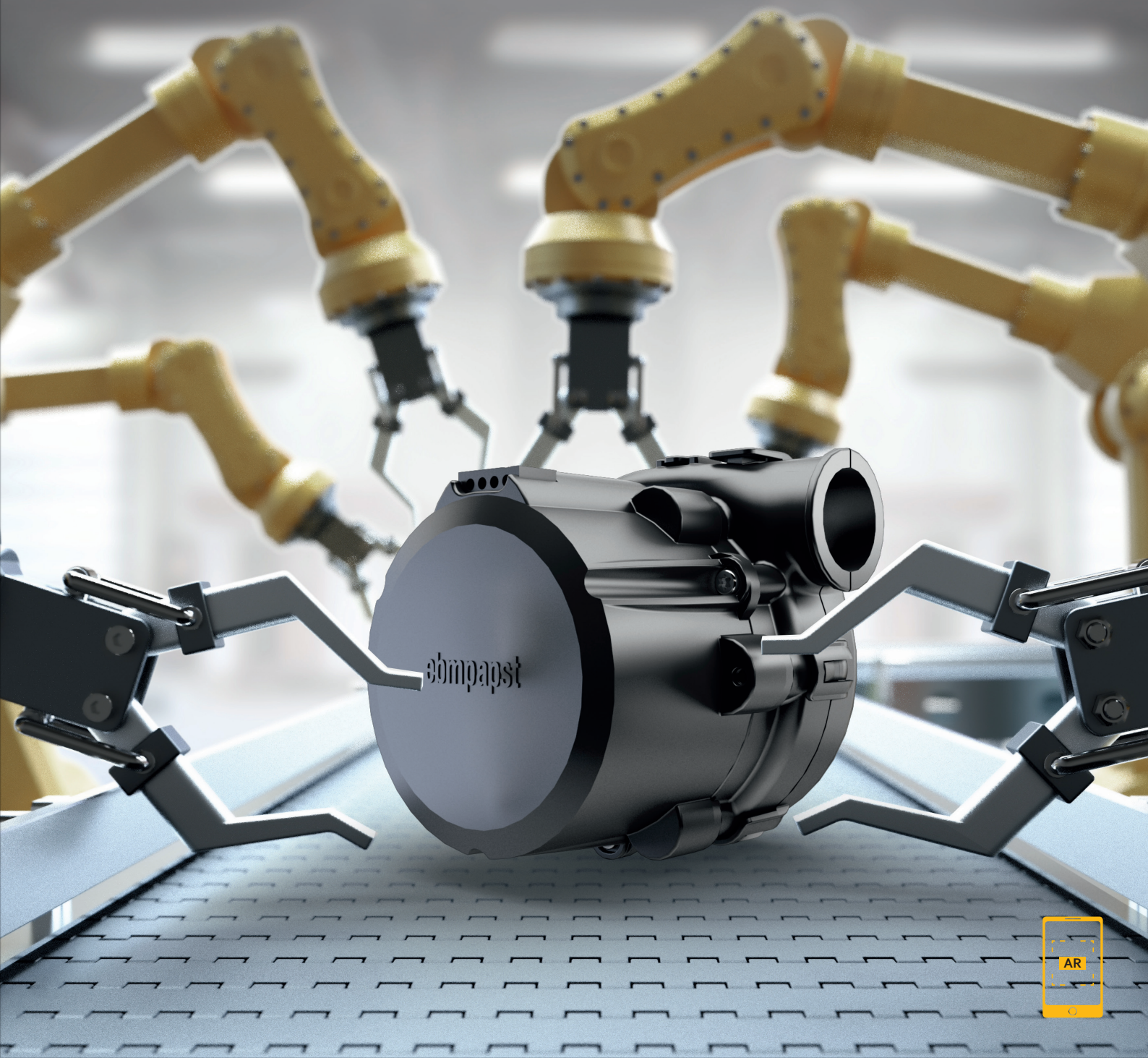


Powerful, compact, quiet: *The RVE45 DC centrifugal fan.*

Perfect to meet the high demands of industry.

ebmpapst

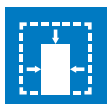
the engineer's choice



Developed for medicine,
perfected for industry.



