

# High Speed Spindles

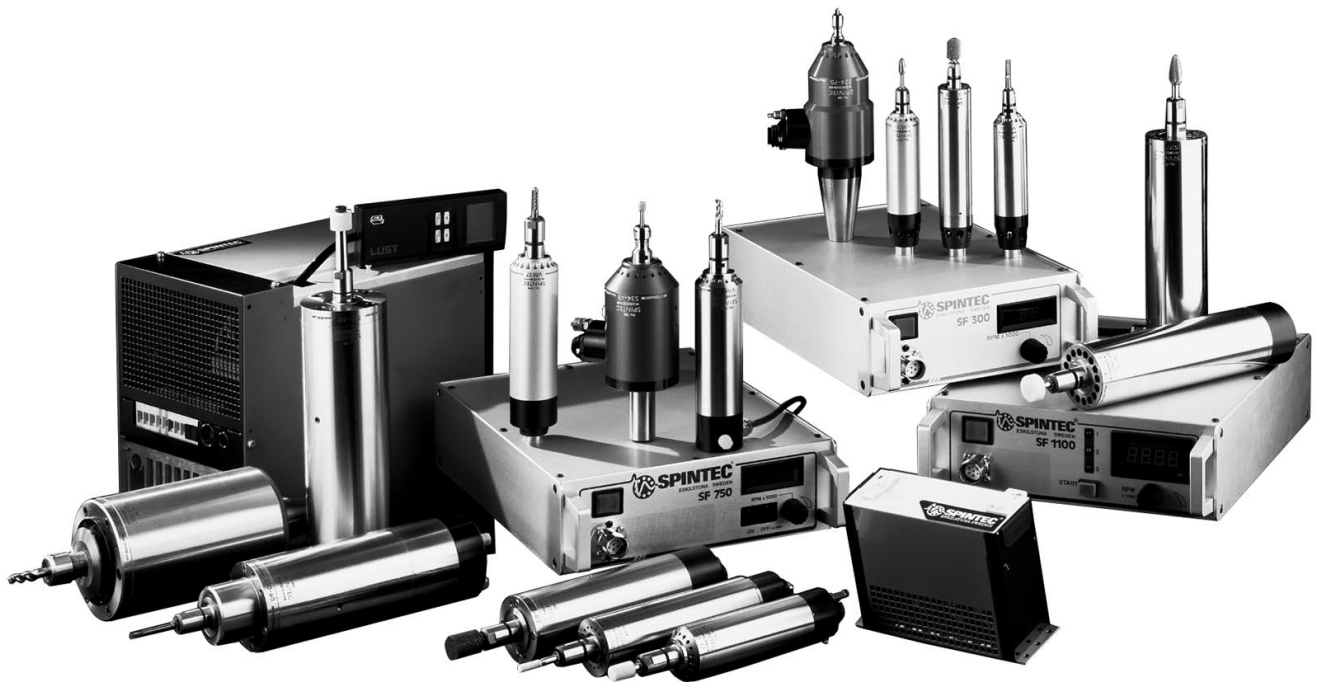


## Spindles and converters

**SPINTEC** spindles are designed for clients with high demands on accuracy and reliability of service. The spindles are manufactured with the highest accuracy. All rotating parts are dynamically balanced and exchangeable without impairing the tolerance of the spindle. We also carry out the service of all spindles.

The **SPINTEC range** of high frequency spindles helps you to renew and adapt your machinery to modern tools that need high working speeds. The spindles can easily be clamped into existing machines.

**SPINTEC** has a range of compact electronic converters to power its spindles. These have adjustable controls which enables the setting of optimum cutting speeds. Thermal and overload cut-outs are incorporated. RS 232 interfaces are also available.



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# Overview

MOTOR TYPE	Spindles										
	S11-72	S16-60	S18-60	S19-60	S20-60	S21-60	S21-90	S27-30	S27-38	S27-40	S27-54
Speed, min rpm	36.000	15.000	15.000	15.000	15.000	15.000	30.000	9.000	9.000	9.000	15.000
Speed, max rpm	72.000	60.000	60.000	60.000	60.000	60.000	90.000	30.000	38.000	40.000	54.000
Output, kW	0,1	0,4	0,4	0,4	0,65	0,7	0,4	0,55	0,55	0,8	0,75
Diameter, mm	33	45	50	60	60	60	60	60	60	60	60
Type of cooling	Air/ Built-in fan	Air/ Built-in fan	Air/ Built-in fan	Air/ Built-in fan	Water	Water	Water	Air/ Built-in fan	Air/ Built-in fan	Air/ Built-in fan	Air/ Built-in fan
Lubricant	—	—	—	—	—	Oilmist	Oilmist	—	—	—	—
Converter	SF700	SF750 SF700	SF750 SF700	SF750 SF700	SF750 SF700	SF750 SF700	SF750 SF700	SF1500 —	SF1500 —	SF1500 —	SF1500 —
Air regulator	EK-6273	EK-6273	EK-6273	EK-6273	—	—	—	EK-6273	EK-6273	EK-6273	EK-6273
Water regulator	—	—	—	—	EK-4AA	EK-4AA	EK-4AA	—	—	—	—
Cooling system	—	—	—	—	PWK 17-S	PWK 17-S	PWK 17-S	—	—	—	—
Oil mist regulator	—	—	—	—	—	Oil mist 1	Oil mist 1	—	—	—	—

