

# Phantom

## LA GAMME DE TARAUDS UNIVERSELS LA PLUS LARGE!



Consultez  
votre distributeur  
pour obtenir vos  
prix nets!

Pourquoi choisir

### LES TARAUDS MACHINES UNIVERSELS PHANTOM ?

- › Fiabilité, précision, performance
- › Réduction des coûts, un seul taraud pour toutes les matières
- › Disponible en version poudre Métallurgique (PM), pour les grandes séries sur des aciers à résistance mécanique élevée, usinage à sec grâce au revêtement Hardlube, plus écologique

IL N'Y A PAS DE LIMITES À CE QUE VOUS POUVEZ FAIRE.

ISO ■	ISO □	NL	FR	ES	DE
<b>P 11</b> s800 N/mm <sup>2</sup>	<b>P 11</b> s800 N/mm <sup>2</sup>	<b>Ongelegeerd en gelegeerd staal ≤600 N/mm<sup>2</sup></b> 1.0037 (St37), 1.0038 (S235JR G2), 1.00402 (C22), 1.1178 (C30E)	<b>Aciers non-alliés ou faiblement alliés ≤600 N/mm<sup>2</sup></b> 1.0037 (A37), 1.0038 (E 24-2 Ne), 1.00402 (1C20), 1.1178 (1C30)	<b>Acero no aleado ≤600 N/mm<sup>2</sup></b> 1.0037 (S235JR), 1.0038 (S235JR G2), 1.0402 (F.112), 1.1178 (C30E)	<b>Unlegierter und legierter Stahl ≤600 N/mm<sup>2</sup></b> 1.0037 (St37), 1.0038 (S235JR G2), 1.00402 (C22), 1.1178 (C30E)
<b>P 12</b> s850 N/mm <sup>2</sup>	<b>P 12</b> s850 N/mm <sup>2</sup>	<b>Ongelegeerd en gelegeerd staal 600 - 850 N/mm<sup>2</sup></b> 1.0050 (St50-2), 1.0070 (St70-2), 1.0301 (C10), 1.0503 (C45), 1.1121 (Ck10), 1.1191 (C45E), 1.0718 (11SMnPb30), 1.0736 (11SMn37)	<b>Aciers non-alliés ou faiblement alliés 600 - 850 N/mm<sup>2</sup></b> 1.0050 (A50-2), 1.0070 (A70-2), 1.0301 (1C10), 1.0503 (1C45), 1.1121 (XC10), 1.1191 (2C45), 1.0718 (S250PB), 1.0736 (S300PB)	<b>Acero no aleado 600 - 850 N/mm<sup>2</sup></b> 1.0050 (Fe490-2), 1.0070 (Fe690-2), 1.0301 (F.1151), 1.0503 (F.114), 1.1121 (F.1510-C10K), 1.1191 (C45K), 1.0718 (F.2112-11SMnPb28), 1.0736 (F.2113-11SMn37)	<b>Unlegierter und legierter Stahl 600 - 850 N/mm<sup>2</sup></b> 1.0050 (St50-2), 1.0070 (St70-2), 1.0301 (C10), 1.0503 (C45), 1.1121 (Ck10), 1.1191 (C45E), 1.0718 (11SMnPb30), 1.0736 (11SMn37)
<b>P 13</b> s1000 N/mm <sup>2</sup>	<b>P 13</b> s1000 N/mm <sup>2</sup>	<b>Gelegeerd staal 850 - 1000 N/mm<sup>2</sup></b> 1.0727 (46S20), 1.0728 (60S20), 1.0757 (46SPb20), 1.2080 (X210Cr12), 1.2083 (X42Cr13), 1.2767 (X45NiCrMo4), 1.5131 (50MnSi4), 1.7003 (38Cr2), 1.7030 (28Cr4), 1.7043 (38Cr4)	<b>Aciers alliés 850 - 1000 N/mm<sup>2</sup></b> 1.0727 (45MF4), 1.0728 (60S20), 1.0757 (46SPb20), 1.2080 (Z200C12), 1.2083 (Z40C14), 1.2767 (Y35NCD16), 1.5131 (50MnSi4), 1.7003 (38Cr2), 1.7030 (28Cr4), 1.7043 (38Cr4)	<b>Acero aleado 850 - 1000 N/mm<sup>2</sup></b> 1.0727 (46S20), 1.0728 (60S20), 1.0757 (46SPb20), 1.2080 (F.5212-X210Cr12), 1.2083 (X42Cr13), 1.2767 (X45NiCrMo4), 1.5131 (50MnSi4), 1.7003 (38Cr2), 1.7030 (28Cr4), 1.7043 (38Cr4)	<b>Legierter Stahl 850 - 1000 N/mm<sup>2</sup></b> 1.0727 (46S20), 1.0728 (60S20), 1.0757 (46SPb20), 1.2080 (X210Cr12), 1.2083 (X42Cr13), 1.2767 (X45NiCrMo4), 1.5131 (50MnSi4), 1.7003 (38Cr2), 1.7030 (28Cr4), 1.7043 (38Cr4)
<b>P 14</b> s1400 N/mm <sup>2</sup>	<b>P 14</b> s1400 N/mm <sup>2</sup>	<b>Gelegeerd staal 1000 - 1400 N/mm<sup>2</sup></b> 1.5710 (36NiCr6), 1.7035 (41Cr40), 1.7225 (42CrMo4), 1.8519 (31CrMoV9), 1.8550 (34CrAlNi7), 1.5752 (15NiCr13), 1.7131 (16MnCr5), 1.7264 (20CrMo5)	<b>Aciers alliés 1000 - 1400 N/mm<sup>2</sup></b> 1.5710 (36NiCr6), 1.7035 (41Cr40), 1.7225 (42CrMo4), 1.8519 (31CrMoV9), 1.8550 (34CrAlNi7), 1.5752 (15NiCr13), 1.7131 (16MnCr5), 1.7264 (20CrMo5)	<b>Acero aleado 1000 - 1400 N/mm<sup>2</sup></b> 1.5710 (36NiCr6), 1.7035 (41Cr40), 1.7225 (42CrMo4), 1.8519 (31CrMoV9), 1.8550 (34CrAlNi7), 1.5752 (15NiCr13), 1.7131 (16MnCr5), 1.7264 (20CrMo5)	<b>Legierter Stahl 1000 - 1400 N/mm<sup>2</sup></b> 1.5710 (36NiCr6), 1.7035 (41Cr40), 1.7225 (42CrMo4), 1.8519 (31CrMoV9), 1.8550 (34CrAlNi7), 1.5752 (15NiCr13), 1.7131 (16MnCr5), 1.7264 (20CrMo5)
<b>H 15</b> HRC	<b>H 15</b> HRC	<b>Gehard en inzetgehard staal 50 - 60 HRC</b> 1.2344 (X40CrMoV5), 1.2767 (X45NiCrMo4), 1.2379 (X155CrVMo12-1), 1.2080 (X210Cr12), 1.3343 (S6-5-2)	<b>Aciers trempés et Aciers de cémentation alliés 50 - 60 HRC</b> 1.2344 (Z 40 CDV 5), 1.2767 (X45NiCrMo4), 1.2379 (D2), 1.2080 (Z200C12), 1.3343 (Z85WDCV)	<b>Acero templado 50 - 60 HRC</b> 1.2344 (X40CrMoV5), 1.2767 (X45NiCrMo4), 1.2379 (X155CrVMo12-1), 1.2080 (X210Cr12), 1.3343 (S6-5-2)	<b>Gehärteter und einsatzgehärteter Stahl, 50-60 HRC</b> 1.2344 (X40CrMoV5), 1.2767 (X45NiCrMo4), 1.2379 (X155CrVMo12-1), 1.2080 (X210Cr12), 1.3343 (S6-5-2)
<b>M 21</b> INOX s850N/mm <sup>2</sup>	<b>M 21</b> INOX s850N/mm <sup>2</sup>	<b>Roestvaststaal, INOX ≤850 N/mm<sup>2</sup></b> 1.4005 (X12CrS13), 1.4104 (X14CrMos17), 1.4105 (X6CrMoS17), 1.4301 (XCrNi18-10)(304), 1.4305 (X8CrNiS18-9)(303)	<b>Aciers Inoxydables ≤850 N/mm<sup>2</sup></b> 1.4005 (Z11CF13), 1.4104 (Z13CF17), 1.4105 (Z8CF17), 1.4301 (XCrNi18-10)(304), 1.4305 (X8CrNiS18-9)(303)	<b>Acero inoxidable ≤850 N/mm<sup>2</sup></b> 1.4006 (F.3401-X10Cr13), 1.4104 (F.3117-X10Cr17), 1.4301 (F.3504-X5CrNi18-10)(304), 1.4305 (F.3508-X10CrNiS18-09)(303)	<b>Rostfreier Stahl, INOX ≤850 N/mm<sup>2</sup></b> 1.4005 (X12CrS13), 1.4104 (X14CrMos17), 1.4105 (X6CrMoS17), 1.4301 (XCrNi18-10)(304), 1.4305 (X8CrNiS18-9)(303)
<b>M 22</b> INOX >850N/mm <sup>2</sup>	<b>M 22</b> INOX >850N/mm <sup>2</sup>	<b>Roestvaststaal, INOX &gt;850 N/mm<sup>2</sup></b> 1.4438 (X2CrNiMo18-15-4)(317), 1.4404 (X2CrNiMo17-12-2)(316L), 1.4571 (X6CrNiMoTi17-12-2)(316Ti)	<b>Aciers Inoxydables &gt;850 N/mm<sup>2</sup></b> 1.4438 (X2CrNiMo18-15-4)(317), 1.4404 (X2CrNiMo17-12-2)(316L), 1.4571 (X6CrNiMoTi17-12-2)(316Ti)	<b>Acero inoxidable &gt;850 N/mm<sup>2</sup></b> 1.4438 (X2CrNiMo18-15-4)(317), 1.4404 (X2CrNiMo17-12-2)(316L), 1.4571 (F.3535-X6CrNiMoTi17-12-2)(316Ti)	<b>Rostfreier Stahl, INOX &gt;850 N/mm<sup>2</sup></b> 1.4438 (X2CrNiMo18-15-4)(317), 1.4404 (X2CrNiMo17-12-2)(316L), 1.4571 (X6CrNiMoTi17-12-2)(316Ti)
<b>K 31</b> GG	<b>K 31</b> GG	<b>Grijs gietijzer GG &lt;260 HB30</b> 0.6015 (GG 15), 0.6025 (GG 25), 0.6040 (GG 40)	<b>Fontes &lt;260 HB30</b> 0.6015 (GG 15), 0.6025 (GG 25), 0.6040 (GG 40)	<b>Fundición gris con grafito laminado GG &lt;260 HB30</b> 0.6015 (FG15), 0.6025 (FG25), 0.6040 (FG40)	<b>Grauguss GG &lt;260 HB30</b> 0.6015 (GG 15), 0.6025 (GG 25), 0.6040 (GG 40)
<b>K 32</b> GGG GTS-GTW	<b>K 32</b> GGG GTS-GTW	<b>Smeedbaar en Nodulair gietijzer &lt;260 HB30</b> 0.8145 (GTS-45), 0.8170 (GTS-70-02), 0.7040 (GGG 40), 0.7070 (GGG 70)	<b>Fontes à graphites et malléables &lt;260 HB30</b> 0.8145 (GTS-45), 0.8170 (GTS-70-02), 0.7040 (GGG 40), 0.7070 (GGG 70)	<b>Fundición gris con grafito esferoidal &lt;260 HB30</b> 0.8145 (GTS-45), 0.8170 (GTS-70-02), 0.7040 (GGG 40), 0.7070 (GGG 70)	<b>Formbar und dehnbares Gusseisen &lt;260 HB30</b> 0.8145 (GTS-45), 0.8170 (GTS-70-02), 0.7040 (GGG 40), 0.7070 (GGG 70)
<b>N 41</b> Alu	<b>N 41</b> Alu	<b>Aluminium en Aluminiumlegeringen</b> 3.0255 (Al99.5), 3.2315 (AlMgSi1), 3.3515 (AlMg1)	<b>Aluminium et Alliages d'Aluminium</b> 3.0255 (A59050C), 3.2315 (AlMgSi1), 3.3515 (AlMg1)	<b>Aluminio y aleaciones de Aluminio</b> 3.0255 (Al99.5), 3.2315 (AlMgSi1), 3.3515 (AlMg1)	<b>Aluminium und Aluminiumlegierungen</b> 3.0255 (Al99.5), 3.2315 (AlMgSi1), 3.3515 (AlMg1)
<b>N 42</b> Alu Si>10%	<b>N 42</b> Alu Si>10%	<b>Gietaluminium Si 10 - 24%</b> 3.2131 (G-AISi5Cu1), 3.2153 (G-AISi7Cu3), (3.2573 G-AISi9), 3.2581 (G-AISi12), 3.2583 (G-AISi12Cu)	<b>Alliages d'Aluminium Si 10 - 24%</b> 3.2131 (G-AISi5Cu1), 3.2153 (G-AISi7Cu3), (3.2573 G-AISi9), 3.2581 (G-AISi12), 3.2583 (G-AISi12Cu)	<b>Fundición de Aluminio aleada Si 10 - 24%</b> 3.2131 (G-AISi5Cu1), 3.2153 (G-AISi7Cu3), (3.2573 G-AISi9), 3.2581 (L-2520,21), 3.2583 (L2530)	<b>Druckguss Si 10 - 24%</b> 3.2131 (G-AISi5Cu1), 3.2153 (G-AISi7Cu3), (3.2573 G-AISi9), 3.2581 (G-AISi12), 3.2583 (G-AISi12Cu)
<b>N 43</b> Mg	<b>N 43</b> Mg	<b>Magnesiumlegeringen</b> 3.5200 (MgMn2), 3.5812 (G-MgAl8Zn1), 3.5612 (G-MgAl6Zn1)	<b>Alliages de Magnésium</b> 3.5200 (MgMn2), 3.5812 (AZ81hp), 3.5612 (AZ61)	<b>Aleaciones de Magnesio</b> 3.5200 (MgMn2), 3.5812 (AZ81hp), 3.5612 (AZ61)	<b>Magnesiumlegierungen</b> 3.5200 (MgMn2), 3.5812 (G-MgAl8Zn1), 3.5612 (G-MgAl6Zn1)
<b>N 51</b> Cu	<b>N 51</b> Cu	<b>Koper en Koperlegeringen</b> 2.0070 (SE-Cu), 2.1020 (CuSn6), 2.1096 (G-CuSn5ZnPB), 2.0380 (CuZn39PB2), 2.0401 (CuZn39PB3), 2.0250 (CuZn20), 2.0280 (CuZn33), 2.0332 (CuZn37PB0,5)	<b>Cuivres et Alliages de cuivres</b> 2.0070 (SE-Cu), 2.1020 (CuSn6), 2.1096 (G-CuSn5ZnPB), 2.0380 (CuZn40), 2.0401 (CuZn39PB3), 2.0250 (CuZn20), 2.0280 (CuZn33), 2.0332 (CuZn37PB0,5)	<b>Cobre y aleaciones de cobre</b> 2.0070 (SE-Cu), 2.1020 (CuSn6), 2.1096 (G-CuSn5ZnPB), 2.0380 (CuZn39PB2), 2.0401 (CuZn39PB3), 2.0250 (CuZn20), 2.0280 (CuZn33), 2.0332 (CuZn37PB0,5)	<b>Kupfer und Kupferlegeringen</b> 2.0070 (SE-Cu), 2.1020 (CuSn6), 2.1096 (G-CuSn5ZnPB), 2.0380 (CuZn39PB2), 2.0401 (CuZn39PB3), 2.0250 (CuZn20), 2.0280 (CuZn33), 2.0332 (CuZn37PB0,5)
<b>N 52</b> CuAlFe	<b>N 52</b> CuAlFe	<b>Koper- en Aluminiumlegering</b> 2.0916 (CuAl5), 2.0960 (CuAl9Mn), 2.1050 (CuSn10), 2.0980 (CuAl11Ni), 2.1247 (CuBe2) AMPCO® 8, AMPCO® 8 15, AMPCO® 18	<b>Cuivre et Alliages d'Aluminium</b> 2.0916 (CuAl5), 2.0960 (CuAl9Mn), 2.1050 (CuSn10), 2.0980 (CuAl11Ni), 2.1247 (CuBe1.9) AMPCO® 8, AMPCO® 8 15, AMPCO® 18	<b>Cobre y aleaciones de Aluminio</b> 2.0916 (CuAl5), 2.0960 (CuAl9Mn), 2.1050 (CuSn10), 2.0980 (CuAl11Ni), 2.1247 (CuBe2) AMPCO® 8, AMPCO® 8 15, AMPCO® 18	<b>Kupfer- und Aluminiumlegierungen</b> 2.0916 (CuAl5), 2.0960 (CuAl9Mn), 2.1050 (CuSn10), 2.0980 (CuAl11Ni), 2.1247 (Cu-Be2) AMPCO® 8, AMPCO® 8 15, AMPCO® 18
<b>N 61</b> PVC	<b>N 61</b> PVC	<b>Duroplastic en Thermoplastic</b> PMMA, PVC, PE, PP, PTFE	<b>Duroplastiques et Thermoplastiques</b> PMMA, PVC, PE, PP, PTFE	<b>Duroplásticos en Termoplásticos</b> PMMA, PVC, PE, PP, PTFE	<b>Duroplaste und Thermoplaste</b> PMMA, PVC, PE, PP, PTFE
<b>N 62</b> GFK/CFK	<b>N 62</b> GFK/CFK	<b>Versterkte kunststoffen</b> GFK, CFK	<b>Plastiques réenforcés</b> GFK, CFK	<b>Plásticos reforzados</b> GFK, CFK	<b>Verstärkte Kunststoffe</b> GFK, CFK
<b>S 71</b> Ni/Co	<b>S 71</b> Ni/Co	<b>Nikkel- en Cobaltlegeringen</b> Hastelloy, Inconel, Nimonic, Jetalloy	<b>Alliages de Nickel et de Cobalt</b> Hastelloy, Inconel, Nimonic, Jetalloy	<b>Aleaciones de Niquel y Cobalto</b> Hastelloy, Inconel, Nimonic, Jetalloy	<b>Nickel und Kobaltlegeringen</b> Hastelloy, Inconel, Nimonic, Jetalloy
<b>S 72</b> Ti	<b>S 72</b> Ti	<b>Titaniumlegeringen</b> 3.7024 (Ti99.5), 3.7114 (TiAl5Sn2.5), 3.7124 (TiCu2), 3.7154 (TiAl6Zr5), 3.7165 (TiAl6V4), 3.7184 (TiAl4Mo4Sn2.5)	<b>Alliages de Titane</b> 3.7024 (T35), 3.7114 (TiAl5Sn2.5), 3.7124 (T-U2), 3.7154 (TiAl6Zr5), 3.7165 (TiAl6V4), 3.7184 (TiAl4Mo4Sn2.5)	<b>Titanio aleado</b> 3.7024 (Ti99.5), 3.7114 (TiAl5Sn2.5), 3.7124 (TiCu2), 3.7154 (TiAl6Zr5), 3.7165 (TiAl6V4), 3.7184 (TiAl4Mo4Sn2.5)	<b>Titanlegierungen</b> 3.7024 (Ti99.5), 3.7114 (TiAl5Sn2.5), 3.7124 (TiCu2), 3.7154 (TiAl6Zr5), 3.7165 (TiAl6V4), 3.7184 (TiAl4Mo4Sn2.5)

