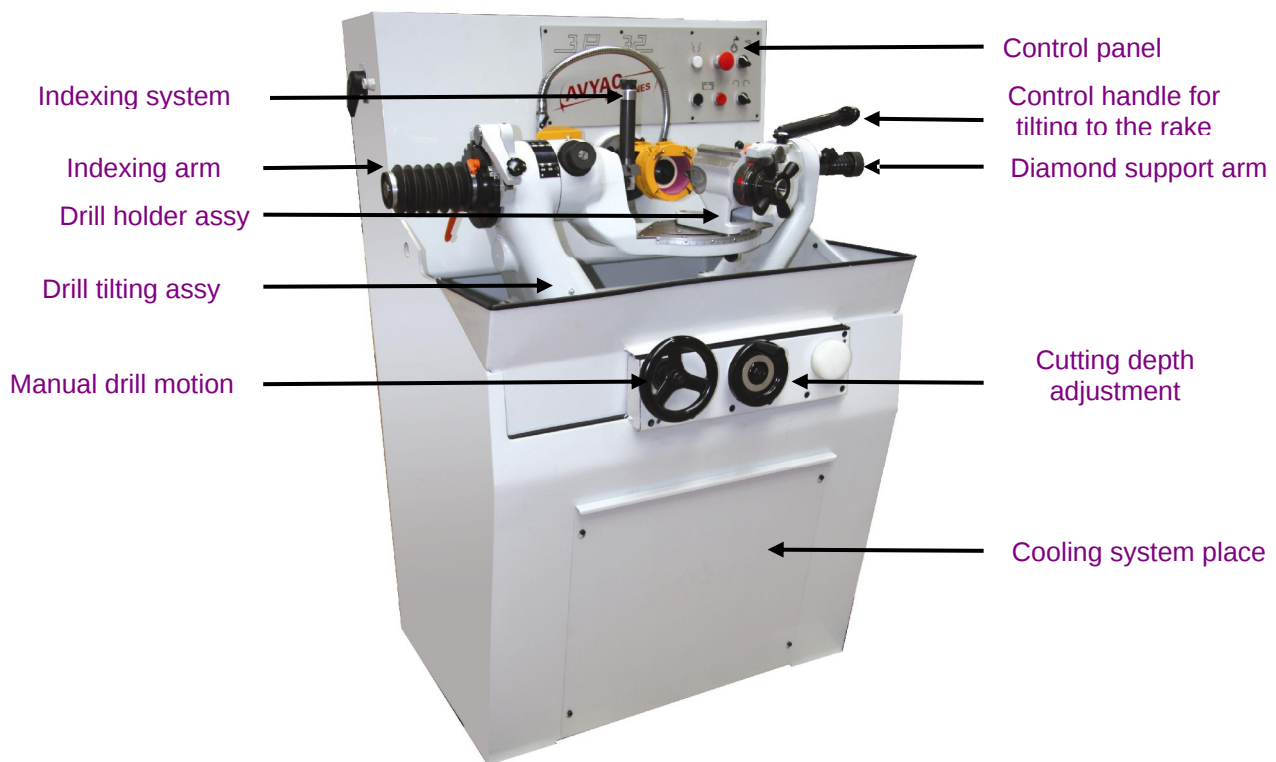


DETAILED DOCUMENTATION

1. AVYAC 3P32: PRESENTATION



DRILL TILTING ASSY ("3 rakes" and centre cut patents)

Provides the tilting of the drill for the grinding of each rake. The tilting motion is obtained by means of a control handle which can be locked in position by slotted disks.

The first rake is adjustable, The 2nd and 3rd rake have fixed positions (3 rakes patent). The 4th rake is adjustable (centre cut patent)

A swivelling block placed on the cradle allows the setting of the point angle and receives the drill head stocks.

DRILL HOLDER COMPOUND SLIDE

This assembly is mounted on cross roller precision rails and ensures:

A longitudinal motion by means of a hand wheel on the L.H. front of the machine frame ensuring the backward and forward motion of the drill in front of the grinding wheel. These strokes are limited by means of adjustable stops.

A transverse motion by means of a hand wheel in the middle of the front of the machine frame for cutting depth adjustment with an end thrust stop corresponding to the diamond dressing depth.

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DRILL HEADSTOCKS

Providing by means of the shell sockets and double taper collets the centring and locking of the drills as well as their swivelling by 180° for the sharpening of the two lips. The grinding range of the machine is covered by 2 head stocks, the first with a capacity of 3 to 16 mm, the second with a capacity of 16 to 32 mm. The collets have a 0.25 mm flexibility.