MOTOR TYPE	Spindles				Tool motors		Spindles			
	S28-40	S30-60	S33-75	S50-30	VM10	VM17	S24-75	S34-45	S44-30	S44-50
Speed, min rpm	9.000	15.000	25.000	15.000	36.000	15.000	30.000	15.000	5.000	10.000
Speed, max rpm	40.000	60.000	75.000	30.000	72.000	54.000	75.000	45.000	30.000	50.000
Output, kW	1,1	2	1,2	5	0,1	0,4	0,3	0,5	2,5	2,2
Diameter, mm	80	80	80	100	33	45	70	70	110	110
Type of cooling	Water	Water	Water	Water	Air/ Built-in fan	Air/ Built-in fan	Air	Air	Water	Water
Lubricant	—	Oilmist	Oilmist	Oilmist	—	—	—	—	—	—
Converter	SF3000	SF3000	SF3000	CDA-5,5-3	SF700	SF750 SF700	SF750 SF700	SF750 SF700	SF3000	SF3000
Air regulator	—	—	—	—	EK-6273	EK-6273	EK-6273	EK-6273	—	—
Water regulator	EK-4AA	EK-4AA	EK-4AA	EK-4AA	—	—	—	—	EK-4AA	EK-4AA
Cooling system	PWK 17-S	PWK 17-S	PWK 17-S	PHK 1025	—	—	—	—	PWK 17-S	PWK 17-S
Oil mist regulator	—	Oil mist 1	Oil mist 1	Oil mist 1	—	—	—	—	—	—

Company policy is one of continuous improvement, all designs are therefore subject to modification without notice.

#### Tool motors

VM 10 and VM 17 are used for hand work as auxiliary spindles in machines for deburring, drilling, milling, engraving and simple grinding.

#### Air-cooled spindles

S11, S16, S18, S19, S24, S27 and S34  
The slim dimensions of these spindles make them suitable for building into multispindle machines. The spindles are used for bore grinding, jig grinding, drilling and milling.

#### Water-cooled spindles

Spindles S20, S28 & S44 are designed for applications where heavy and continuous loading is a requirement. Suitable for grinding, jig grinding, milling, de-burring and drilling

#### Water-cooled & oil-mist lubricated spindles

S21, S30, S33 & S50 are intended for production grinding with high precision e.g. internal grinding.

#### Static converters

SF 700, SF 750, SF 1500 and SF 3000 are intended for speed control of the motor and spindle series of SPINTEC.

For built-in converters the CDA type is used. This type is available in a range of sizes and speed.



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## 3-phase induction motors and converters <sup>®</sup>

**The SPINTEC motors/spindles** are a combination of a 3-phase induction motor and of the shaftless patented rotor.

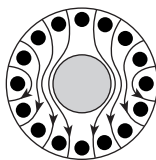
**SPINTEC high frequency converters** deliver a three phase output which is infinitely adjustable for frequency and voltage so that optimum spindle/motor performance can be set.

**Two pole motors** normally rotate with at 3000 rpm when connected to 50 Hz AC supply. At 1000 Hz AC rotation increases to 60,000 rpm.

As a precaution all hand held motors operate at 50 volts and are perfectly safe at this voltage. However motors designed for 'build-in' applications are driven at higher voltage where speed is controlled through frequency variation and proportional voltage.

**Three phase high frequency converters and motors** provide the necessary high speeds for applications such as grinding, drilling, milling, de-burring, woodworking and portable tools. High frequency motors have considerable advantages over conventional series wound motors; for example, speed stability when under load, precise speed control through frequency-voltage adjustment and low maintenance cost particularly as carbon brushes are not used.

**The patented Spintec shaftless rotor** incorporates rotor plates and copper bars which reduces the overall diameter, when compared with the more conventional design this has lower giro and centrifugal forces even when operated at high speed.



Conventional rotor

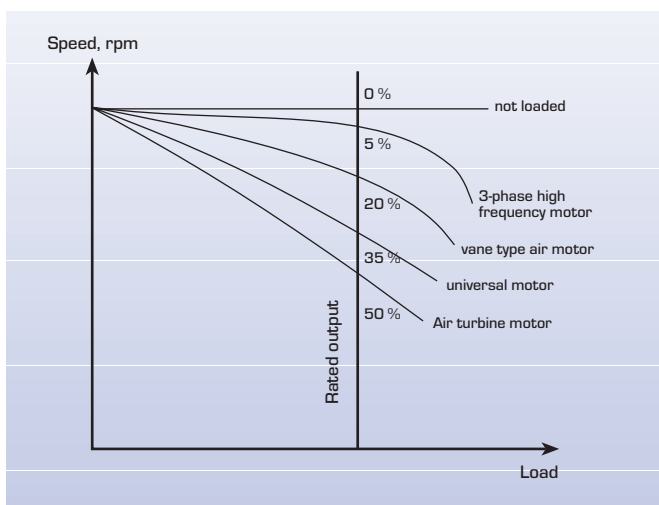


SPINTEC-rotor

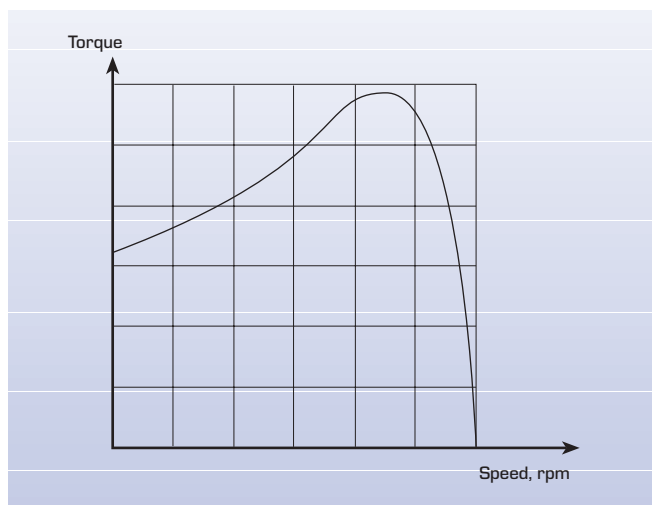


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## Comparison between speed losses of various types of motors under 100% load



## Torque / speed – SPINTEC motors



### Rated output

This is measured at the spindle nose i.e. it states the actual output which can be taken out from the spindle.

### Noise level

This is measured 0,9 m from the spindle nose and is stated in dBA.

