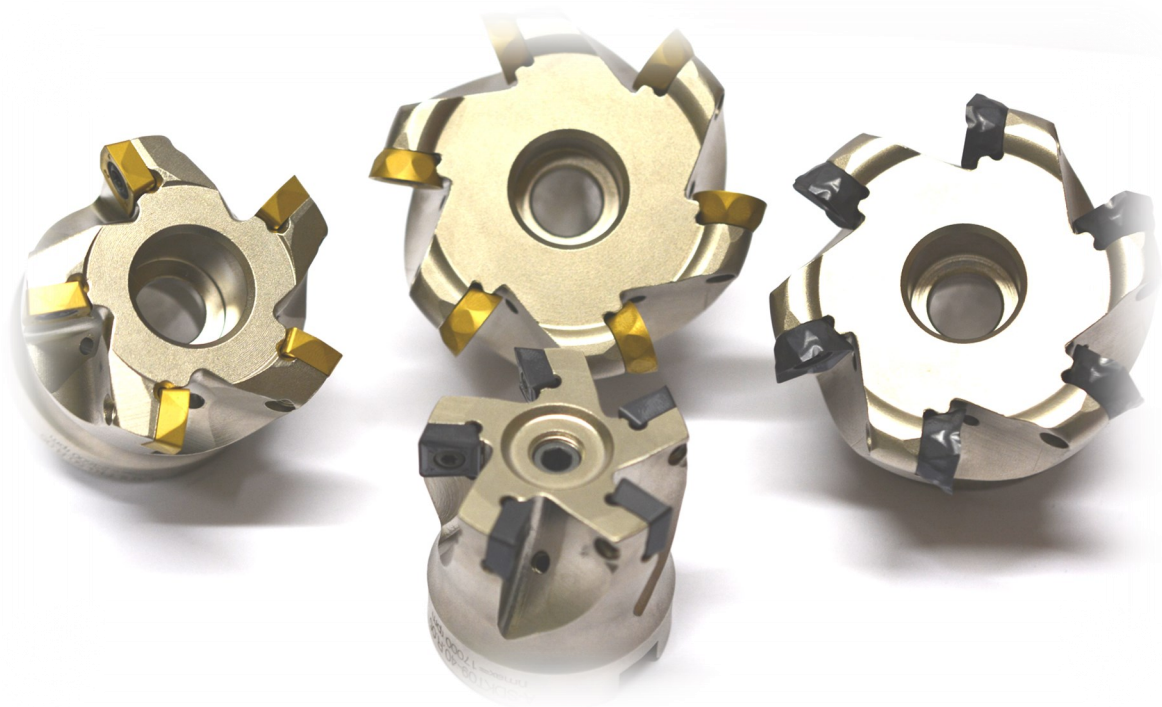
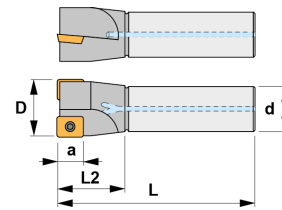



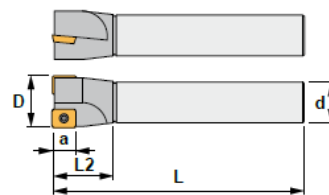
Fraisage




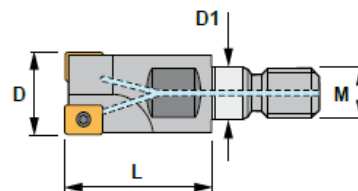
Version avec prix sur demande




N°art.	Désignation	ØD	L2	L	Ødh6	Z	AP...		Prix CHF
23656	F90AP1010C16Z1	10	25	110	16	1	AP..1003	K155	
23657	F90AP1012C16Z1	12	25	110	16	1	AP..1003	K155	
23658	F90AP1014C16Z1	14	25	110	16	1	AP..1003	K155	
23659	F90AP1016C20Z2	16	25	110	20	2	AP..1003	K155	
23660	F90AP1018C20Z2	18	30	110	20	2	AP..1003	K125	
23661	F90AP1020C20Z3	20	30	125	20	3	AP..1003	K125	
23662	F90AP1022C20Z3	22	30	125	20	3	AP..1003	K125	
23663	F90AP1025C25Z4	25	30	125	25	4	AP..1003	K125	
24132	F90AP1028C25Z4	28	30	125	25	4	AP..1003	K125	

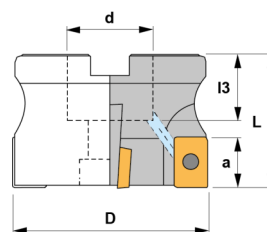
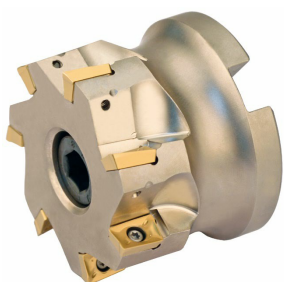


N°art.	Désignation	ØD	L2	L	Ødh6	Z	AP...		Prix CHF
23863	F90AP1016C20Z2L	16	25	175	20	2	AP..1003	K155	
23864	F90AP1020C20Z3L	20	30	200	20	3	AP..1003	K125	

