

Maschi a macchina, scanalature diritte, imb. corretto, fil. metrica ISO passo grosso

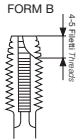
Machine taps, spiral point, metric thread / Tarauds machine, entrée gun, fil. métrique

Machos de maquina, entrada corregida, rosca metrica / Maschinen-Gewindebohrer für metrisches ISO-Regelgewinde

M

DIN 371/B ISO 2/6H

Gambo rinforzato / Reinforced shank / Queue renforcée / Mango reforzado / Verstärkten Schaft



HSS-G AISI M2
HV 750

HSS-CO AISI M35
HV 820÷850

Ø	/	L	d	pcs	Art. 10162 HSS-G	Art. 10250 HSS-CO		
					cod.	€ cad/each	cod.	€ cad/each
M 2	x 0,4	8	45	2,8	1	1016202X04	1025002X04	
2,5	x 0,45	9	50	2,8	1	10162025X045	10250025X045	
3	x 0,5	11	56	3,5	1	1016203X05	1025003X05	
3,5	x 0,6	13	56	4	1	10162035X06	10250035X06	
4	x 0,7	13	63	4,5	1	1016204X07	1025004X07	
5	x 0,8	16	70	6	1	1016205X08	1025005X08	
6	x 1	19	80	6	1	1016206X1	1025006X1	
7	x 1	19	80	7	1	1016207X1	1025007X1	
8	x 1,25	22	90	8	1	1016208X125	1025008X125	
9	x 1,25	22	90	9	1	- - -	1025009X125	
10	x 1,5	24	100	10	1	1016210X15	1025010X15	

Applicazioni / Applications

HSS-G
*R ≤ 700 N/mm²



Acciaio / Steel



Metals



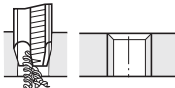
HSS-CO
*R ≤ 850 N/mm²



Inox



Acciaio / Steel



- Per fori passanti in acciai con R_s * N/mm², ghisa, metalli non ferrosi a truciolo lungo.
- For through holes in steel with R_s * N/mm², cast iron, non ferrous metals with long chip
- Pour trous débouchants en acier avec R_s *N/mm², fonte, alliages légers.
- Para orificios pasantes en materiales de hasta R_s * N/mm².
- Für durchgangsloch in Stahl mit R_s *N/mm², Stahlguss, alu langspanend.



M 3÷12 7 pcs

10240300 HSS-G
€

10345300 HSS-CO
€



M 3÷12 14 pcs

2,5-3,3-4,2-5
6,8-8,5-10,2

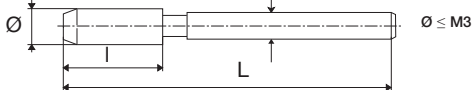
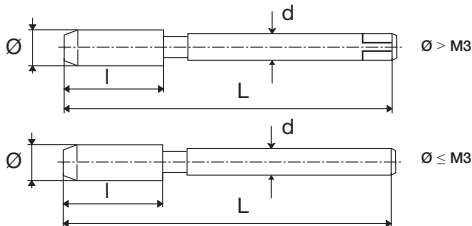
10240306 HSS-G
€

10345306 HSS-CO
€

DIN 376/B ISO 2/6H



Confezione / Packaging



Gambo cilindrico Ø ≤ M3
Round shank

Ø	/	L	d	pcs	Art. 10165 HSS-G	Art. 10253 HSS-CO		
					cod.	€ cad/each	cod.	€ cad/each
M 3	x 0,5	11	56	2,2	1	1016503X05	1025303X05	
4	x 0,7	13	63	2,8	1	1016504X07	1025304X07	
5	x 0,8	16	70	3,5	1	1016505X08	1025305X08	
6	x 1	19	80	4,5	1	1016506X1	1025306X1	
8	x 1,25	22	90	6	1	1016508X125	1025308X125	
10	x 1,5	24	100	7	1	1016510X15	1025310X15	
12	x 1,75	29	110	9	1	1016512X175	1025312X175	
14	x 2	30	110	11	1	1016514X2	1025314X2	
16	x 2	30	110	12	1	1016516X2	1025316X2	
18	x 2,5	34	125	14	1	1016518X25	1025318X25	
20	x 2,5	34	140	16	1	1016520X25	1025320X25	
22	x 2,5	34	140	18	1	1016522X25	1025322X25	
24	x 3	38	160	18	1	1016524X3	1025324X3	
27	x 3	38	160	20	1	1016527X3	1025327X3	
30	x 3,5	45	180	22	1	1016530X35	1025330X35	
33	x 3,5	50	180	25	1	1016533X35	1025333X35	
36	x 4	56	200	28	1	1016536X4	1025336X4	
39	x 4	60	200	32	1	1016539X4	1025339X4	
42	x 4,5	60	200	32	1	1016542X45	1025342X45	
45	x 4,5	65	220	36	1	1016545X45	1025345X45	
48	x 5	70	250	36	1	1016548X5	1025348X5	
52	x 5	70	250	40	1	1016552X5	1025352X5	
56	x 5,5	70	250	40	1	- - -	1025356X55	
60	x 5,5	75	280	45	1	- - -	1025360X55	
64	x 6	80	315	50	1	- - -	1025364X6	
68	x 6	80	315	50	1	- - -	1025368X6	

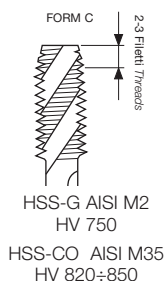
Maschi a macchina, scanalature destre 35°, imb. "C", fil. metrica ISO



Machine taps, 35° spiral flute, metric coarse thread / Tarauds machine, goujures 35°, filetage métrique gros. / Machos de maquina, canal helicoidal 35°, rosca metrica vasta / Maschinen-Gewindebohrer, 35° rechtsspirale, für metrisches ISO-Regelgewinde

M

DIN 371/C-35° ISO 2/6H



M	Ø	/	L	d	pcs
2	x 0,4	6	45	2,8	1
2,5	x 0,45	6	50	2,8	1
3	x 0,5	6	56	3,5	1
3,5	x 0,6	13	56	4	1
4	x 0,7	7	63	4,5	1
5	x 0,8	8	70	6	1
6	x 1	10	80	6	1
7	x 1	19	80	7	1
8	x 1,25	14	90	8	1
9	x 1,25	14	90	9	1
10	x 1,5	16	100	10	1

Art. 10183 HSS-G

cod.	€ cad/each
1018302X04	
10183025X045	
1018303X05	
10183035X06	
1018304X07	
1018305X08	
1018306X1	
1018307X1	
1018308X125	
- - -	
1018310X15	