GRINDING SPINDLE

Running in high precision bearings, lubricated for life and completely sealed, it does not require any maintenance.

INDEXING SYSTEM

The index is used for positioning the drill lip with respect to the web thickness. It also determines the drill length to be cut off by grinding. It is set by sliding the support arm and by a final precise adjustment by means of a milled knob.

GRINDING WHEEL DRESSING

The machine is equipped with a dressing diamond with one centred point, and a gagging system. The diamond is placed on the axis of rotation of the drill holder assembly. After wheel dressing, lock the end thrust stop for the transverse motion. Each grinding operation will stop at this position.

WATERING

Placed in the bottom part of the frame, it is easily accessible from both the rear and the front for cleaning of the sediment tank.

2. CHARACTERISTICS

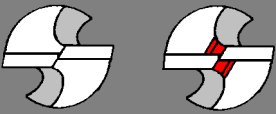
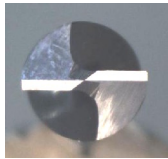
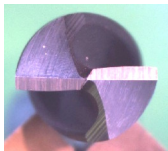
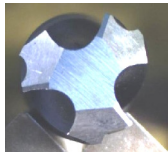
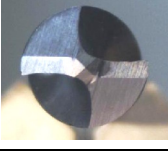
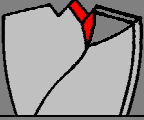
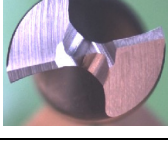
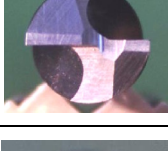
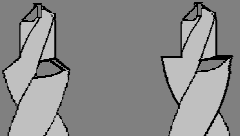
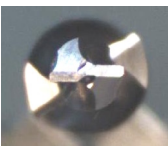
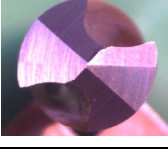
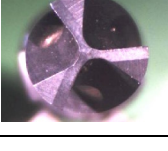
Grinding capacity		Ø 3 to 32 mm
Point angle	Drill length < 450 mm	90° to 180°
	Drill length > 450 mm	105° to 120°
1st rake		+10 to -10°
2nd rake		30°
3rd rake		50°
4th rake		80° to 96°
Max step height	Stepped drills	50 mm
Collet flexibility		0.25 mm
Power supply		220 – 380 V
Spindle motor		1.1 kW
Coolant motor		0.375 kW
Machine lamp		24 V
Cup Wheel		Ø 100 x 51 x 20
Spindle rotation speed		4700 tr / min
Max space requirements	Height	1450 mm
	Width	1180 mm
	Depth	1050 mm
Weight (net)		700 kg
Conformity	With the provisions of the machinery directive (directive 98/37/CE) and with national implanting legislation.	
Paint :	Machine	GREY LIGHT RAL 7035
	Wheel guard	YELLOW RAL 1007
	Electrical cabinet	GREY LIGHT RAL 7035

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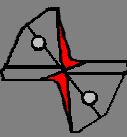
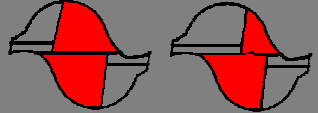
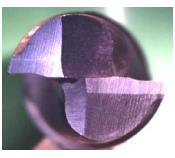
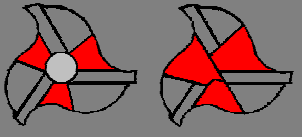
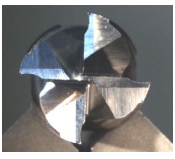
3. GRINDING

N°	Drawing	Picture	Description	Diameters
002 003			2 rakes - 3 rakes disc T819.516	From 3 to 32
004			Cruciform disc T819.516	From 3 to 32
006			Core drills (3, 4, 5 lips) disc T819511, T819512 or T819.520	From 3 to 32
019			sheet metal grinding or wood grinding disc T819.516 Option A20.09.000	From 3 to 32
021			Sheet metal specific grinding disc T819.516	From 3 to 32
025			Flat end drill disc T819.516	From 3 to 32
033			Step drills disc T819.516 Option A20.10.000	From 3 to 32
100			2 flutes carbide drills Disc T819.516 Option A20.19.000	From 3 to 20
126			3 lips HSS or carbide drill Disc T819.521 Option A20.19.000	From 3 to 32

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N°	Drawing	Picture	Description	Diameters
140			Gundrill disc T819.516 (maximum length : 2 m) Option A20.40.000 Option A20.19.000	From 3 to 32
145			2 flutes for deep hole disc T819.516 Option A20.19.000	From 3 to 32
202-212			2 flutes end mill with or without center cutting disc T819.521	From 3 to 32
203-213			3 flutes end mill with or without center cutting disc T819.521	From 3 to 32

Attention: Find accessories you need for each grinding type in next pages

4. ACCESSORIES AND OPTIONS

Find here the accessories you need for the drills you want to grind.