# TARAUD MACHINE PHANTOM UNI... INNOVATION, FIABILITÉ, ÉCONOMIE DE COÛTS ET DURABILITÉ

Découvrez nos tarauds machine standards UNI innovants, sans revêtement et à géométrie unique qui sont disponibles dans toutes les dimensions (même les moins courantes). Ces produits garantissent un taraudage de précision sur un large spectre d'application matière, ce qui, par conséquent va réduire vos stocks.



## STANDARD : UNI SANS REVÊTEMENT

Le taraud universel pour tous les matériaux

REVÊTU POUR UNE PRODUCTIVITÉ PLUS ÉLEVÉE ET UNE DURÉE DE VIE PLUS LONGUE



## UNI REVÊTEMENT TIN

Taraud universel extra-performant sur l'acier



## UNI REVÊTEMENT TiCN

Taraud universel extra-performant sur l'inox



## HP2 UNI HARDLUBE

Taraud universel pour la production de masse et l'utilisation sur l'acier haute performance et inoxydable

Une véritable économie de coût avec un niveau de prix semblable à celui des tarauds standards sur le marché, mais avec beaucoup plus de possibilités ; le choix est facile... ce taraud machine UNI est la solution !

Outre la version sans revêtement, une vaste gamme revêtue est en effet à votre disposition pour encore plus d'efficacité et de productivité sur des matériaux spécifiques. Ainsi, vous pouvez produire plus de trous et vous avez moins de changements d'outils pendant la production.

Le champion de la gamme est le taraud machine PM HP2 UNI hardlube pour la production de masse et l'utilisation sur l'acier fortement allié et inoxydable. Ce taraud machine HP2 UNI est utilisable dans des configurations spécifiques comme le taraudage à sec sans nettoyage ultérieur.

## POUR EN SAVOIR PLUS : PHANTOM.EU

Sur [Phantom.eu](https://phantom.eu), vous trouverez un aperçu de l'assortiment, des vidéos, des résultats de tests et des diamètres de pré-perçage - tout cela pour contribuer au résultat que vous souhaitez.

## Tarands machines UNI



Très approprié

Approprié




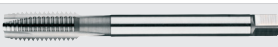




### Métrique

> 22.200	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 6
> 22.201	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 6
> 22.210	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 6
> 22.211	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 6
> 22.230	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 7
> 22.231	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 7
> 22.240	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 7
> 22.241	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 7
> 22.268	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 8
> 22.269	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 8
> 22.350	<b>Phantom</b>	M	NORM		<b>P M K N S</b>		P. 8
> 22.351	<b>Phantom</b>	M	NORM		<b>P M K N S</b>		P. 8
> 23.300	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 9
> 23.301	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 9
> 23.320	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 9
> 23.321	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 9
> 23.324	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 10
> 23.325	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 10
> 23.368	<b>Phantom</b>	M	DIN 371		<b>P M K N S</b>		P. 10
> 23.369	<b>Phantom</b>	M	DIN 376		<b>P M K N S</b>		P. 10
> 23.370	<b>Phantom</b>	M	NORM		<b>P M K N S</b>		P. 11
> 23.371	<b>Phantom</b>	M	NORM		<b>P M K N S</b>		P. 11









### Métrique fin

> 23.620	<b>Phantom</b>	MF	DIN 374		<b>P M K N S</b>		P. 12
> 23.621	<b>Phantom</b>	MF	DIN 374		<b>P M K N S</b>		P. 12
> 23.668	<b>Phantom</b>	MF	DIN 374		<b>P M K N S</b>		P. 13
> 23.840	<b>Phantom</b>	MF	DIN 374		<b>P M K N S</b>		P. 13
> 23.868	<b>Phantom</b>	MF	DIN 374		<b>P M K N S</b>		P. 13