Up to 38,000 rpm
at over 4,900 Pa



66 x 64 x 65 mm



160 g



58 dB (A)



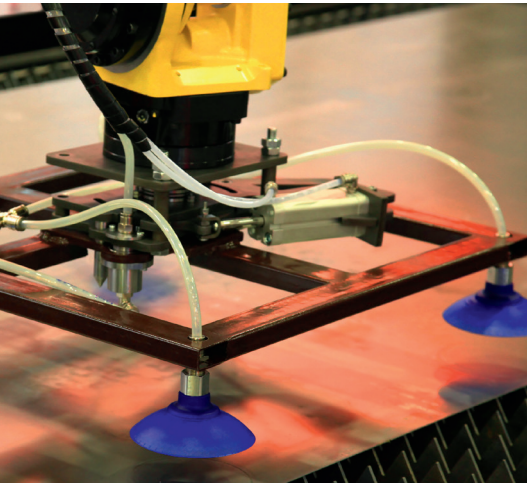
The RVE45 DC centrifugal fan
really shows what it can do
when reliable *high performance is
required in the smallest of spaces.*

For you, this means:

**greater design freedom, greater
efficiency, and significantly lower
noise levels.**

Whatever you are planning.

The RVE45 demonstrates its qualities *in a wide range of applications.*



More design freedom for vacuum lifters

Vacuum lifters require highly varied and changing pressures. High pressure is required when lifting and holding objects. This can be used to generate a strong vacuum. However, when lowering goods, a rapid drop in pressure is necessary, which guarantees that the item is released immediately. Vacuum lifters are used in many areas: one example is in the mail order sector. With the RVE45, cables do not run over the robot arm, significantly increasing the level of constructional freedom.

Efficient battery operation for breathing masks

In production plants, there is work that can only be performed using breathing masks, for example work in paint shops. By installing the RVE45 in the mask, the oxygen supply is reliably guaranteed. The same applies to effectively removing exhaled air. Due to

the centrifugal fan's compact design, the size and weight of the mask move in a comfortable range for the person wearing it and it can also be operated efficiently with a battery.



Extremely quiet for alternating pressure mattresses

Alternating pressure mattresses are prophylactic measures that reduce the pressure on specific areas of skin when people are confined to their beds. The RVE45 inflates the air-filled chambers in a mattress, changing the patient's position and thus preventing bedsores. The low noise generation means that the patient's sleep is barely disturbed by it.



For filling bubble wrap precisely

So that goods reach their recipients safely, fragile packaging contents are often padded and protected using bubble wrap. The bubble wrap is produced on special packaging machines. The RVE45 from ebm-papst plays an important role in these.

It ensures that the individual air chambers are inflated with short, precise pressure surges, but never burst. It doesn't get much better than that.

For mobile extraction systems and filtration

Hygiene plays a central role in nail studios. The health of beauticians and customers is even more important. Therefore, it is extremely unpleasant for fine dust from the nail grinding machine to spread around the entire nail studio unhindered.

So that this does not happen, there are special extraction systems, which always have a blower at their core. Ideally, this requires a very compact, powerful and quiet offering, just like the RVE45 from ebm-papst.



And what are you planning?

Let's work out together how the RVE45 can inspire your project.

Your contact: Martin Sauter

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E-mail: martin.sauter@de.ebmpapst.com

Technical data and variants: [ebmpapst.com/rve45](https://www.ebmpapst.com/rve45)

How you benefit from the RVE45.

So many strengths. *In such little space.*

Electronics

Plug and play

- + Integrated control electronics
- + Speed control through a separate wire by means of PWM signal or analog voltage
- + Output signals: Tach signal or alarm signal
- + 4wire interface

Connection area

Simple commissioning

- + Free wires 310 mm, galvanized
- + Custom solutions available on request

Motor

Unrivalled compactness

- + Space-saving motor design
- + Special high-performance magnets

Efficient operation

- + Lightweight rotor for highly dynamic operation
- + Acceleration: up to 80 rev/ms

Low noise emissions

- + Low noise levels with 58 dB(A)

Minimal vibration

- + Dynamic balancing of the impeller-motor unit

Air outlet

Easy to connect

- + Universal air outlet simplifies incorporation into the application
- + Connection to rubber collar



Find out more
with the Xplore app.
See back page for info

Impeller

High static efficiency

- + Aerodynamically optimized blade geometry

Light fan impeller

- + For highly dynamic operation

Low losses

- + Optimal fan impeller inflow and quiet operation

Robust design

- + Designed for revolutions up to 38,000 rpm and extreme pressures

Optional hose attachment

- + For complex installation situations
- + Flexible air supply possible



Scroll housing

Robust design

- + Scroll housing for reduced noise

Simple installation

- + Mounting holes for uncomplicated screw attachment

What the RVE45 has to offer. *And what you gain from it.*



Highly dynamic characteristics

Its extremely dynamic EC internal rotor motor facilitates adaptation to dynamic pressure changes and switches both quickly and reliably between a high and considerably reduced pressure.