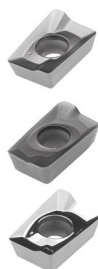


N°art.	Désignation	ØD	L	M	ØD1	Z	AP...		Prix CHF
24129	F90AP1016M08Z2	16	23	M8	8.5	2	AP..1003	K155	
24130	F90AP1020M10Z3	20	30	M10	10.5	3	AP..1003	K125	
24131	F90AP1025M12Z4	25	35	M12	12.5	4	AP..1003	K125	

Version avec prix sur demande



N°art.	Désignation	ØD	L	ØdH7	Z	I3	AP..		Prix CHF
23664	F90AP1032A16Z5	32	40	16	5	18	AP..1003	K125	
23665	F90AP1040A16Z6	40	40	16	6	18	AP..1003	K125	
23666	F90AP1050A22Z7	50	40	22	7	20	AP..1003	K125	
23667	F90AP1063A22Z8	63	50	22	9	20	AP..1003	K125	

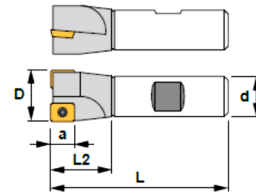



N°art.	Désignation	P	M	K	N	S	Prix CHF
23668	APKT100305PDER (DSM355)	•	•	•		○	
23669	APKT100308PDER (DSM 355)	•	•	•			
23670	APKT100312PDER (DSM 355)	•	•	•			
23671	APET100305PDFR (FI20)				•	○	

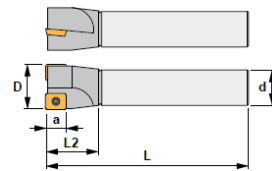
• application principale ○ application secondaire

Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	80-180	70-150	70-100	180-250	10-40
Av Fz	0.05-0.18	0.03-0.15	0.04-0.2	0.05-0.25	0.02-0.1

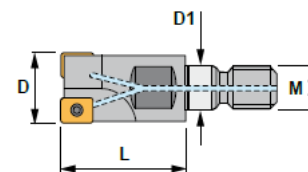
Version avec prix sur demande




N°art.	Désignation	ØD	L2	L	Ødh6	Z	AP...		Prix CHF
24125	F90AP1620C20Z1	20	30	100	20	1	AP...1604	K138	
24126	F90AP1625C25Z2	25	30	100	25	2	AP...1604	K138	
24127	F90AP1632C32Z3	32	35	110	32	3	AP...1604	K140	
24128	F90AP1640C32Z4	40	35	110	32	4	AP...1604	K140	

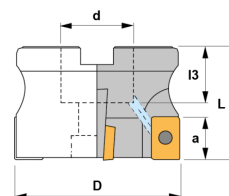





N°art.	Désignation	ØD	L2	L	Ødh6	Z	AP...		Prix CHF
24133	F90AP1620C20Z1L	20	35	200	20	1	AP...1604	K138	
24134	F90AP1625C25Z2L	25	35	200	25	2	AP...1604	K138	
24135	F90AP1632C32Z3L	32	35	250	32	3	AP...1604	K140	
24136	F90AP1640C32Z4L	40	35	250	32	4	AP...1604	K140	



N°art.	Désignation	ØD	L	M	ØD1	Z	AP...		Prix CHF
24137	F90AP1625M12Z2	25	35	M12	12.5	2	AP...1604	K138	
24138	F90AP1632M16Z3	32	43	M16	17.0	3	AP...1604	K140	

Version avec prix sur demande



N°art.	Désignation	ØD	L	ØdH7	Z	I3	AP..		Prix CHF
24139	F90AP1640A16Z4	40	40	16	4	18	AP..1604	K140	
24140	F90AP1650A22Z5	50	40	22	5	20	AP..1604	K140	
24141	F90AP1663A27Z6	63	50	27	6	22	AP..1604	K140	
24115	F90AP1680A27Z7	80	50	27	7	22	AP..1604	K140	
24142	F90AP16100A32Z8	100	50	32	8	25	AP..1604	K140	
 24143	F90AP16125A40Z8 *	125	63	40	8	30	AP..1604	K140	
 24144	F90AP16160A40Z9 *	160	63	40	9	30	AP..1604	K140	

* sans arrosage au centre

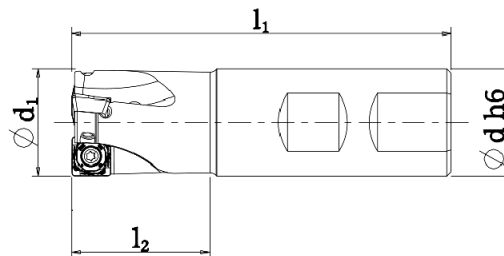



N°art.	Désignation	P	M	K	N	S	Prix CHF
18993	APLT1604PDSR-71K (RSM 351)	•		•			
18419	APHW1604PDSR (DSM 351)			•			
16186	APHT1604PDER-41L (DSM 351)	•	•		○	○	
16148	APHT1604PDFR-41M (FI 20)				•	○	
23653	APKT1604PDER-63K (DSM355)	•	•	○			

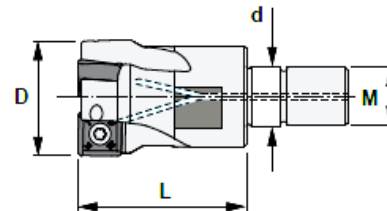
• application principale ○ application secondaire


Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	80-180	70-150	70-100	180-250	10-40
Av Fz	0.05-0.18	0.03-0.15	0.04-0.2	0.05-0.25	0.02-0.1

