063 050 A21-5	21	63	22	50	5	☉
212393300	ASSN 063 050 A30-4	30	63	22	50	4	☉
212393400	ASSN 080 055 A30-4	30	80	27	55	4	☉
212393600	ASSN 100 060 A30-4	30	100	32	60	4	☉
212393500	ASSN 080 065 A40-4	40	80	27	65	4	○
212393800	ASSN 100 070 A40-4	40	100	32	70	4	○

☉ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

EXTERNAL TOOLHOLDERS | Suportes externos | Herramientas externas



Order Code Código	Reference Referência Referencia	Dimensions Dimensões Dimensiones (mm)						Number of inserts	Stock
		A	ϕDc	ϕd	$\phi d2$	L	L1		
212396400	ASSE 020 065 A21-3	21	20	22	58	65	25	3	○
212396500	ASSE 030 065 A21-3	21	30	22	68	65	25	3	○
212396600	ASSE 045 070 A21-4	21	45	27	83	70	25	4	○

☉ Stock item | Produto de stock | Itens de stock

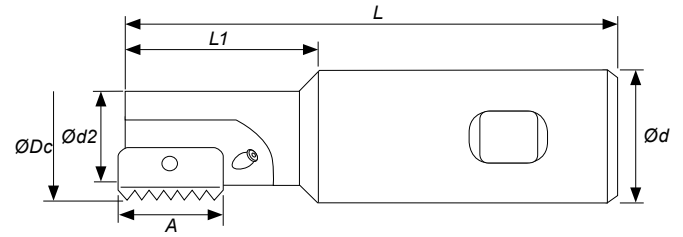
○ Available under request | Disponível sobre consulta | Disponible bajo consulta

THREADING
Thread milling - Inserts
Thread milling - Toolholders
Thread turning - Overview
Thread turning - Inserts
Thread turning - Toolholders
Thread turning - Spare Parts
Technical Data

SINGLE INSERT TOOLHOLDERS

NEW

WSSN-1

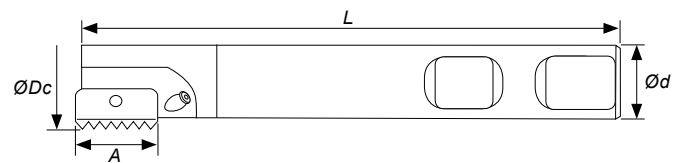


Order Code Código	Reference Referência Referencia	Dimensions Dimensões Dimensiones (mm)						Number of inserts	Stock
		A	ØDc	Ød	Ød2	L	L1		
212394700	WSSN 009 085 A12-1	12	9,5	20	7,5	85	14	1	⊗
212394800	WSSN 010 085 A12-1	12	9,9	20	7,6	85	16	1	⊗
212394900	WSSN 012 075 A12-1	14	12,0	20	8,9	75	20	1	⊗
212395000	WSSN 014 085 A14-1	14	14,5	20	11,2	85	25	1	⊗
212395100	WSSN 017 085 A14-1	14	17,0	20	13,4	85	30	1	⊗
212395200	WSSN 018 085 A21-1*	21	18,0	20	14,4	85	30	1	⊗
212395300	WSSN 021 094 A21-1	21	21,0	20	16,5	94	40	1	⊗
212395400	WSSN 029 110 A30-1	30	29,0	25	22,4	110	50	1	⊗
212395500	WSSN 048 153 A40-1	40	48,0	40	35,0	153	78	1	○

⊗ Stock item | Produto de stock | Itens de stock ○ Available under request | Disponível sobre consulta | Disponible bajo consulta

*Can not be used with the following inserts: | Não pode ser usado com as seguintes pastilhas: | No se puede utilizar con las siguientes plaquitas:
21 I 3.5 ISO; 21 I 8.0 UN; 21 I 7.0 UN; 21 I/E 11 BSPT; 21 I/E 11.5 NPT; 21 I/E 11.5 NPTF