**Dressing system
A20.09.000**



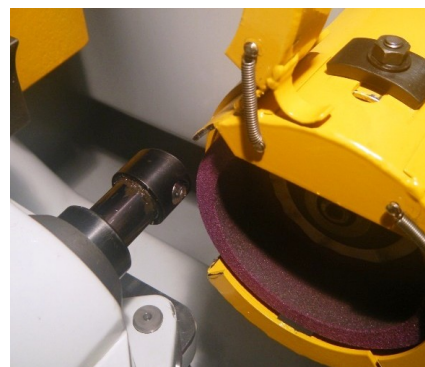
To do a chamfer on vitrified wheels to sharpen cruciform drills

**Support with clock
A20.19.000**



For calibration of diamond and CBN wheels

**Diamond dressing chuck
A20.23.70**

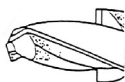


To dress external diameter of the vitrified wheels to the correct angle you need

**Special slide for stepped drills
precision = 0,1mm
A20.10.000**



To sharpen stepped drills



Maximum step length 50 mm
Maximum step point angle 90°

**Bayonet device
A20.12.000**



Allows to repair the headstocks when the screw becomes imperfect

**Option Gundrill
A20.40.000**

This option includes :
1 stop for 140° T860.000
1 stop for 180° T860.001
1 extension of wheel T860.002
The modification of disc
N°820.2000.2525

Allows to grind gundrill until 2 meters on 3P32

**Capacity 21 - 40 mm
A20.20.000**



This option includes :
1 headstock holder diameter 85 mm
1 headstock diameter 85 mm capacity 21 to 40 mm (A11.06.60)
1 set of 20 collets from 21 to 40 mm (T830015)
3 Tool holder MT2, MT3, MT4
1 extension for longitudinal arm
1 front protection sump
1 notch disc (T819136)

Caution : The following grinding : cruciform (004), flat end (025), 2 flutes carbide (100), 3 flutes carbide (126), 2 flutes for deep hole (154) are not workable with this option.
Step drills (030) are possible until diameter 35 mm

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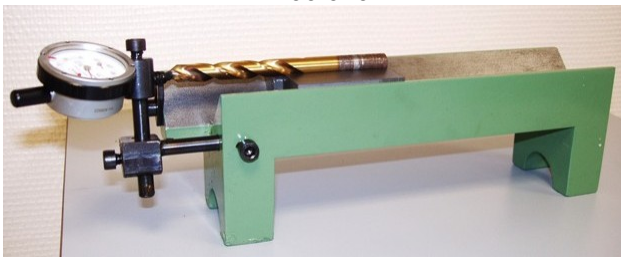
Disc

The discs are used with the headstocks (next page) and allows to do the division between the different flutes of the tool. (1 disc for each headstock).

2 notch disc T819.510  To sharpen 2 rakes and 3 rakes drill, RH et LH, 002, 003	3 notch disc T819.511  3 lips core drills 006	4 notch disc T819.512  4 lips core drills 006	Special disc T819.513  For sheet metal type sharpening 019, 021
Special disc T819.514  For cruciform sharpening 004	Standard disc T819.516  For drills number 002, 003, 004, 019, 021, 025, 030, 100, 140, 145	5 notch disc T819.520  5 lips core drills 006	6/7 notch disc T819.521  3 lips carbide, 2 and 3 flutes end mill 126, 202, 203, 212, 213

Drills checking

Checking V for height and flutes symmetry T700.020



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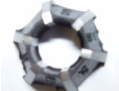
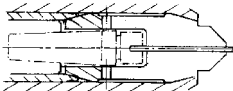
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Tool holding

3 to 16 headstock 820.2006.000  With collets diameter 2.5 to 16	16 to 32 headstock 820.2007.000  With collets diameter 16 to 32
---	--

