

SEZIONI VENTILANTI**FAN SECTIONS****Ventilatori con trasmissione****Belt driven fans**

I ventilatori previsti sono DWDI (doppia larghezza, doppia aspirazione) della serie geometrica DIN R20. Sono disponibili in versione:

- pale in avanti: per basse pressioni
- pala rovescia: per pressioni medio-alte
- pala rovescia a profilo alare: per pressioni medio-alte ed alta efficienza.

Tutti i ventilatori sono dotati di telaio (nelle forme costruttive R, K, K1, K2 a seconda della pressione di esercizio).

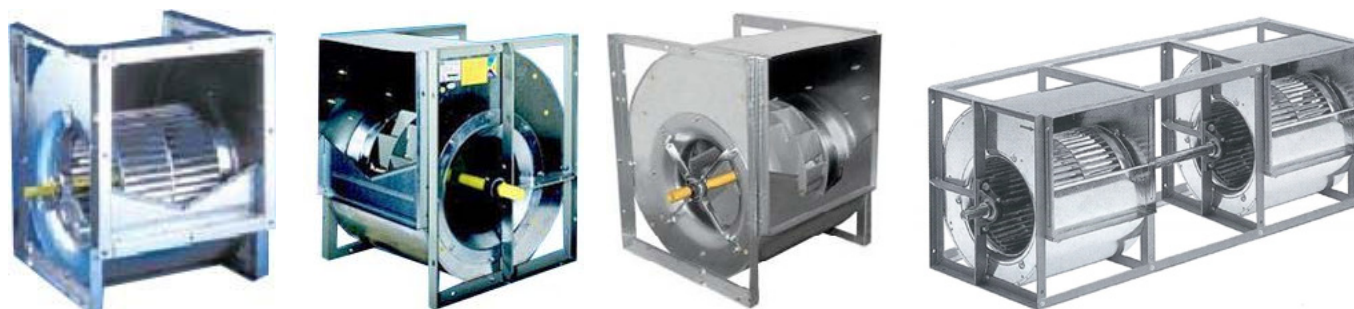
Per alcune grandezze della serie 23MK ribassata sono previsti ventilatori binati (con unico motore).

The fans are DIDW (double inlet double width) of the DIN R20 series and are available in the following versions:

- forward curved for low pressures;
- backward curved for medium to high pressures;
- backward curved aerofoil blades for high efficiency and medium to high pressures;

All the fans are complete with frames (in the R, K, K1 and K2 types according to the operating pressure).

For some sizes of the low profile 23MK series twin fans with a common shaft and single motor are installed.



Le trasmissioni sono del tipo a pulegge e cinghie trapezoidali dei tipi SPA, SPB, SPC.

Le pulegge sono montate agli alberi di motore e ventilatore con calettatore conico tipo "Taper-lock".

Le cinghie vengono regolate mediante l'utilizzo di slitta tendicinghia montata sotto il motore.



The drives are trapezoidal belts and pulleys types SPZ, SPA, SPB, SPC. The pulleys are fixed to the fan and motor shaft by conical taper lock bushes.

Belt tension can be adjusted by means on the motor slide rail fitted below the motor.

Motori**Motors**

I motori elettrici standard, installati sulle centrali sono del tipo:

- Asincrono trifase;
- Costruzione chiusa con ventilazione esterna;
- Rotore a gabbia;
- Configurazione B3 ad albero orizzontale;
- Protezione IP55 e classe di isolamento F;
- Conformi alle norme IEC, CEI, UNEL.
- Classi di Efficienza: IE3, IE2 o IE1 a seconda delle normative applicabili nei singoli mercati e degli specifici requisiti di efficienza

The standard electric motors are of the following type:



- Three phase asynchronous;
- Closed construction with external fan;
- Squirrel cage;
- Horizontal shaft type B3;
- IP55 protection with class F insulation;
- IEC, CEI, UNEL approved;
- Efficiency classes: IE3, IE2 o IE1 according to the applicable regulations in the specific markets and to the efficiency requirements.

Opzionalmente possono essere forniti:

- Con Inverter integrato
- Monofase
- Antideflagranti
- Con termistore
- Con scaldiglia

The following options may be supplied:

- With built-in Inverter;
- Single-phase;
- Explosion proof;
- With thermocontact;
- With internal heater.

Ventilatori plug-fan con motore asincrono**Plug-fans with asynchronous motor**

Per applicazioni specifiche, dove la sanitarizzazione è essenziale, sono previsti i ventilatori senza coclea (detti plug-fan o plenum-fan). Tali ventilatori devono essere alimentati e regolati tramite inverter.