### Cooling

Depending on the application for which the spindle/motor is intended, there are three different types of cooling, water, compressed-air or built-in fan

### Run-out

This is measured in the seat taper of the collet and amounts to maximum:  
 for hand motors: 0,01 mm,  
 for standard spindles: 0,005 mm  
 for special spindles: 0,002 mm

### Coaxiality

Coaxiality is measured in the following manner: A mandrel is fitted to a fixed spindle nose. With the spindle barrel mounted on the Vee Block the barrel is rotated through 360°. Two measurements are taken at a distance of 25 mm from the spindle nose. Any variation in height should then be within the stated coaxiality tolerances.

### Ball bearings

All ball bearings are high precision spindle ball bearings operating with fixed preload in the VM motors and with spring pre-load in the other spindles. The spring pre-load remains constant at all working conditions and temperatures.

All motors and spindles are permanently lubricated. Special spindles are supplied with oil mist lubrication.

### Electric connection

3- or 6-pole contact with PTC through converter.

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# S 11, S 16, S 18 & S 19

# SPINTEC®

## STANDARD EXECUTION

### HOUSING

Tough hardened steel



### COOLING

Built-in fan  
Compressed air-cooled (P)



### BEARINGS

Selfcontained, spring preloaded  
high precision angular  
contact ball bearings.



### ELECTRICAL CONNECTION

6-pole contact with PTC  
through converter



### ROTATION DIRECTION

Right rotation



### ACCESSORIES

Case  
Connection cable (3 m)  
2 off wrenches  
1 off collet

## SPECIAL EXECUTION

Ceramic ball bearings



Left rotation



Spindle nose with regofix collet  
ER 8 (max 5,0 mm)  
ER 11 (max 7,0 mm)

**Air cooled spindles** are designed for high speed, precision and reliability. They are intended for building into machines for such operations as grinding, drilling, milling and deburring.

Compressed air cooling (P) is advisable when operating in either dirty or hostile environments or where more effective cooling is required. Noise levels will also be lower.

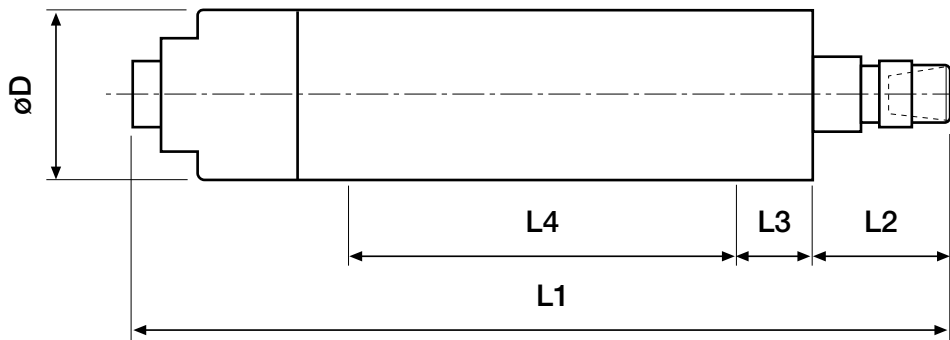
As motors are manufactured to the highest possible standards with all rotating parts dynamically balanced spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.



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# S 11, S 16, S 18 & S 19



Technical Specifications	S 11-72	S 16-60	S 18-60	S 19-60
Dimensions, mm				
D (h6)*	33	50	45	60
L1	198	250	250	244
L2 (incl. collet)	25	37	37	37
L3	15	20	20	20
L4	71	102	102	145
Weight, kg	0,6	2,0	2,0	3,6
Spindle nose type	10	17	17	17
Included collet (ø)	3,0	6,0	6,0	6,0
Max. collet diameter (ø)	4,0	8,0	8,0	8,0
Input, max kW	0,20	0,56	0,56	0,56
Output, max kW	0,10	0,40	0,40	0,40
Voltage, Band	Öberg/Nema 6 **	Öberg/S2 **	Öberg/S2 **	Öberg/S2 **
Speed, max rpm	72.000	60.000	60.000	60.000
Speed, min rpm	36.000	15.000	15.000	15.000
Max. run-out (mm)	0,005	0,005	0,005	0,005
Max coaxiality (mm)	0,05	0,05	0,05	0,05
Air consumption [l/min] *	50	90	90	90
Noise level (dBa)	74	80	80	80

Accessories	S 11-72	S 16-60	S 18-60	S 19-60
Converter	SF 750/SF 700 **	SF 750/SF 700 **	SF 750/SF 700 **	SF 750/SF 700 **
Air regulator (10-100 l/min)	EK-6273	EK-6273	EK-6273	EK-6273

## CE-approval / EMC test

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test according to EN 50 081-2 (1993) & EN 50 082-2 (1995)

\* Airflow between spindle and air regulator adjustable for different working cycles

\*\* High voltage (max 240V)

We reserve the right to make alterations in design



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## S 27

# SPINTEC®

**STANDARD EXECUTION****HOUSING**

Tough hardened steel

**COOLING**Built-in fan  
Compressed air-cooled (P)**BEARINGS**Selfcontained, spring preloaded  
high precision angular  
contact ball bearings.**ELECTRICAL CONNECTION**6-pole contact with PTC  
through converter**ROTATION DIRECTION**

Right rotation

**ACCESSORIES**Case  
Connection cable (3 m)  
2 off wrenches  
1 off collet**SPECIAL EXECUTION**

Ceramic ball bearings



Left rotation

Spindle nose with regofix collet  
ER 11 (max 7,0 mm)  
ER 16 (max 13,0 mm)Spindle with angular  
connection for power and  
compressed air (AC).

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**Air cooled spindles** are designed for high speed, precision and reliability. They are intended for building into machines for such operations as grinding, drilling, milling and deburring.

Compressed air cooling (P) is advisable when operating in either dirty or hostile environments or where more effective cooling is required. Noise levels will also be lower.