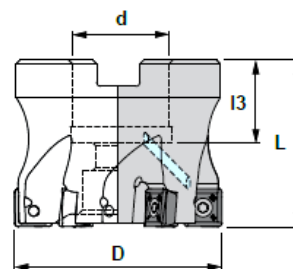
Version avec prix sur demande




N°art.	Désignation	Ød1	l2	l1	Ødh6	Z	SD...		Prix CHF
22332	F90SD0925C25Z3	25	32	88	25	3	SDKT09..	K148	
22333	F90SD0932C32Z4	32	40	100	32	4	SDKT09..	K148	

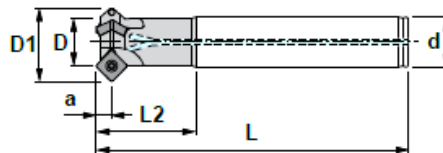
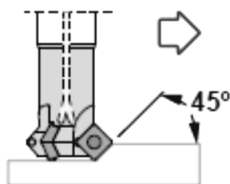
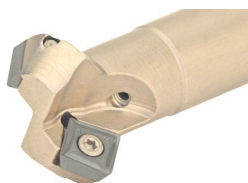



N°art.	Désignation	ØD	L	d	M	Z	SD...		Prix CHF
24145	F90SD0925M12Z3	25	35	12.5	M12	3	SDKT09..	K148	
24146	F90SD0932M16Z4	32	43	17.0	M16	4	SDKT09..	K148	



N°art.	Désignation	ØD	L	Ødh7	Z	l3	SD...		Prix CHF
22334	F90SD0940A16Z5	40	40	16	5	18	SDKT09..	K148	
22335	F90SD0950A22Z6	50	40	22	6	20	SDKT09..	K148	
22336	F90SD0963A22Z7	63	40	22	7	20	SDKT09..	K148	
22337	F90SD0980A27Z9	80	50	27	9	22	SDKT09..	K148	

Version avec prix sur demande



N°art.	Désignation	ØD	ØD1	Ødh7	a	Z	L2	L	SD...		Prix CHF
24147	F45SD090819C16Z1	8	19.3	16	6	1	30	100	SDKT09..	K148	
24148	F45SD091627C20Z2	16	27.5	20	6	2	30	100	SDKT09..	K148	
24149	F45SD092031C25Z3	20	31.5	25	6	3	40	125	SDKT09..	K148	

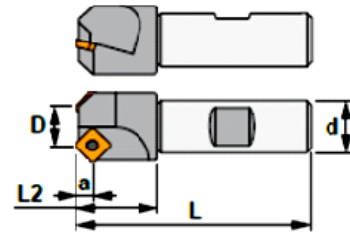
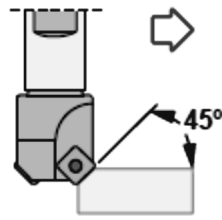
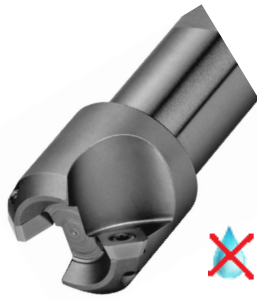



N°art.	Désignation	P	M	K	N	S	Prix CHF
22331	SDHT09T308FR-51M FI20				•	○	
22458	SDHT09T308FR-51L DSM251	○	•		•	•	
22472	SDKT09T308SR-51K DSM352	•	○	•			
22330	SDKT09T308SR-51L DSM301	○	•	○			
23885	SDKT09T308SR-51L DSM355	○	•			•	

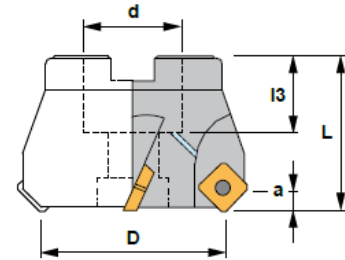
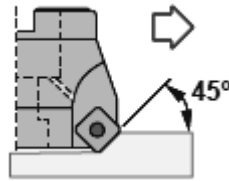
• application principale ○ application secondaire





Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	110-220	90-180	120-160	180-250	20-60
Av Fz	0.05-0.3	0.03-0.25	0.04-0.2	0.05-0.5	0.02-0.1

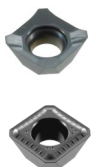
Version avec prix sur demande



N°art.	Désignation	ØD	Ødh7	a	Z	L2	L	SD...		Prix CHF
19178	F42.020.W20SD09.R01	20	20	4.5	2	25	82	SD..09T3A	K462	
19179	F42.025.W25SD09.R01	25	25	4.5	3	25	85	SD..09T3A	K462	
19180	F42.032.W25SD09.R01	32	25	4.5	3	30	88	SD..09T3A	K462	



N°art.	Désignation	ØD	Ødh7	a	Z	I3	L	SD...		Prix CHF
 19181	F45.040.A16SD09.Z4	40	16	4.5	4	18	40	SD..09T3A	K462	
 19182	F45.050.A22SD09.Z5	50	22	4.5	5	20	42	SD..09T3A	K462	
 23192	F45.063.A22SD09.Z6	63	22	4.5	6	20	42	SD..09T3A	K462	