For specific applications where the accurate cleaning is essential, fans without scroll can be used (so called plug-fans or plenum-fans). Those fans must be fed and controlled through frequency converter.

Ventilatori plug-fan con motore EC**Plug-fans with EC motor**

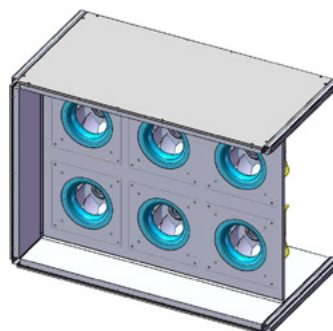
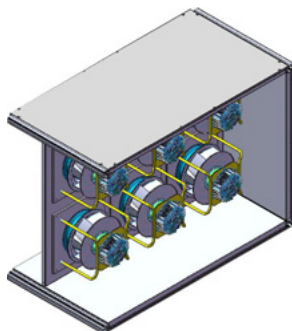
I ventilatori plug fan con motore EC (Electronically Commutated) permettono una regolazione continua della velocità dallo 0 al 100%. I motori EC sono caratterizzati da un elevatissimo rendimento. L'elettronica di controllo è integrata nella cassa del motore e permette l'interfacciamento con segnale 0-10V, 4-20 mA o tramite l'interfaccia Modbus integrata. Sono installati direttamente alla paratia fra bassa ed alta pressione fino alla taglia 560. Su supporti a basamento dalla taglia 630.



The plug fan with EC motor (Electronically Commutated) allow a continuous velocity control from 0 to 100%. EC motors have a very high efficiency. The electronics for the control is integrated in the motor housing and allows a direct interface with 0-10V or 4-20 mA signal or by means of the integrated Modbus connection. They are installed directly to the partition wall between low and high pressure sides up to size 560. On rubber supports at the base-frame from size 630.

Esecuzione speciale : tecnologia fan-wall**Special execution with fan-wall technology**

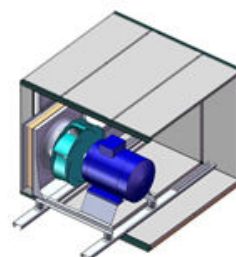
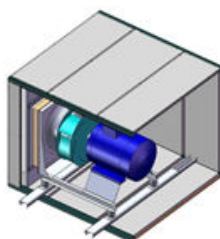
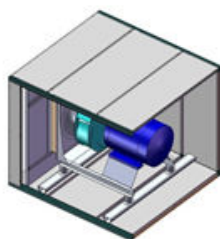
La portata è suddivisa su più ventilatori plug EC funzionanti in parallelo ottenendo un uniforme distribuzione dell'aria sui componenti a monte e valle dei ventilatori.



The airflow is divided among more EC plug fans operating in parallel for a more uniform air distribution at upstream and downstream components.

Esecuzione speciale: estrazione laterale per la pulizia**Special execution: side withdrawal for cleaning**

Il gruppo motore ventilante è montato su guide a scorrimento laterale per permettere una più agevole pulizia del ventilatore.



The fan-motor assembly is installed on rails for a side withdrawal. This allows easier fan's cleaning operations.

Esecuzione speciale: Dispositivo di estrazione per manutenzione straordinaria**Special execution: withdrawal device for extraordinary maintenance**

La sezione ventilante è dotata di una trave estraibile sulla quale scorre un carrello. Un paranco può essere collegato al carrello per sollevare e rimuovere l'intero gruppo ventilante.



The fan-motor assembly is provided with an extractable beam on which a cart can move. A tackle can be connected to the cart for lifting and removing the entire fan-motor assembly.



