PRODUCT GUIDE

Pneumatic resonance for industrial processes

A practical guide to product families, documented reference data and measurable application trials.



Original product photograph from the RESONATOR source archive. The pictured configuration is not a dimensional specification.

Start with the production problem. Select the energy path. Measure the result.

High frequency. Low amplitude. Compressed-air powered.

The response depends on the device, mounting, structure and material load. Individual features also exist in other vibration products; application performance is demonstrated through a matched trial.

RVS / RVI / RVC

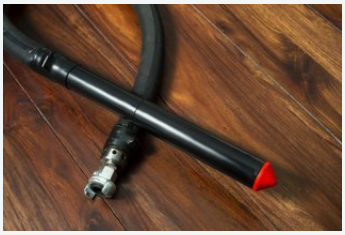
Three ways to enter the process

ARA is the pneumatic resonance architecture. RVS, RVI and RVC describe how excitation is introduced into the installation.



RVS / Stationary

External mounting on silos, hoppers, moulds, tables and transfer equipment. Define the support, working axis and pneumatic supply for the actual structure.



RVI / Immersion

Direct excitation inside compatible liquids, wet mixes and process media. Confirm the medium, contact materials, temperature, depth and hose arrangement.

RVC

RVC / Custom

Application-specific interfaces, configurations and OEM integration. Begin with equipment geometry, operating conditions and a measurable production target.

Materials and functional precision

Historical manufacturer documentation describes special cast alloys and special manufacturing procedures. The final material grade, surface condition and functional tolerances belong to the agreed drawing and technical proposal. This guide does not specify unverified grades or numerical tolerances.

RFC / PUBLIC ENGINEERING REFERENCE

Stationary reference data

Legacy RFC 1, RFC 2 and RFC 3. Values are reproduced from historical manufacturer records and are not confirmed current RVS ratings.

Model	Pressure bar	Declared force N	Frequency Hz	Air use m³/min
RFC 1	2	9,500	300	1.08
RFC 1	4	44,500	650	1.5
RFC 1	6	76,000	850	1.68
RFC 2	2	24,140	300	1.68
RFC 2	4	45,321	450	2.28
RFC 2	6	113,338	650	2.7
RFC 3	2	23,500	200	2.28
RFC 3	4	94,250	400	3.42
RFC 3	6	212,046	600	3.88

Model	Nominal L × D × H, mm	Mass, kg
RFC 1	160 × 50 × 183	7.77
RFC 2	193 × 63 × 205	13.65
RFC 3	235 × 80 × 235	25.10

Reference status. These are historical source-declared values. No test method, calibration record or uncertainty is supplied. No mapping from RFC 1/2/3 to current RVS product classes is established. Confirm the delivered unit and its operating point before selection.

Air-use reference conditions are not consistently defined across the supplied files. The quoted m³/min values must not be used alone to size a compressor. The source nominal dimensions are not a complete installed envelope; fittings, supports and side-view thickness must be checked against the delivery drawing.

RFB / PUBLIC ENGINEERING REFERENCE

Immersion reference data

Legacy RFB 1 and RFB 2. Two models are documented in the supplied source; no third model specification is established.

Model	Pressure bar	Declared force N	Frequency Hz	Air use m³/min
RFB 1	2	3,000	320	0.3
RFB 1	4.5	7,000	500	0.7
RFB 1	7	9,500	570	1.0
RFB 2	2	3,800	170	0.38
RFB 2	4.5	9,500	270	0.8
RFB 2	7	13,000	350	1.3

Model	Length L, mm	Source D, mm*	Mass, kg
RFB 1	470	45	6.0
RFB 2	530	65	9.5

* The source labels D as “D radijus”. Whether this denotes radius or diameter must be confirmed. Working-radius and capacity claims are omitted because their units or test conditions are incomplete. At RFB 2 / 4.5 bar the source lists 270 Hz and 15,000/min, which do not agree; only the source Hz value is reproduced here.

Air-use reference conditions are not consistently defined across the supplied files. The quoted m³/min values must not be used alone to size a compressor. The source nominal dimensions are not a complete installed envelope; fittings, supports and side-view thickness must be checked against the delivery drawing.

RFC & RFB characteristics, original supplied Numbers template. Nominal length and mass and the 2 / 4.5 / 7 bar operating points are reproduced as source references. The source does not establish a current RVI specification.

CEMEX / 2018

Experience from the plant

Three contexts from the July 2018 RESONATOR / CEMEX project record. Historical experience frames the next trial; it is not a universal performance guarantee.





01 Cement-filler silo

The project record reports a cleaning response within approximately **30 seconds**, with less reliance on manual intervention. This is an application-specific observation, not 30 seconds of cycle time saved. No matched baseline or independently audited saving is supplied.

02 Bulk-material transfer

The record describes material accumulation and manual clearing at transfer equipment, followed by improved discharge after installation. The observation is qualitative; downtime and throughput gains are not quantified.

03 Concrete vibration table

The Sv. Kajo trial identifies samples P-61 and P-63 and **15 seconds of effective vibration**. The supplied result note records C25/30, Dmax16, XC2, S1, Cl0.2 and w/c = 0.5. No percentage strength or density gain is reproduced here.

INDUSTRIAL PILOT

A measured next step

Define the production loss and acceptance criteria before agreeing on equipment, installation and a trial.

01 Establish the baseline

Record the current method, material conditions, cycle time and operator interventions.

02 Select and install

Agree the unit, mounting interface, pneumatic supply and operating procedure.

03 Compare under load

Repeat with representative material and load. Keep product quality and conditions comparable.

04 Review and decide

Document the result, air demand and operating value before selecting a long-term commercial model.

Measure	Record
Continuity	Blockage count and stopped minutes per equal output
Cycle and output	Time per accepted cycle and good output per hour
Quality	Application-specific acceptance criteria and rejects
Operating demand	Air consumption, labour and maintenance events

Application and quotation: sales@resonator.hr
General enquiries: info@resonator.hr
Technical support: support@resonator.hr

The technical proposal confirms the delivery scope, current specification, mounting, operating limits, support and commercial conditions. Warranty, delivery time and certification must be confirmed for the exact supplied configuration.

Source basis: RESONATOR historical RFC/RFB technical records; About product; Best practice Resonator-Cemex HR, 30 July 2018; Cemex - Resonator beton rezultat, 2018. Compilation date: 30 October 2026.