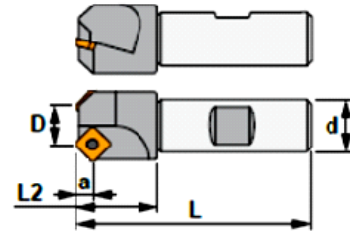
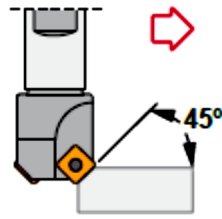
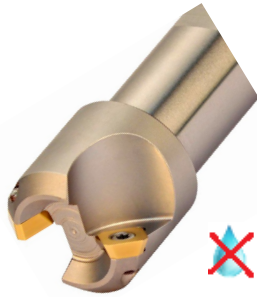



N°art.	Désignation	P	M	K	N	S	Prix CHF
21138	SDHT09T3AEEN-41L (FI20)				•	○	
18820	SDHT09T3AEEN-41L (DSM 251)	○	•		•	•	
16390	SDLT09T3AEEN-71K (DSM 351)	•	○	•			

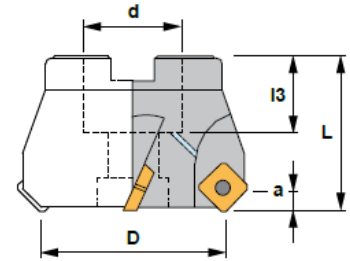
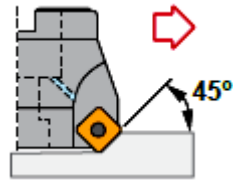
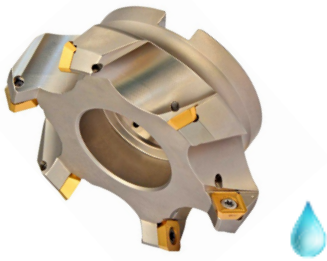
• application principale ○ application secondaire


Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	110-220	90-180	120-160	180-250	20-60
Av Fz	0.05-0.3	0.03-0.25	0.04-0.2	0.05-0.5	0.02-0.1





Version avec prix sur demande



N°art.	Désignation	ØD	Ødh7	a	Z	L2	L	SE...		Prix CHF
24161	F45SE1232C32Z2	32	32	6	2	40	125	SE..1204	K159	
24163	F45SE1240C32Z2	40	32	6	3	40	125	SE..1204	K159	



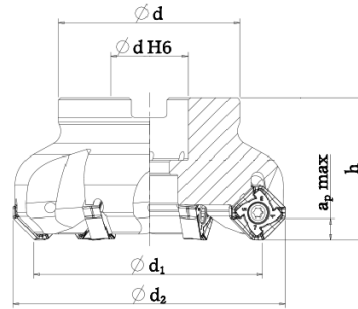
N°art.	Désignation	ØD	Ødh7	a	Z	I3	L	SE...		Prix CHF
24164	F45SE1250A22Z4	50	22	6	4	20	40	SE..1204	K159	
24165	F45SE1263A22Z5	63	22	6	5	20	50	SE..1204	K159	
24166	F45SE1280A27Z6	80	27	6	6	22	50	SE..1204	K159	
24167	F45SE12100A32Z6	100	32	6	6	25	50	SE..1204	K159	
24168	F45SE12125A40Z7	125	40	6	7	30	63	SE..1204	K159	
X 24169	F45SE12160A40Z8	160	40	6	8	30	63	SE..1204	K159	
X 24170	F45SE12200A60Z10	200	60	6	10	40	63	SE..1204	K159	


N°art.	Désignation	P	M	K	N	S	Prix CHF
 10489	SEHT1204AFFN-41M (FI 20)				•	○	
 10483	SEHT1204AFEN-41L (DSM 251)	○	•		•	•	
 16677	SELT1204AFEN-71K (DSM 351)	•	○	•			
 23380	SEHW1204AFEN (DSM+353)			•			

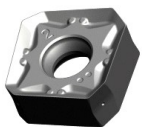
• application principale ○ application secondaire

Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	110-220	90-180	120-160	180-350	20-60
Av Fz	0.05-0.3	0.03-0.25	0.04-0.2	0.05-0.5	0.02-0.1

Version avec prix sur demande



N°art.	Désignation	Ød1	Ød2	ØdH6	ap	Z	h	SO...		Prix CHF
22338	F45SO1540A16Z4	40	55	16	6.5	4	45	SO..1505..	K1432	
22339	F45SO1550A22Z4	50	65	22	6.5	4	45	SO..1505..	K1432	
22340	F45SO1563A22Z5	63	78	22	6.5	5	45	SO..1505..	K1432	
22341	F45SO1580A27Z6	80	95	27	6.5	6	50	SO..1505..	K1432	
22342	F45SO15100A32Z7	100	115	32	6.5	7	50	SO..1505..	K1432	
22343	F45SO15125A40Z8	125	140	40	6.5	8	63	SO..1505..	K1432	
24171	F45SO15160A40Z10	160	175	40	6.5	10	63	SO..1505..	K1432	

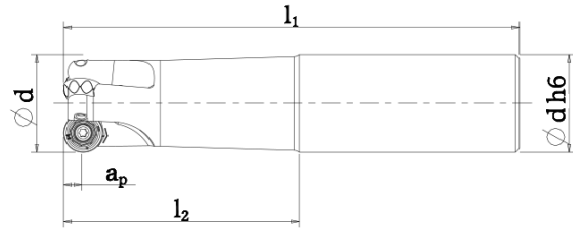



N°art.	Désignation	P	M	K	N	S	Prix CHF
23246	SOKU1505AZER-71S (RSM359)		○			•	
24173	SOKU1505AZER-71K (DSM352)	•	○				
24174	SOKU1505AZER-71L (DSM355)	○	•				
24175	SOKU1505AZER-71K (DSM255)			•			
22344	SOKU1505AZER-71K (RSM255)	•		○			