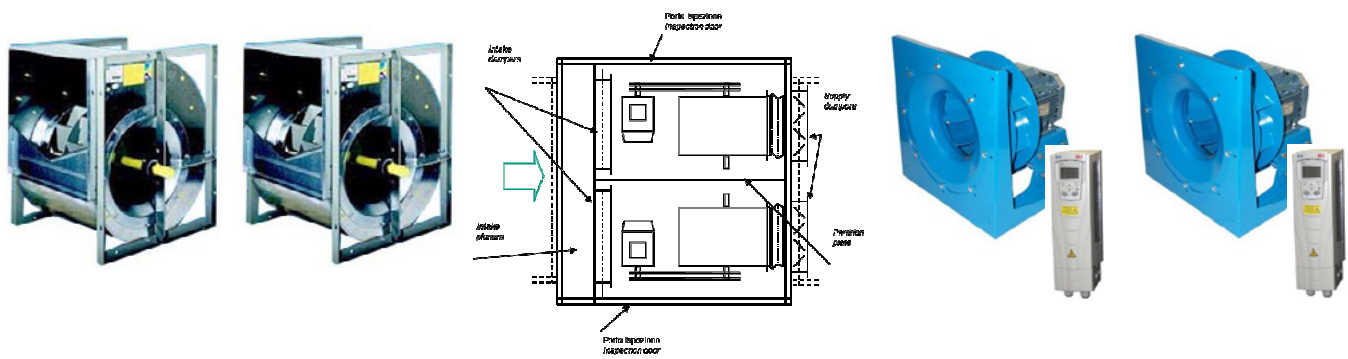
| 23MK | ventilatori | | | | | | | | | | | |
|------|-----------------------------------|-------------|---|-----------------------------------|-------------|---|-----------------------------------|-------------|---|-----------------------------------|-------------|---|
| | diametro ventilatore Fan diameter | binato twin | supporti antivibr. Antibratation supports | diametro ventilatore Fan diameter | binato twin | supporti antivibr. Antibratation supports | diametro ventilatore Fan diameter | binato twin | supporti antivibr. Antibratation supports | diametro ventilatore Fan diameter | binato twin | supporti antivibr. Antibratation supports |
| 0304 | 160 | | | 180 | | | | | | | | |
| 0404 | 160 | | | 180 | | | 200 | | | 225 | | |
| 0405 | 180 | | | 200 | | | 225 | | | 250 | | gomma / rubber |
| 0406 | 180 | | | 200 | | | 225 | | gomma / rubber | 250 | | |
| 0407 | 225 | | | 250 | | gomma / rubber | 225 | • | | | | |
| 0408 | 250 | | | 225 | • | | 250 | • | | | | |
| 0409 | 225 | • | | 250 | • | | | | | | | |
| 0410 | 225 | • | | 250 | • | | | | | | | |
| 0411 | 225 | • | | 250 | • | | | | | | | |
| 0412 | 250 | • | | | | | | | | | | |
| 0413 | 250 | • | | | | | | | | | | |
| 0505 | 225 | | | 250 | | | 280 | | | 315 | | |
| 0506 | 225 | | | 250 | | | 280 | | gomma / rubber | 315 | | gomma / rubber |
| 0507 | 250 | | | 280 | | | 315 | | | | | |
| 0508 | 280 | | gomma / rubber | 315 | | | | | | | | |
| 0509 | 315 | | | 250 | • | | | | | | | |
| 0510 | 315 | | | 250 | • | | 280 | • | | | | |
| 0511 | 250 | • | | 280 | • | gomma / rubber | 315 | • | gomma / rubber | | | |
| 0512 | 280 | • | | 315 | • | | | | | | | |
| 0513 | 280 | • | | 315 | • | | | | | | | |
| 0608 | 315 | | | 355 | | | 400 | | | | | |
| 0612 | 355 | | | 400 | | | 315 | • | gomma / rubber | | | |
| 0613 | 400 | | | 315 | • | | 355 | • | | | | |
| 0708 | 355 | | | 400 | | | 450 | | molla / spring | | | |
| 0712 | 400 | | | 450 | | | 400 | • | | | | |
| 0713 | 400 | | | 450 | | | 400 | • | gomma / rubber | | | |
| 0808 | 355 | | | 400 | | | 450 | | | 500 | | |
| 0809 | 400 | | | 450 | | | 500 | | | 560 | | |
| 0810 | 400 | | | 450 | | | 500 | | | 560 | | molla / spring |
| 0811 | 400 | | | 450 | | | 500 | | | 560 | | |
| 0812 | 450 | | | 500 | | | 560 | | | | | |
| 0813 | 450 | | | 500 | | | 560 | | | | | |
| 1012 | 500 | | | 560 | | | 630 | | molla / spring | | | |
| 1013 | 500 | | | 560 | | | 630 | | | 710 | | |
| 1212 | 500 | | | 560 | | molla / spring | 630 | | | 710 | | molla / spring |
| 1213 | 560 | | | 630 | | | 710 | | | | | |
| 1214 | 560 | | | 630 | | | 710 | | | | | |
| 1216 | 630 | | molla / spring | 710 | | | 800 | | | 900 | | molla / spring |
| 1220 | 710 | | | 800 | | | 900 | | | | | |
| 1224 | 800 | | | 900 | | | | | | | | |
| 1416 | 710 | | | 800 | | | 900 | | molla / spring | | | |
| 1420 | 800 | | | 900 | | | 1000 | | | | | |
| 1424 | 900 | | | 1000 | | | | | | | | |
| 1428 | 900 | | | 1000 | | | | | | | | |