For you, this means:

The air flow is always dosed exactly as required.



Better thought-out

The space-saving motor design and special high-performance magnets make the RVE45 particularly compact and lightweight.

For you, this means:

More design freedom and smaller sizes for all your applications.



Especially quiet

Vibration-absorbing materials and an optimized aerodynamic design help to minimize the operating noise.

For you, this means:

Your products work at significantly lower noise levels – a real plus for your sales team.

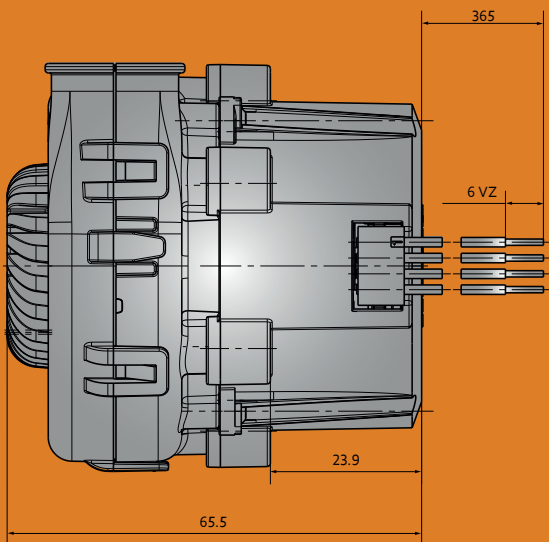


Approvals

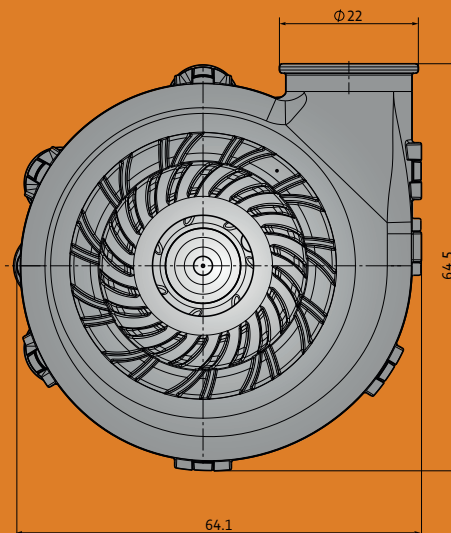
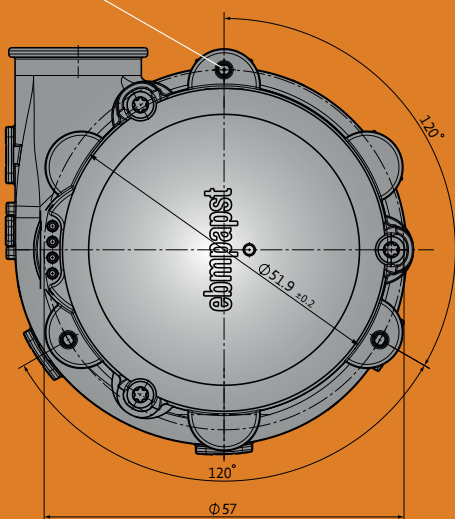
- + VDE 0805
- + UL 507
- + CSA for UL
- + CE

At a glance: **Facts and figures.**

The RV45 was developed for the special demands of medical respirators, an area in which it proved to be a great success. With the RVE45, we have now optimized the compact DC centrifugal fan for use in industrial applications.