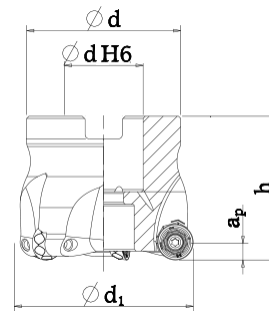
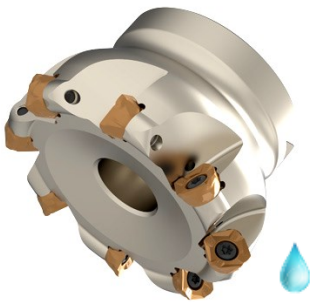
• application principale ○ application secondaire


Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	110-220	90-180	120-160	-	30-80
Av Fz	0.2-0.45	0.15-0.35	0.18-0.4	-	0.05-0.2

Version avec prix sur demande



N°art.	Désignation	Ød	l1	l2	Ødh6	ap	Z	RP../SD..		Prix CHF
22349	F45RX12C25Z2	25	116	60	25	6	2	RP12/SD11	K1382	
22351	F45RX12C32Z3	32	130	70	32	6	3	RP12/SD11	K1382	



N°art.	Désignation	Ød1	Ød	Ødh6	ap	Z	h	RP../SD..		Prix CHF
22352	F45RX12A40Z4	40	38	16	6	4	40	RP12/SD11	K1402	
22353	F45RX12A50Z5	50	43	22	6	5	40	RP12/SD11	K1402	
22354	F45RX12A63Z6	63	48	22	6	6	40	RP12/SD11	K1402	
22355	F45RX12A80Z8	80	58	27	6	8	50	RP12/SD11	K1402	
22356	F45RX12A100Z10	100	78	32	6	10	50	RP12/SD11	K1402	

N°art.	Désignation	P	M	K	N	S	Prix CHF
22359	RPHX1204MO-92S RSM359		○			•	
22357	RPMX1204MO-92K RSM155	○		•			
22358	RPMX1204MO-92L DSM301	○	•				
22360	RDHX1204MO-92M FI20				•		
22361	SDMX1105AEER-93K RSM155	○		•			
22362	SDMX1105AEER-93L DSM301	○	•				
22363	SDMX1105AEER-93S RSM359		○			•	



• application principale ○ application secondaire

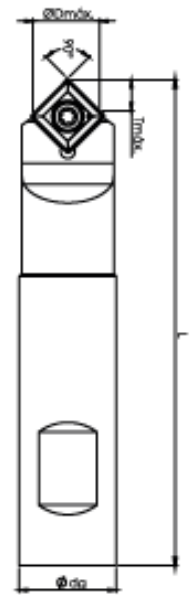
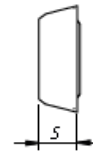
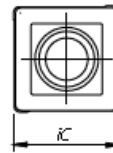
Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	110-220	90-180	120-160	-	30-80
Av Fz	0.2-0.45	0.15-0.35	0.18-0.4	-	0.05-0.2

L'outil multifonction

Version avec prix sur demande

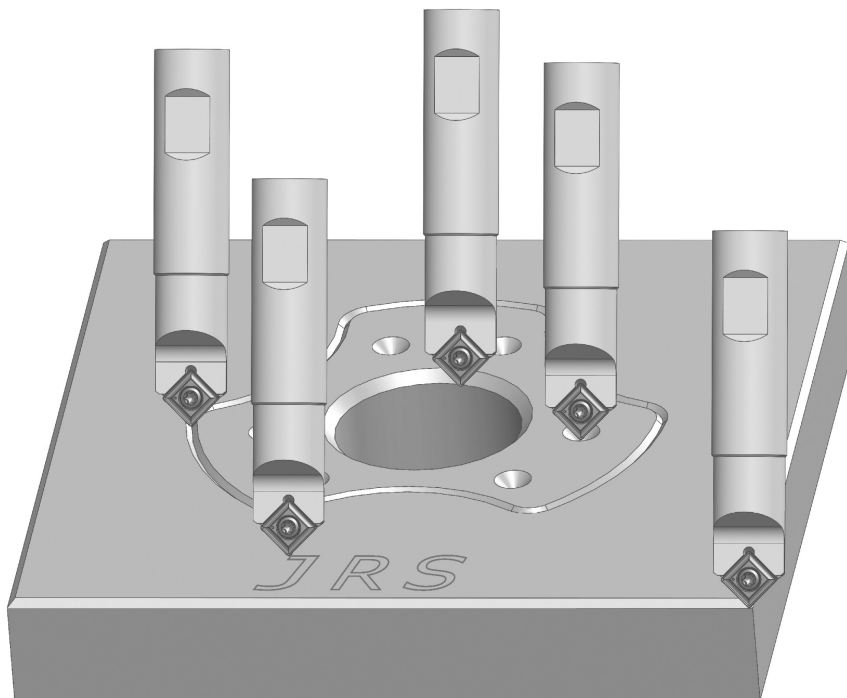


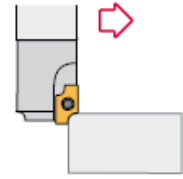
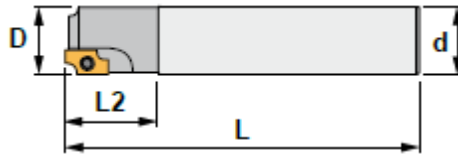
N° art	Désignation	D	L1	Ømax	Tmax	Angle	Prix CHF
23441	F45.016.SO11	16	150	13	6.5	45°	
23564	F45.016.SO11S	16	100	13	6.5	45°	