SEZIONI VENTILANTI
FAN SECTIONS
Diametri ventilatori plug-fan con motore asincrono
Diameters of plug-fans with asynchronous motor


| 023MK | plug fan plug fan | | | | | | | | | | | | | | |
|-------|---|---------------------------------|--|---|---------------------------------|--|---|---------------------------------|--|-----|----------------|----------------|-----|---|----------------|
| | Diametro ventilatore Fan diameter | q.tà ventilatori Fan Q.ty | supporti antivibranti Antivibrating supports | Diametro ventilatore Fan diameter | q.tà ventilatori Fan Q.ty | supporti antivibranti Antivibrating supports | Diametro ventilatore Fan diameter | q.tà ventilatori Fan Q.ty | supporti antivibranti Antivibrating supports | | | | | | |
| 0304 | 250 | 1 | gomma / rubber | 280 | 0 | gomma / rubber | 315 | 0 | gomma / rubber | | | | | | |
| 0404 | 280 | 1 | | 250 | 0 | | 315 | 0 | | | | | | | |
| 0405 | 280 | 1 | | 315 | 0 | | 355 | 0 | | | | | | | |
| 0406 | 315 | 1 | | 355 | 0 | | 400 | 0 | | | | | | | |
| 0407 | 355 | 1 | | 315 | 0 | | 400 | 0 | | | | | | | |
| 0408 | 355 | 1 | | 315 | 0 | | 400 | 0 | | | | | | | |
| 0409 | 315 | 2 | | 355 | 1 | | 400 | 0 | | | | | | | |
| 0410 | 315 | 2 | | 355 | 1 | | 400 | 0 | | | | | | | |
| 0411 | 355 | 2 | | 315 | 1 | | 400 | 0 | | | | | | | |
| 0412 | 355 | 2 | | 315 | 1 | | 400 | 1 | | | | | | | |
| 0413 | 355 | 2 | | 315 | 1 | | 400 | 1 | | | | | | | |
| 0505 | 315 | 1 | | 355 | 0 | | 400 | 0 | | | | | | | |
| 0506 | 355 | 1 | | 400 | 0 | | 450 | 0 | | | | | | | |
| 0507 | 400 | 1 | | 450 | 0 | | molla / spring | 500 | | 0 | molla / spring | | | | |
| 0508 | 450 | 1 | | 400 | 0 | | molla / rubber | 500 | | 0 | gomma / rubber | | | | |
| 0509 | 450 | 1 | molla / spring | 500 | 0 | molla / spring | 355 | 1 | | | | | | | |
| 0510 | 355 | 2 | gomma / rubber | 500 | 0 | gomma / rubber | 400 | 1 | gomma / rubber | | | | | | |
| 0511 | 355 | 2 | | 400 | 1 | | 500 | 0 | | | | | | | |
| 0512 | 355 | 2 | | 400 | 1 | | 500 | 0 | | | | | | | |
| 0513 | 400 | 2 | molla / spring | 450 | 1 | molla / spring | 500 | 0 | molla / spring | | | | | | |
| 0608 | 450 | 1 | | molla / spring | 500 | | 0 | 560 | | 0 | | | | | |
| 0612 | 400 | 2 | | gomma / rubber | 560 | | 0 | 630 | | 0 | | | | | |
| 0613 | 500 | 2 | | molla / spring | 450 | | 1 | molla / spring | | 630 | 0 | molla / spring | | | |
| 0708 | 500 | 1 | | | 560 | | 0 | | | 630 | 0 | | | | |
| 0712 | 450 | 2 | | | 630 | | 0 | | | 500 | 1 | | | | |
| 0713 | 500 | 2 | | | 630 | | 0 | | | 560 | 1 | | | | |
| 0808 | 560 | 1 | | | 500 | | 0 | | | 630 | 0 | | | | |
| 0809 | 630 | 1 | | | 560 | | 0 | | | 710 | 0 | | | | |
| 0810 | 630 | 1 | | | 710 | | 0 | | | 800 | 0 | | | | |
| 0811 | 710 | 1 | | | 630 | | 0 | | | 800 | 0 | | | | |
| 0812 | 710 | 1 | | | 630 | | 0 | | | 800 | 0 | | | | |
| 0813 | 710 | 1 | | | 630 | | 0 | | | 800 | 0 | | | | |
| 1012 | 800 | 1 | | | molla / spring | | 710 | | | 0 | molla / spring | | 800 | 0 | molla / spring |
| 1013 | 800 | 1 | | | | | 710 | | | 0 | | | 900 | 0 | |
| 1212 | 900 | 1 | 800 | | | 0 | 900 | | 0 | | | | | | |
| 1213 | 900 | 1 | 800 | | | 0 | 1000 | | 0 | | | | | | |
| 1214 | 900 | 1 | 800 | | | 0 | 1000 | | 0 | | | | | | |
| 1216 | 1000 | 1 | 1000 | 0 | | 1120 | 0 | | | | | | | | |
| 1220 | 800 | 2 | 900 | 0 | | 1120 | 0 | | | | | | | | |
| 1224 | 900 | 2 | 1120 | 0 | | 1250 | 0 | | | | | | | | |
| 1416 | 1120 | 1 | 1120 | 0 | | 1250 | 0 | | | | | | | | |
| 1420 | 900 | 2 | 1000 | 0 | | 1250 | 0 | | | | | | | | |
| 1424 | 1000 | 2 | 1120 | 0 | | 1250 | 0 | | | | | | | | |
| 1428 | 1000 | 2 | 1250 | 0 | | 1400 | 0 | | | | | | | | |
| | | | 1120 | 1 | | 1400 | 0 | | | | | | | | |