Art. 10255 HSS-CO

cod.	€ cad/each
1025502X04	
10255025X045	
1025503X05	
10255035X06	
1025504X07	
1025505X08	
1025506X1	
1025507X1	
1025508X125	
1025509X125	
1025510X15	

Applicazioni / Applications

HSS-G
*R ≤ 700 N/mm²



Acciaio / Steel



Metals



HSS-CO
*R ≤ 850 N/mm²



Inox



Acciaio / Steel



- Per fori ciechi in acciai con R_s * /mm² ghisa malleabile, metalli non ferrosi a truciolo lungo, acciai resistenti al calore, acciai inox.
- For blind holes in steel with R_s * N/mm² malleable cast iron, non ferrous metal with long chips, stainless steel, heat resistant steel.
- Pour trous borgnes en acier avec R_s * N/mm² fonte, alliages légers, acier inoxydable.
- Para orificios ciegos in acero de hasta R_s * /mm² aleaciones ligeras, fundicion, acero aleado y acero inox.
- Für grundloch in Stahl mit R_s * N/mm² Stahlguss, alu langspanend, korrosions-beständige Stähle (V2A-V4A) etc.



M 3÷12 7 pcs

10240305 HSS-G
€

10345305 HSS-CO
€



M 3÷12 14 pcs

2,5-3,3-4,2-5
6,8-8,5-10,2

10240307 HSS-G
€

10345307 HSS-CO
€



M 3÷12 14 pcs

DIN 371/B+371/C 35°

10240310 HSS-G
€

10345310 HSS-CO
€

DIN 376/C-35° ISO 2/6H



M	Ø	/	L	d	pcs
3 x 0,5	5	56	2,2	1	
4 x 0,7	7	63	2,8	1	
5 x 0,8	8	70	3,5	1	
6 x 1	10	80	4,5	1	
8 x 1,25	13	90	6	1	
10 x 1,5	15	100	7	1	
12 x 1,75	18	110	9	1	
14 x 2	20	110	11	1	
16 x 2	22	110	12	1	
18 x 2,5	25	125	14	1	
20 x 2,5	25	140	16	1	
22 x 2,5	25	140	18	1	
24 x 3	30	160	18	1	
27 x 3	30	160	20	1	
30 x 3,5	35	180	22	1	
33 x 3,5	35	180	25	1	
36 x 4	40	200	28	1	
39 x 4	40	200	32	1	
42 x 4,5	45	200	32	1	
45 x 4,5	45	220	36	1	
48 x 5	50	250	36	1	
52 x 5	50	250	40	1	
56 x 5,5	70	250	40	1	
60 x 5,5	70	280	45	1	
64 x 6	75	315	50	1	
68 x 6	75	315	50	1	

Art. 10180 HSS-G

cod.	€ cad/each
1018003X05	
1018004X07	
1018005X08	
1018006X1	
1018008X125	
1018010X15	
1018012X175	
1018014X2	
1018016X2	
1018018X25	
1018020X25	
1018022X25	
1018024X3	
1018027X3	
1018030X35	
1018033X35	
1018036X4	
1018039X4	
1018042X45	
1018045X45	
1018048X5	
1018052X5	
- - -	
- - -	
- - -	
- - -	

Art. 10257 HSS-CO

cod.	€ cad/each
1025703X05	
1025704X07	
1025705X08	
1025706X1	
1025708X125	
1025710X15	
1025712X175	
1025714X2	
1025716X2	
1025718X25	
1025720X25	
1025722X25	
1025724X3	
1025727X3	
1025730X35	
1025733X35	
1025736X4	
1025739X4	
1025742X45	
1025745X45	
1025748X5	
1025752X5	
1025756X55	
1025760X55	
1025764X6	
1025768X6	

Gambo cilindrico Ø ≤ M3
Round shank

Maschi a macchina per dadi, filettatura metrica ISO a passo grosso.

Machine nut taps, metric coarse thread / Tarauds machine à l'enfilade, filetage métrique

Machos de maquina, tipo tuercas, rosca metrica / Maschinen-muttergewindebohrer, metrisches Regel-Gewinde

10273



DIN 357
ISO 2/6H



HSS-CO AISI M35
HV 820÷850



Gambo cilindrico $\varnothing \leq M3$
Round shank

Art. 10273
HSS-CO

	\varnothing	/	L	d	pcs	cod.	€ cad/each
M	3 x 0,5	22	70	2,2	1	1027303X05	
	4 x 0,7	25	90	2,8	1	1027304X07	
	5 x 0,8	28	100	3,5	1	1027305X08	
	6 x 1	32	110	4,5	1	1027306X1	
	8 x 1,25	40	125	6	1	1027308X125	
	10 x 1,5	45	140	7	1	1027310X15	
	12 x 1,75	50	180	9	1	1027312X175	
	14 x 2	56	200	11	1	1027314X2	
	16 x 2	63	200	12	1	1027316X2	
	18 x 2,5	63	220	14	1	1027318X25	
	20 x 2,5	70	250	16	1	1027320X25	
	22 x 2,5	80	280	18	1	1027322X25	
	24 x 3	80	280	18	1	1027324X3	

Punta-Maschio a macchina per forature e filettature in una sola operazione.

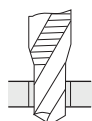
Combined machine drill-tap for drilling and threading in one operation / Foret taraudeur à machine, filetage métrique

Brocas-macho, rosca metrica normal / Maschinen-kombi-Gewindebohrer für metrisches ISO Regel-Gewinde

10290



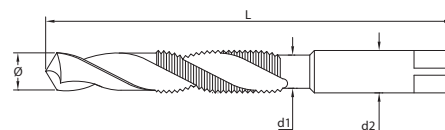
DIN 357
ISO 2/6H



Art. 10290
HSS-CO

M

	\varnothing	L	d1	d2	pcs	cod.	€ cad/each
M	3 x 0,5	56	2,5	3	1	1029003X05	
	4 x 0,7	63	3,3	4	1	1029004X07	
	5 x 0,8	71	4,2	5	1	1029005X08	
	6 x 1	80	5	6	1	1029006X1	
	8 x 1,25	95	6,8	8	1	1029008X125	
	10 x 1,5	106	8,5	10	1	1029010X15	
	12 x 1,75	115	10,2	12	1	1029012X175	

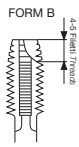


Maschi a macchina "lunghi", filettatura metrica ISO a passo grosso

Long machine taps, ISO metric coarse threads / Tarauds machine long filetage metric ISO

Machos de máquina largos, rosca metrica larga / Lange maschinen-gewindebohrer, metrisches-Regelgewinde