WSSN-1 || Long shank

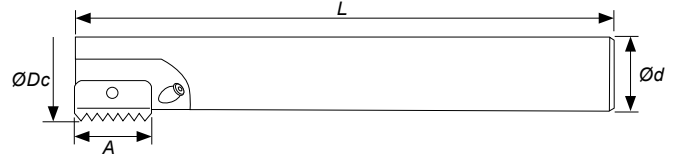


Order Code Código	Reference Referência Referencia	Dimensions Dimensões Dimensiones (mm)				Number of inserts	Stock
		A	ØDc	Ød	L		
212396000	WSSN 025 125 A21-1	21	25	20	125	1	⊗
212396100	WSSN 031 150 A30-1	30	31	25	150	1	⊗
212396200	WSSN 038 150 A30-1	30	38	32	150	1	⊗
212396300	WSSN 048 210 A40-1	40	48	40	210	1	○

⊗ Stock item | Produto de stock | Itens de stock ○ Available under request | Disponível sobre consulta | Disponible bajo consulta

Note: For holders with long overhang reduce the cutting speed by 20-40%, depending on workpiece, material, pitch and overhang | Para suportes com comprimento elevado reduza a velocidade de corte em 20-40%, dependendo da peça a maquinar, do material, do pitch e comprimento | Para herramientas con longitud elevada reduzca la velocidad de corte en 20-40%, dependiendo de la pieza a mecanizar, del material, del pitch y la longitud.

ECSN-1 || Long carbide shank



Order Code Código	Reference Referência Referencia	Dimensions Dimensões Dimensiones (mm)				Number of inserts	Stock
		A	ØDc	Ød	L		
212394000	ECSN 010 125 A12-1*	12	9,9	8	125	1	⊗
212394100	ECSN 013 110 A14-1	14	13,2	10	110	1	⊗
212394200	ECSN 013 155 A14-1	14	13,2	10	155	1	⊗
212394300	ECSN 015 175 A14-1	14	15,2	12	175	1	⊗
212394400	ECSN 021 130 A21-1	21	21,0	16	130	1	⊗
212394500	ECSN 021 200 A21-1	21	21,0	16	200	1	⊗
212394600	ECSN 027 270 A30-1	30	27,0	20	270	1	○

⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

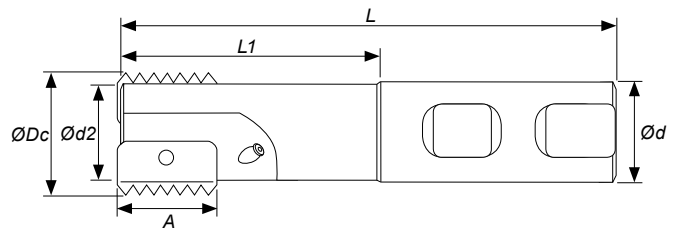
* Without coolant bore | Sem furo de refrigeração | Sin agujero de refrigeración

Note: For holders with long overhang reduce the cutting speed by 20-40%, depending on workpiece, material, pitch and overhang | Para suportes com comprimento elevado reduza a velocidade de corte em 20-40%, dependendo da peça a maquinar, do material, do pitch e comprimento | Para herramientas con longitud elevada reduzca la velocidad de corte en 20-40%, dependiendo de la pieza a mecanizar, del material, del pitch y la longitud.

DOUBLE INSERT TOOLHOLDERS

Suportes de duas pastilhas | Herramientas de dos plaquitas

WSSN-2



Order Code Código	Reference Referência Referencia	Dimensions Dimensões Dimensiones (mm)						Number of inserts	Stock
		A	ØDc	Ød	Ød2	L	L1		
212395600	WSSN 020 093 A14-2	14	20	20	16	93	41	2	⊗
212395700	WSSN 030 108 A21-2	21	30	25	24	108	52	2	⊗
212395800	WSSN 040 130 A30-2	30	40	32	30	130	70	2	⊗
212395900	WSSN 050 153 A40-2	40	50	40	38	153	78	2	○