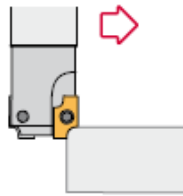
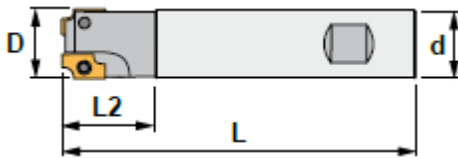
N° art.	Plaquette	IC	S	R	Prix CHF
23442	SOMT11T308EN-32B (DST255)	10.87	3.97	0.8	
23443	SOGT11T303EN-32B (DST255)	10.87	3.97	0.3	

Pointer, contourner, chanfreiner et graver le tout en un




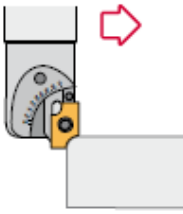
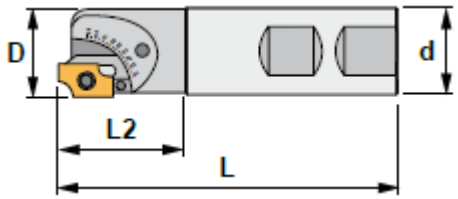



N°art.	Désignation	ØD	L2	L	Ødh6	Z	ADMT1503		Prix CHF
24094	F90.017R1-2.5	17	30	120	16	1	R1.0-2.5	K138	
24095	F90.017R3-5	17	30	120	16	1	R3.0-5.0	K138	



Version avec prix sur demande

N°art.	Désignation	ØD	L2	L	Ødh6	Z	ADMT1503		Prix CHF
24121	F90.022R1-2.5	22	35	120	20	2	R1.0-2.5	K138	
24122	F90.022R3-5	22	35	120	20	2	R3.0-5.0	K138	

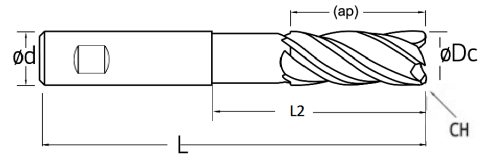
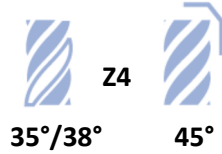
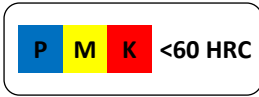


N°art.	Désignation	ØD	L2	L	Ødh6	Z	ADMT1503		Prix CHF
24123	F90.025R1-5	25.5	37	104	25	1	R1.0-5.0	K140	
24124	F90.025R1-5L	25.5	37	178	25	1	R1.0-5.0	K140	

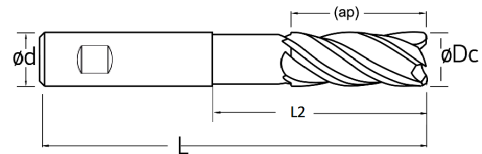
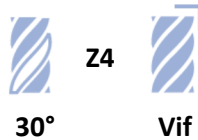
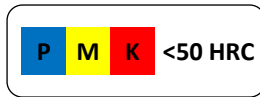
N°art.	Désignation	P	M	K	N	S	Prix CHF
24084	ADMT 1503 R1.0-C RSM 203	•	•	○	○		
23233	ADMT 1503 R1.5-C RSM 203	•	•	○	○		
24085	ADMT 1503 R2.0-C RSM 203	•	•	○	○		
24086	ADMT 1503 R2.5-C RSM 203	•	•	○	○		
24089	ADMT 1503 R3.0-C RSM 203	•	•	○	○		
24087	ADMT 1503 R3.5-C RSM 203	•	•	○	○		
24090	ADMT 1503 R4.0-C RSM 203	•	•	○	○		
24088	ADMT 1503 R4.5-C RSM 203	•	•	○	○		
24091	ADMT 1503 R5.0-C RSM 203	•	•	○	○		

Matière	P aciers	M inox	K fontes	N non ferreux	S superalliages
Vc m/min	80-180	70-150	70-100	180-250	
Av Fz	0.05-0.15	0.03-0.1	0.04-0.12	0.05-0.2	

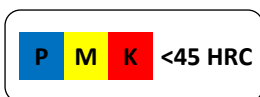
• application principale ○ application secondaire



N° art.	Désignation	ØDc	Ap	L2	L	CH	Ødh6	Z	Prix CHF	Actuel
23362	FR3538Z402005W	2	5	9	57	0.07	6	4	34.80	20.90
23363	FR3538Z403008W	3	8	14	57	0.15	6	4	34.80	20.90
23364	FR3538Z404011W	4	11	16	57	0.15	6	4	34.80	20.90
23365	FR3538Z405013W	5	13	19	57	0.15	6	4	34.80	20.90
23366	FR3538Z406013W	6	13	20	57	0.15	6	4	34.80	20.90
23367	FR3538Z408019W	8	19	26	63	0.15	8	4	44.70	26.80
23368	FR3538Z410022W	10	22	31	72	0.20	10	4	62.80	37.70
23369	FR3538Z412026W	12	26	37	83	0.20	12	4	83.70	50.20
23370	FR3538Z416032W	16	32	43	92	0.35	16	4	153.50	92.10
23371	FR3538Z420038W	20	38	53	104	0.60	20	4	223.20	133.90