10291



HSS-CO AISI M35
HV 820÷850

≈ DIN 371/B
ISO 2/6H

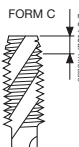


Art. 10291
HSS-CO

M

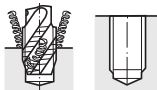
Ø	L	/	d	pcs	cod.	€ cad/each
M 3 x 0,5	x 100	11	3,5	1	1029103100	
4 x 0,7	x 100	13	4,5	1	1029104100	
4 x 0,7	x 120	13	4,5	1	1029104120	
5 x 0,8	x 100	16	6	1	1029105100	
5 x 0,8	x 120	16	6	1	1029105120	
5 x 0,8	x 150	16	6	1	1029105150	
6 x 1	x 100	19	6	1	1029106100	
6 x 1	x 120	19	6	1	1029106120	
6 x 1	x 150	19	6	1	1029106150	
8 x 1,25	x 120	22	8	1	1029108120	
8 x 1,25	x 150	22	8	1	1029108150	
10 x 1,5	x 120	24	10	1	1029110120	
10 x 1,5	x 150	24	10	1	1029110150	
12 x 1,75	x 120	29	12	1	1029112120	
12 x 1,75	x 150	29	12	1	1029112150	

10292



HSS-CO AISI M35
HV 820÷850

≈ DIN 371/C-35°
ISO 2/6H



Art. 10292
HSS-CO

M

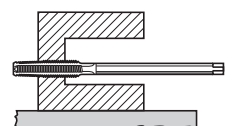
Ø	L	/	d	pcs	cod.	€ cad/each
M 3 x 0,5	x 100	6	3,5	1	1029203100	
4 x 0,7	x 100	7	4,5	1	1029204100	
4 x 0,7	x 120	7	4,5	1	1029204120	
5 x 0,8	x 100	8	6	1	1029205100	
5 x 0,8	x 120	8	6	1	1029205120	
5 x 0,8	x 150	8	6	1	1029205150	
6 x 1	x 100	10	6	1	1029206100	
6 x 1	x 120	10	6	1	1029206120	
6 x 1	x 150	10	6	1	1029206150	
8 x 1,25	x 120	14	8	1	1029208120	
8 x 1,25	x 150	14	8	1	1029208150	
10 x 1,5	x 120	16	10	1	1029210120	
10 x 1,5	x 150	16	10	1	1029210150	
12 x 1,75	x 120	18	12	1	1029212120	
12 x 1,75	x 150	18	12	1	1029212150	

Applicazioni / Applications

R ≤ 850 N/mm²



- Per maschiature in acciai con R_s 850 N/mm², ghisa malleabile, metalli non ferrosi a truciolo lungo, acciai resistenti al calore, acciai refrattari, acciai inox;
- For threading steel with R_s 850 N/mm², malleable cast iron, nonferrous metal with long chips, heat-resistant and refractory steel, stainless steel.
- Pour tarauder acier avec R_s 850 N/mm², fonte malléable, alliages légers, acier réfractaire et acier inoxydable.
- Para atornillar acero con R_s 850 N/mm², fundición, aleaciones ligeras, acero aleado y refractario, acero inoxidable.
- Um in Stahl mit R_s 850 N/mm², Temperguss, Nichteisenmetalle, hitzbeständigem Stahl und rostfreierem Stahl Gewinde zu bohren



Maschi a macchina in HSS-CO rivestiti al TiN, fil. metrica ISO a passo grosso

HSS-CO TiN coated machine taps, metric thread / Tarauds machine HSS-CO avec revêtement TiN, fil. métrique / Machos de maquina HSS-CO con recubrimiento de titanio, rosca metrica / Maschinengewindebohrer mit TiN beschichtung für metrisches ISO Regalgewinde

10350 10351



HSS-CO+TiN
HV 0,05=2500

DIN 371/B DIN 376/B



Art. 10350 HSS-CO+TiN

M

Ø	/	L	d	pcs	cod.	€ cad/each
M 3 x 0,5	11	56	3,5	1	1035003X05	
4 x 0,7	13	63	4,5	1	1035004X07	
5 x 0,8	16	70	6	1	1035005X08	
6 x 1	19	80	6	1	1035006X1	
8 x 1,25	22	90	8	1	1035008X125	
10 x 1,5	24	100	10	1	1035010X15	

Art. 10351 HSS-CO+TiN

Ø	/	L	d	pcs	cod.	€ cad/each
M 12 x 1,75	29	110	9	1	1035112X175	
14 x 2	30	110	11	1	1035114X2	
16 x 2	30	110	12	1	1035116X2	
18 x 2,5	34	125	14	1	1035118X25	
20 x 2,5	34	140	16	1	1035120X25	
22 x 2,5	34	140	18	1	1035122X25	
24 x 3	38	160	18	1	1035124X3	



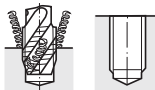
M 3=12 7 pcs
10390300 HSS-CO+TiN
€

10354 10355



HSS-CO+TiN

DIN 371/C-35° DIN 376/C-35°



Art. 10354 HSS-CO+TiN

M

Ø	/	L	d	pcs	cod.	€ cad/each
M 3 x 0,5	6	56	3,5	1	1035403X05	
4 x 0,7	7	63	4,5	1	1035404X07	
5 x 0,8	8	70	6	1	1035405X08	
6 x 1	10	80	6	1	1035406X1	
8 x 1,25	14	90	8	1	1035408X125	
10 x 1,5	16	100	10	1	1035410X15	

Art. 10355 HSS-CO+TiN

Ø	/	L	d	pcs	cod.	€ cad/each
M 12 x 1,75	18	110	9	1	1035512X175	
14 x 2	20	110	11	1	1035514X2	
16 x 2	22	110	12	1	1035516X2	
18 x 2,5	25	125	14	1	1035518X25	
20 x 2,5	25	140	16	1	1035520X25	
22 x 2,5	25	140	18	1	1035522X25	
24 x 3	30	160	18	1	1035524X3	



M 3=12 7 pcs
10390305 HSS-CO+TiN
€

Applicazioni / Applications

R ≤ 1200 N/mm²



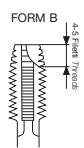
- Alto rendimento nella filettatura in acciai ad elevata resistenza sino a R_s ≤ 1200 N/mm², quali acciai da bonifica alto legati, acciai inox, acciai resistenti agli acidi, acciai refrattari. Temperatura max. di lavoro 550°
- High performances in high strength steel R_s ≤ 1200 N/mm², stainless steel, acid resistant steel, high alloy construction steel.
- Haute rendement en taraudage des aciers alliés traités, acier inox, acier réfractaire avec R_s ≤ 1200 N/mm²
- Alto rendimento en taladro de acero de alta resistencia de hasta R_s ≤ 1200 N/mm², acero inox, acero tratado, etc...
- Breites anwendungsspektrum u.a. für gut Spanbare Stähle, rostfrei Stähle, Säurebeständiggestähle und Vergütungsstähle bis 1200 N/mm²