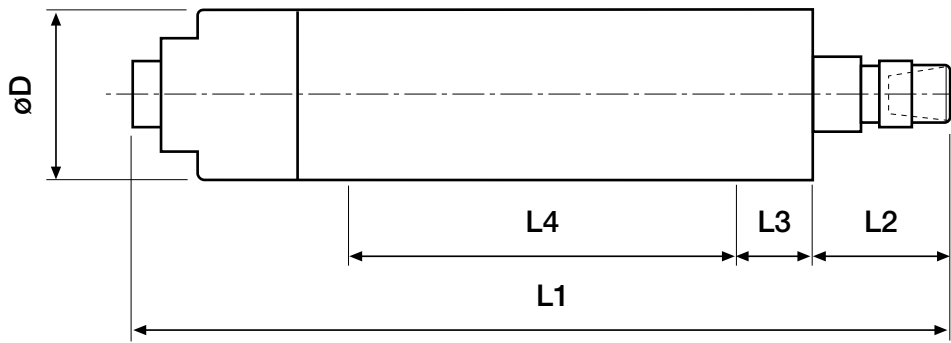
As motors are manufactured to the highest possible standards with all rotating parts dynamically balanced spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.





# S 27



Technical Specifications	S 27-30 P *	S 27-40	S 27-38 P *	S 27-54 P
Dimensions, mm				
D (h6) **	60	60	60	60
L1	300	300	280	280
L2 (incl. collet)	37	37	37	37
L3	25	20	25	20
L4	102	102	82	82
Weight, kg	3,3	3,2	3,3	3,0
Spindle nose type	17	17	17	17
Included collet (ø)	6,0	6,0	6,0	6,0
Max. collet diameter (ø)	8,0	8,0	8,0	8,0
Output, max kW	0,56	0,80	0,55	0,75
Voltage at max frequency (V)	210	210	210	210
Speed, max rpm	30.000	40.000	38.000	54.000
Speed, min rpm	9.000	9.000	9.000	9.000
Max. run-out (mm)	0,005	0,005	0,005	0,005
Max coaxiality (mm)	0,05	0,05	0,05	0,05
Air consumption (l/min) ***	100	80	100	80
Noise level (dBa)	80	80	80	80

Accessories	S 27-30 P *	S 27-40	S 27-38 P *	S 27-54 P
Converter	SF 1500	SF 1500	SF 1500	SF 1500
Air regulator (10-100 l/min)	EK-6273	EK-6273	EK-6273	EK-6273

## CE-approval / EMC test

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test according to EN 50 081-2 (1993) & EN 50 082-2 (1995)

- \* Spindles with double front bearings
- \*\* All spindles are available with  $D = \varnothing 70$  mm
- \*\*\* Airflow between spindle and air regulator adjustable for different working cycles

We reserve the right to make alterations in design



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## S 20 & S 28

# SPINTEC®

### STANDARD EXECUTION

#### HOUSING

Stainless steel



#### COOLING

Water cooling



#### BEARINGS

Selfcontained, spring preloaded, high precision angular contact ball bearings.



#### ELECTRICAL CONNECTION

6-pole contact with PTC through converter



#### WATER CONNECTION

Connections at the back for inlet and outlet (R 1/8")



#### ROTATION DIRECTION

Possible to run in both directions



#### ACCESSORIES

Case

Connection cable (3 m)

2 off chuck wrenches

1 off collet

### SPECIAL EXECUTION

Ceramic ball bearings



Spindle nose with regofix collet ER 11 (max 7,0 mm)

**Water cooled spindles** are intended for building into machines, where power, wide speed range and low noise levels are essential.

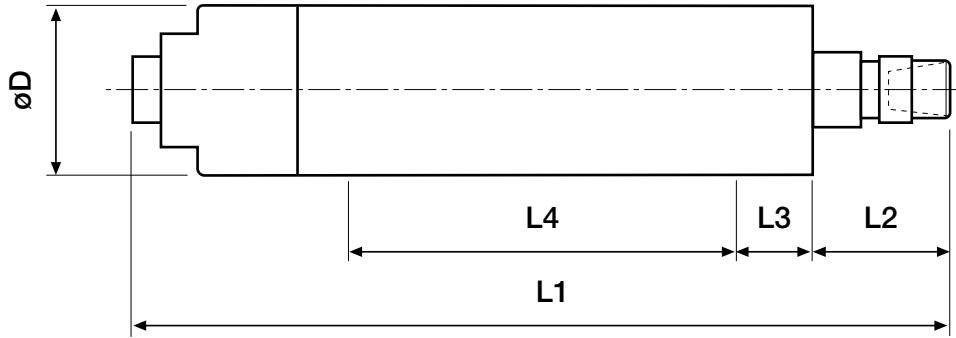
As motors are manufactured to the highest possible standards with all rotating parts dynamically balanced spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.



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# S 20 & S 28



Technical Specifications		S 20-60	S 28-40
Dimensions, mm	D (h6)	60	80
	L1	259	300
	L2 (incl. collet)	36	34
	L3	25	35
	L4	168	177
Weight, kg		3,6	6,8
Spindle nose type		17	17/40
Included collet (ø)		6,0	6,0/8,0
Max. collet diameter (ø)		8,0	8,0/12,0
Input, max kW		0,80	1,55
Output, max kW		0,65	1,10
Voltage, Band		Öberg/S2 ***	Nema 5
Speed, max rpm		60.000	40.000
Speed, min rpm		15.000	9.000
Max run-out (mm)		0,005	0,005
Max coaxiality (mm)		0,05	0,05
Water consumption (l/min) *		0,6	1,2
Noise level (dBa)		64	60

Accessories	S 20-60	S 28-40
Converter	SF 750/SF 700 ***	SF 3000
Water regulator (0,1 - 1,25 l/min)	EK-4AA	EK-4AA
Cooling system **	PWK 17-S	PWK 17-S

## CE-approval / EMC test

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test according to EN 50 081-2 (1993) & EN 50 082-2 (1995)

\* Depending of the surrounding temperature etc.

\*\* In locations where the surrounding temperature exceeds 25°C or when the spindle works continuously with a high output (>80% of max. output) we recommend using the PHK 1025

\*\*\* High voltage (max 240V)

We reserve the right to make alterations in design.



