

Micro

Spida 5 - SpidaXpert

Medical

a subsidiary of
VIASYS Healthcare

The world's leading
Spirometry PC software



Focus on the Future



Medical

Advanced features

Spida 5 is the highest quality advanced Spirometry software you can buy. The 32-bit package is simple to use and employs a state of the art multi-window, graphical interface.

Up to 41 Spirometry indices can be measured, previous test curves overlaid for comparison and both open and closed Flow/Volume Loop test techniques used.

An animated child incentive device and the long term trending of patient results also feature.

Spida 5 can be easily linked to other patient journal or GP administration systems, occupational health systems or other medical databases.

Spida 5 is compatible with Microsoft Windows 2000, Me and XP and will link to all Micro Medical Spirometers*

Spida 5 and SpidaXpert come with a software protection key (Dongle) which offers increased flexibility in that the software can be installed on a number of PC's (but only used on the PC with the Dongle connected to it).



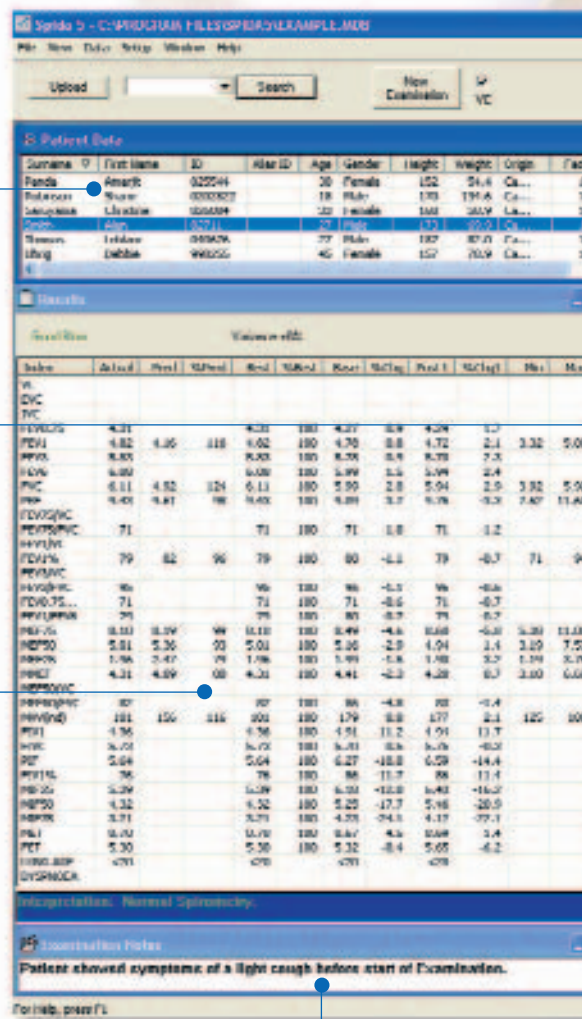
Spida 5 (Cat. No. SD5000)

Features

- Multi-window layout is extremely easy and fast to use
- 3 animated child incentive displays
- Real-time Flow/Volume and Volume/Time traces
- Open and closed Flow/Volume loop test technique is possible
- Overlaying of previous test curves for comparison
- Long term trending facility
- Lung age calculation and textual interpretation based on ATS, NICE and Enright recommendations
- Powerful search capability
- Up to 50 spirometry parameters are measured
- Can be easily linked to other patient journal or GP administration systems, occupational health systems or other medical databases
- Portable protection-key, enabling software usage on multiple PC's and sites (on an individual basis)
- Additional flexibility of Dongle software protection key system



Fully searchable Patient Database



Animated child incentive window

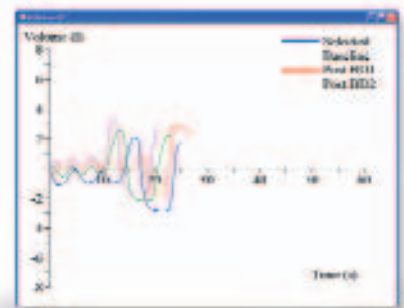
Results analysis

Spida 5 has an installed base of over 10,000 users worldwide

Alterable notes



* Spida 5 and SpidaXpert are compatible with all Micro Medical spirometers except the Micro Spirometer (MD01) and Micro DiaryCard (MD02)



1. Slow vital capacity display



2. Animated graphical child incentive devices

The main interface includes a table of 'Previous tests' with columns for Date/Time, Date, Post, Type, FEV1, FVC, and RD. Below the table are four windows: 'Child Incentive' (animation), 'Best volume time curve' (Volume (l) vs Time (s)), and two 'Best flow volume loop' windows (Flow (l/s) vs Volume (l)). A shaded region in the flow volume loops is labeled 'Predicted area'.