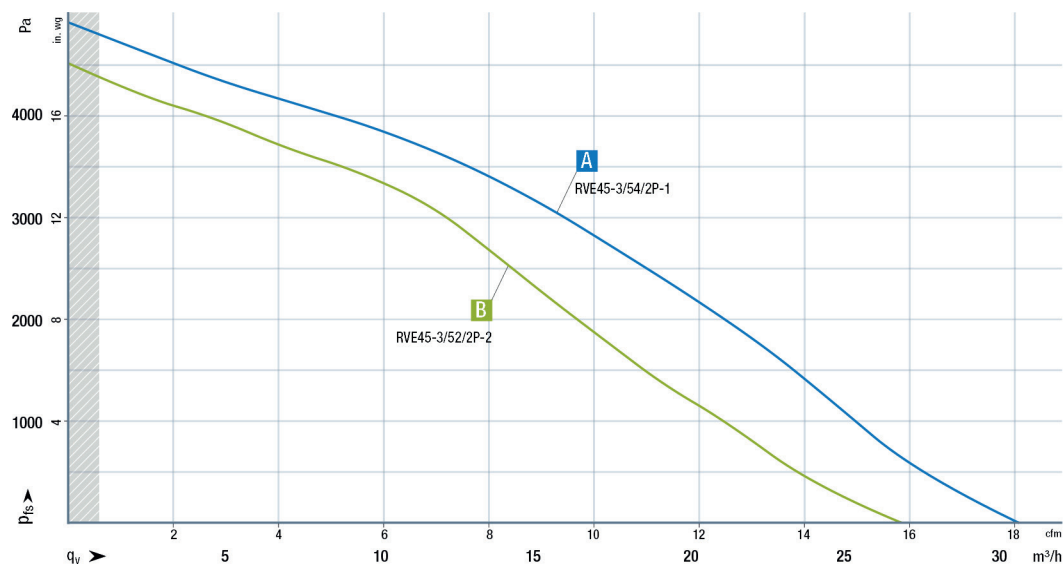


For plastic-cutting screws \varnothing 2.5 mm
max. screw-in depth 6 mm

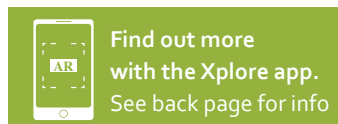


The extremely compact blower can be used in a wide range of industrial applications. Its dynamic EC internal rotor motor facilitates adaptation to rapid pressure changes and switches both quickly and reliably between a high and considerably reduced pressure. Speed changes from 0 to 38,000 rpm to less than 500 ms are easy for the RVE45.

The high nominal speed of 38,000 rpm produces exactly the dynamic power required, which is also supported by the rotor's low moment of inertia. Active braking ensures a similar dynamic response at negative acceleration. Vibration-absorbing materials and ideal aerodynamics ensure that it operates particularly quietly and, thanks to maintenance-free ball bearings, it can continue to do so for many years.



An air flow < 1 m³/h is not permitted for continuous operation.



Nominal data		Air flow	Air flow	Nominal voltage	Voltage range	Sound pressure *	Power consumption	Nominal speed	Temperature range	Service life L ₁₀ (25 °C) ebm-papst standard	Service life L ₁₀ (T _{max}) ebm-papst standard	Life expectancy L ₁₀ IPC (25 °C)
Type		l/min	cfm	VDC	VDC	dB(A)	W	rpm	°C	Hours		Hours
A	RVE45-3/54/2P 8315100100	513	18.1	24	16 to 30	58	38	38,000	-20 to +65	20,000/9,000		45,000
B	RVE45-3/52/2P 8315100111	450	15.9	12	9 to 15	58	30	33,000	-20 to +65	20,000/9,000		45,000

* Extraction noise @ 1,000 Pa. Blower with open intake side facing upwards, opposite side lays on 10 cm thick foam, outlet openings with hose and 4 mm standard nozzle (acoustically insulated), microphone 1.0 m vertical over blower, room noise level < 26 dB(A).

Blower with hose and standard resistor with 4 mm inside diameter, a length of 40 mm and a 45° outlet angle.