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# S 21, S 30 & S 33

**Water cooled and Oil mist lubricated spindles** are intended for building into machines, where power, wide speed range and low noise levels are essential.

As motors are manufactured to the highest possible standards with all rotating parts dynamically balanced spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.

## STANDARD EXECUTION

### HOUSING

Stainless steel



### COOLING

Water cooling



### BEARINGS

Oil mist lubricated, spring preloaded, high precision angular contact ball bearings.



### ELECTRICAL CONNECTION

6-pole contact with PTC through converter



### WATER/OIL MIST CONNECTION

Connections at the back for inlet and outlet (R 1/8")



### ROTATION DIRECTION

Possible to run in both directions



### ACCESSORIES

Case

Connection cable (3 m)

2 off chuck wrenches

1 off collet

## SPECIAL EXECUTION

Ceramic ball bearings



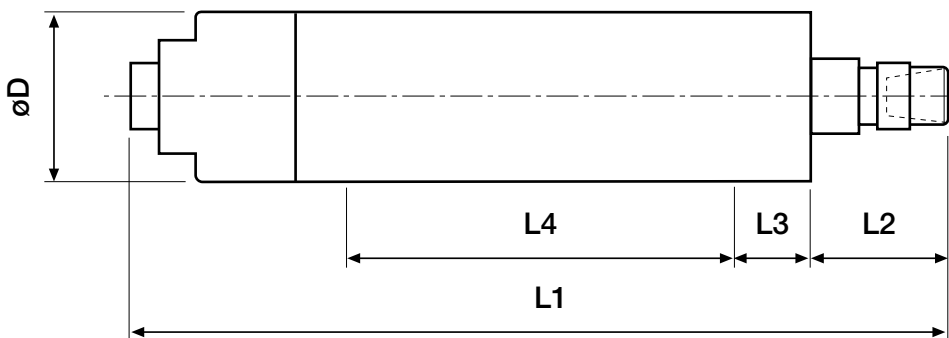
Spindle nose with regofix collet  
ER 11 (max 7,0 mm)



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# S 21, S 30 & S 33



Technical Specifications	S 21-60	S 21-90	S 30-60	S 33-75
Dimensions, mm				
D (h6)	60	60	80	80
L1	259	229	303	257
L2 (incl. collet)	36	29	34	24
L3	25	20	43	35
L4	168	125	169	151
Weight, kg	3,5	2,9	7,0	7,0
Spindle nose type	17	Regofix, ER 8	17	Regofix, ER 11
Included collet (ø)	6,0	3,0	6,0	6,0
Max. collet diameter (ø)	8,0	5,0	8,0	7,0
Output, max kW	0,70	0,40	2,00	1,20
Voltage, Band	Öberg/S2 ***	Öberg/S2 ***	Nema 5	Nema 6
Speed, max rpm	60.000	90.000	60.000	75.000
Speed, min rpm	15.000	30.000	15.000	25.000
Max run-out (mm)	0,005	0,005	0,005	0,005
Max coaxiality (mm)	0,05	0,05	0,05	0,05
Water consumption (l/min) *	0,6	0,6	1,2	1,2
Noise level (dBa)	60	60	63	64

Accessories	S 21-60	S 21-90	S 30-60	S 33-75
Converter	SF 750/SF 700 ***	SF 750/SF 700 ***	SF 1500	SF 1500
Water regulator (0,1-1,25 l/min)	EK-4AA	EK-4AA	EK-4AA	EK-4AA
Cooling system **	PWK 17-S	PWK 17-S	PWK 17-S	PWK 17-S
Oil mist regulator	Oil mist 1	Oil mist 1	Oil mist 1	Oil mist 1

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\* Depending of the surrounding temperature etc.

\*\* In locations where the surrounding temperature exceeds 25°C or when the spindle works continuously with a high output (>80% of max. output) we recommend using the PHK 1025

\*\*\* High voltage (max 240V)

We reserve the right to make alterations in design.



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## S 50

# SPINTEC®

**STANDARD EXECUTION****HOUSING**

Hardened steel

**COOLING**

Water cooling

**BEARINGS**

Oil mist lubricated, spring preloaded, high precision angular contact ball bearings.

**ELECTRICAL CONNECTION**

6-pole contact with PTC through converter

**WATER/OIL MIST CONNECTION**

Connections at the back for inlet and outlet (R 1/8")

**ROTATION DIRECTION**

Right rotation

**ACCESSORIES**Case  
Connection cable (3 m)  
2 off chuck wrenches

**Water cooled and Oil mist lubricated spindle** intended for building into machines, where power, wide speed range and low noise levels are essential.

All motors are manufactured to the highest possible standards with all rotating parts dynamically balanced, spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.

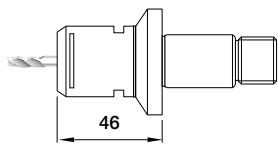
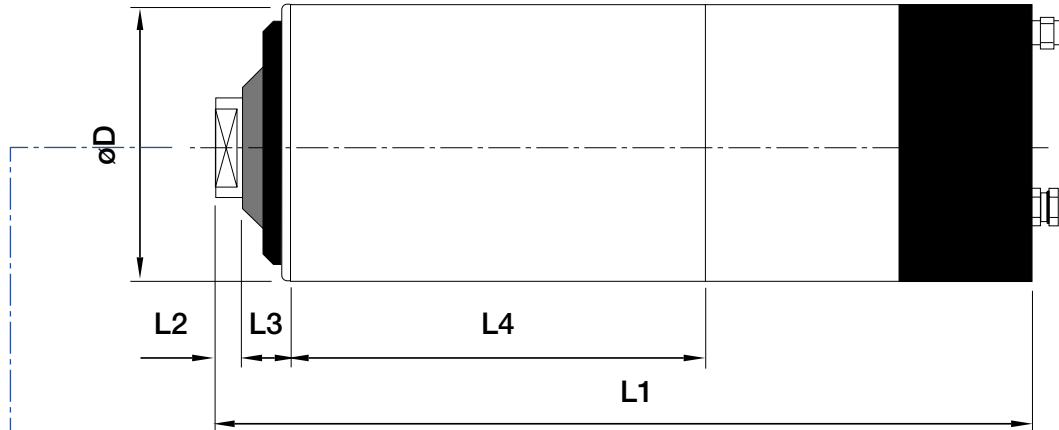
**SPECIAL EXECUTION**