**UNC**

> 24.120	<b>Phantom</b>	UNC	DIN 371		<b>P M K N S</b>		P. 14
> 24.121	<b>Phantom</b>	UNC	DIN 376		<b>P M K N S</b>		P. 14
> 24.340	<b>Phantom</b>	UNC	DIN 371		<b>P M K N S</b>		P. 14
> 24.341	<b>Phantom</b>	UNC	DIN 376		<b>P M K N S</b>		P. 14



**UNF**

> 24.520	<b>Phantom</b>	UNF	DIN 371		<b>P M K N S</b>		P. 15
> 24.521	<b>Phantom</b>	UNF	DIN 376		<b>P M K N S</b>		P. 15
> 24.740	<b>Phantom</b>	UNF	DIN 371		<b>P M K N S</b>		P. 15
> 24.741	<b>Phantom</b>	UNF	DIN 376		<b>P M K N S</b>		P. 15













**BSP (paz gaz)**

> 25.097	<b>Phantom</b>	BSP G	DIN 5156		<b>P M K N S</b>		P. 16
> 25.297	<b>Phantom</b>	BSP G	DIN 5156		<b>P M K N S</b>		P. 16







**Jeu de Tarauds machine Métrique**

> 29.250	<b>Phantom</b>						P. 16
> 29.260	<b>Phantom</b>						P. 16

**Métrique, à gauche**

> 29.950	<b>Phantom</b>	M			<b>P M K N S</b>		P. 17
> 29.951	<b>Phantom</b>	M			<b>P M K N S</b>		P. 17
> 29.956	<b>Phantom</b>	M			<b>P M K N S</b>		P. 17
> 29.957	<b>Phantom</b>	M			<b>P M K N S</b>		P. 17

**Métrique Fin, à gauche**

> 29.960	<b>Phantom</b>	MF			<b>P M K N S</b>		P. 18
> 29.961	<b>Phantom</b>	MF			<b>P M K N S</b>		P. 18

**CONSULTEZ VOTRE DISTRIBUTEUR  
POUR OBTENIR VOS PRIX NETS !**

**> 22.200 Phantom**

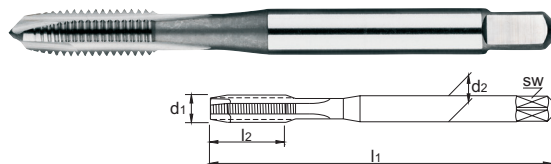
FR **Taroud machine HSS-E UNI Métrique**

HSS-E M DIN 371 3xD Form B 4-5 ISO 2 6H UNI

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤600 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
22.200.0100	M1	0.25	40	6	2.5	2.1
22.200.0110	M1,1	0.25	40	6	2.5	2.1
22.200.0120	M1,2	0.25	40	6	2.5	2.1
22.200.0140	M1,4	0.3	40	7	2.5	2.1
22.200.0160	M1,6	0.35	40	8	2.5	2.1
22.200.0170	M1,7	0.35	40	8	2.5	2.1
22.200.0180	M1,8	0.35	40	8	2.5	2.1
22.200.0200	M2	0.4	45	8	2.8	2.1
22.200.0220	M2,2	0.45	45	9	2.8	2.1
22.200.0230	M2,3	0.4	45	9	2.8	2.1
22.200.0250	M2,5	0.45	50	9	2.8	2.1

Ref.	d1	P	l1	l2	d2	sw
22.200.0260	M2,6	0.45	50	9	2.8	2.1
22.200.0300	M3	0.5	56	11	3.5	2.7
22.200.0350	M3,5	0.6	56	13	4	3
22.200.0400	M4	0.7	63	13	4.5	3.4
22.200.0450	M4,5	0.75	70	14	9	4.9
22.200.0500	M5	0.8	70	16	6	4.9
22.200.0600	M6	1	80	19	6	4.9
22.200.0700	M7	1	80	19	7	5.5
22.200.0800	M8	1.25	90	22	8	6.2
22.200.0900	M9	1.25	90	20	9	7
22.200.1000	M10	1.5	100	24	10	8

**> 22.201 Phantom**

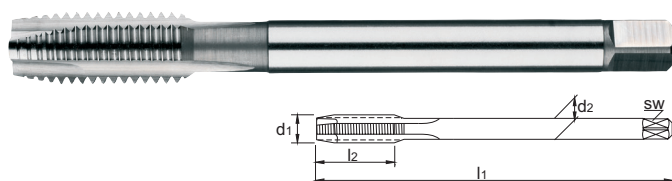
FR **Taroud machine HSS-E UNI Métrique**

HSS-E M DIN 376 3xD Form B 4-5 ISO 2 6H UNI

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤600 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
22.201.0200	M2	0.4	45	8	1.4	
22.201.0250	M2,5	0.45	50	9	1.8	
22.201.0300	M3	0.5	56	13	2.2	
22.201.0400	M4	0.7	63	13	2.8	2.1
22.201.0500	M5	0.8	70	16	3.5	2.7
22.201.0600	M6	1	80	19	4.5	3.4
22.201.0700	M7	1	80	19	5.5	4.3
22.201.0800	M8	1.25	90	22	6	4.9
22.201.0900	M9	1.25	90	22	7	5.5
22.201.1000	M10	1.5	100	24	7	5.5
22.201.1200	M12	1.75	110	29	9	7
22.201.1400	M14	2	110	30	11	9
22.201.1600	M16	2	110	32	12	9

Ref.	d1	P	l1	l2	d2	sw
22.201.1800	M18	2.5	125	34	14	11
22.201.2000	M20	2.5	140	34	16	12
22.201.2200	M22	2.5	140	34	18	14.5
22.201.2400	M24	3	160	38	18	14.5
22.201.2700	M27	3	160	38	20	16
22.201.3000	M30	3.5	180	45	22	18
22.201.3300	M33	3.5	180	50	25	20
22.201.3600	M36	4	200	56	28	22
22.201.3900	M39	4	200	60	32	24
22.201.4200	M42	4.5	200	60	32	24
22.201.4500	M45	4.5	220	65	36	29
22.201.4800	M48	5	250	70	36	29
22.201.5200	M52	5	250	70	40	32

**> 22.210 Phantom**

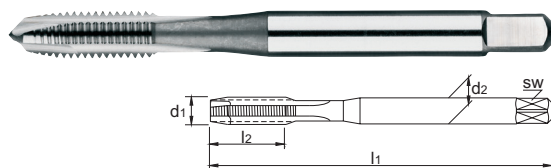
FR **Taroud machine HSS-E UNI Métrique, surcoté**

HSS-E M DIN 371 3xD Form B 4-5 ISO 2 6H +0,1 +0,2 UNI

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤600 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
22.210.0510	M5+0,1	0.8	70	15	6	4.9
22.210.0610	M6+0,1	1	80	17	6	4.9
22.210.0620	M6+0,2	1	80	17	6	4.9

Ref.	d1	P	l1	l2	d2	sw
22.210.0820	M8+0,2	1.25	90	20	8	6.2
22.210.1020	M10+0,2	1.5	100	22	10	8

**> 22.211 Phantom**

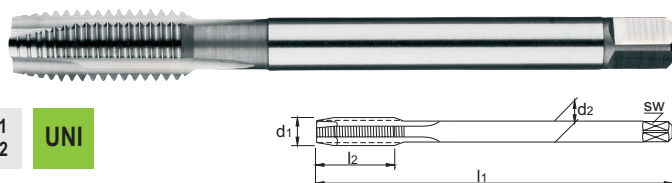
FR **Taroud machine HSS-E UNI Métrique, surcoté**

HSS-E M DIN 376 3xD Form B 4-5 ISO 2 6H +0,1 +0,2 UNI

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤600 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
22.211.1220	M12+0,2	1.75	110	24	9	7
22.211.1420	M14+0,2	2	110	26	11	9

Ref.	d1	P	l1	l2	d2	sw
22.211.1610	M16+0,1	2	110	27	12	9
22.211.1620	M16+0,2	2	110	27	12	9

> 22.230 Phantom

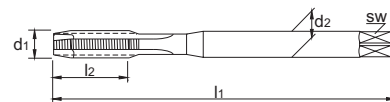


FR Taraud machine HSS-E UNI Métrique, TiN

**HSS-E** **M** **60°** **TiN** **DIN 371** **3xD** **Form B** **4-5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **M 22** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
22.230.0200	M2	0.4	45	8	2.8	2.1
22.230.0250	M2,5	0.45	50	9	2.8	2.1
22.230.0300	M3	0.5	56	11	3.5	2.7
22.230.0400	M4	0.7	63	13	4.5	3.4
22.230.0500	M5	0.8	70	16	6	4.9

Ref.	d1	P	l1	l2	d2	sw
22.230.0600	M6	1	80	19	6	4.9
22.230.0700	M7	1	80	19	7	5.5
22.230.0800	M8	1.25	90	22	8	6.2
22.230.0900	M9	1.25	90	22	9	7
22.230.1000	M10	1.5	100	24	10	8

> 22.231 Phantom

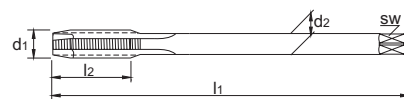


FR Taraud machine HSS-E UNI Métrique, TiN

**HSS-E** **M** **60°** **TiN** **DIN 376** **3xD** **Form B** **4-5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **M 22** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
22.231.0300	M3	0.5	56	13	2.2	
22.231.0400	M4	0.7	63	13	2.8	2.1
22.231.0500	M5	0.8	70	16	3.5	2.7
22.231.0600	M6	1	80	19	4.5	3.4
22.231.0700	M7	1	80	19	5.5	4.3
22.231.0800	M8	1.25	90	22	6	4.9
22.231.0900	M9	1.25	90	22	7	5.5
22.231.1000	M10	1.5	100	24	7	5.5
22.231.1200	M12	1.75	110	29	9	7

Ref.	d1	P	l1	l2	d2	sw
22.231.1400	M14	2	110	30	11	9
22.231.1600	M16	2	110	32	12	9
22.231.1800	M18	2.5	125	34	14	11
22.231.2000	M20	2.5	140	34	16	12
22.231.2200	M22	2.5	140	34	18	14.5
22.231.2400	M24	3	160	38	18	14.5
22.231.2700	M27	3	160	38	20	16
22.231.3000	M30	3.5	180	45	22	18

> 22.240 Phantom

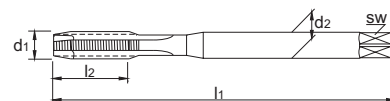


FR Taraud machine HSS-E UNI Métrique, TiCN

**HSS-E** **M** **60°** **TiCN** **DIN 371** **3xD** **Form B** **4-5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **M 22** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
22.240.0200	M2	0.4	45	8	2.8	2.1
22.240.0250	M2,5	0.45	50	9	2.8	2.1
22.240.0300	M3	0.5	56	11	3.5	2.7
22.240.0400	M4	0.7	63	13	4.5	3.4
22.240.0500	M5	0.8	70	16	6	4.9

Ref.	d1	P	l1	l2	d2	sw
22.240.0600	M6	1	80	19	6	4.9
22.240.0700	M7	1	80	19	7	5.5
22.240.0800	M8	1.25	90	22	8	6.2
22.240.0900	M9	1.25	90	22	9	7
22.240.1000	M10	1.5	100	24	10	8

> 22.241 Phantom

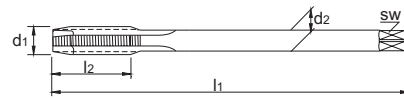


FR Taraud machine HSS-E UNI Métrique, TiCN

**HSS-E** **M** **60°** **TiCN** **DIN 376** **3xD** **Form B** **4-5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **M 22** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8