SEZIONI VENTILANTI
FAN SECTIONS
Diametri ventilatori plug-fan con motore EC
Diameters of plug-fans with EC motor


| 023MK | plug fan con motore EC plug fan with EC motor | | | | | | | | |
|-------|--|------------------------------|--|-------------------------------|------------------------------|--|-------------------------------|------------------------------|--|
| | diam. vent. Fan Dia. | q.tà vent. Fan Q.ty | Montaggio Installation | diam. vent. Fan Dia. | q.tà vent. Fan Q.ty | Montaggio Installation | diam. vent. Fan Dia. | q.tà vent. Fan Q.ty | Montaggio Installation |
| 0304 | 250 | 1 | su paratia on partition plate | 280 | 1 | su paratia on partition plate | | | su paratia on partition plate |
| 0404 | 250 | 1 | | 310 | 1 | | 310 | 1 | |
| 0405 | 280 | 1 | | 310 | 1 | | 355 | 1 | |
| 0406 | 280 | 1 | | 310 | 1 | | 355 | 1 | |
| 0407 | 310 | 1 | | 355 | 1 | | 400 | 1 | |
| 0408 | 355 | 1 | | 400 | 1 | | 280 | 2 | |
| 0409 | 400 | 1 | | 280 | 2 | | 310 | 2 | |
| 0410 | 400 | 1 | | 280 | 2 | | 310 | 2 | |
| 0411 | 400 | 1 | | 310 | 2 | | 355 | 2 | |
| 0412 | 310 | 2 | | 355 | 2 | | 400 | 2 | |
| 0413 | 310 | 2 | | 355 | 2 | | 400 | 2 | |
| 0505 | 280 | 1 | | 310 | 1 | | 355 | 1 | |
| 0506 | 310 | 1 | | 355 | 1 | | 400 | 1 | |
| 0507 | 355 | 1 | | 400 | 1 | | 450 | 1 | |
| 0508 | 400 | 1 | | 450 | 1 | | 500 | 1 | |
| 0509 | 450 | 1 | | 500 | 1 | | 400 | 2 | |
| 0510 | 450 | 1 | | 500 | 1 | | 400 | 2 | |
| 0511 | 450 | 1 | | 500 | 1 | | 400 | 2 | |
| 0512 | 450 | 1 | | 500 | 1 | | 400 | 2 | |
| 0513 | 500 | 1 | | 400 | 2 | | 450 | 2 | |
| 0608 | 450 | 1 | | 500 | 1 | | 560 | 1 | |
| 0612 | 500 | 1 | | 560 | 1 | | 630 | 1 | |
| 0613 | 500 | 1 | | 560 | 1 | | 450 | 2 | |
| 0708 | 450 | 1 | | 500 | 1 | | 560 | 1 | |
| 0712 | 630 | 1 | | 710 | 1 | | 500 | 2 | |
| 0713 | 630 | 1 | | 710 | 1 | | 500 | 2 | |
| 0808 | 500 | 1 | | 560 | 1 | | 630 | 1 | |
| 0809 | 500 | 1 | | 560 | 1 | | 630 | 1 | |
| 0810 | 630 | 1 | 710 | 1 | 800 | 1 | | | |
| 0811 | 630 | 1 | 710 | 1 | 800 | 1 | | | |
| 0812 | 710 | 1 | 800 | 1 | 560 | 2 | | | |
| 0813 | 710 | 1 | 800 | 1 | 560 | 2 | | | |
| 1012 | 710 | 1 | 800 | 1 | 900 | 1 | | | |
| 1013 | 710 | 1 | 800 | 1 | 900 | 1 | | | |
| 1212 | 710 | 1 | 800 | 1 | 900 | 1 | | | |
| 1213 | 800 | 1 | 900 | 1 | 630 | 2 | | | |
| 1214 | 800 | 1 | 900 | 1 | 630 | 2 | | | |
| 1216 | 900 | 1 | 630 | 2 | 710 | 2 | | | |
| 1220 | 710 | 2 | 800 | 2 | 900 | 2 | | | |
| 1224 | 900 | 2 | 630 | 3 | 710 | 3 | | | |
| 1416 | 630 | 2 | 710 | 2 | 800 | 2 | | | |
| 1420 | 800 | 2 | 900 | 2 | 630 | 3 | | | |
| 1424 | 900 | 2 | 630 | 3 | 710 | 3 | | | |
| 1428 | 900 | 2 | 800 | 3 | 900 | 3 | | | |
| | | | gomma su basamento rubber on base frame | | | gomma su basamento rubber on base frame | | | gomma su basamento rubber on base frame |