Maschi a macchina in HSS-CO rivestiti al TiAlN, fil. metrica passo grosso



HSS-CO TiAlN coated machine taps / Tarauds machine HSS-CO avec revêtement TiAlN, fil. métrique / Machos de maquina HSS-CO con recubrimiento TiAlN, rosca metrica / Maschinengewindebohrer mit TiAlN beschichtung für metrisches ISO Regelgewinde

10400 10401



HSS-CO+TiAlN
HV 0,05=3000
T° Max. : 800°C

DIN 371/B DIN 376/B



Art. 10400 HSS-CO+TiAlN

M

Ø	/	L	d	pcs	cod.	€ cad/each
M 3 x 0,5	11	56	3,5	1	1040003X05	
4 x 0,7	13	63	4,5	1	1040004X07	
5 x 0,8	16	70	6	1	1040005X08	
6 x 1	19	80	6	1	1040006X1	
8 x 1,25	22	90	8	1	1040008X125	
10 x 1,5	24	100	10	1	1040010X15	

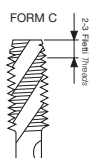
Art. 10401 HSS-CO+TiAlN

Ø	/	L	d	pcs	cod.	€ cad/each
M 12 x 1,75	29	110	9	1	1040112X175	
14 x 2	30	110	11	1	1040114X2	
16 x 2	30	110	12	1	1040116X2	
18 x 2,5	34	125	14	1	1040118X25	
20 x 2,5	34	140	16	1	1040120X25	
22 x 2,5	34	140	18	1	1040122X25	
24 x 3	38	160	18	1	1040124X3	



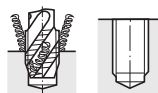
M 3+12 7 pcs
10450300 HSS-CO+TiAlN
€

10404 10405



HSS-CO+TiAlN
HV 0,05=3300
T° Max. : 800°C

DIN 371/C-35° DIN 376/C-35°



Art. 10404 HSS-CO+TiAlN

M

Ø	/	L	d	pcs	cod.	€ cad/each
M 3 x 0,5	6	56	3,5	1	1040403X05	
4 x 0,7	7	63	4,5	1	1040404X07	
5 x 0,8	8	70	6	1	1040405X08	
6 x 1	10	80	6	1	1040406X1	
8 x 1,25	14	90	8	1	1040408X125	
10 x 1,5	16	100	10	1	1040410X15	

Art. 10405 HSS-CO+TiAlN

Ø	/	L	d	pcs	cod.	€ cad/each
M 12 x 1,75	18	110	9	1	1040512X175	
14 x 2	20	110	11	1	1040514X2	
16 x 2	22	110	12	1	1040516X2	
18 x 2,5	25	125	14	1	1040518X25	
20 x 2,5	25	140	16	1	1040520X25	
22 x 2,5	25	140	18	1	1040522X25	
24 x 3	30	160	18	1	1040524X3	



M 3+12 7 pcs
10450305 HSS-CO+TiAlN
€

Applicazioni / Applications

R ≤ 1300 N/mm²



- Altissimo rendimento nella maschiatura di acciai ad alta resistenza sino a R_s 1300 N/mm², quali acciai inox, acciai resistenti alla corrosione, acciai refrattari, acciai da bonifica alto legati trattati. Temperatura operativa sino a 800°

- High performances in high strength steel with R_s 1300 N/mm², stainless steel, heat resistant steel, high alloy steel.

- Haute rendement en taraudage des aciers alliés traités, acier inox, acier refractaire avec R_s 1300 N/mm²

- Alto rendimiento en taladro de acero de alta resistencia de hasta R_s 1300 N/mm², acero inox, acero aleado tratado, etc...

- Breites anwendungsspektrum u.a. für gut Spanbare Stähle, rostfrei Stähle, Säurebeständigstähle und Vergütungsstähle bis 1300 N/mm²

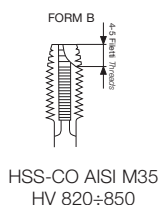
Maschi a macchina, filettatura Inglese Whitworth a passo grosso



Machine taps, british standard thread / Tarauds machine, filetage BSW

Machos de maquina, rosca inglesa BSW / Maschinengewindebohrer, Whitworth-gewinde BS 84

10265 10266



HSS-CO AISI M35
HV 820÷850

≈ DIN 371/B ≈ DIN 376/B



Art. 10265 HSS-CO ISO 2/6 H

BSW

Ø	l	L	d	pcs	cod.	€ cad/each
BSW 1/8 x 40	5	56	3,5	1	102651/8	
5/32 x 32	6	63	4,5	1	102655/32	
3/16 x 24	9	70	5,5	1	102653/16	
1/4 x 20	10	90	7	1	102651/4	
5/16 x 18	12	90	8	1	102655/16	
3/8 x 16	14	100	9	1	102653/8	

Art. 10266 HSS-CO

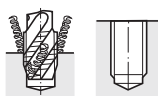
Ø	l	L	d	pcs	cod.	€ cad/each
BSW 7/16 x 14	20	100	8	1	102667/16	
1/2 x 12	25	110	9	1	102661/2	
9/16 x 12	25	110	11	1	102669/16	
5/8 x 11	28	110	12	1	102665/8	
3/4 x 10	32	125	14	1	102663/4	
7/8 x 9	32	140	18	1	102667/8	
1" x 8	36	160	20	1	102661"	
1.1/4 x 7	40	180	22	1	102661.1/4	
1.1/2 x 6	50	200	32	1	102661.1/2	

10274 10275



HSS-CO AISI M35
HV 820÷850

≈ DIN 371/C-35° ≈ DIN 376/C-35°



Art. 10274 HSS-CO

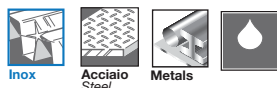
Ø	l	L	d	pcs	cod.	€ cad/each
BSW 1/8 x 40	5	56	3,5	1	102741/8	
5/32 x 32	6	63	4,5	1	102745/32	
3/16 x 24	9	70	5,5	1	102743/16	
1/4 x 20	10	90	7	1	102741/4	
5/16 x 18	12	90	8	1	102745/16	
3/8 x 16	14	100	9	1	102743/8	