MT1 tool holder for headstock 3 to 16 T816.000 	MT2 tool holder for headstock 3 to 16 T816.001 	MT2 tool holder for headstock 16 to 32 820.2007.2275 	MT3 tool holder for headstock 16 to 32 820.2007.2228 
For back introducing of the tools with taper shank			

MT2 chuck 2.5/6.5 T828.001  For tool holder MT2 (T816.000)	MT2 chuck 6.5/10 T828.008  For tool holder MT2 (T816.001)	Rubber flex J116 : 2.5-4.5 T829.001  With T828.001	Rubber flex J117 4.5/6.5 T829.002  With T828.001	Rubber flex J422 6.5/10 T829.006  With T828.003	key for chuck - T828.001 T828.021  With T828.001	key for chuck - T828.008 T828.023  With T828.008
 For back introducing of the tools with cylindrical shank						

COLLETS

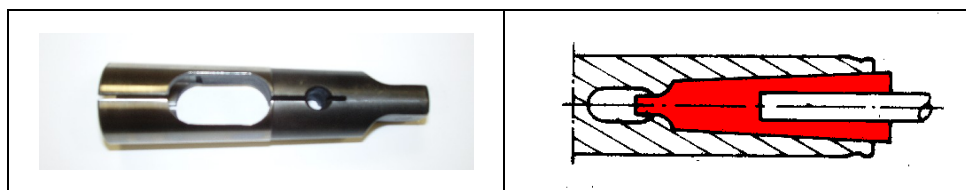
		
Set of 4 collets diameter 2 to 2.75 mm per 0.25 mm : T840.001	Set of 45 collets diameter 5 to 16 mm per 0.25 mm : T840.003	Set of 64 collets diameter 16.25 to 32 mm per 0.25 mm : T840.004
Set of 8 collets diameter 3 to 4.75 mm per 0.25 mm : T840.002		
Set of 15 collets diameter 2 to 16 mm per 1 mm : T840.005		Set of 16 collets diameter 17 to 32 mm per 1 mm : T840.006

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CLEFT SOCKETS



Set of 11 cleft sockets CM1 diameter 5 to 10 per 0,5 : **T829.501**

Set of 10 cleft sockets CM2 diameter 10 to 14,5 per 0,5 : **T829.502**

Lot de 11 cleft sockets CM3 diameter 15 to 20 per 0,5 : **T829.503**

Spare parts

Diamond	Right helix Indexing plate	Left helix indexing plate	cable	Guiding tube for cable	Diamond calibrator
T800.006	820.2000.2048	820.2000.2049 (20-47)	T206.000	820.2000.2303	820.2000.2426/A1
					
Diameter 10 mm	Dimensions : 42 x 21 x 4 angle at 15°	Dimensions : 42 x 45 x 4 Angle at 15°	Cable for longitudinal table Length 1500 mm Diameter 2 mm	Length 750 mm	Need to be adjusted according to your machine

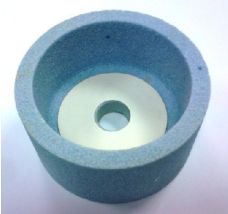
5 liters cutting fluid	5 liters cutting fluid	5 liters Mobil Velocity oil N°6	Manual pump
T429.007	T429.008	T429.011	T425.101
			
for HSS tools only	for HSS and carbide tools	For lubrication	To use with oil T429.011

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VITRIFIED WHEELS

Ref	Picture	properties	Grinding	Diameters:
T821.100		11A 100x50x20 Blue 40A 80 K8VY	002, 003, 004, 006, 025, 033, 202, 203, 212, 213	3 to 10 mm
T821.101		6A 100x50x20 / 80x37 blue 40A 60 J8VY	002, 003, 004, 006, 019, 020	3 to 20 mm
T821.102		6A 100x50x20/80x37 red 60A 60/2 J8VY	002, 003, 004, 006, 019, 020	3 to 20 mm
T821.103		11A 100x50x20 red 60A 60/2 J8VY	002, 003, 004, 006, 025, 033, 202, 203, 212, 213	3 to 32 mm
T821.104		6A 100x50x20/80x37 white 40A 54/1 J8VY	002, 003, 004, 006, 019, 020	16 to 32 mm