Previous tests

Best volume time curve

Best flow volume loop

All flow volume loops

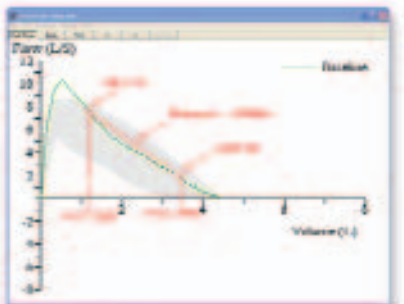
Predicted area

Test	Date	Time	Flow	Volume	FEV1	FVC	RD	Flow	Volume	FEV1	FVC	RD
Baseline	12/02/2004	10:00	1.5	4.75	5.75	10.00	1.5	4.75	5.75	10.00	1.5	4.75
Post DD1	12/02/2004	10:05	1.5	4.75	5.75	10.00	1.5	4.75	5.75	10.00	1.5	4.75
Post DD2	12/02/2004	10:10	1.5	4.75	5.75	10.00	1.5	4.75	5.75	10.00	1.5	4.75

3. Comprehensive result screen



4. Result trending screen



5. Help files – Index parameter explanation screen

MicroLoop

SpiroUSB

MicroDL

MicroGP

MicroPlus



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Instant support in performing and interpreting spirometry

SpidaXpert is a comprehensive, quality assurance, interpretation and diagnostic software program for spirometry. Developed in partnership with a prestigious group of Dutch Respiratory Physicians⁷, SpidaXpert brings added benefits as an upgrade to Spida 5. SpidaXpert automatically assesses the quality and reproducibility of the spirometry tests according to international standards. Concise analysis and diagnosis is achieved using clear coloured graphical indicators and comprehensive textual interpretation.

SpidaXpert, which includes all the features of Spida 5, is a powerful support tool, a true physician's friend.



Examination Quality

Graphical Interpretation

Results Warning

Long or Short Interpretations

Graphical Bar indicator

SpidaXpert (Cat. No. SD5000XP)

Features

- Available as an upgrade to Spida 5
- Internationally recognised (ATS)¹ test quality assurance analysis with coaching messages
- Test sequence quality assurance grading (NLHEP)²
- Graphical indicator of severity of obstruction before and after bronchodilation
- All the features of Spida 5 built-in

- Graphical interpretation of result compared to the normal population
- Long and short textual interpretation, diagnosis and further recommendations
- Database of spirometry patterns in disease to aid tutoring
- High quality, professionally supported, alternative language versions available
- Additional flexibility of Dongle software protection key system



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Quality Assured Spirometry

Examination Quality ▶

Poor quality blows (according to the ATS guidelines¹) are highlighted in red, whilst messages of encouragement are displayed for the patient (e.g Blow Out Faster, Blow Out Longer etc).

A quality grade (A, B, C, D and F – the most recent NLHEP guidelines²) is assigned to the examination (Base, Post 1 and Post 2) to indicate the reproducibility of the individual blows.

T...	Type	FEV1	FVC	PEF	Quality
1	Base	3.95	5.23	5.93	Don't Hesitate!
2	Base	3.92	5.22	7.65	Good Blow
3	Base	3.90	5.20	6.99	Good Blow
4	Base	3.93	5.15	6.86	Good Blow
5	Base	3.95	5.35	7.70	Good Blow
+	Base	3.98	5.35	7.70	Quality A
6	Post 1	3.04	5.19	5.96	Blow out Faster!
7	Post 1	3.85	5.20	7.26	Good Blow
8	Post 1	3.86	5.01	6.51	Blow out Faster!
9	Post 1	3.81	5.10	7.40	Good Blow
10	Post 1	3.95	5.27	6.96	Don't Hesitate!
+	Post 1	3.85	5.20	7.40	Quality A

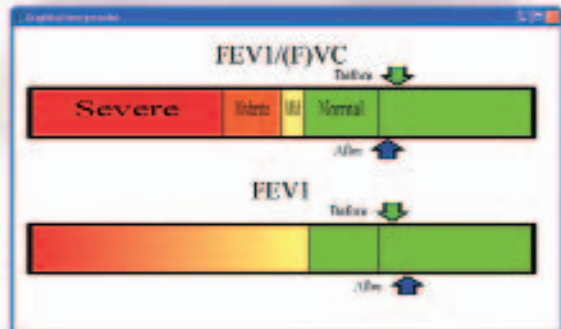
Date	Time	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post	Pre	Post
FEV1	3.95	3.04	3.92	3.90	3.93	3.95	3.98	3.93	3.85	3.86	3.81	3.95	3.85
FVC	5.23	5.19	5.22	5.20	5.15	5.35	5.35	5.20	5.01	5.10	5.27	5.20	5.20
PEF	5.93	5.96	7.65	6.99	6.86	7.70	7.70	7.26	6.51	7.40	6.96	7.40	7.40

Results Warning

Those values which fall below the Lower Limit of Normality for the Predicted Values are highlighted in red.