Art. 10275 HSS-CO

Ø	l	L	d	pcs	cod.	€ cad/each
BSW 7/16 x 14	20	100	8	1	102757/16	
1/2 x 12	25	110	9	1	102751/2	
9/16 x 12	25	110	11	1	102759/16	
5/8 x 11	28	110	12	1	102755/8	
3/4 x 10	32	125	14	1	102753/4	
7/8 x 9	32	140	18	1	102757/8	
1" x 8	36	160	20	1	102751"	
1.1/4 x 7	40	180	22	1	102751.1/4	
1.1/2 x 6	50	200	32	1	102751.1/2	

Applicazioni / Applications

R_s 850 N/mm²



Maschi a macchina con anello blu, filettatura metrica ISO

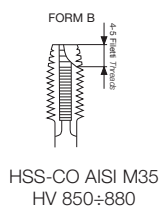
Blue ring machine taps / Tarauds machine avec anneau bleu

Machos de maquina con anillo azul / Blauring-Maschinen-Gewindebohrer



Speciali per acciai refrattari, acciai da tempra e cementazione - Special for wear and heat resistant steel

10500 10501



HSS-CO AISI M35
HV 850÷880

DIN 371/B

DIN 376/B



Art. 10500
HSS-CO

M

Ø	/	L	d	pcs	cod.	€ cad/each
M 3 x 0,5	11	56	3,5	1	1050003X05	
4 x 0,7	13	63	4,5	1	1050004X07	
5 x 0,8	16	70	6	1	1050005X08	
6 x 1	19	80	6	1	1050006X1	
8 x 1,25	22	90	8	1	1050008X125	
10 x 1,5	24	100	10	1	1050010X15	



M 3÷12 7 pcs
10520302 HSS-CO
€

Art. 10501
HSS-CO

Ø	/	L	d	pcs	cod.	€ cad/each
M 12 x 1,75	29	110	9	1	1050112X175	
14 x 2	30	110	11	1	1050114X2	
16 x 2	30	110	12	1	1050116X2	
18 x 2,5	34	125	14	1	1050118X25	
20 x 2,5	34	140	16	1	1050120X25	

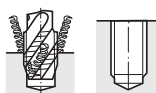
10502 10503



HSS-CO AISI M35
HV 850÷880

DIN 371/C-40°

DIN 376/C-40°



Art. 10502
HSS-CO 40°

M

Ø	/	L	d	pcs	cod.	€ cad/each
M 3 x 0,5	6	56	3,5	1	1050203X05	
4 x 0,7	7	63	4,5	1	1050204X07	
5 x 0,8	8	70	6	1	1050205X08	
6 x 1	10	80	6	1	1050206X1	
8 x 1,25	14	90	8	1	1050208X125	
10 x 1,5	16	100	10	1	1050210X15	



M 3÷12 7 pcs
10520303 HSS-CO
€

Art. 10503
HSS-CO 40°

Ø	/	L	d	pcs	cod.	€ cad/each
M 12 x 1,75	18	110	9	1	1050312X175	
14 x 2	20	110	11	1	1050314X2	
16 x 2	22	110	12	1	1050316X2	
18 x 2,5	25	125	14	1	1050318X25	
20 x 2,5	25	140	16	1	1050320X25	

Applicazioni / Applications

R ≤ 1200 N/mm²



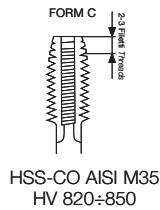
- Per filettatura in acciai resistenti all'usura quali gli acciai refrattari, acciai legati da tempra e cementazione, acciai per utensili con R_s ≤ 1200 N/mm².
- For use in wear resistant steel, heat resistant steel, tool steel with R_s ≤ 1200 N/mm²
- Pour taraudage en aciers refractaires, acier de outil, acier pour traitement thermique avec R_s ≤ 1200 N/mm²
- Para rosca en acero resistente al calor, acero para tratamiento termico, acero para utensilios hasta R_s ≤ 1200 N/mm²
- Für Gewindebohrer in hochlegierte Stähle, zähe kurzspanende Werkstoffe, legierte Werkzeugstähle.

Maschi a macchina con anello nero, filettatura metrica ISO

Black ring machine taps / Tarauds machine avec anneau noir

Machos de maquina con anillo negro / Schwarzring-Maschinengewindebohrer

10508 10509

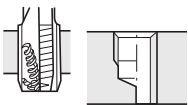


Nitrurato Nitrited

L'arricchimento della superficie con nitrato e carbonio diminuisce la tendenza all'incollamento dei trucioli e aumenta durezza superficie e resistenza a usura.

The surface enrichment with nitrate and carbon is aimed to avoiding chips sticking on the tool and to increasing surface hardness and wear resistance.

DIN 371/C DIN 376/C



Art. 10508
HSS-CO

M

Ø	l	L	d	pcs	cod.	€ cad/each
M 3 x 0,5	11	56	3,5	1	1050803X05	
4 x 0,7	13	63	4,5	1	1050804X07	
5 x 0,8	16	70	6	1	1050805X08	
6 x 1	19	80	6	1	1050806X1	
8 x 1,25	22	90	8	1	1050808X125	
10 x 1,5	24	100	10	1	1050810X15	



M 3÷12 7 pcs
10520304 HSS-CO
€

Art. 10509
HSS-CO

Ø	l	L	d	pcs	cod.	€ cad/each
M 12 x 1,75	29	110	9	1	1050912X175	
14 x 2	30	110	11	1	1050914X2	
16 x 2	30	110	12	1	1050916X2	
18 x 2,5	34	125	14	1	1050918X25	
20 x 2,5	34	140	16	1	1050920X25	

Applicazioni / Applications



Ghisa
Cast Iron



Bronze
Mg Alloys



Alu



Plastica Dura
Hard Plastics

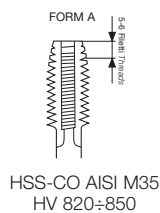
- Per filettatura in fori ciechi e passanti in ghisa grigia e sferoidale, leghe di magnesio, bronzo e alluminio a truciolo corto, plastica dura.
- For making threads into through and blind holes, cast iron, magnesium alloys, bronze and short chip aluminium, hard plastics.
- Pour taraudage en fontes à haute résistance, alliages de magnésium, bronze, plastique très dur.
- Para roscar fundiciones, aleaciones de magnesio, bronzo, plastico duro.
- Für Grauguss und Sphäroguss, Magnesiumlegierungen, Bronze und Alu-Kurzspanend.