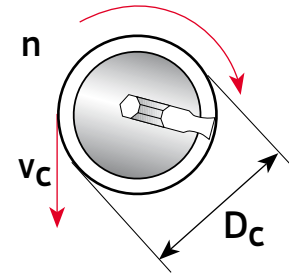
⊗ Stock item | Produto de stock | Itens de stock

○ Available under request | Disponível sobre consulta | Disponible bajo consulta

Conversion of selected cutting speed to rotational speed is calculated using the following formulas:

Spindle Speed (rev/min)

$$n = \frac{v_c \cdot 1000}{\pi \cdot D_c} \quad (\text{RPM})$$



Cutting Speed (m/min)

$$v_c = \frac{n \cdot \pi \cdot D_c}{1000} \quad (\text{m/min})$$

Nomenclature

- D_c - Cutter diameter (mm)
- n - Spindle Speed (rev/min)
- V_c - Cutting Speed (m/min)

Example for the following values:

$V_c = 120 \text{ m/min}$
 $D_c = 30 \text{ mm}$

$$n = \frac{V_c \times 1000}{\pi \times D} = \frac{120 \times 1000}{3.14 \times 30} = 1274 \text{ RPM}$$

SPEED AND FEED SELECTION

Seleção da velocidade e do avanço | Selección de la velocidad e de avance

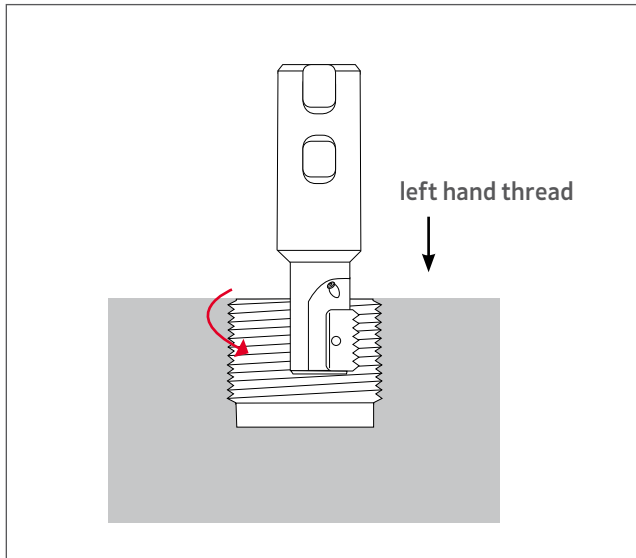
TiAlN – Sub-Micron Grade with Titanium Aluminium Nitride multi-layer coating (ISO K10-K20). This is a general purpose grade, which can be used with all materials, it should be run at medium to high cutting speeds.

Recommended Feed Rate: 0.05 - 0.15 mm

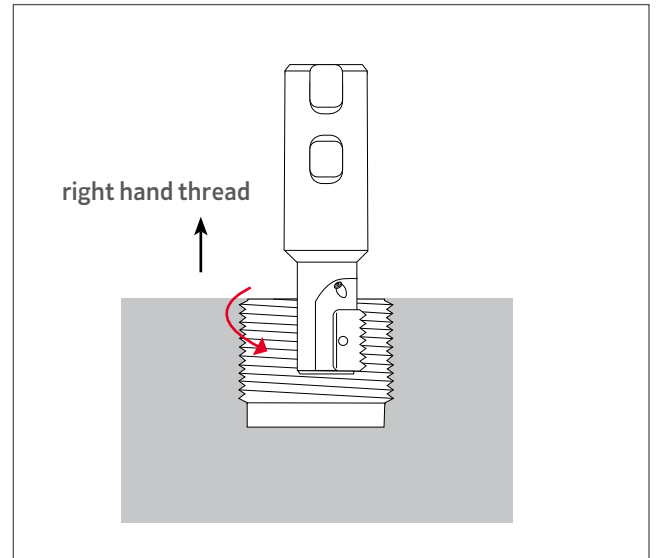
ISO	Material	Cutting Speed V_c (m/min) TiAlN
P	Low and Medium Carbon Steels	115 - 280
	High Carbon Steels	130 - 200
	Treated Steels	105 - 180
M	Stainless Steels, Cast Stainless Steels	130 - 190
	Cast Steels	150 - 190
K	Cast Iron	80 - 170
N	Non-Ferrous and Aluminium	180 - 340
	Synthetics, Duroplastics, Thermoplastics	115 - 460
S	Nickel Alloys, Titanium Alloys	25 - 90