**Wheel holder for
vitrified wheels
110.22.000**



**Wheel holder extractor for
110.22.000
A20.18.000**



Can be used to extract
wheel holder 110.22.000

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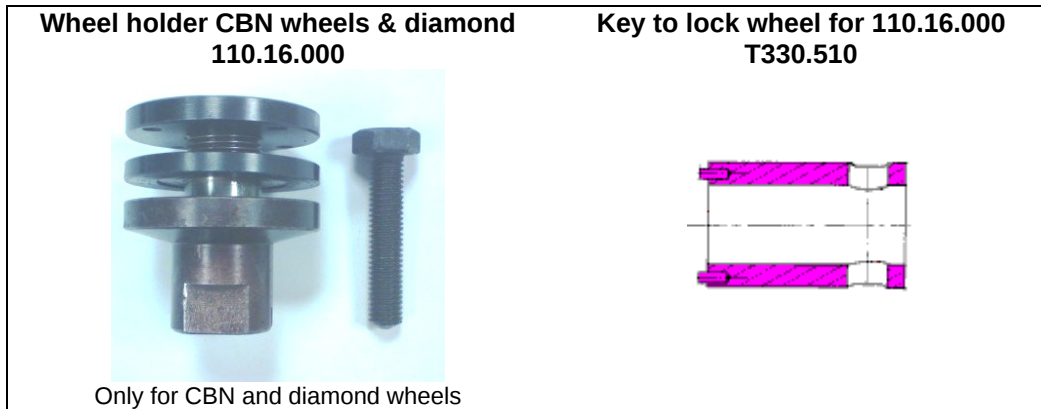
CBN & DIAMOND wheels

N°	Form	Properties	Grinding	diameters:
T822.000		DIAMOND , 12V9 D100, Al. 20 mm Grain 126, C100 Binding resin	100, 126, 140 202-212 carbide 203-213 carbide 204-214 carbide	3 to 20 mm
T822.001		CBN , 12V9 D100, Al. 20 mm Grain 126, C100 Binding resin	002 – 003 – 004 006 202-212 HSS 212-213 HSS 213-214 HSS	3 to 20 mm
T822.002		DIAMOND 6A9 D100, Al. 20 mm grain 126, C100 Binding resin	002 003 004 006 100 140	3 to 20 mm
T822.003		CBN 6A9 D100, Al. 20 mm grain 126, C100 Binding resin	002 003 004 006	10 to 40 mm
T822.040		DIAMOND 6A9 D100 grain 151 C100 Binding resin	002 003 004 006 100 140	3 to 20 mm
T822.041		DIAMOND 6A9 D100 grain 151 C100 Binding resin	002 003 004 006 100 140	3 to 20 mm

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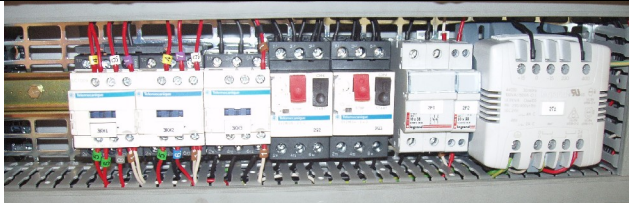
5. TRAINING

One day training in your plant: F101

One day training in our plant: F103

6. STANDARD MATERIAL

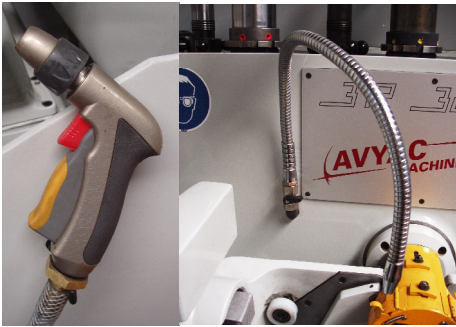
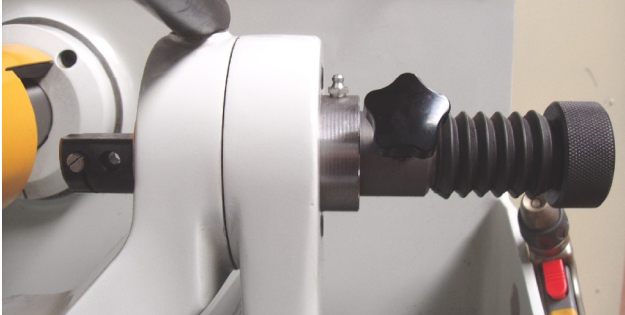
STANDARD MATERIALS SUPPLIED WITH BASIC MACHINE 820.00.000

MATERIAL	PICTURE	REFERENCE	QTY
Electrical Equipment integrated to the frame - 400V, 50 Hz		E13.00.820	1
Coolant device removable 50 liters (pump flow 60 l/min)		A49.01.000	1