Maschi a macchina con anello rosso, filettatura metrica ISO

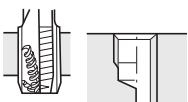
Red ring machine taps / Tarauds machine avec anneau rouge

Machos de maquina con anillo rojo / Rotring-Maschinengewindebohrer

10510



DIN 371/A



Art. 10510
HSS-CO

M

Ø	l	L	d	pcs	cod.	€ cad/each
M 4 x 0,7	9	63	4,5	1	1051004X07	
5 x 0,8	11	70	6	1	1051005X08	
6 x 1	12	80	6	1	1051006X1	
8 x 1,25	15	90	8	1	1051008X125	
10 x 1,5	16	100	10	1	1051010X15	



M 4÷10 5 pcs
10520310 HSS-CO
€

Applicazioni / Applications

R ≥ 1200 N/mm²



Inox



Acciaio
Steel



- Per filettatura in acciai resistenti all'usura quali gli acciai refrattari, acciai legati da tempra e cementazione, acciai per utensili con R ≥ 1200 N/mm².
- For use in wear resistant steel, heat resistant steel, tool steel with R ≥ 1200 N/mm²
- Pour taraudage en aciers refractaires, acier de outil, acier pour traitement thermique avec R ≥ 1200 N/mm²
- Para rosca en acero resistente al calor, acero para tratamiento termico, acero para utensilios hasta R ≥ 1200 N/mm²
- Für Gewindebohrer in hochlegierte Stähle, zähe kurzspanende Werkstoffe, legierte Werkzeugstähle.

Filiera tonde al cromo, filettatura metrica ISO



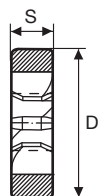
C.V. round dies, metric thread / Filière ronde, filetage métrique

Cojinetes redondos C.V., rosca métrica / Runde Schneideisen C.V., metrisches ISO Gewinde

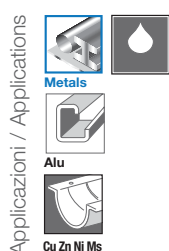
C.V. UNI 4535 ≈DIN 223

Metrica passo grosso Metric coarse pitch-Pas gros métrique
Rosca métrica larga-Métrisches grossgewinde

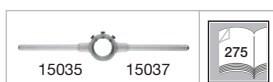
M



HRC ≈ 60±61



R ≤ 600 N/mm²



Ø	DxS	pcs	cod.	€ cad/each	12001
M 2 x 0,4	25,4 x 9	5	12001202X04		
3 x 0,5	25,4 x 9	5	12001203X05		
4 x 0,7	25,4 x 9	5	12001204X07		
5 x 0,8	25,4 x 9	5	12001205X08		
6 x 1	25,4 x 9	5	12001206X1		
6 x 1	38,1 x 14	5	12001306X1		
7 x 1	25,4 x 9	5	12001207X1		
8 x 1,25	25,4 x 9	5	12001208X125		
8 x 1,25	38,1 x 14	5	12001308X125		
9 x 1,25	25,4 x 9	5	12001209X125		
10 x 1,5	25,4 x 9	5	12001210X15		
10 x 1,5	38,1 x 14	5	12001310X15		
11 x 1,5	38,1 x 14	5	12001311X15		
12 x 1,75	25,4 x 9	5	12001212X175		
12 x 1,75	38,1 x 14	5	12001312X175		
14 x 2	38,1 x 14	5	12001314X2		
16 x 2	38,1 x 14	5	12001316X2		
16 x 2	50,8 x 16	3	12001516X2		
18 x 2,5	38,1 x 14	5	12001318X25		
18 x 2,5	50,8 x 16	3	12001518X25		
20 x 2,5	38,1 x 14	5	12001320X25		
20 x 2,5	50,8 x 16	3	12001520X25		
22 x 2,5	50,8 x 16	3	12001522X25		
24 x 3	50,8 x 16	3	12001524X3		
27 x 3	63,5 x 19	1	12001627X3		
30 x 3,5	63,5 x 19	1	12001630X35		
33 x 3,5	63,5 x 19	1	12001633X35		
36 x 4	63,5 x 19	1	12001636X4		

C.V. UNI 4535 ≈DIN 223

Metrica passo fine Metric fine - Métrique fin
Metrica fina - ISO Feingewinde

MF



Confezione / Packaging



Ø	DxS	pcs	cod.	€ cad/each	12005
MF 6 x 0,75	25,4 x 9	5	12005206X075		
7 x 0,75	25,4 x 9	5	12005207X075		
8 x 0,75	25,4 x 9	5	12005208X075		
8 x 1	25,4 x 9	5	12005208X1		
9 x 0,75	25,4 x 9	5	12005209X075		
9 x 1	25,4 x 9	5	12005209X1		
10 x 1,25	25,4 x 9	5	12005210X125		
12 x 1,5	25,4 x 9	5	12005212X15		
10 x 0,75	38,1 x 14	5	12005310X075		
10 x 1	38,1 x 14	5	12005310X1		
10 x 1,25	38,1 x 14	5	12005310X125		
11 x 0,75	38,1 x 14	5	12005311X075		
11 x 1	38,1 x 14	5	12005311X1		
11 x 1,25	38,1 x 14	5	12005311X125		
12 x 0,75	38,1 x 14	5	12005312X075		
12 x 1	38,1 x 14	5	12005312X1		
12 x 1,25	38,1 x 14	5	12005312X125		
12 x 1,5	38,1 x 14	5	12005312X15		
14 x 1	38,1 x 14	5	12005314X1		
14 x 1,25	38,1 x 14	5	12005314X125		
14 x 1,5	38,1 x 14	5	12005314X15		
16 x 1	38,1 x 14	5	12005316X1		
16 x 1,5	38,1 x 14	5	12005316X15		
18 x 1,5	38,1 x 14	5	12005318X15		
18 x 2	38,1 x 14	5	12005318X2		
18 x 1,5	50,8 x 16	3	12005518X15		
18 x 2	50,8 x 16	3	12005518X2		
20 x 1,5	50,8 x 16	3	12005520X15		
20 x 2	50,8 x 16	3	12005520X2		
22 x 1,5	50,8 x 16	3	12005522X15		
22 x 2	50,8 x 16	3	12005522X2		
24 x 1,5	50,8 x 16	3	12005524X15		
24 x 2	50,8 x 16	3	12005524X2		
27 x 1,5	63,5 x 19	1	12005627X15		
27 x 2	63,5 x 19	1	12005627X2		
30 x 1,5	63,5 x 19	1	12005630X15		
30 x 2	63,5 x 19	1	12005630X2		
30 x 3	63,5 x 19	1	12005630X3		

Giramaschi estensibili, modello americano

Adjustable tap wrenches / Tourne à gauche extensible
Giramachos ayustables / Verstellbare Windeisen