INTERNAL THREAD | Rosca interna | Roscado interno

Left hand thread | Rosca esquerda | Rosca izquierda

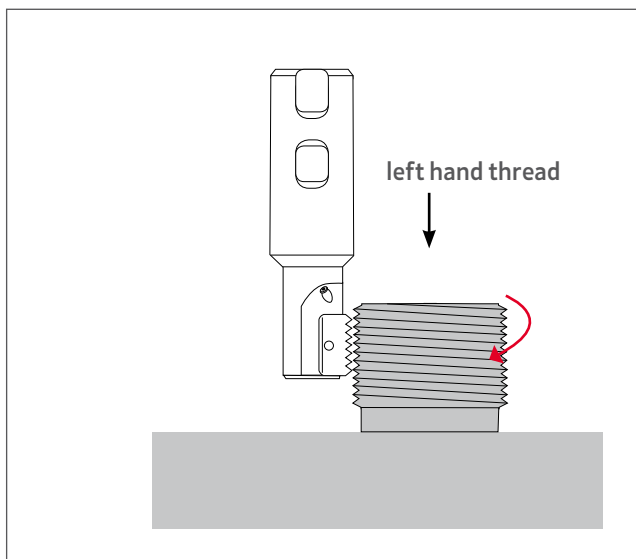


Right hand thread | Rosca direita | Rosca derecha

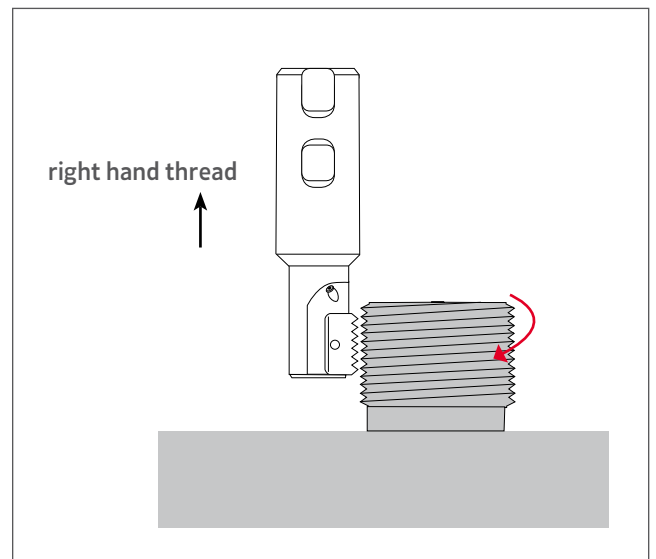


EXTERNAL THREAD | Rosca externa | Roscado externo

Left hand thread | Rosca esquerda | Rosca izquierda

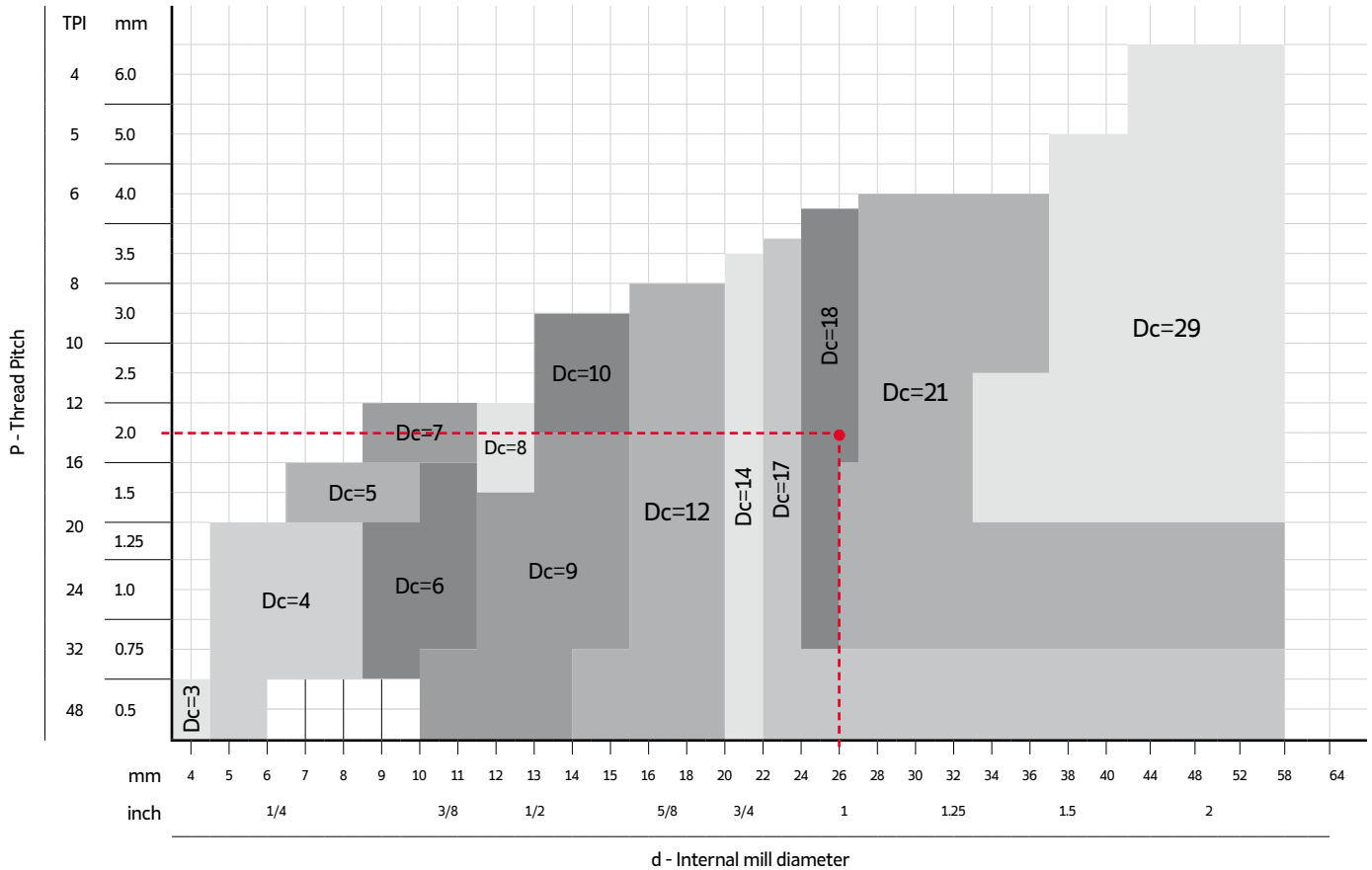


Right hand thread | Rosca direita | Rosca derecha



TOOL SELECTION | Selecção de ferramenta | Selección de herramienta

The chart below provide a accurate visual selection tool for internal threading.
(Suitable for the thread forms: ISO, UN, WHIT, NPT, NPTF, BSPT and PG)



Any tool with a small diameter can produce larger diameter threads.

Example:

Internal thread: M26 x 2.0

Find a milling tool to produce **d = 26 internal** right hand ISO thread with a tread pitch **P = 2.0mm**.

Internal mill diameter **d = 26 mm**

+

Thread pitch **P = 2.0 mm**

As you can see above, the two red lines intersect at a selected tool with a cutting diameter of **Dc = 18 mm**

Chosen toolholder - order code: 212395200 | Reference: WSSN 018 085 A21-1

Chosen insert - order code: 2123995G4 | Reference: 21 | 2.0 ISO PH7920

Right hand Thread
Rosca direita | Rosca derecha