SEZIONI VENTILANTI
FAN SECTIONS
**Diametri ventilatori per sezioni ventilanti doppie
compartimentate**
**Fan diameters for double fan sections with
partition plate**


| 23MK | ventilatori centrifughi doppi (stand-by) <i>Double centrifugal fans (stand-by)</i> | | 23MK | ventilatori plug-fan doppi (stand-by) <i>Double centrifugal plug fans (stand-by)</i> | |
|------|---|---|------|---|---|
| | diametro ventilatore <i>Fan diameter</i> | supporti antivibr. <i>Antivibration supports</i> | | diametro ventilatore <i>Fan diameter</i> | supporti antivibr. <i>Antivibration supports</i> |
| 0304 | 180 | gomma / rubber | 0304 | 250 | gomma / rubber |
| 0404 | 225 | gomma / rubber | 0404 | 280 | gomma / rubber |
| 0405 | 250 | gomma / rubber | 0405 | 280 | gomma / rubber |
| 0406 | 250 | gomma / rubber | 0406 | 315 | gomma / rubber |
| 0407 | - | - | 0407 | 315 | gomma / rubber |
| 0408 | - | - | 0408 | 355 | gomma / rubber |
| 0409 | - | - | 0409 | 400 | gomma / rubber |
| 0410 | - | - | 0410 | 450 | molla / spring |
| 0411 | - | - | 0411 | 450 | molla / spring |
| 0412 | - | - | 0412 | 500 | molla / spring |
| 0413 | - | - | 0413 | 560 | molla / spring |
| 0505 | 280 | gomma / rubber | 0505 | 630 | molla / spring |
| 0506 | 315 | gomma / rubber | 0506 | 630 | molla / spring |
| 0507 | 315 | gomma / rubber | 0507 | 710 | molla / spring |
| 0508 | 315 | gomma / rubber | 0508 | 710 | molla / spring |
| 0509 | - | - | 0509 | 710 | molla / spring |
| 0510 | - | - | 0510 | 800 | molla / spring |
| 0511 | - | - | 0511 | 800 | molla / spring |
| 0512 | - | - | 0512 | 900 | molla / spring |
| 0513 | - | - | 0513 | 900 | molla / spring |
| 0608 | 400 | gomma / rubber | 0608 | 900 | molla / spring |
| 0612 | - | - | 0612 | 1000 | molla / spring |
| 0613 | - | - | 0613 | 1000 | molla / spring |
| 0708 | 450 | molla / spring | 0708 | 1000 | molla / spring |
| 0712 | - | - | 0712 | 1120 | molla / spring |
| 0713 | - | - | 0713 | 1120 | molla / spring |
| 0808 | 500 | molla / spring | 0808 | 1250 | molla / spring |
| 0809 | 500 | molla / spring | 0809 | 1250 | molla / spring |
| 0810 | 560 | molla / spring | 0810 | 560 | molla / spring |
| 0811 | 560 | molla / spring | 0811 | 560 | molla / spring |
| 0812 | 560 | molla / spring | 0812 | 560 | molla / spring |
| 0813 | 560 | molla / spring | 0813 | 560 | molla / spring |
| 1012 | 630 | molla / spring | 1012 | 630 | molla / spring |
| 1013 | 710 | molla / spring | 1013 | 710 | molla / spring |
| 1212 | 710 | molla / spring | 1212 | 710 | molla / spring |
| 1213 | 710 | molla / spring | 1213 | 710 | molla / spring |
| 1214 | 710 | molla / spring | 1214 | 710 | molla / spring |
| 1216 | 800 | molla / spring | 1216 | 800 | molla / spring |
| 1220 | 900 | molla / spring | 1220 | 900 | molla / spring |
| 1224 | 900 | molla / spring | 1224 | 900 | molla / spring |
| 1416 | 900 | molla / spring | 1416 | 900 | molla / spring |
| 1420 | 1000 | molla / spring | 1420 | 1000 | molla / spring |
| 1424 | 1000 | molla / spring | 1424 | 1000 | molla / spring |
| 1428 | 1000 | molla / spring | 1428 | 1000 | molla / spring |