N° art.	Désignation	ØDc	Ap	L2	L	Ødh6	Z	Prix CHF	Actuel
23353	FR30Z402006W	2	6	9	57	6	4	37.20	22.30
23354	FR30Z403012W	3	10	15	57	6	4	37.20	22.30
23355	FR30Z404014W	4	14	17	57	6	4	37.20	22.30
23372	FR30Z405016W	5	16	19	57	6	4	37.20	22.30
23356	FR30Z406019W	6	19	21	57	6	4	37.20	22.30
23357	FR30Z408020W	8	20	27	63	8	4	49.60	29.75
23358	FR30Z410022W	10	22	32	72	10	4	68.20	40.90
23359	FR30Z412025W	12	25	37	83	12	4	89.90	53.95
23360	FR30Z416032W	16	32	44	92	16	4	161.20	96.75

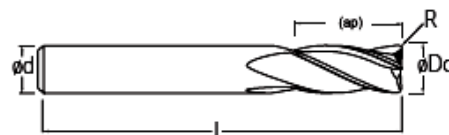


Z4

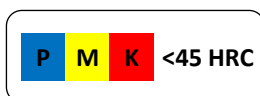
30°



Rayon



N° art.	Désignation	ØDc	Ap	L	R	Ødh6	Z	Prix CHF	Actuel
24007	FR30RZ406019R050	6	19	50	0.50	6	4	38.00	22.80
24008	FR30RZ406019R100	6	19	50	1.0	6	4	38.00	22.80
24009	FR30RZ408020R050	8	20	63	0.50	8	4	44.00	26.40
24010	FR30RZ408020R100	8	20	63	1.0	8	4	44.00	26.40
24011	FR30RZ410022R100	10	22	75	1.0	10	4	62.00	37.20
24012	FR30RZ410022R200	10	22	75	2.0	10	4	62.00	37.20
24013	FR30RZ412025R100	12	25	75	1.0	12	4	76.00	45.60
24014	FR30RZ412025R200	12	25	75	2.0	12	4	76.00	45.60
24015	FR30RZ416032R100	16	32	89	1.0	16	4	142.00	85.20
24016	FR30RZ416032R200	16	32	89	2.0	16	4	142.00	85.20

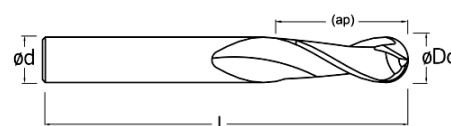


Z2

30°



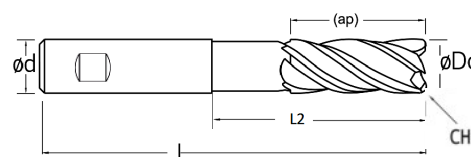
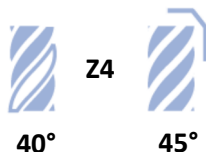
Hémisphérique



N° art.	Désignation	ØDc	Ap	L	R	Ødh6	Z	Prix CHF	Actuel
23993	FR30RBZ202006	2	6	38	1.0	3	2	26.00	15.60
23994	FR30RBZ203012	3	12	38	1.5	3	2	26.00	15.60
23995	FR30RBZ204014	4	14	50	2.0	4	2	26.00	15.60
23996	FR30RBZ205016	5	16	50	2.5	6	2	34.00	20.40
23997	FR30RBZ206019	6	19	50	3.0	6	2	34.00	20.40
23998	FR30RBZ208020	8	20	63	4.0	8	2	44.00	26.40
23999	FR30RBZ210022	10	22	75	5.0	10	2	62.00	37.20
24000	FR30RBZ212025	12	25	75	6.0	12	2	74.00	44.40



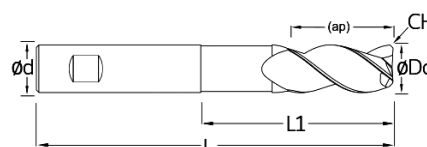
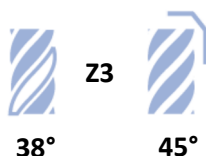
M S <50 HRC



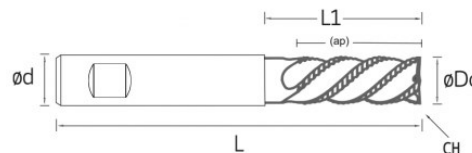
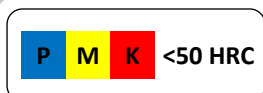
N° art.	Désignation	ØDc	Ap	L2	L	CH	Ødh6	Z	Prix CHF	Actuel
23909	FR40Z403008W	3	8	15	57	0.15	6	4	36.60	21.95
23910	FR40Z404011W	4	11	17	57	0.15	6	4	36.60	21.95
23911	FR40Z405013W	5	13	19	57	0.15	6	4	36.60	21.95
23912	FR40Z406013W	6	13	21	57	0.15	6	4	36.60	21.95
23913	FR40Z408019W	8	19	27	63	0.15	8	4	46.80	28.10
23914	FR40Z410022W	10	22	32	72	0.20	10	4	66.00	39.60
23915	FR40Z412026W	12	26	38	83	0.20	12	4	87.60	52.55
23916	FR40Z414026W	14	26	38	83	0.25	14	4	124.20	74.55
23917	FR40Z416032W	16	32	44	92	0.35	16	4	160.60	96.35
23918	FR40Z418032W	18	34	44	92	0.45	18	4	203.00	121.80
23919	FR40Z420032W	20	38	54	104	0.60	20	4	235.00	141.00