KRINO®

DIN 1814 Lega Leggera - Zinc die-cast / Alliage de zinc / Aleacione ligera / Körper aus Zinkdruckguss



Gr. N.	Per maschi for taps			L	cod.	€ cad/each
	M	BSW	BSP			
0	1 ÷ 8	1/16 ÷ 1/4		130	1500100	
1	1 ÷ 10	1/16 ÷ 3/8	1/8	180	1500101	
1.1/2	1 ÷ 12	1/16 ÷ 1/2	1/8	180	1500101.1/2	
2	4 ÷ 12	5/32 ÷ 1/2	1/8	280	1500102	
3	5 ÷ 20	7/32 ÷ 3/4	1/8 ÷ 1/2	380	1500103	
4	11 ÷ 27	7/16 ÷ 1"	1/4 ÷ 3/4	500	1500104	
5	13 ÷ 32	1/2 ÷ 1.1/4	1/4 ÷ 1"	700	1500105	
*6	18 ÷ 42	3/4 ÷ 1.1/2	1/2 ÷ 1.1/4	780	1500106	
*7	25 ÷ 52	1" ÷ 2.1/8	3/4 ÷ 2.1/4	800	1500107	
*8	25 ÷ 64	1" ÷ 2.1/2	3/4 ÷ 3"	1200	1500108	

* corpo in acciaio / steel

15001

DIN 1814 Acciaio / Steel / Acier / Acero / Stahl-Ausführung



Gr. N.	Per maschi for taps			L	cod.	€ cad/each
	M	BSW	BSP			
0	1 ÷ 8	1/16 ÷ 1/4		170	1500300	
1	1 ÷ 10	1/16 ÷ 3/8	1/8	200	1500301	
1.1/2	1 ÷ 12	1/16 ÷ 1/2	1/8	200	1500301.1/2	
2	4 ÷ 12	5/32 ÷ 1/2	1/8	260	1500302	
3	5 ÷ 20	7/32 ÷ 3/4	1/8 ÷ 1/2	345	1500303	
4	11 ÷ 27	7/16 ÷ 1"	1/4 ÷ 3/4	430	1500304	
5	13 ÷ 32	1/2 ÷ 1.1/4	1/4 ÷ 1"	770	1500305	
6	18 ÷ 42	3/4 ÷ 1.1/2	1/2 ÷ 1.1/4	870	1500306	
7	25 ÷ 52	1" ÷ 2.1/8	3/4 ÷ 2.1/4	1000	1500307	
8	25 ÷ 64	1" ÷ 2.1/2	3/4 ÷ 3"	1200	1500308	

15003

Giramaschi fissi a sfera

Ball tap wrenches / Porte-tarauts / Giramacho fixo / Kugelwindeisen



Gr. N.	Per maschi for taps		L	cod.	€ cad/each
	M				
0	1 ÷ 4		200	1501300	
1	3,5 ÷ 8		200	1501301	
2	4 ÷ 10		200	1501302	
3	5 ÷ 12		200	1501303	
4	10 ÷ 16		200	1501304	
5	12 ÷ 20		200	1501305	
6	18 ÷ 27		200	1501306	

15013

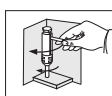
Giramaschi a cricchetto reversibile

Tap holder with ratchet / Porte-tarauds à cliquet / Giramachos de carraca / Werkzeugehalter mit knarre

Art. 15010 Serie corta - Short serie

15010
15011

Acciaio / Steel



Gr. N.	Per maschi for taps		L	pcs 	cod.	€ cad/each
	M	BSW				
1	3 ÷ 10	1/8 ÷ 3/8	85	1	1501001	
2	5 ÷ 12	7/32 ÷ 1/2	100	1	1501002	

Art. 15011 Serie lunga - Long serie

Gr. N.	Per maschi for taps		L	pcs 	cod.	€ cad/each
	M	BSW				
1	3 ÷ 10	1/8 ÷ 3/8	250	1	1501101	
2	5 ÷ 12	7/32 ÷ 1/2	300	1	1501102	

cod. €
cad/each

Griffe per / Jaws for 1501001 - 1501101 1501110

Griffe per / Jaws for 1501002 - 1501102 1501112

Giramaschi a mandrino tipo goodel

Goodel tap holder without ratchet / Porte-tarauds goodel sans cliquet / Giramachos goodel sin carraca / Werkzeugehalter ohne knarre

Art. 15005 Serie corta - Short serie

15005
15006

Gr. N.	Per maschi for taps		L	pcs 	cod.	€ cad/each
	M	BSW				
1	3 ÷ 5	1/8 ÷ 3/16	62	1	1500501	
2	6 ÷ 8	1/4 ÷ 3/8	78	1	1500502	
3	9 ÷ 10	3/8	102	1	1500503	
4	10 ÷ 12	3/8 ÷ 1/2	102	1	1500504	

Art. 15006 Serie lunga - Long serie

Gr. N.	Per maschi for taps		L	pcs 	cod.	€ cad/each
	M	BSW				
1	3 ÷ 5	1/8 ÷ 3/16	150	1	1500601	
2	6 ÷ 8	1/4 ÷ 3/8	150	1	1500602	
3	9 ÷ 10	3/8	150	1	1500603	
4	10 ÷ 12	3/8 ÷ 1/2	150	1	1500604	

PROLUNGA PER MASCHI Tap extension / Rallong pour tarauds / Prolungador para machos / Verlängerung für Gewindebohrer

10098



Quadro Square (mm) 	L	Per maschi for taps DIN 352	cod.	€ cad/each	Quadro Square (mm) 	L	Per maschi for taps DIN 352	cod.	€ cad/each
2.1	60	M 1-2.6	10098021		10.0	140		10098100	
2.4	70		10098024		11.0	150	M 18	10098110	
2.7	80	M 3	10098027		12.0	155	M 20	10098120	
3.0	90	M 3.5	10098030		13.0	165		10098130	
3.4	95	M 4	10098034		14.5	175	M 22-24	10098145	
3.8	100		10098038		16.0	180	M 27	10098160	
4.3	105		10098043		18.0	200	M 30	10098180	
4.9	110	M 4.5-8	10098049		20.0	220	M 33	10098200	
5.5	115	M 9-10	10098055		22.0	220	M 36	10098220	
6.2	120	M 11	10098062		24.0	235	M 39-42	10098240	
7.0	125	M 12	10098070		26.0	250		10098260	
8.0	125		10098080		29.0	265	M 45-48	10098290	
9.0	130	M 14-16	10098090		32.0	285	M 52	10098320	

Portafiliera per filiere tonde

Round-die stock / Porte filières à main / Manerales para cojinetes / Schneideisenhalter