I ventilatori sono montati su supporti antivibranti in gomma fino al diametro 400 e a molla oltre. Il grafico rappresenta la trasmissibilità (ossia il rapporto fra forza trasmessa e quella applicata) alle varie frequenze (velocità di rotazione del ventilatore) considerando diverse deflessioni statiche dell'antivibrante (da 3 a 25 mm). E' evidente che maggiore è la deflessione statica, minore è la trasmissibilità.

Fans are installed on antivibration supports in rubber up to 400 diameter and spring type above. The graph shows the transmissibility (namely the ratio of the transmitted force on the applied force) at different frequencies (rotational speed of fan), considering various static deflections of the anti-vibrating supports. (from 3 to 25 mm). It is evident that as bigger is the static deflection, lower is the transmissibility.

Le deflessioni statiche dipendono dal peso del gruppo motoventilante, dal tipo e dal numero di ammortizzatori impiegati e si calcolano come segue:

The static deflections depend on the weight of the fan-motor assembly, on the type and quantity of a.v. supports and can be calculated as follows:

$$x = F * k$$

$$x = F * k$$

dove:

x = deflessione statica (mm)
 F = forza applicata (kg)
 k = caratteristica elastica

where:

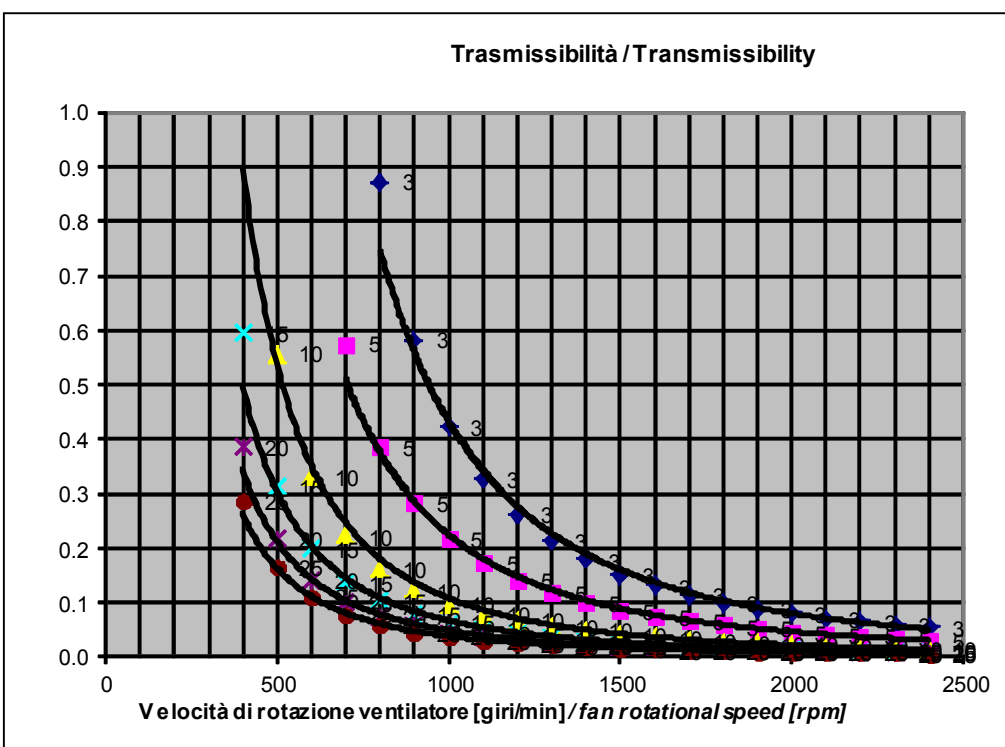
x = static deflection (mm)
 F = applied force (kg)
 k = elastic coefficient

I supporti vengono calcolati in modo da avere la massima freccia possibile senza eccedere il carico massimo Fmax del supporto antivibrante.