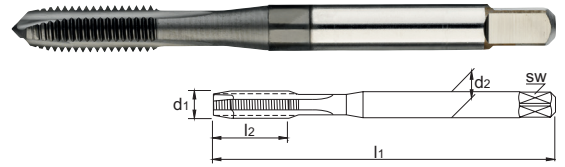


Ref.	d1	P	l1	l2	d2	sw
22.241.0300	M3	0.5	56	13	2.2	
22.241.0400	M4	0.7	63	13	2.8	2.1
22.241.0500	M5	0.8	70	16	3.5	2.7
22.241.0600	M6	1	80	19	4.5	3.4
22.241.0800	M8	1.25	90	22	6	4.9
22.241.1000	M10	1.5	100	24	7	5.5
22.241.1200	M12	1.75	110	29	9	7
22.241.1400	M14	2	110	30	11	9

Ref.	d1	P	l1	l2	d2	sw
22.241.1600	M16	2	110	32	12	9
22.241.1800	M18	2.5	125	34	14	11
22.241.2000	M20	2.5	140	34	16	12
22.241.2200	M22	2.5	140	34	18	14.5
22.241.2400	M24	3	160	38	18	14.5
22.241.2700	M27	3	160	38	20	16
22.241.3000	M30	3.5	180	45	22	18

**> 22.268 Phantom**

FR **Taraud machine HSS-E PM HP2 UNI Métrique, HARDLUBE**



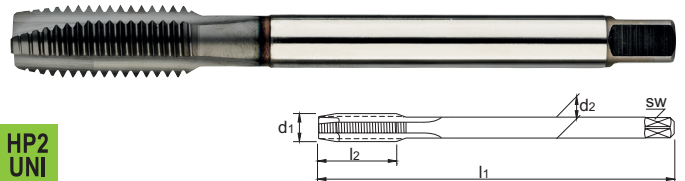
HSS-E PM	M	60°	HARD LUBE	DIN 371	3xD	Form B	4-5	ISO 2 6H	HP2 UNI		
P 11	P 12	P 13	P 14	M 21	M 22	K 31	K 32	N 41	N 42	S 71	S 72
≤800 N/mm <sup>2</sup>	≤850 N/mm <sup>2</sup>	<1000 N/mm <sup>2</sup>	<1400 N/mm <sup>2</sup>	INOX ≤850N/mm <sup>2</sup>	INOX >850N/mm <sup>2</sup>	GG	GGG GTS-GTW	Alu	Alu Si>10%	Ni/Co	Ti
15-20	15-20	8-15	8-15	8-15	8-15	20-25	20-25	20-25	20-25	5-12	5-12

Ref.	d1	P	l1	l2	d2	sw
22.268.0300	M3	0.5	56	11	3.5	2.7
22.268.0400	M4	0.7	63	13	4.5	3.4
22.268.0500	M5	0.8	70	16	6	4.9

Ref.	d1	P	l1	l2	d2	sw
22.268.0600	M6	1	80	19	6	4.9
22.268.0800	M8	1.25	90	22	8	6.2
22.268.1000	M10	1.5	100	24	10	8

**> 22.269 Phantom**

FR **Taraud machine HSS-E PM HP2 UNI Métrique, HARDLUBE**



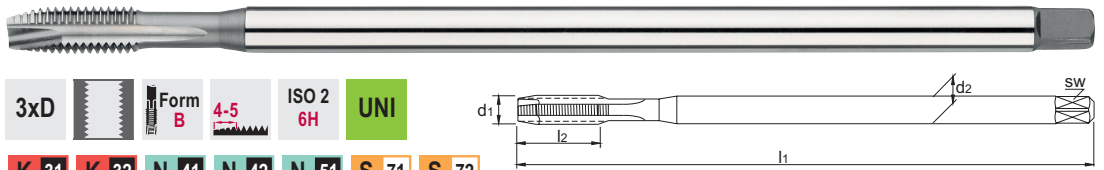
HSS-E PM	M	60°	HARD LUBE	DIN 376	3xD	Form B	4-5	ISO 2 6H	HP2 UNI		
P 11	P 12	P 13	P 14	M 21	M 22	K 31	K 32	N 41	N 42	S 71	S 72
≤800 N/mm <sup>2</sup>	≤850 N/mm <sup>2</sup>	<1000 N/mm <sup>2</sup>	<1400 N/mm <sup>2</sup>	INOX ≤850N/mm <sup>2</sup>	INOX >850N/mm <sup>2</sup>	GG	GGG GTS-GTW	Alu	Alu Si>10%	Ni/Co	Ti
15-20	15-20	8-15	8-15	8-15	8-15	20-25	20-25	20-25	20-25	5-12	5-12

Ref.	d1	P	l1	l2	d2	sw
22.269.1200	M12	1.75	110	29	9	7
22.269.1400	M14	2	110	30	11	9

Ref.	d1	P	l1	l2	d2	sw
22.269.1600	M16	2	110	32	12	9
22.269.2000	M20	2.5	140	34	16	12

**> 22.350 Phantom**

FR **Taraud machine HSS-E UNI Métrique, version longue**



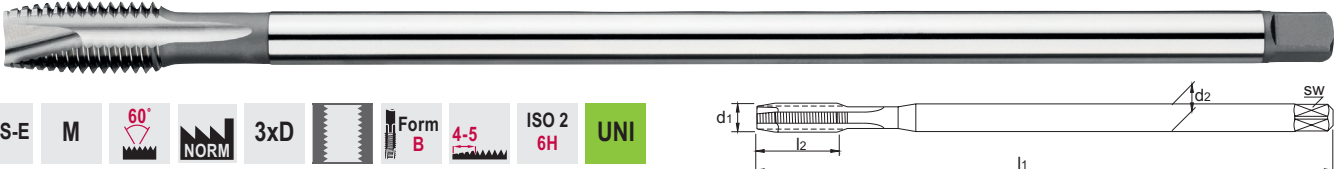
HSS-E	M	60°	NORM	3xD	Form B	4-5	ISO 2 6H	UNI		
P 11	P 12	P 13	M 21	K 31	K 32	N 41	N 42	N 51	S 71	S 72
≤800 N/mm <sup>2</sup>	≤850 N/mm <sup>2</sup>	<1000 N/mm <sup>2</sup>	INOX ≤850N/mm <sup>2</sup>	GG	GGG GTS-GTW	Alu	Alu Si>10%	Cu	Ni/Co	Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
22.350.0400	M4	0.7	126	13	4.5	3.4
22.350.0500	M5	0.8	140	15	6	4.9

Ref.	d1	P	l1	l2	d2	sw
22.350.0600	M6	1	160	17	6	4.9
22.350.0800	M8	1.25	180	20	8	6.2

**> 22.351 Phantom**

FR **Taraud machine HSS-E UNI Métrique, version longue**



HSS-E	M	60°	NORM	3xD	Form B	4-5	ISO 2 6H	UNI		
P 11	P 12	P 13	M 21	K 31	K 32	N 41	N 42	N 51	S 71	S 72
≤800 N/mm <sup>2</sup>	≤850 N/mm <sup>2</sup>	<1000 N/mm <sup>2</sup>	INOX ≤850N/mm <sup>2</sup>	GG	GGG GTS-GTW	Alu	Alu Si>10%	Cu	Ni/Co	Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	8-15	2-8

Ref.	d1	P	l1	l2	d2	sw
22.351.0800	M8	1.25	180	20	6	4.9
22.351.1000	M10	1.5	200	22	7	5.5
22.351.1200	M12	1.75	220	24	9	7

Ref.	d1	P	l1	l2	d2	sw
22.351.1600	M16	2	220	32	12	9
22.351.2000	M20	2.5	280	32	16	12
22.351.2400	M24	3	320	34	18	14.5

> 23.300 Phantom



FR Taraud machine HSS-E UNI Métrique

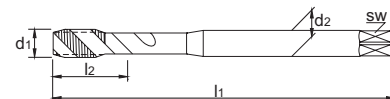
HSS-E M 60° DIN 371 2,5xD 40° Form C 2,5 ISO 2 6H UNI

P 11 P 12 P 13 M 21 K 31 K 32 N 41 N 42 N 51 S 71 S 72

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
23.300.0200	M2	0.4	45	4	2.8	2.1
23.300.0220	M2,2	0.45	45	4.5	2.8	2.1
23.300.0230	M2,3	0.4	45	4	2.8	2.1
23.300.0250	M2,5	0.45	50	4	2.8	2.1
23.300.0260	M2,6	0.45	50	4	2.8	2.1
23.300.0300	M3	0.5	56	6	3.5	2.7
23.300.0350	M3,5	0.6	56	6	4	3

Ref.	d1	P	l1	l2	d2	sw
23.300.0400	M4	0.7	63	7	4.5	3.4
23.300.0500	M5	0.8	70	8	6	4.9
23.300.0600	M6	1	80	10	6	4.9
23.300.0700	M7	1	80	10	7	5.5
23.300.0800	M8	1.25	90	12.5	8	6.2
23.300.1000	M10	1.5	100	15	10	8



> 23.301 Phantom



FR Taraud machine HSS-E UNI Métrique

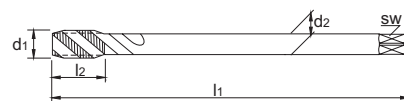
HSS-E M 60° DIN 376 2,5xD 40° Form C 2,5 ISO 2 6H UNI

P 11 P 12 P 13 M 21 K 31 K 32 N 41 N 42 N 51 S 71 S 72

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
23.301.0600	M6	1	80	8	4.5	3.4
23.301.0800	M8	1.25	90	10	6	4.9
23.301.0900	M9	1.25	90	12.5	7	5.5
23.301.1000	M10	1.5	100	15	7	5.5
23.301.1200	M12	1.75	110	17.5	9	7
23.301.1400	M14	2	110	20	11	9
23.301.1600	M16	2	110	20	12	9
23.301.1800	M18	2.5	125	25	14	11

Ref.	d1	P	l1	l2	d2	sw
23.301.2000	M20	2.5	140	25	16	12
23.301.2200	M22	2.5	140	25	18	14.5
23.301.2400	M24	3	160	30	18	14.5
23.301.2700	M27	3	160	30	20	16
23.301.3000	M30	3.5	180	45	22	18
23.301.3300	M33	3.5	180	35	25	20
23.301.3600	M36	4	200	40	28	22



> 23.320 Phantom



FR Taraud machine HSS-E UNI Métrique, TiN

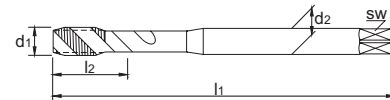
HSS-E M 60° TiN DIN 371 2,5xD 40° Form C 2,5 ISO 2 6H UNI

P 11 P 12 P 13 M 21 M 22 K 31 K 32 N 41 N 42 N 51 S 71 S 72

15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
23.320.0200	M2	0.4	45	4	2.8	2.1
23.320.0250	M2,5	0.45	50	4	2.8	2.1
23.320.0300	M3	0.5	56	6	3.5	2.7
23.320.0400	M4	0.7	63	7	4.5	3.4
23.320.0500	M5	0.8	70	8	6	4.9

Ref.	d1	P	l1	l2	d2	sw
23.320.0600	M6	1	80	10	6	4.9
23.320.0700	M7	1	80	10	7	5.5
23.320.0800	M8	1.25	90	12.5	8	6.2
23.320.1000	M10	1.5	100	15	10	8



> 23.321 Phantom



FR Taraud machine HSS-E UNI Métrique, TiN

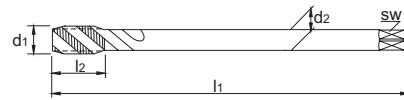
HSS-E M 60° TiN DIN 376 2,5xD 40° Form C 2,5 ISO 2 6H UNI

