

Concrete technology High-Frequency Technology for On-Site Concrete Compaction



System solutions
from WACKER
for compacting
on-site concrete



WACKER – High-Frequency Concrete Compaction System

Individual, custom-made solutions for compacting concrete: WACKER provides a flexible and compact plug & play modular system for any job site application requiring concrete consolidation.

The complete WACKER package provides all of the concrete compaction components that you need – from a single source.

The compaction system can also be rented for occasional use, of course. Rent or purchase - we will advise you on the best way to use WACKER equipment.

High-frequency internal vibrators

For maximum quality and reliability during concrete compaction

Powerful external vibrators

The ideal alternative in areas that are difficult to access with internal vibrators and for high-grade surfaces.

Frequency converters

For internal and external vibrators. The frequency converters can be connected to the mains power supply or operated using a generator.

Generators

For providing an independent power supply and for direct connection to high-frequency vibration equipment



The benefits of systems “made by Wacker”

- **Concrete compaction optimization**
due to the excellent performance and reliability of the equipment
- **Stable, reproducible compaction processes**
- **Versatile system solutions**
suitable for the entire range of WACKER vibration equipment
- **Consistently high performance and productivity**
with a long service life
- **Individual solutions**
for customer-specific projects and applications

1. IREN
2. IRFUN
3. IRSEN



Powerful, reliable and user-friendly: WACKER IREN, IRFUN and IRSEN internal vibrators

Usage tips

- 1 Insert vibrator head into concrete at regular intervals and slowly withdraw after a short delay at the deepest point.
- 2 Distance between immersion points: approx. 10 times the diameter of the internal vibrator
- 3 Select distance between immersion points so that the concrete areas that are affected by the vibration overlap
- 4 Layer-by-layer concrete compaction (max. layer thickness approx. 20 in). The vibrator head must be inserted into the previously compacted lower layer (approx. 4 in).
- 5 Do not immerse internal vibrator too close to the forms, particularly if the concrete has to meet certain optical requirements.



The tailored range of high-frequency internal vibrators from WACKER contains the right equipment for any application – with maximum performance, reliability and safety.

IREN

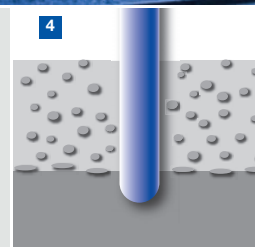
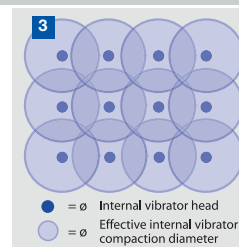
Thanks to their high-torque, constant-speed motors, machines of the IREN series deliver outstanding compaction performance with any size vibrator head, even in extremely dense concrete.

IRSEN

The internal vibrators in the IRSEN series have a low-vibration handle that reduces the amount of vibration considerably and increases operating comfort.

IRFUN

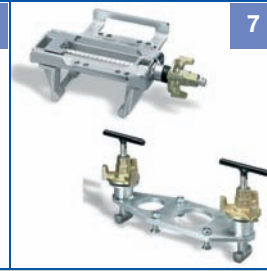
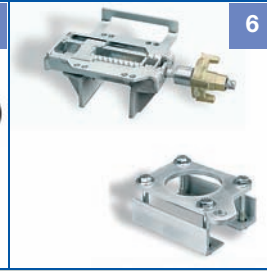
The outstanding feature of the equipment in the IRFUN series is the integrated, absolutely wear-free frequency converter.



Advantages of internal vibrators

- In-house manufactured top quality components provide a long service life and reliable operation
- Consistent speed for maximum productivity and compacting performance
- Internal vibrators for connecting to frequency converters – the economical solution when multiple vibrators are being used
- Internal vibrators with converters integrated in the cable for flexible deployment (connection to mains power supply or generator)
- Internal vibrators with handle for manufacturing concrete floors and for use in pre-cast concrete plants

4. AR 36
5. ARFU 36
6. SV 4 and SV 41 load-bearing form
7. SV 5 and SV 51 frame-type form



Innovative and economical: Exposed-concrete vibrators AR 36 and ARFU 36 from WACKER with flexible clamping system

Usage tips

- 1 Check suitability of form for external vibrator
- 2 Standard value for use of forms: Horizontal and vertical clearance approx. 40 in
- 3 Maximum backfill layer depth: 20 in
- 4 Do not switch external vibrators on until first lift layer has been put in
- 5 Compaction time: approx. 1-2 minutes... for each new layer of concrete



Advantages of exposed-concrete vibrators AR 36 and ARFU 36

- Small, light, flexible external vibrator for on-site concrete forms and lightweight pre-cast concrete forms
- Quick and easy to attach to form
- Powerful electric motor with vibration-resistant and heat-resistant motor coils
- Stable characteristic curve ensures that speed is extremely consistent
- Completely impervious to dust and water spray
- Vibration-proof connections and power cable
- Can be connected to the most popular frequency converters with an output frequency of 200 Hz
- ARFU 36: with integrated converter. Direct connection to mains power supply or generator

Accessories: Tension clamps

These innovative, vibration-proof clamping systems are in a continuous state of development and are suitable for all of the widely used form systems – worldwide.