Ceramic ball bearings

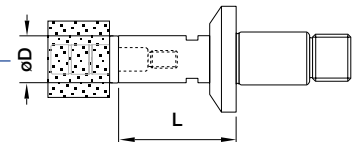


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# S 50

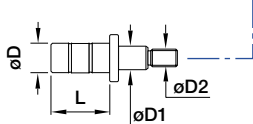


**Regofix nose ER 20 \*\***  
ORDER.NO.  
50512



**Extensions \*\***

ORDER.NO.	L	øD
50452-16-20	20	16
50452-16-40	40	16
50452-16-70	70	16
50452-16-100	100	16
50452-24-20	20	24
50452-24-40	40	24
50452-24-70	70	24
50452-24-100	100	24



**Holders \*\***

ORDER.NO.	øD	øD1	øD2	L
50455-8-6 *	6	8	M6	15
50455-8-10 *	10	8	M6	15
50455-8-13 *	13	8	M6	15
50455-10-10	10	10	M8	20
50455-10-13	13	10	M8	20
50455-10-16	16	10	M8	20
50455-10-20	20	10	M8	20

\* For 50452-16-.....

\*\* Other dimensions and lengths on request

Technical specifications		S 50-30
Dimensions, mm	D (h6)	100
	L1	298
	L2 (excl. extension)	9
	L3	21
L4 (clamping)	150	
Weight, kg		12,0
Output, max kW		5,0
Voltage (max V)		350
Speed, max rpm		30.000
Speed, min rpm		5.000
Max. run-out (mm)		0,005
Max. coaxiality (mm)		0,05
Water consumption [l/min] *		1,2
Noise level (dBa)		60

Accessories		S 50-30
Converter		CDA-5,5-3
Control unit with speed & start/stopp		Control box
Water regulator (0,1 - 1,25 l/min)		EK-4AA
Cooling system **		PHK 1025
Oil mist regulator		Oil mist 1

**CE-approval / EMC test**

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test acc. to EN 50 081-2 (1993) & EN 50 082-2 (1995)

\* Depending of the ambient temperature etc.

\*\* In locations where the surrounding temperature exceeds 25°C or when the spindle works continuously with a high output (>80% of max. output) we recommend using the PHK 1025.

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## VM 10 & VM 17

# SPINTEC®

### STANDARD EXECUTION

#### HOUSING

Anodized aluminium  
Stainless steel (R)



#### COOLING

Built-in fan  
Compressed air-cooled (P)



#### BEARINGS

Selfcontained, fixed preloaded  
high precision deep groove  
ball bearings.



#### ELECTRICAL CONNECTION

6-pole contact through converter



#### ROTATION DIRECTION

Right rotation



#### ACCESSORIES

Case  
Connection cable (3 m)  
2 off wrenches  
1 off collet

### SPECIAL EXECUTION

Left rotation



Spindle nose with regofix collet  
ER 8 (max 5,0 mm)  
ER 11 (max 7,0 mm)



Spindle with angular  
connection for power and  
compressed air (AC)



Ceramic bearing



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**Air-cooled motors** with built-in fan intended for hand work and as auxiliary spindles in machines where light drilling, grinding, milling and deburring is required.

Stainless steel housings are recommended when installing spindles into machines. Compressed air cooling (P) is advisable when operating in either dirty or hostile environments or where more effective cooling is required. Noise levels will also be lower.

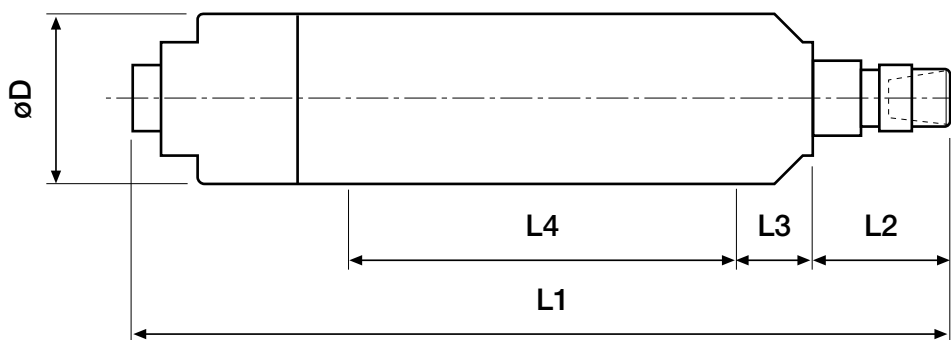
As motors are manufactured to the highest possible standards with all rotating parts dynamically balanced spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.





# VM 10 & VM 17



Technical Specifications		VM 10	VM 17
Dimensions, mm	D (h7)	33	45
	L1	167	226
	L2 (incl. collet)	26	37
	L3	15	20
	L4	71	102
Weight, kg		0,3	0,9
Spindle nose type		10	17
Included collet (ø)		3,0	6,0
Max. collet diameter (ø)		4,0	8,0
Input, max kW		0,20	0,56
Output, max kW		0,10	0,40
Voltage, Band		Öberg/Nema 6 **	Öberg/S2 **
Speed, max rpm		72.000	54.000
Speed, min rpm		36.000	15.000
Max. run-out (mm)		0,01	0,01
Max coaxiality (mm)		0,3	0,3
Air consumption (l/min) *		50	90
Noise level (dBa)		74	82

Accessories		VM 10	VM 17
Converter		SF 750 / SF 700 **	SF 750 / SF 700 **
Air regulator (10-100 l/min)		EK-6273	EK-6273

## CE-approval / EMC test

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test according to EN 50 081-2 (1993) & EN 50 082-2 (1995)

\* Airflow between spindle and air regulator adjustable for different working cycles

\*\* High voltage (max 240V)

We reserve the right to make alterations in design



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# S 24 & S 34

# SPINTEC®

## STANDARD EXECUTION

### HOUSING

Anodized aluminium



### COOLING

Compressed air cooled



### BEARINGS

Selfcontained, spring preloaded high precision deep groove ball bearings.