P 11 P 12 P 13 M 21 M 22 K 31 K 32 N 41 N 42 N 51 S 71 S 72

15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8

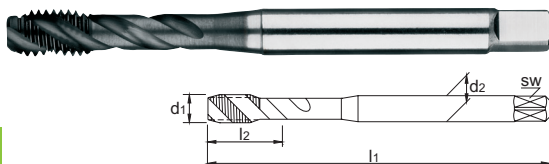
Ref.	d1	P	l1	l2	d2	sw
23.321.0600	M6	1	80	8	4.5	3.4
23.321.0800	M8	1.25	90	10	6	4.9
23.321.1000	M10	1.5	100	15	7	5.5
23.321.1200	M12	1.75	110	17.5	9	7

Ref.	d1	P	l1	l2	d2	sw
23.321.1400	M14	2	110	20	11	9
23.321.1600	M16	2	110	20	12	9
23.321.2000	M20	2.5	140	25	16	12
23.321.2400	M24	3	160	30	18	14.5



**> 23.324 Phantom**

FR Tarda machine HSS-E UNI Métrique, TiCN



HSS-E	M	60°	TiCN	DIN 371	2,5xD	40°	Form C	2,5	ISO 2 6H	UNI	
P 11	P 12	P 13	M 21	M 22	K 31	K 32	N 41	N 42	N 51	S 71	S 72
≤800 N/mm²	≤850 N/mm²	<1000 N/mm²	INOX ≤850N/mm²	INOX >850N/mm²	GG	GGG GTS-GTW	Alu	Alu Si>10%	Cu	Ni/Co	Ti
15-20	10-20	6-10	7-10	4-8	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
23.324.0300	M3	0.5	56	6	3.5	2.7
23.324.0400	M4	0.7	63	7	4.5	3.4
23.324.0500	M5	0.8	70	8	6	4.9

Ref.	d1	P	l1	l2	d2	sw
23.324.0600	M6	1	80	10	6	4.9
23.324.0800	M8	1.25	90	12.5	8	6.2
23.324.1000	M10	1.5	100	15	10	8

**> 23.325 Phantom**

FR Tarda machine HSS-E UNI Métrique, TiCN



HSS-E	M	60°	TiCN	DIN 376	2,5xD	40°	Form C	2,5	ISO 2 6H	UNI	
P 11	P 12	P 13	M 21	M 22	K 31	K 32	N 41	N 42	N 51	S 71	S 72
≤800 N/mm²	≤850 N/mm²	<1000 N/mm²	INOX ≤850N/mm²	INOX >850N/mm²	GG	GGG GTS-GTW	Alu	Alu Si>10%	Cu	Ni/Co	Ti
15-20	10-20	6-10	7-10	4-8	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
23.325.0600	M6	1	80	10	4.5	3.4
23.325.0800	M8	1.25	90	12.5	6	4.9
23.325.1000	M10	1.5	100	15	7	5.5
23.325.1200	M12	1.75	110	17.5	9	7

Ref.	d1	P	l1	l2	d2	sw
23.325.1400	M14	2	110	20	11	9
23.325.1600	M16	2	110	20	12	9
23.325.2000	M20	2.5	140	25	16	12

**> 23.368 Phantom**

FR Tarda machine HSS-E PM HP2 UNI Métrique, HARDLUBE



HSS-E PM	M	60°	HARD LUBE	DIN 371	2,5xD	50°	Form C	2-2,5	6HX	HP2 UNI	
P 11	P 12	P 13	P 14	M 21	M 22	K 31	K 32	N 41	N 42	S 71	S 72
≤800 N/mm²	≤850 N/mm²	<1000 N/mm²	<1400 N/mm²	INOX ≤850N/mm²	INOX >850N/mm²	GG	GGG GTS-GTW	Alu	Alu Si>10%	Ni/Co	Ti
15-20	15-20	8-15	8-15	8-15	8-15	20-25	20-25	20-25	20-25	5-12	5-12

Ref.	d1	P	l1	l2	d2	sw
23.368.0300	M3	0.5	56	6	3.5	2.7
23.368.0400	M4	0.7	63	7	4.5	3.4
23.368.0500	M5	0.8	70	8	6	4.9

Ref.	d1	P	l1	l2	d2	sw
23.368.0600	M6	1	80	10	6	4.9
23.368.0800	M8	1.25	90	12.5	8	6.2
23.368.1000	M10	1.5	100	15	10	8

**> 23.369 Phantom**

FR Tarda machine HSS-E PM HP2 UNI Métrique, HARDLUBE



HSS-E PM	M	60°	HARD LUBE	DIN 376	2,5xD	50°	Form C	2-2,5	6HX	HP2 UNI	
P 11	P 12	P 13	P 14	M 21	M 22	K 31	K 32	N 41	N 42	S 71	S 72
≤800 N/mm²	≤850 N/mm²	<1000 N/mm²	<1400 N/mm²	INOX ≤850N/mm²	INOX >850N/mm²	GG	GGG GTS-GTW	Alu	Alu Si>10%	Ni/Co	Ti
15-20	15-20	8-15	8-15	8-15	8-15	20-25	20-25	20-25	20-25	5-12	5-12

Ref.	d1	P	l1	l2	d2	sw
23.369.1200	M12	1.75	110	17.5	9	7
23.369.1400	M14	2	110	20	11	9

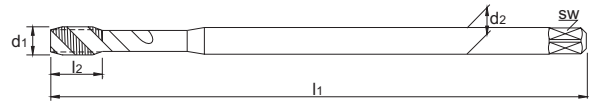
Ref.	d1	P	l1	l2	d2	sw
23.369.1600	M16	2	110	20	12	9
23.369.2000	M20	2.5	140	25	16	12

**> 23.370 Phantom**

FR **Taraud machine HSS-E UNI Métrique, version longue**



HSS-E	M	60°	NORM	2,5xD	40°	Form C	2,5	ISO 2 6H	UNI	
P 11	P 12	P 13	M 21	K 31	K 32	N 41	N 42	N 51	S 71	S 72
≤800 N/mm <sup>2</sup>	≤850 N/mm <sup>2</sup>	<1000 N/mm <sup>2</sup>	INOX ≤850N/mm <sup>2</sup>	GG	GGG GTS-GTW	Alu	Alu Si>10%	Cu	Ni/Co	Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8



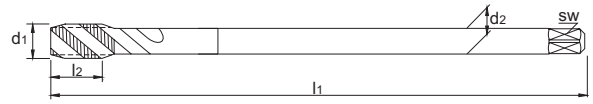
Ref.	d1	P	l1	l2	d2	sw	Ref.	d1	P	l1	l2	d2	sw
23.370.0400	M4	0.7	126	7	4.5	3.4	23.370.0600	M6	1	160	10	6	4.9
23.370.0500	M5	0.8	140	8	6	4.9	23.370.0800	M8	1.25	180	12.5	8	6.2

**> 23.371 Phantom**

FR **Taraud machine HSS-E UNI Métrique, version longue**



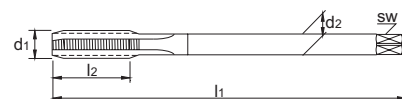
HSS-E	M	60°	NORM	2,5xD	40°	Form C	2,5	ISO 2 6H	UNI	
P 11	P 12	P 13	M 21	K 31	K 32	N 41	N 42	N 51	S 71	S 72
≤800 N/mm <sup>2</sup>	≤850 N/mm <sup>2</sup>	<1000 N/mm <sup>2</sup>	INOX ≤850N/mm <sup>2</sup>	GG	GGG GTS-GTW	Alu	Alu Si>10%	Cu	Ni/Co	Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8



Ref.	d1	P	l1	l2	d2	sw	Ref.	d1	P	l1	l2	d2	sw
23.371.0800	M8	1.25	180	12	6	4.9	23.371.1600	M16	2	220	20	12	9
23.371.1000	M10	1.5	200	15	7	5.5	23.371.2000	M20	2.5	280	25	16	12
23.371.1200	M12	1.75	220	17.5	9	7							

**> 23.620 Phantom**

FR **Taraud machine HSS-E Métrique Fin**



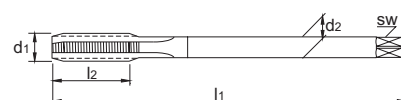
**HSS-E** **MF** **60°** **DIN 374** **3xD** **Form B** **5** **ISO 2 6H** **UNI**  
**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**  
≤600 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti  
 15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
23.620.0303	MF3	0.35	56	8	2.2	
23.620.0405	MF4	0.5	63	10	2.8	2.1
23.620.0505	MF5	0.5	70	11	3.5	2.7
23.620.0605	MF6	0.5	80	13	4.5	3.4
23.620.0607	MF6	0.75	80	13	4.5	3.4
23.620.0705	MF7	0.5	80	13	5.5	4.3
23.620.0707	MF7	0.75	80	13	5.5	4.3
23.620.0805	MF8	0.5	80	13	6	4.9
23.620.0807	MF8	0.75	80	13	6	4.9
23.620.0810	MF8	1	90	20	6	4.9
23.620.0907	MF9	0.75	90	20	7	5.5
23.620.0910	MF9	1	90	20	7	5.5
23.620.1005	MF10	0.5	90	16	7	5.5
23.620.1007	MF10	0.75	90	16	7	5.5
23.620.1010	MF10	1	90	16	7	5.5
23.620.1012	MF10	1.25	100	22	7	5.5
23.620.1110	MF11	1	90	20	8	6.2
23.620.1112	MF11	1.25	90	20	8	6.2
23.620.1205	MF12	0.5	100	22	9	7
23.620.1207	MF12	0.75	100	22	9	7
23.620.1210	MF12	1	100	22	9	7
23.620.1212	MF12	1.25	100	22	9	7
23.620.1215	MF12	1.5	100	22	9	7
23.620.1310	MF13	1	100	22	11	9
23.620.1410	MF14	1	100	22	11	9
23.620.1412	MF14	1.25	100	22	11	9
23.620.1415	MF14	1.5	100	22	11	9
23.620.1510	MF15	1	100	22	12	9
23.620.1515	MF15	1.5	100	22	12	9
23.620.1610	MF16	1	100	22	12	9
23.620.1612	MF16	1.25	100	22	12	9
23.620.1615	MF16	1.5	100	22	12	9
23.620.1810	MF18	1	110	25	14	11
23.620.1815	MF18	1.5	110	25	14	11
23.620.1820	MF18	2	125	30	14	11
23.620.2010	MF20	1	125	25	16	12
23.620.2015	MF20	1.5	125	25	16	12

Ref.	d1	P	l1	l2	d2	sw
23.620.2020	MF20	2	140	32	16	12
23.620.2210	MF22	1	125	25	18	14.5
23.620.2212	MF22	1.25	125	25	18	14.5
23.620.2215	MF22	1.5	125	25	18	14.5
23.620.2220	MF22	2	140	32	18	14.5
23.620.2410	MF24	1	140	28	18	14.5
23.620.2415	MF24	1.5	140	28	18	14.5
23.620.2420	MF24	2	140	28	18	14.5
23.620.2510	MF25	1	140	28	18	14.5
23.620.2515	MF25	1.5	140	28	18	14.5
23.620.2520	MF25	2	140	28	18	14.5
23.620.2615	MF26	1.5	140	28	18	14.5
23.620.2715	MF26	1.5	140	28	18	16
23.620.2720	MF27	2	140	28	20	16
23.620.2815	MF28	1.5	140	28	20	16
23.620.3010	MF30	1	150	28	22	18
23.620.3015	MF30	1.5	150	28	22	18
23.620.3020	MF30	2	150	28	22	18
23.620.3215	MF32	1.5	150	28	22	18
23.620.3315	MF33	1.5	160	30	25	20
23.620.3320	MF33	2	160	30	25	20
23.620.3415	MF34	1.5	170	30	28	22
23.620.3515	MF35	1.5	170	30	28	22
23.620.3615	MF36	1.5	170	30	28	22
23.620.3620	MF36	2	170	30	28	22
23.620.3630	MF36	3	200	50	28	22
23.620.3815	MF38	1.5	170	30	28	22
23.620.4015	MF40	1.5	170	30	32	24
23.620.4215	MF42	1.5	170	30	32	24
23.620.4220	MF42	2	170	30	32	24
23.620.4230	MF42	3	200	45	32	24
23.620.4515	MF45	1.5	180	32	36	29
23.620.4520	MF45	2	180	32	36	29
23.620.4815	MF48	1.5	190	32	36	29
23.620.5015	MF50	1.5	190	32	36	29
23.620.5215	MF52	1.5	190	32	40	32