- Lightweight tension clamp systems that have been tested on construction sites
- Easy to fit without special tools
- System solutions for load-bearing and frame-type forms
- Safety cable to prevent the equipment from falling over



8. FUE 6
9. KTU 2
10. FUE 2

Portable and powerful: Electronic frequency and voltage converters from WACKER

Usage tip

The total nominal current of the connected equipment must not exceed the output current of the converter:

		FUE 6/042/200US	FUE 2/042/200W	KTU 2/042/200W
Nominal Current [A]		50	35	35
IREN 30	3,5	4	2	2
IREN 38	7,0	4	2	2
IREN 45	10,0	4	2	2
IREN 57	17,3	2	2	2
IREN 65	25,0	2	1	1
AR 36/6/042	9,0	4	2	2



The advantages of frequency converters

- Small, lightweight, flexible for use on construction sites
- Optimum safety due to the protective low voltage (< 50 V) and galvanic separation by means of an isolating converter.
- Maintenance free: No moving parts whatsoever in the converter. Extremely robust due to sturdy casing and protection frame
- The overload cut-out makes the equipment extremely safe to use at constant high power, even at the current limit.
- KTU series with integrated cable drum for connecting 1 or 2 high frequency internal vibrators. Can also be used with cable fully reeled in due to optimum cable diameter.
- FUE 6: The frequency adjusting facility of the FUE 6 ensures that the equipment can be used flexibly in conjunction with external vibrators.

Always to hand: Portable Generators

- High-performance mobile generators for general use on construction sites

Technical data

High Frequency Internal Vibrators	IREN 30	IREN 38	IREN 45	IREN 57	IREN 65	IRSEN 30	IRSEN 38	IRSEN 45	IRSEN 57
Vibrator head Ø in (mm)	1.2 (30)	1.5 (38)	1.8 (45)	2.3 (58)	2.6 (65)	1.2 (30)	1.5 (38)	1.8 (45)	2.3 (58)
Protective hose ft (m)	16.4 (5,0)	16.4 (5,0)	16.4 (5,0)	16.4 (5,0)	16.4 (5,0)	2.6 (0,8)	2.6 (0,8)	2.6 (0,8)	2.6 (0,8)
Operating weight lb (kg)	24.9 (11,3)	23.1 (10,5)	26.0 (11,8)	35.7 (16,2)	49.6 (22,5)	11.2 (5,1)	13.0 (5,9)	15.9 (7,2)	24.7 (11,2)
Voltage (V)	42 3 ~	42 3 ~	42 3 ~	42 3 ~	42 3 ~	42 3 ~	42 3 ~	42 3 ~	42 3 ~
Effective compaction diameter (cm) (depending on concrete consistency)	15.8 (40)	19.7 (50)	23.6 (60)	33.5 (85)	47.2 (120)	15.8 (40)	19.7 (50)	23.6 (60)	33.5 (85)
Vibrations (vpm)	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000	12,000
Input current (A)	3.5	7.0	10.0	17.3	25.0	3.5	7.0	10.0	17.3

High Frequency Internal Vibrators with integrated Inverter	IRFUN 38	IRFUN 45	IRFUN 57
Vibrator head Ø in (mm)	1.5 (38)	1.8 (45)	2.3 (58)
Protective hose ft (m)	18.0 (5,5)	18.0 (5,5)	18.0 (5,5)
Operating weight lb (kg)	28.7 (13,0)	34.0 (15,4)	43.7 (19,8)
Voltage (V)	110-130 ~	110-130 ~	110-130 ~
Effective compaction diameter in (cm) (depending on concrete consistency)	19.7 (50)	23.6 (60)	33.5 (85)
Vibrations (vpm)	12,000	12,000	12,000
Input current (A)	6.0	8.0	12.0

External Vibrators	AR 36/6/042S2.3	ARFU 36/6/115US
Vibrator weight lb (kg)	12.1 (5,5)	31.3 (14,2)*
Standard centrifugal force lb (kN)	517.5 (2,3)	391.2 (1,74)
Vibrations (vpm)	6,000	6,000
Voltage (V)	42 3 ~	110-130 ~
Input current (A)	9	6

* incl. converter

Electronic Frequency and Voltage Inverters / with cable drum	FUE 6/042/200US	FUE 2/042/200W	KTU 2/042/200W
Weight lb (kg)	67.2 (30,5)	58.2 (26,4)	75.8 (34,4)
Input voltage (V)	220-240 ~	220-240 ~	220-240 ~
Input frequency (Hz)	50-60	50-60	50-60
Input current (A)	22	13,0	13,0
Output voltage (V)	42 3 ~	42 3 ~	42 3 ~
Output frequency (Hz)	0-200	200	200
Output current (A)	50	35	35

Detailed product information can be found on our home page at www.wackergroup.com