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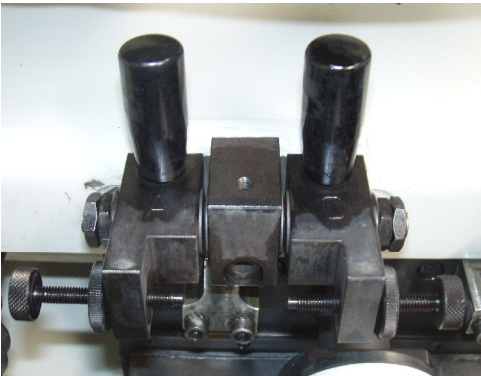
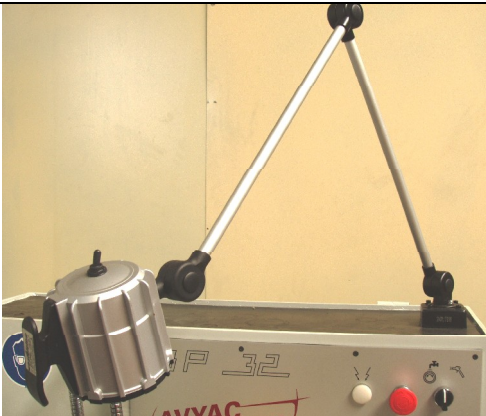
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MATERIAL	PICTURE	REFERENCE	QTY
Watering adaptation (hose pipe, tap, ...)		820.10.000	1
Spindle		100.05.000	1
Wheel safety guard		820.05.000	1
Tool holder set (That receive the headstocks)		820.2001/A1	1
diamond dressing device for vitrified wheels - ever mounted on the machine when delivery		820.2000D	1

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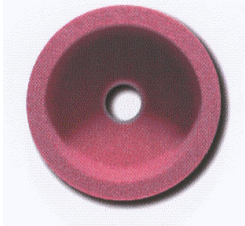
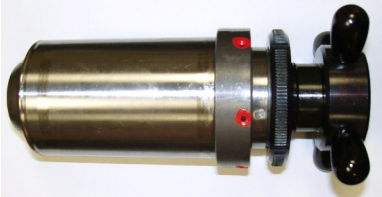
MATERIAL	PICTURE	REFERENCE	QTY
tool-indexing device - ever mounted on the machine when delivery		820.2000.2535/A1	1
Retractable stops - ever mounted on the machine when delivery		820.2010.000	1
Lighting 24 V: 70W 24V		E13.58.000	1

Pack "standard accessories"	Including the above parts :	820.80.001	1
Wheel holder		110.22.000	1

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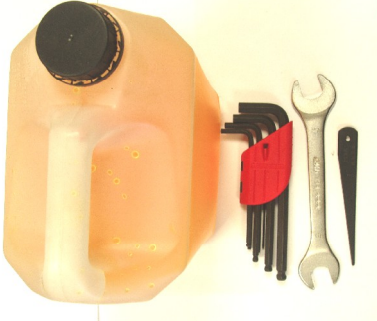
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Pack "standard accessories"	Including the above parts :	820.80.001	1
Vitrified wheel diameter 100 mm		T821.102	1
Headstock for collets diameter 2 to 16 mm		820.2006.000	1
Headstock for collets diameter 16 to 32 mm		820.2007.000	1
Notch disc		T819.516	2
Shank holder MT1 diameter 26 mm		T816.000	1
Shank holder CM2 diameter 26 mm		T816.001	1
Shank holder CM2 diameter 32 mm		820.2007.2275	1
Shank holder CM3 diameter 32 mm		820.2007.2228	1
Set of 15 collets from diameter 2 to 16 mm (per 1 mm)		T840.005	1
Set of 16 collets from diameter 17 to 32 mm (per 1 mm)		T840.006	1

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Pack "standard accessories"	Including the above parts :	820.80.001	1
Extension for shank holder		T816.004	1
Diamond		T800.006	1
Tools set including : 1 flat key 19-21 (T330.040), 1 set of BTR key (T330.150), 1 shank extractor CM1/CM2 (T816.091) and 5 liters cutting fluid		820.20.000	1
Electrical drawing in English		E13.820.002	1
Using technical book in English		820.90.021	1
General drawing for spare parts		820.90.050	1
1 year Guaranty parts and working		820.60.002 (Europe) Or 820.60.003 (World)	1

Ex works price