**> 23.621 Phantom**

FR **Taraud machine HSS-E UNI Métrique Fin, TiN**



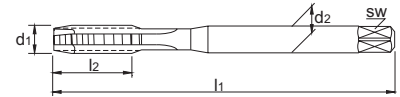
**HSS-E** **MF** **60°** **TiN** **DIN 374** **3xD** **Form B** **5** **ISO 2 6H** **UNI**  
**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**  
≤600 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti  
 15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
23.621.0810	MF8	1	90	20	6	4.9
23.621.1010	MF10	1	90	16	7	5.5
23.621.1012	MF10	1.25	100	22	7	5.5
23.621.1210	MF12	1	100	22	9	7
23.621.1212	MF12	1.25	100	22	9	7
23.621.1215	MF12	1.5	100	22	9	7
23.621.1415	MF14	1.5	100	22	11	9
23.621.1615	MF16	1.5	100	22	12	9
23.621.1815	MF18	1.5	110	25	14	11
23.621.2010	MF20	1	125	25	16	12
23.621.2015	MF20	1.5	125	25	16	12

Ref.	d1	P	l1	l2	d2	sw
23.621.2020	MF20	2	140	32	16	12
23.621.2215	MF22	1.5	125	25	18	14.5
23.621.2415	MF24	1.5	140	28	18	14.5
23.621.2420	MF24	2	140	28	18	14.5
23.621.2515	MF25	1.5	140	28	18	14.5
23.621.2720	MF27	2	140	28	20	16
23.621.3015	MF30	1.5	150	28	22	18
23.621.3020	MF30	2	150	28	22	18
23.621.3215	MF32	1.5	150	28	22	18
23.621.3620	MF36	2	170	30	28	22

**> 23.668 Phantom**

FR **Taraud machine HSS-E PM HP2 UNI Métrique Fin, HARDLUBE**



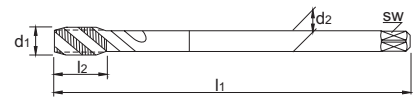
HSS-E PM	MF	60°	HARD LUBE	DIN 374	3xD	Form B	4-5	ISO 2 6H	HP2 UNI		
P 11 ≤800 N/mm²	P 12 ≤850 N/mm²	P 13 <1000 N/mm²	P 14 <1400 N/mm²	M 21 INOX ≤850N/mm²	M 22 INOX >850N/mm²	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	S 71 Ni/Co	S 72 Ti
15-20	15-20	8-15	8-15	8-15	8-15	20-25	20-25	20-25	20-25	5-12	5-12

Ref.	d1	P	l1	l2	d2	sw
23.668.0810	MF8	1	90	20	6	4.9
23.668.1010	MF10	1	90	16	7	5.5
23.668.1012	MF10	1.25	90	16	7	5.5
23.668.1210	MF12	1	100	22	9	7
23.668.1212	MF12	1.25	100	22	9	7
23.668.1215	MF12	1.5	100	22	9	7
23.668.1410	MF14	1	100	22	11	9

Ref.	d1	P	l1	l2	d2	sw
23.668.1415	MF14	1.5	100	22	11	9
23.668.1615	MF16	1.5	100	22	12	9
23.668.1815	MF18	1.5	110	25	14	11
23.668.2015	MF20	1.5	125	25	16	12
23.668.2215	MF22	1.5	125	25	18	14.5
23.668.2415	MF24	1.5	140	28	18	14.5
23.668.2420	MF24	2	140	28	18	14.5

**> 23.840 Phantom**

FR **Taraud machine HSS-E UNI Métrique Fin**



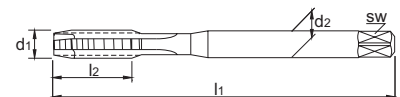
HSS-E	MF	60°	DIN 374	2,5xD	40°	Form C	2-3	ISO 2 6H	UNI	
P 11 ≤800 N/mm²	P 12 ≤850 N/mm²	P 13 <1000 N/mm²	M 21 INOX ≤850N/mm²	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
23.840.0405	MF4	0.5	63	10	2.8	2.1
23.840.0505	MF5	0.5	70	11	3.5	2.7
23.840.0605	MF6	0.5	80	13	4.5	3.4
23.840.0607	MF6	0.75	80	13	4.5	3.4
23.840.0807	MF8	0.75	80	13	6	4.9
23.840.0810	MF8	1	90	20	6	4.9
23.840.0910	MF9	1	90	20	7	5.5
23.840.1007	MF10	0.75	90	16	7	5.5
23.840.1010	MF10	1	90	16	7	5.5
23.840.1012	MF10	1.25	100	22	7	5.5
23.840.1110	MF11	1	90	20	8	6.2
23.840.1210	MF12	1	100	22	9	7
23.840.1212	MF12	1.25	100	22	9	7
23.840.1215	MF12	1.5	100	22	9	7
23.840.1310	MF13	1	100	22	11	9
23.840.1410	MF14	1	100	22	11	9
23.840.1412	MF14	1.25	100	22	11	9
23.840.1415	MF14	1.5	100	22	11	9
23.840.1510	MF15	1	100	22	12	9
23.840.1515	MF15	1.5	100	22	12	9
23.840.1610	MF16	1	100	22	12	9
23.840.1615	MF16	1.5	100	22	12	9
23.840.1810	MF18	1	110	25	14	11
23.840.1815	MF18	1.5	110	25	14	11
23.840.1820	MF18	2	125	30	14	11

Ref.	d1	P	l1	l2	d2	sw
23.840.2010	MF20	1	125	25	16	12
23.840.2015	MF20	1.5	125	25	16	12
23.840.2020	MF20	2	140	32	16	12
23.840.2210	MF22	1	125	25	18	14.5
23.840.2215	MF22	1.5	125	25	18	14.5
23.840.2220	MF22	2	140	32	18	14.5
23.840.2410	MF24	1	140	28	18	14.5
23.840.2415	MF24	1.5	140	28	18	14.5
23.840.2420	MF24	2	140	28	18	14.5
23.840.2515	MF25	1.5	140	28	18	14.5
23.840.2615	MF26	1.5	140	28	18	14.5
23.840.2715	MF27	1.5	140	28	20	16
23.840.2720	MF27	2	140	28	20	16
23.840.2815	MF28	1.5	140	28	20	16
23.840.3010	MF30	1	150	28	22	18
23.840.3015	MF30	1.5	150	28	22	18
23.840.3020	MF30	2	150	28	22	18
23.840.3215	MF32	1.5	150	28	22	18
23.840.3315	MF33	1.5	160	30	25	20
23.840.3320	MF33	2	160	30	25	20
23.840.3515	MF35	1.5	170	30	28	22
23.840.3615	MF36	1.5	170	30	28	22
23.840.3620	MF36	2	170	30	28	22
23.840.3630	MF36	3	200	50	28	22
23.840.4015	MF40	1.5	170	30	32	24

**> 23.868 Phantom**

FR **Taraud machine HSS-E PM HP2 UNI Métrique Fin, HARDLUBE**



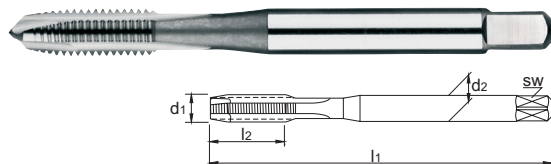
HSS-E PM	MF	60°	HARD LUBE	DIN 374	2,5xD	50°	Form C	2-2,5	ISO 2 6H	HP2 UNI	
P 11 ≤800 N/mm²	P 12 ≤850 N/mm²	P 13 <1000 N/mm²	P 14 <1400 N/mm²	M 21 INOX ≤850N/mm²	M 22 INOX >850N/mm²	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	S 71 Ni/Co	S 72 Ti
15-20	15-20	8-15	8-15	8-15	8-15	20-25	20-25	20-25	20-25	5-12	5-12

Ref.	d1	P	l1	l2	d2	sw
23.868.0810	MF8	1	90	20	6	4.9
23.868.1010	MF10	1	90	16	7	5.5
23.868.1012	MF10	1.25	100	22	7	5.5
23.868.1210	MF12	1	100	22	9	7
23.868.1212	MF12	1.25	100	22	9	7
23.868.1215	MF12	1.5	100	22	9	7
23.868.1412	MF14	1.25	100	22	11	9

Ref.	d1	P	l1	l2	d2	sw
23.868.1415	MF14	1.5	100	22	11	9
23.868.1615	MF16	1.5	100	22	12	9
23.868.1815	MF18	1.5	110	25	14	11
23.868.2015	MF20	1.5	125	25	16	12
23.868.2215	MF22	1.5	125	25	18	14.5
23.868.2415	MF24	1.5	140	28	18	14.5
23.868.2420	MF24	2	140	28	18	14.5

> 24.120 **Phantom**

FR Taraud machine HSS-E UNI UNC



HSS-E UNC 60° DIN 371 3xD Form B 5 2B UNI

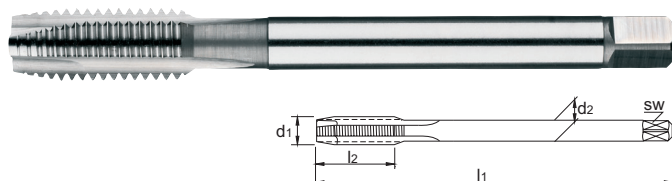
P 11 s800 N/mm <sup>2</sup>	P 12 s850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX s850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
24.120.0284	UNC Nr. 4	40	56	11	3.5	2.7
24.120.0317	UNC Nr. 5	40	56	11	3.5	2.7
24.120.0350	UNC Nr. 6	32	56	13	4	3
24.120.0416	UNC Nr. 8	32	63	13	4.5	3.4
24.120.0482	UNC Nr. 10	24	70	15	6	4.9

Ref.	d1	P	l1	l2	d2	sw
24.120.0548	UNC Nr. 12	24	80	19	6	4.9
24.120.0635	UNC 1/4	20	80	19	7	5.5
24.120.0794	UNC 5/16	18	90	22	8	6.2
24.120.0952	UNC 3/8	16	100	22	9	7

> 24.121 **Phantom**

FR Taraud machine HSS-E UNI UNC



HSS-E UNC 60° DIN 376 3xD Form B 5 2B UNI

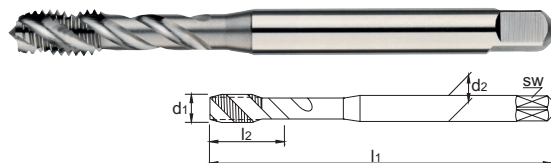
P 11 s800 N/mm <sup>2</sup>	P 12 s850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX s850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
24.121.1111	UNC 7/16	14	100	22	8	6.2
24.121.1270	UNC 1/2	13	110	24	9	7
24.121.1429	UNC 9/16	12	110	26	11	9
24.121.1588	UNC 5/8	11	110	27	12	9

Ref.	d1	P	l1	l2	d2	sw
24.121.1905	UNC 3/4	10	125	30	14	11
24.121.2222	UNC 7/8	9	140	32	18	14.5
24.121.2540	UNC 1	8	160	36	18	14.5