Degree of protection = IP20

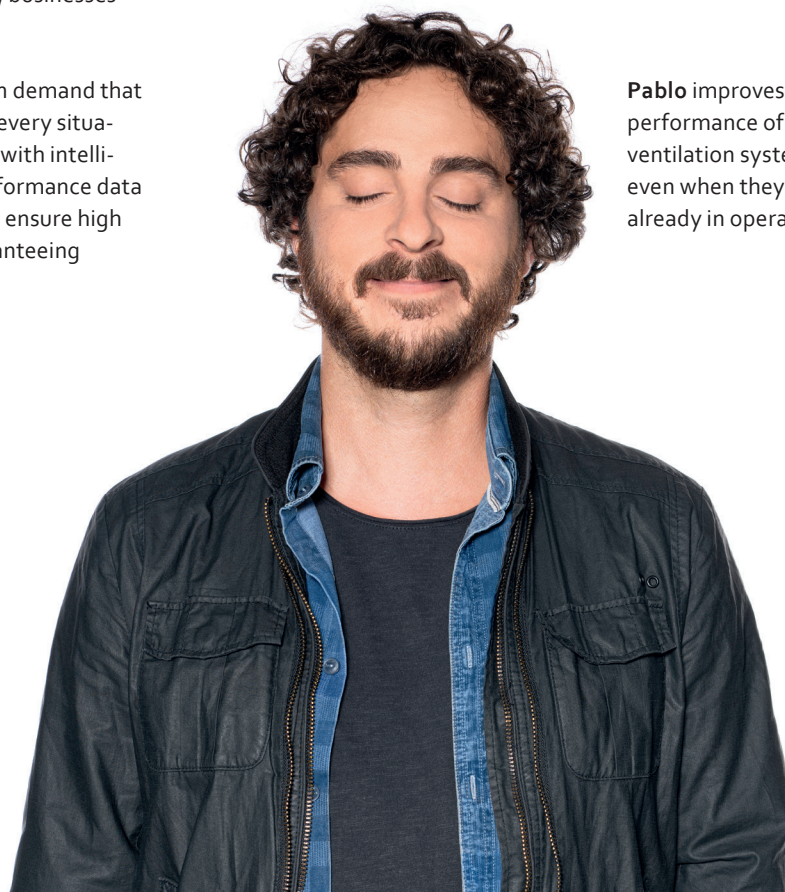
All data in mm. Data sheets available on request. The product descriptions in this brochure do not represent assured properties.

GreenIntelligence.

Making Engineers Happy.

Why do our customers look so happy? Because when it comes to the Internet of Things and the digital transformation, we provide them with a clear competitive edge with GreenIntelligence for intelligent control and interconnection of fans, drives and systems to make applications more powerful, processes more efficient, businesses more successful and their customers more satisfied.

For **industrial ventilation technology**, solutions are in demand that ensure top performance and operational reliability in every situation. GreenIntelligence gives you robust fan solutions with intelligent networking capabilities that provide reliable performance data and extensive control and monitoring functions. They ensure high levels of efficiency and system availability while guaranteeing maximum data security.



Pablo improves the performance of his ventilation systems even when they are already in operation.

**This is how much
GreenIntelligence
there is in the new RVE45**

- ⌚ The rotor is particularly light, which results in a low power consumption at high dynamic performance.
- ⌚ Speed control is possible with a PWM signal or analog voltage, which reduces the energy consumption to what is required.
- ⌚ The fan can be monitored via a tach signal or alarm signal, which reduces downtimes or prevents them preemptively.
- ⌚ As a customer, you can adjust the fan characteristics to your individual requirements and environmental conditions by parameterizing them during the design-in phase.

About ebm-papst.

ebm-papst is a leader in ventilation and drive engineering technology and a much sought-after engineering partner in many industries. With around 20,000 different products, we have the perfect solution for practically every requirement. We believe the consistent further development of our highly-efficient GreenTech EC technology provides our customers with the best opportunities for the future in industrial digitization.

With GreenIntelligence, ebm-papst already offers intelligent networked complete solutions that are unique anywhere in the world today.

We are pleased to help!

Let's find out how ebm-papst can work with you to make your company and your solutions even better. We look forward to it.

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ebmpapst

the engineer's choice

Six reasons that make us the ideal partner:

- 1. Our systems expertise.**
As experts in advanced motor technology, electronics and aerodynamics, we provide system solutions from a single source.
- 2. Our spirit of invention.**
Our 600 engineers and technicians will develop a solution that precisely fits your needs.
- 3. Our lead in technology.**
With our EC technology and GreenIntelligence, we combine the highest energy efficiency with the advantages of IoT and digital networking.
- 4. Closeness to our customers.**
Through our numerous sales offices worldwide.
- 5. Our standard of quality.**
Our quality management is uncompromising, at every step in every process.
- 6. Our sustainable approach.**
We assume responsibility with our energy-saving products, environmentally-friendly processes, and social commitment.

www.ebmpapst.com

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the engineer's choice

Discover exciting additional
information in this brochure.



1. Install the Xplore App.
Launch it and
select the RVE45 module.



2. Scan
Point the camera at pages
with the AR icon.

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