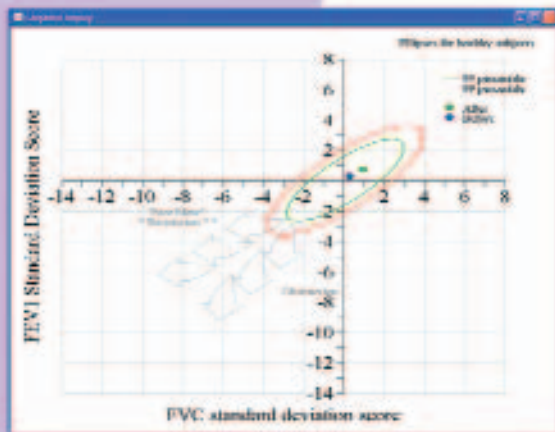
Graphical Bar ▶

The before and after bronchodilation comparison for FEV1/FVC and FEV1 are clearly displayed upon a graphical bar, emphasising the severity of the patient's condition and the performance of bronchodilation.



Graphical Interpretation

The FEV1 and FVC are compared to 95% and 99% of the normal population in a graphical chart that plots performance and displays the patient's movement towards an obstructive, restrictive and combined condition.



Long or Short Interpretations ▶

Professional interpretation and insights into medical explanation can be chosen in either shortened or long textual version, providing advice for the patient's complete diagnosis and treatment.

Warning: Only 1 valid baseline blow(s) Only 1 valid post broncho-dilator blow(s) Ventilatory function within normal limits, the bronchodilator effect on FEV1 is within physiological limits. However, symptomatic improvement may occur within a significant increase in FEV1. No spirometric evidence of expiratory airflow limitation. The lack of bronchodilator responsiveness similarly does not suggest the presence of airway obstruction at the moment. The optimal FEV1 may be higher than it obtained after bronchodilation and should be assessed in a clinically optimal phase. We speak of significant bronchodilation if FEV1 increases by 9 to 12% of the predicted value, and/or > 200 ml. A marked bronchodilator effect implies that the FEV1 increased by 12% or more of the predicted value.

Hardware Requirements

An IBM-compatible PC is required, with hardware that meets or exceeds the following minimum requirements:

- Processor: Pentium 133 MHz
- RAM: 32 MB
- CD-ROM: 4x or faster
- Free Disk Space: 50MB
- Video: SVGA 800x600, 256 colours
- One free serial port for standard Spirometers and one free USB port for the Dongle Software Protection Key
- Two free USB ports for USB enabled Spirometers and for the dongle software protection key

Operating System Requirements

SpidaXpert is network compatible and will work on any of the following operating systems:

- Windows 2000
- Windows XP Home, Professional
- Internet Explorer 4.01 or greater is also required

Micro Medical Ltd pursues a policy of continuing improvement in design, production and performance of its products.
The right is therefore reserved to vary details at any time and without notice.

References

- 1 American Thoracic Society. Standardization of spirometry: 1994 update. Am J Respir Crit Care Med 1995; 152: 1107-1136.
- 2 Office Spirometry for Lung Health Assessment in Adults. A consensus statement from the National Lung Health Education Program. Chest 2000; 117: 1146-1161.
- 3 Quanjer PhH, Tammeling GJ, Cotes JE, Pedersen OF, Peslin R, Yernault JC. Lung volumes and forced ventilatory flows. Official Statement of the European Respiratory Society. Eur Respir J 1993; 6 suppl. 16: 5-40.
- 4 Spirometric 'Lung Age' estimation for motivating smoking cessation. James F. Morris and William Temple, preventative Medicine 14, 655-662 (1985)
- 5 National clinical guideline on management of chronic obstructive pulmonary disease in primary and secondary care (National Institute of Clinical Excellence (NICE) /British Thoracic Society (BTS) Thorax 2004;59(Suppl 1): 1-232 doi: 10.1136/thx.2004.022707
- 6 Office spirometry, a practical guide of the selection and use of spirometers. Paul Enright
- 7 Members of the Dutch consensus group can be found by visiting www.spirxpert.com/spirxpertgroup.htm

Both Micro Medical and the consensus group⁷, which designed the algorithm and the assessments, underlines that these assessments should be regarded as a help. The final assessment of spirometric data, and any decisions about diagnosis, treatment and other interventions in patients remain the sole responsibility of the physician in charge of the patient who should come to a conclusion on the basis of information from various sources, of which spirometric data form only a part.

More information about all aspects of spirometry can be found by visiting www.spirxpert.com



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