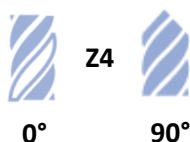
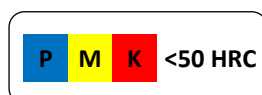
N



N° art.	Désignation	ØDc	Ap	L2	L	CH	Ødh6	Z	Prix CHF	Actuel
23951	FR38Z303007W	3	7	15	57	0.15	6	3	36.60	21.95
23952	FR38Z304008W	4	8	17	57	0.15	6	3	36.60	21.95
23953	FR38Z305010W	5	10	19	57	0.15	6	3	36.60	21.95
23954	FR38Z306010W	6	10	21	57	0.15	6	3	36.60	21.95
23955	FR38Z308016W	8	16	27	63	0.15	8	3	49.90	29.95
23956	FR38Z310019W	10	19	32	72	0.20	10	3	72.90	43.75
23957	FR38Z312022W	12	22	38	83	0.20	12	3	99.40	59.65
23958	FR38Z316026W	16	26	44	92	0.35	16	3	151.80	91.10
23959	FR38Z320032W	20	32	54	104	0.60	20	3	226.00	135.60

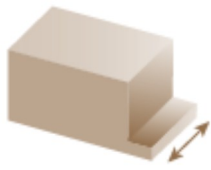


N° art.	Désignation	$\varnothing Dc$	Ap	L1	L	CH	$\varnothing dh6$	Z	Prix CHF	Actuel
23892	FR45EBZ406013W	6	13	21	57	0.15	6	4	42.50	25.50
23893	FR45EBZ408019W	8	19	27	63	0.15	8	4	54.10	32.45
23894	FR45EBZ410022W	10	22	32	72	0.20	10	4	76.10	45.65
23895	FR45EBZ412026W	12	26	38	83	0.20	12	4	100.80	60.50
23896	FR45EBZ516032W	16	32	44	92	0.35	16	5	185.20	111.15
23897	FR45EBZ620038W	20	38	54	104	0.60	20	6	268.60	161.20



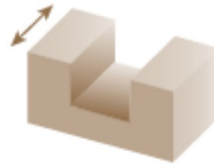
N° art.	Désignation	$\varnothing Dc$	$\varnothing dh6$	A	L	Z	Prix CHF	Actuel
23899	FR90CH40302*	3	3	90	38	4	26.50	15.90
23900	FR90CH40402*	4	4	90	50	4	26.50	15.90
23901	FR90CH40603W	6	6	90	57	4	35.20	21.15
23902	FR90CH40804W	8	8	90	63	4	46.70	28.05
23903	FR90CH41005W	10	10	90	72	4	60.00	36.00
23904	FR90CH41206W	12	12	90	83	4	84.70	50.85
23905	FR90CH41608W	16	16	90	92	4	147.50	88.50
23906	FR90CH42010W	20	20	90	104	4	217.20	130.35

* sans weldon



$$Ae = 0.125 - 0.5 \times \varnothing$$

$$Ap = 1.0 \times \varnothing$$



$$Ae = 1.0 \times \varnothing$$

$$Ap = 1.0 \times \varnothing$$



$$Ae = 0.125 - 0.25 \times \varnothing$$

$$Ap = 1.0 \times \varnothing$$

ISO	Groupe de matière	Vc	Fz	Fz	Fz	Fz	Fz	Fz	Fz	Fz	Fz	Fz
P	Aciers < 600 N/mm²	250-325	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
	Aciers < 800 N/mm²	210-300	0.007	0.010	0.010	0.010	0.016	0.020	0.024	0.030	0.032	0.036
	Aciers < 1000 N/mm²	175-250	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
	Aciers < 1400 N/mm²	125-210	0.035	0.040	0.045	0.050	0.060	0.085	0.090	0.100	0.120	0.160
M	Inox ferritique	120-175	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
	Inox austénitique	80-110	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
K	Fontes GG	210-250	0.007	0.010	0.010	0.010	0.016	0.020	0.024	0.030	0.032	0.036
	Fontes GGG	140-175	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
N	Aluminium Si <2%	400-600	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
	Aluminium Si -10%	200-250	0.007	0.010	0.010	0.010	0.016	0.020	0.024	0.030	0.032	0.036
	Alliages Cuivre	400-600	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
	Laiton	200-250	0.035	0.040	0.045	0.050	0.060	0.085	0.090	0.100	0.120	0.160
S	Supers-alliages	25-60	Min	Min	Min	Min	Min	Min	Min	Min	Min	Min
		Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
H	Aciers trempés 46-54 HRC	80-130	0.007	0.010	0.010	0.010	0.016	0.020	0.024	0.030	0.032	0.036
		Aciers trempés 55-62 HRC	70-100	Max	Max	Max	Max	Max	Max	Max	Max	Max
			0.035	0.040	0.045	0.050	0.060	0.085	0.090	0.100	0.120	0.160