DIN 225 (EN 22568) Lega Leggera / Zinc die-cast / Alliage de zinc / Aleacione ligera / Körper aus Zinkdruckguss



Art. 15030 In pollici - Inch

Gr. N.	Ø mm	Ø pollici/inch	L mm	pcs	cod.	€ cad/each
0	20,6 x 6,35	13/16 x 1/4	185	1	1503000	
1	25,4 x 9,5	1" x 3/8	215	1	1503001	
2/A	33,4 x 11,1	1.5/16 x 7/16	265	1	1503002/A	
2	38,1 x 12,7	1.1/2 x 1/2	310	1	1503002	
3	50,8 x 15,9	2" x 5/8	485	1	1503003	
4	63,5 x 19	2.1/2 x 3/4	630	1	1503004	
*5	76,2 x 22	3" x 7/8	700	1	1503005	
*6	88,9 x 25,4	3.1/2 x 1"	940	1	1503006	
*7	101,6 x 25,4	4" x 1"	980	1	1503007	

15030
15035

* acciaio / steel

Art. 15035 Per filiere DIN 223 - For dies DIN 223

Gr.	M	BSW-BSP	L	pcs	cod.	€ cad/each
16 x 5	M 1 ÷ 2,6	W 1/16 ÷ 3/32	160	1	1503516X5	
20 x 5	M 3 ÷ 4	W 1/8 ÷ 5/32	185	1	1503520X5	
20 x 7	M 4,5 ÷ 6	W 3/16 ÷ 1/4	185	1	1503520X7	
25 x 9	M 7 ÷ 9	W 5/16	215	1	1503525X9	
30 x 11	M 10 ÷ 11	W 3/8 ÷ 7/16	265	1	1503530X11	
38 x 10	MF 12 ÷ 14	G 1/8 ÷ 1/4	315	1	1503538X10	
38 x 14	M 12 ÷ 14	W 1/2 ÷ 9/16	315	1	1503538X14	
45 x 14	MF 16 ÷ 20	G 3/8 ÷ 1/2	450	1	1503545X14	
45 x 18	M 16 ÷ 20	W 5/8 ÷ 13/16	450	1	1503545X18	
55 x 16	MF 22 ÷ 24	G 5/8 ÷ 3/4	560	1	1503555X16	
55 x 22	M 22 ÷ 24	W 7/8 ÷ 1"	560	1	1503555X22	
65 x 18	MF 26 ÷ 35	G 7/8 ÷ 1"	630	1	1503565X18	
65 x 25	M 27 ÷ 36	W 1"1/8 ÷ 1"3/8	630	1	1503565X25	
*75 x 20	MF 38 ÷ 42	G 1"1/8 ÷ 1"1/4	710	1	1503575X20	
*75 x 30	M 39 ÷ 42	W 1"1/2 ÷ 1"5/8	710	1	1503575X30	
*90 x 22	MF 45 ÷ 52	G 1"3/8 ÷ 1"3/4	920	1	1503590X22	
*90 x 36	M 45 ÷ 52	W 1"3/4 ÷ 2"	920	1	1503590X36	

* acciaio / steel

DIN 225 (EN 22568) Acciaio / Steel / Acier / Acero / Stahl-Ausführung



Art. 15032 In pollici - Inch

Gr. N.	Ø mm	Ø pollici/inch	L mm	pcs	cod.	€ cad/each
1	25,4 x 9,5	1" x 3/8	210	1	1503201	
2	38,1 x 12,7	1"1/2 x 1/2	300	1	1503202	
3	50,8 x 15,9	2" x 5/8	490	1	1503203	
4	63,5 x 19	2.1/2 x 3/4	520	1	1503204	
5	76,2 x 22	3" x 7/8	700	1	1503205	
6	88,9 x 25,4	3.1/2 x 1"	950	1	1503206	
7	101,6 x 25,4	4" x 1"	890	1	1503207	

15032
15037

Art. 15037 Per filiere DIN 223 - For dies DIN 223

Gr.	M	BSW-BSP	L	pcs	cod.	€ cad/each
16 x 5	M 1 ÷ 2,6	W 1/16 ÷ 3/32	160	1	1503716X5	
20 x 5	M 3 ÷ 4	W 1/8 ÷ 5/32	190	1	1503720X5	
20 x 7	M 4,5 ÷ 6	W 3/16 ÷ 1/4	190	1	1503720X7	
25 x 9	M 7 ÷ 9	W 5/16	215	1	1503725X9	
30 x 11	M 10 ÷ 11	W 3/8 ÷ 7/16	250	1	1503730X11	
38 x 10	MF 12 ÷ 14	G 1/8 ÷ 1/4	310	1	1503738X10	
38 x 14	M 12 ÷ 14	W 1/2 ÷ 9/16	310	1	1503738X14	
45 x 14	MF 16 ÷ 20	G 3/8 ÷ 1/2	445	1	1503745X14	
45 x 18	M 16 ÷ 20	W 5/8 ÷ 13/16	445	1	1503745X18	
55 x 16	MF 22 ÷ 24	G 5/8 ÷ 3/4	495	1	1503755X16	
55 x 22	M 22 ÷ 24	W 7/8 ÷ 1"	495	1	1503755X22	
65 x 18	MF 26 ÷ 35	G 7/8 ÷ 1"	550	1	1503765X18	
65 x 25	M 27 ÷ 36	W 1.1/8 ÷ 1"3/8	550	1	1503765X25	
75 x 20	MF 38 ÷ 42	G 1.1/8 ÷ 1"1/4	735	1	1503775X20	
75 x 30	M 39 ÷ 42	W 1.1/2 ÷ 1"5/8	735	1	1503775X30	
90 x 22	MF 45 ÷ 52	G 1.3/8 ÷ 1"3/4	900	1	1503790X22	
90 x 36	M 45 ÷ 52	W 1.3/4 ÷ 2"	900	1	1503790X36	
105 x 22	MF 54 ÷ 65	G 2" ÷ 2"1/4	980	1	15037105X22	
105 x 36	M 56 ÷ 64	W 2" ÷ 2"1/4	980	1	15037105X36	
120 x 22	MF 64 ÷ 71	G 2.1/4 ÷ 2.3/4	960	1	15037120X22	
120 x 36	M 64 ÷ 71	BSW 2.1/2 ÷ 2.3/4	960	1	15037120X36	
130 x 25		G 3"	960	1	15037130X25	
130 x 36			960	1	15037130X36	
140 x 22			980	1	15037140X22	
150 x 25		G 3.1/2	1000	1	15037150X25	
160 x 25		G 4"	1000	1	15037160X25	