> 24.340 **Phantom**

FR Taraud machine HSS-E UNI UNC



HSS-E UNC 60° DIN 371 2,5xD Form C 2,5 2B UNI

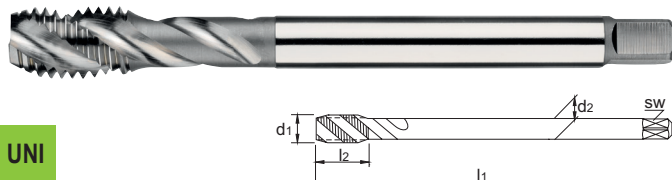
P 11 s800 N/mm <sup>2</sup>	P 12 s850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX s850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
24.340.0285	UNC Nr. 4	40	56	5	3.5	2.7
24.340.0317	UNC Nr. 5	40	56	6	3.5	2.7
24.340.0350	UNC Nr. 6	32	56	6	4	3
24.340.0416	UNC Nr. 8	32	63	7	4.5	3.4
24.340.0482	UNC Nr. 10	24	70	8	6	4.9

Ref.	d1	P	l1	l2	d2	sw
24.340.0548	UNC Nr. 12	24	80	10	6	4.9
24.340.0635	UNC 1/4	20	80	10	7	5.5
24.340.0794	UNC 5/16	18	90	13	8	6.2
24.340.0952	UNC 3/8	16	100	16	9	7

> 24.341 **Phantom**

FR Taraud machine HSS-E UNI UNC



HSS-E UNC 60° DIN 376 2,5xD Form C 2,5 2B UNI

P 11 s800 N/mm <sup>2</sup>	P 12 s850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX s850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8

Ref.	d1	P	l1	l2	d2	sw
24.341.1111	UNC 7/16	14	100	15	8	6.2
24.341.1270	UNC 1/2	13	110	18	9	7
24.341.1429	UNC 9/16	12	110	20	11	9
24.341.1588	UNC 5/8	11	110	20	12	9

Ref.	d1	P	l1	l2	d2	sw
24.341.1905	UNC 3/4	10	125	25	14	11
24.341.2222	UNC 7/8	9	140	28	18	14.5
24.341.2540	UNC 1	8	160	32	18	14.5

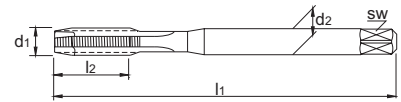
> 24.520 Phantom



FR Taraud machine HSS-E UNI UNF

HSS-E UNF 60° DIN 371 3xD Form B 5 2B UNI

P 11 ≤800 N/mm <sup>2</sup>	P 12 ≤850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX ≤850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8



Ref.	d1	P	l1	l2	d2	sw
24.520.0285	UNF Nr. 4	48	56	11	3.5	2.7
24.520.0317	UNF Nr. 5	44	56	11	3.5	2.7
24.520.0350	UNF Nr. 6	40	56	13	4	3
24.520.0416	UNF Nr. 8	36	63	13	4.5	3.4
24.520.0482	UNF Nr. 10	32	70	16	6	4.9

Ref.	d1	P	l1	l2	d2	sw
24.520.0548	UNF Nr. 12	28	80	19	6	4.9
24.520.0635	UNF 1/4	28	80	19	7	5.5
24.520.0794	UNF 5/16	24	90	22	8	6.2
24.520.0952	UNF 3/8	24	100	18	9	7

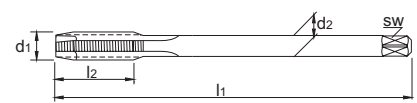
> 24.521 Phantom



FR Taraud machine HSS-E UNI UNF

HSS-E UNF 60° DIN 376 3xD Form B 5 2B UNI

P 11 ≤800 N/mm <sup>2</sup>	P 12 ≤850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX ≤850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8



Ref.	d1	P	l1	l2	d2	sw
24.521.1111	UNF 7/16	20	100	22	8	6.2
24.521.1270	UNF 1/2	20	110	28	9	7
24.521.1429	UNF 9/16	18	110	32	11	9
24.521.1588	UNF 5/8	18	110	32	12	9

Ref.	d1	P	l1	l2	d2	sw
24.521.1905	UNF 3/4	16	125	34	14	11
24.521.2222	UNF 7/8	14	140	34	18	14.5
24.521.2540	UNF 1	12	160	38	18	14.5

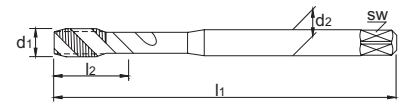
> 24.740 Phantom



FR Taraud machine HSS-E UNI UNF

HSS-E UNF 60° DIN 371 2,5xD Form C 2,5 2B UNI

P 11 ≤800 N/mm <sup>2</sup>	P 12 ≤850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX ≤850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8



Ref.	d1	P	l1	l2	d2	sw
24.740.0285	UNF Nr. 4	48	56	5	3.5	2.7
24.740.0317	UNF Nr. 5	44	56	6	3.5	2.7
24.740.0350	UNF Nr. 6	40	56	6	4	3
24.740.0416	UNF Nr. 8	36	63	7	4.5	3.4
24.740.0482	UNF Nr. 10	32	70	8	6	4.9

Ref.	d1	P	l1	l2	d2	sw
24.740.0548	UNF Nr. 12	28	80	10	6	4.9
24.740.0635	UNF 1/4	28	80	10	7	5.5
24.740.0794	UNF 5/16	24	90	13	8	6.2
24.740.0952	UNF 3/8	24	100	10	9	7

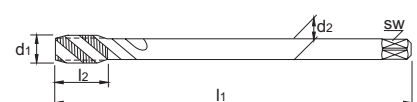
> 24.741 Phantom



FR Taraud machine HSS-E UNI UNF

HSS-E UNF 60° DIN 376 2,5xD Form C 2,5 2B UNI

P 11 ≤800 N/mm <sup>2</sup>	P 12 ≤850 N/mm <sup>2</sup>	P 13 <1000 N/mm <sup>2</sup>	M 21 INOX ≤850N/mm <sup>2</sup>	K 31 GG	K 32 GGG GTS-GTW	N 41 Alu	N 42 Alu Si>10%	N 51 Cu	S 71 Ni/Co	S 72 Ti
15-20	10-20	6-10	7-10	10-15	10-15	25-35	10-20	15-35	2-8	2-8

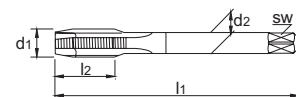


Ref.	d1	P	l1	l2	d2	sw
24.741.1111	UNF 7/16	20	100	15	8	6.2
24.741.1270	UNF 1/2	20	110	18	9	7
24.741.1429	UNF 9/16	18	110	20	11	9
24.741.1588	UNF 5/8	18	110	20	12	9

Ref.	d1	P	l1	l2	d2	sw
24.741.1905	UNF 3/4	16	125	25	14	11
24.741.2222	UNF 7/8	14	140	28	18	14.5
24.741.2540	UNF 1	12	160	32	18	14.5

> 25.097 Phantom

FR Taraud machine HSS-E UNI BSP (pas gaz)



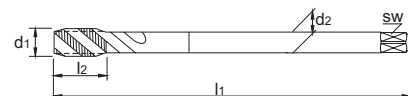
**HSS-E** **BSP G** **55°** **DIN 5156** **3xD** **Form B** **5** **UNI**  
**P 11** **P 12** **P 13** **M 21** **M 22** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**  
≤500 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> INOX >850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti  
 15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
25.097.0973	BSP 1/8	28	90	16	7	5.5
25.097.1316	BSP 1/4	19	100	22	11	9
25.097.1666	BSP 3/8	19	100	22	12	9
25.097.2096	BSP 1/2	14	125	25	16	12
25.097.2291	BSP 5/8	14	125	25	18	14.5
25.097.2644	BSP 3/4	14	140	28	20	16

Ref.	d1	P	l1	l2	d2	sw
25.097.3020	BSP 7/8	14	150	28	22	18
25.097.3325	BSP 1	11	160	30	25	20
25.097.3790	BSP 1.1/8	11	170	30	28	22
25.097.4191	BSP 1.1/4	11	170	30	32	24
25.097.4780	BSP 1.1/2	11	190	32	36	29

> 25.297 Phantom

FR Taraud machine HSS-E UNI BSP (pas gaz)



**HSS-E** **BSP G** **55°** **DIN 5156** **2,5xD** **40°** **Form C** **2,5** **UNI**  
**P 11** **P 12** **P 13** **M 21** **M 22** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**  
≤500 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> INOX >850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti  
 15-20 10-20 6-10 7-10 4-8 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
25.297.0973	BSP 1/8	28	90	16	7	5.5
25.297.1316	BSP 1/4	19	100	22	11	9
25.297.1666	BSP 3/8	19	100	22	12	9
25.297.2096	BSP 1/2	14	125	25	16	12
25.297.2291	BSP 5/8	14	125	25	18	14.5
25.297.2644	BSP 3/4	14	140	28	20	16

Ref.	d1	P	l1	l2	d2	sw
25.297.3020	BSP 7/8	14	150	28	22	18
25.297.3325	BSP 1	11	160	30	25	20
25.297.3790	BSP 1.1/8	11	170	30	28	22
25.297.4191	BSP 1.1/4	11	170	30	32	24
25.297.4780	BSP 1.1/2	11	190	32	36	29

> 29.250 Phantom

FR Jeu de Taraudage



Ref.	1	A, B
29.250.2000	22.200/22.201: M3-4-5-6-8-10-12	A
29.250.2100	22.201: M3-4-5-6-8-10-12	B
29.250.2120	22.230/22.231: M3-4-5-6-8-10-12	A
29.250.2150	22.205: M3-4-5-6-8-10-12	B
29.250.2500	22.268/22.269: M3-4-5-6-8-10-12	A
29.250.3300	23.300/23.301: M3-4-5-6-8-10-12	A
29.250.3450	23.450/23.451: M3-4-5-6-8-10-12	A

> 29.260 Phantom

FR Jeu de Taraudage Perçage



Ref.	1	2	A, B
29.260.1980	22.200/22.201: M3-4-5-6-8-10-12	11.450: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.1990	22.200/22.201: M3-4-5-6-8-10-12	11.451: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.1995	22.200/22.201: M3-4-5-6-8-10-12	11.461: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.2000	22.200/22.201: M3-4-5-6-8-10-12	11.500: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.2100	22.201: M3-4-5-6-8-10-12	11.500: 2,5-3,3-4,2-5-6-8-8,5-10,2	B
29.260.2120	22.230/22.231: M3-4-5-6-8-10-12	11.461: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.2500	22.268/22.269: M3-4-5-6-8-10-12	11.568: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.3340	23.300/23.301: M3-4-5-6-8-10-12	11.450: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.3350	23.300/23.301: M3-4-5-6-8-10-12	11.451: 2,5-3,3-4,2-5-6-8-8,5-10,2	A
29.260.3360	23.300/23.301: M3-4-5-6-8-10-12	11.500: 2,5-3,3-4,2-5-6-8-8,5-10,2	A

**> 29.950 Phantom**



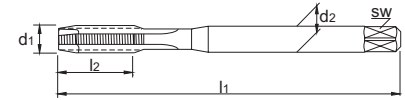
FR **Taraud machine HSS-E UNI Métrique, à gauche**

HSS-E **DIN 371** **3xD** **M** **Form B** **4-5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤800 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
29.950.0300	M3	0.5	56	11	3.5	2.7
29.950.0400	M4	0.7	63	13	4.5	3.4
29.950.0500	M5	0.8	70	15	6	4.9

Ref.	d1	P	l1	l2	d2	sw
29.950.0600	M6	1	80	17	6	4.9
29.950.0800	M8	1.25	90	20	8	6.2
29.950.1000	M10	1.5	100	22	10	8