### ELECTRICAL CONNECTION

6-pole contact with PTC through converter



### ROTATION DIRECTION

Right rotation



### ACCESSORIES

Case  
Connection cable (3 m)  
2 off wrenches  
1 off collet  
1 off nut

## SPECIAL EXECUTION

Ceramic ball bearings



Left rotation

**Air cooled spindles** with compact dimensions, intended for light milling, grinding, drilling and deburring.

These spindles are suitable for mounting on a robot or fitting into a machining centre tool holder.

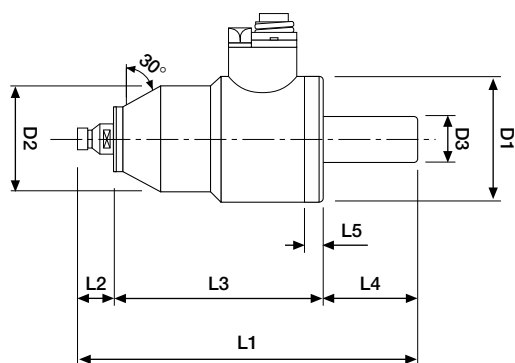
As motors are manufactured to the highest possible standards with all rotating parts dynamically balanced spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.

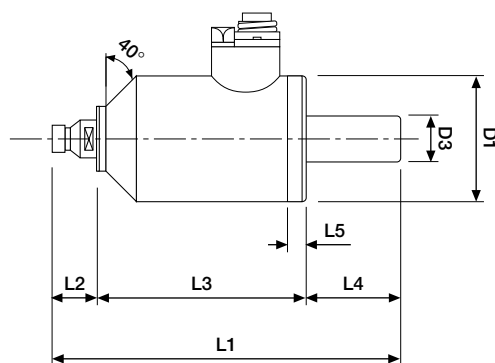


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# S 24



# S 34



Technical Specifications		S 24-75 P	S 34-45 P
Dimensions, mm	D1	70	70
	D2	60	-
	D3	25	25
	L1	202	207
	L2 (incl. collet)	26	33
	L3	121	119
L4 (clamping)	55	55	
L5	10	10	
Weight, kg *		1,6	2,0
Spindle nose type		Regofix, ER 8	Regofix, ER 11
Included collet (ø)		3,0	6,0
Max. collet diameter (ø)		5,0	7,0
Output, max kW		0,30	0,50
Voltage, Band		Öberg/Nema 6 ***	Öberg/Nema 5 ***
Speed, max rpm		75.000	45.000
Speed, min rpm		30.000	15.000
Max run-out (mm)		0,01	0,01
Max coaxiality (mm)		0,05	0,05
Air consumption (l/min) **		50	50
Noise level [dBa]		65	65

Accessories	S 24-75 P	S 34-45 P
Converter	SF 750/SF 700 ***	SF 750/SF 700 ***
Air regulator (10-100 l/min)	EK-6273	EK-6273

## CE-approval / EMC test

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test according to EN 50 081-2 (1993) & EN 50 082-2 (1995)

\* The spindle is delivered with a cylindrical shank, for other type of shanks, i.e. cone, please contact Spintec

\*\* Airflow between spindle and air regulator adjustable for different working cycles

\*\*\* High voltage (max 240V)

We reserve the right to make alterations in design



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# S 44

# SPINTEC®

## STANDARD EXECUTION

### HOUSING

Stainless steel



### COOLING

Water cooling



### BEARINGS

Selfcontained, spring preloaded, high precision angular contact bearings.



### ELECTRICAL CONNECTION

6-pole contact with PTC through converter



### ROTATION DIRECTION

Right rotation



### ACCESSORIES

Case  
Connection cable (3 m)  
2 off chuck wrenches  
1 off collet  
1 off nut

## SPECIAL EXECUTION

Ceramic ball bearings



Left rotation

**Water cooled spindle** with compact dimensions, intended for milling, grinding, drilling and deburring.

This spindle is suitable for mounting on a robot or fitting into a machining centre tool holder.

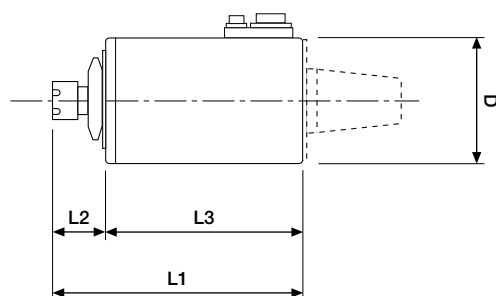
All motors are manufactured to the highest possible standards with all rotating parts dynamically balanced, spare parts are fully interchangeable thus ensuring consistent performance.

When servicing becomes necessary it is recommended that spindles and converters be returned to our factory.



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# S 44



Teknical specifications		S 44-30	S 44-50
Dimensions, mm	D (h6)	110	110
	L1	218	158
	L2 (incl. collet)	56	33
	L3	162	125
Weight, kg (without cone *)		8,5	6,5
Spindle nose type		Regofix, ER 20	Regofix, ER 16
Included collet [ø]		12	8
Max. collet diameter [ø]		13	10
Output, max kW		2,5	2,2
Voltage [V]		300	300
Speed, max rpm		30.000	50.000
Speed, min rpm		5.000	10.000
Max run-out (mm)		0,005	0,005
Max coaxiality (mm)		0,05	0,05
Water consumption [l/min] **		1,2	1,2
Noise level [dBA]		65	65

Accessories	S 44-30	S 44-50
Converter	SF 3000	SF 3000
Water regulator [0,1 - 1,25 l/min]	EK-4AA	EK-4AA
Cooling system ***	PWK 17-S	PWK 17-S

## CE-approval / EMC test

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test acc. to EN 50 081-2 (1993) & EN 50 082-2 (1995)

\* The spindle is delivered without cone, regarding cone size please contact Spintec.

\*\* Depending of the ambient temperature etc.

\*\*\* In locations where the surrounding temperature exceeds 25°C or when the spindle works continuously with a high output (>80% of max. output) we recommend using the PHK 1025.

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# SF 700, SF 750, SF 1500<sup>®</sup> and SF 3000

**Static converters** for continuous speed control of the small motor and spindle series of Spintec.

These converters are built using the latest developments and technology regarding circuit design for optimal use of the spindles at different speed ranges.

The converter has various built in functions such as electronic over current protection and excess temperature control circuits for the motors/spindles. Acceleration and deceleration are regulated and remote control of start/stop and speed is built in. There is also a possibility to connect a PC through an RS-232 interface.

The display shows the actual speed.



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# SF 700, SF 750, SF 1500 och SF 3000

Technical Specifications	SF 700	SF 750	SF 1500	SF 3000
Voltage in	1-phase, 50/60 Hz, 220-240V	1-phase, 50/60 Hz, 220-240V	1-phase, 50/60 Hz, 220-240V	3-phase, 50/60 Hz, 400-460V
Fuse	10 Ampere	5 Ampere	10 Ampere	-
Max output	750 W	750 W	1500 W	3000 W
Frequency range	0-1500 Hz	250-1500 Hz	0-900 Hz	0-1250 Hz
Voltage out	3-phase, 0-240V	3-phase, 11-63V	3-phase, 0-240V	3-phase, 0-440V
Speed range	0-90.000 rpm	15.000-90.000 rpm	0-54.000 rpm	0-75.000 rpm
Dimensions, mm	280 x 385 x 95	280 x 385 x 95	280 x 385 x 95	435 x 345 x 95
Weight, kg	4,5	8,0	5,0	8,5

Type of motor	Motors and spindles that can be connected to each converter			
	SF 700	SF 750	SF 1500	SF 3000
VM 10	•	•		
VM 17	•	•		
S 11-72	•	•		
S 16-60	•	•		
S 18-60	•	•		
S 19-60	•	•		
S 20-60	•	•		
S 21-60	•	•		
S 21-90	•	•		
S 24-75 P	•	•		
S 27-30 P			•	
S 27-38 P			•	
S 27-40			•	
S 27-54 P			•	
S 28-40				•
S 30-60				•
S 33-75				•
S 34-45 P	•	•		
S 44-30				•
S 44-50				•

## CE-approval / EMC test

All SPINTEC products are CE-approved and EMC-tested acc. to EMC directive 89/336/EEC with test according to EN 50 081-2 (1993) & EN 50 082-2 (1995)

*We reserve the right to make alterations in design.*



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## Collets - type Spintec

Collets that fit Spintec spindle nose are available in two accuracy classes.

- Normal accuracy: max. run-out = 0,02 mm (delivered as standard together with VM-motors).
- High accuracy: max. run-out = 0,01 mm (delivered as standard together with all spindles).

The collets are delivered complete with a chuck nut mounted. Dimensions, see below.

Other dimensions on request



Collet ø, mm	Spindle nose type		
	10	17	40
3,0	•	•	
4,0	•	•	
6,0		•	•
8,0		•	•
10,0			•
12,0			•

## Wheel arbors - type Spintec

The wheel arbors are delivered complete with a nut for fastening in the spindle nose and a screw for retaining the grinding wheel.



Spindle nose/Arbor length, mm	Screw diameter for fastening of grinding wheel, mm			
	4,0	5,0	6,0	8,0
17 / 20	•	•	•	•
17 / 40	•	•	•	•
17 / 70	•	•	•	•
40 / 40			•	•
40 / 70			•	•

## Collets - type Regofix

For use with motors/spindles that are equipped with spindle nose type Regofix.



Collet	Width, mm	Length, mm	Capacity	Steps by
ER 8	8,5	15,0	0,5 - 5,0	0,5 mm
ER 11	11,5	18,0	0,5 - 7,0	0,5 mm
ER 16	17,0	27,5	0,5 - 10,0	1,0 mm
ER 20	21,0	31,5	0,5 - 13,0	1,0 mm

## High speed clamps - type Regofix



Clamps	Width, mm	Length, mm	Thread
ER 8 MS	12,0	10,8	M 10 x 0,75
ER 11 MS	16,0	11,3	M 13 x 0,75
ER 16 MS	22,0	17,0	M 19 x 1
ER 20 MS	28,0	19,0	M 24 x 1

## Spanners for High speed clamps - type Regofix



Spanners	Width, mm	Length, mm
ER 8 EMS	19,2	76
ER 11 EMS	22,0	100
ER 16 EMS	33,0	130
ER 20 EMS	42,0	140



## Oil mist regulator

Oil mist 1



## Regulators

EK-4AA – Water (10 - 100 l/min)



EK-6273 – Air (0,1 - 1,25 l/min)



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*Spintec AB is a family company which was formed in 1977 in Eskilstuna, with the aim of making and marketing high speed electric machining spindles, plus converters and accessories for the Swedish market and other industrialised countries.*

*Right from the start, the company aimed at marketing high quality products and services, with a high technology content, and always endeavoured to use the latest machine and appliance technology in its own manufacture.*

*In the summer of 2003, it acquired SPV Tools as a measure to widen its product range. SPV Tools was founded in 1933 and makes very high precision tool holders for industry. Its products include hydraulic chucks, threading tools and other tool holders. When combined with Spintec products, this gives a full-range supplier of equipment for industrial machining.*

*After SPV Tools was acquired, the SPV Spintec Group was formed. These days, the SPV Spintec Group has become known as a problem-solving collaboration partner, whose unique machining know-how can offer customised solutions. Technical consultation, quick service and reliable deliveries are our hall-marks.*