**> 29.951 Phantom**



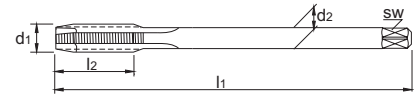
FR **Taraud machine HSS-E UNI Métrique, à gauche**

HSS-E **M** **DIN 376** **3xD** **Form B** **4-5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤800 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	l2	d2	sw
29.951.1200	M12	1.75	110	24	9	7
29.951.1400	M14	2	110	26	11	9
29.951.1600	M16	2	110	27	12	9
29.951.1800	M18	2.5	125	32	14	11

Ref.	d1	P	l1	l2	d2	sw
29.951.2000	M20	2.5	140	32	16	12
29.951.2200	M22	2.5	140	32	18	14.5
29.951.2400	M24	3	160	34	18	14.5
29.951.3000	M30	3.5	180	40	22	18

**> 29.956 Phantom**



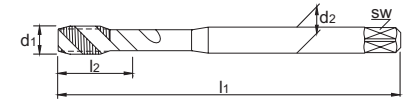
FR **Taraud machine HSS-E UNI Métrique, à gauche**

HSS-E **M** **DIN 371** **2,5xD** **Form C** **2,5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤800 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8



Ref.	d1	P	l1	d2	sw
29.956.0300	M3	0.5	56	3.5	2.7
29.956.0400	M4	0.7	63	4.5	3.4
29.956.0500	M5	0.8	70	6	4.9

Ref.	d1	P	l1	d2	sw
29.956.0600	M6	1	80	6	4.9
29.956.0800	M8	1.25	90	8	6.2
29.956.1000	M10	1.5	100	10	8

**> 29.957 Phantom**



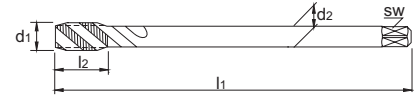
FR **Taraud machine HSS-E UNI Métrique, à gauche**

HSS-E **M** **DIN 376** **2,5xD** **Form C** **2,5** **ISO 2 6H** **UNI**

**P 11** **P 12** **P 13** **M 21** **K 31** **K 32** **N 41** **N 42** **N 51** **S 71** **S 72**

≤800 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX ≤850N/mm<sup>2</sup> GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8

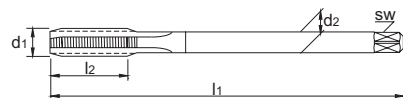


Ref.	d1	P	l1	d2	sw
29.957.1200	M12	1.75	110	9	7
29.957.1400	M14	2	110	11	9
29.957.1600	M16	2	110	12	9

Ref.	d1	P	l1	d2	sw
29.957.2000	M20	2.5	140	16	12
29.957.2400	M24	3	160	18	14.5
29.957.3000	M30	3.5	180	22	18

**> 29.960 Phantom**

FR **Taraud machine HSS-E UNI Métrique Fin, à gauche**



HSS-E MF 60° 3xD Form B ISO 2 6H UNI

P 11 P 12 P 13 M 21 K 31 K 32 N 41 N 42 N 51 S 71 S 72  
≤800 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
29.960.0607	MF6	0.75	80	13	4.5	3.4
29.960.0810	MF8	1	90	20	6	4.9
29.960.1010	MF10	1	90	16	7	5.5
29.960.1012	MF10	1.25	100	22	7	5.5
29.960.1210	MF12	1	100	22	9	7
29.960.1212	MF12	1.25	100	22	9	7
29.960.1415	MF14	1.5	100	22	11	9

Ref.	d1	P	l1	l2	d2	sw
29.960.1615	MF16	1.5	100	22	12	9
29.960.1815	MF18	1.5	110	25	14	11
29.960.2015	MF20	1.5	125	25	16	12
29.960.2215	MF22	1.5	125	25	18	14.5
29.960.2415	MF24	1.5	140	28	18	14.5
29.960.2420	MF24	2	140	28	18	14.5
29.960.3015	MF30	1.5	150	28	22	18

**> 29.961 Phantom**

FR **Taraud machine HSS-E UNI Métrique Fin, à gauche**



HSS-E MF 60° 2,5xD Form C ISO 2 6H UNI

P 11 P 12 P 13 M 21 K 31 K 32 N 41 N 42 N 51 S 71 S 72  
≤800 N/mm<sup>2</sup> ≤850 N/mm<sup>2</sup> <1000 N/mm<sup>2</sup> INOX GG GGG GTS-GTW Alu Alu Si>10% Cu Ni/Co Ti

15-20 10-20 6-10 7-10 10-15 10-15 25-35 10-20 15-35 2-8 2-8

Ref.	d1	P	l1	l2	d2	sw
29.961.0810	MF8	1	90	20	6	4.9
29.961.1010	MF10	1	90	16	7	5.5
29.961.1012	MF10	1.25	100	22	7	5.5
29.961.1210	MF12	1	100	22	9	7
29.961.1212	MF12	1.25	100	22	9	7
29.961.1215	MF12	1.5	100	22	9	7
29.961.1410	MF14	1	100	22	11	9
29.961.1412	MF14	1.25	100	22	11	9
29.961.1415	MF14	1.5	100	22	11	9
29.961.1615	MF16	1.5	100	22	12	9

Ref.	d1	P	l1	l2	d2	sw
29.961.1815	MF18	1.5	110	25	14	11
29.961.2015	MF20	1.5	125	25	16	12
29.961.2215	MF22	1.5	125	25	18	14.5
29.961.2415	MF24	1.5	140	28	18	14.5
29.961.2615	MF26	1.5	140	20	18	14.5
29.961.2715	MF27	1.5	140	20	20	16
29.961.2720	MF27	2	140	20	20	16
29.961.2815	MF28	1.5	140	20	20	16
29.961.3015	MF30	1.5	150	22	22	18
29.961.3020	MF30	2	150	22	22	18

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POUR OBTENIR VOS PRIX NETS !**

# LES MEILLEURS TARAUDS TESTÉS POUR LEUR DURABILITÉ

**BEST  
OF THE  
TEST**

## Phantom

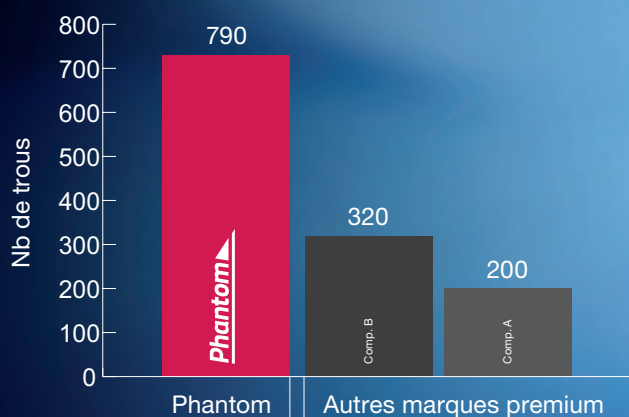


**1** TARAUD > POUR TOUTES LES MATIÈRES

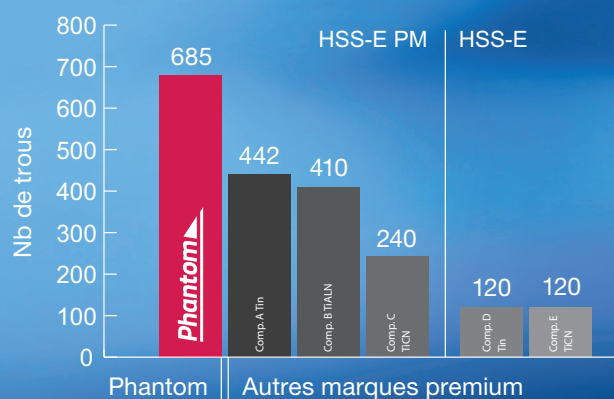
**2x** > PLUS DE TROUS

**100%** > FIABLE

### DURÉE D'UTILISATION PLUS LONGUE SUR 42CRM04



### DURÉE D'UTILISATION PLUS LONGUE SUR L'INOX



#### Tarauds machine UNI HSS-E

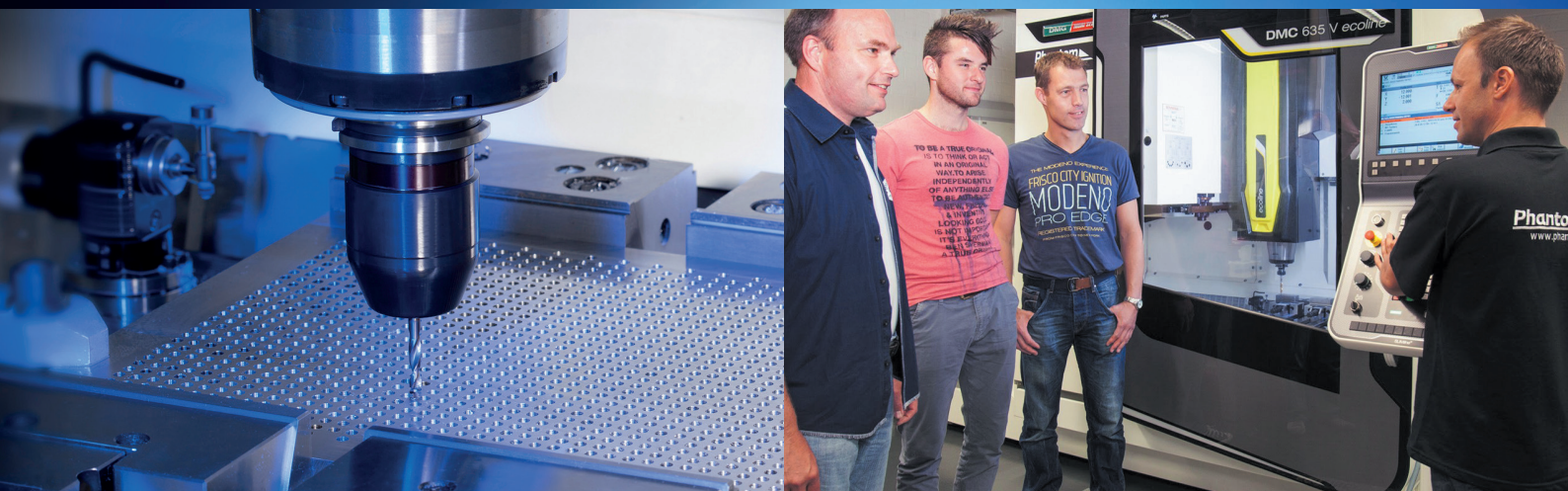
Taraud Phantom testée	23.300.0600/M6
Matière testée	1.7225 / 42CrMo4
Type de trou	Borgne
Profondeur de taraudage	1,5xd =9mm.
Machine	DMG DMC 635 ECO
Porte-outil	Soft Synchro
Vitesse de coupe	Vc=16m/min.
Lubrifiant	Émulsion 8%

#### Tarauds machine hardlube HP2 avec revêtement

Taraud Phantom testée	23.368.0600/M6
Matière testée	1.4571 / INOX316Ti
Type de trou	Borgne
Profondeur de taraudage	1,5xd =9mm.
Machine	DMG DMC 635 ECO
Porte-outil	Soft Synchro
Vitesse de coupe	Vc=16m/min.
Lubrifiant	Huile de coupe

## PAS ENCORE TOTALEMENT CONVAINCU ?

Demandez conseil à votre revendeur ou contactez-nous pour des conseils pratiques. Nous nous ferons un plaisir de vous aider à exploiter au maximum le taraud machine UNI dans votre unité de production.



Constamment à la recherche de solutions pratiques et innovantes dans le domaine du perçage, taraudage, fraisage, chanfreinage, alésage, sciage, tournage et serrage.

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