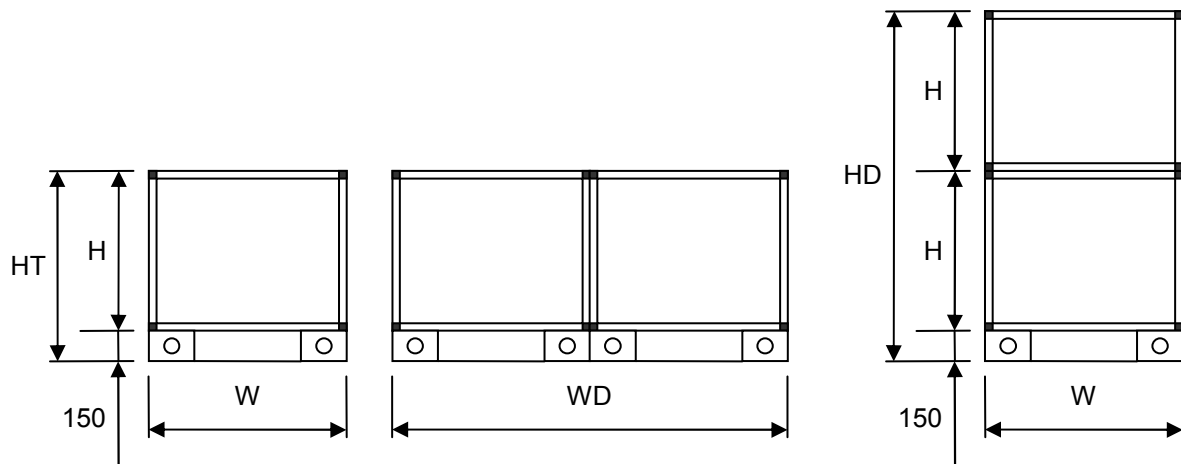
Supports are calculated to have the maximum possible deflection without exceeding the max allowable load Fmax of the anti-vibration mount.

I ventilatori con ammortizzatori in gomma vengono isolati dal pannello frontale con un antivibrante anch'esso in gomma; i ventilatori ammortizzati con molle, sono invece equipaggiati con giunto antivibrante in tela.

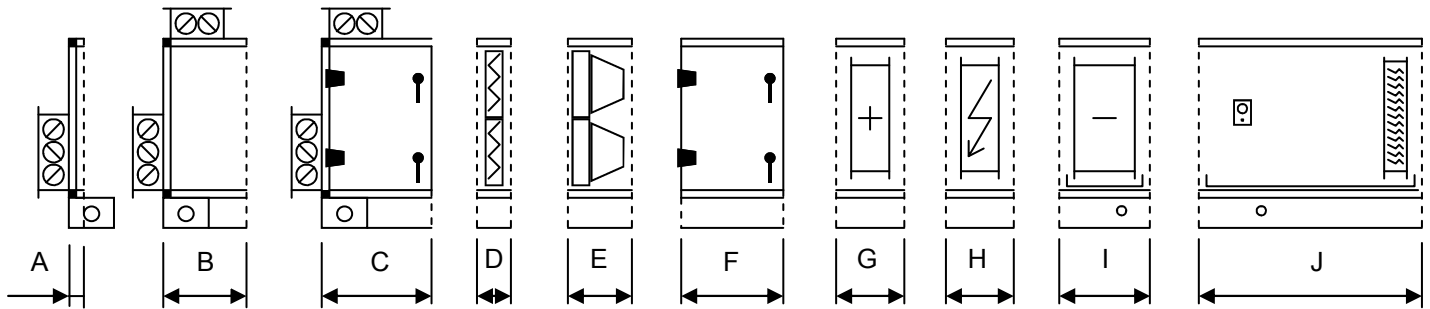
The fans with rubber mounts are insulated from the front panel by means of a rubber joint; the fans on springs are equipped with antivibration canvas at the outlet spigot.



| Tipo Type | Modello Model | k (N/mm) | max Fmax (N) |
|--------------|---------------|----------|--------------|
| gomma rubber | 2025-43Sh | 3.5 | 177 |
| gomma rubber | 3025-43Sh | 8.7 | 412 |
| gomma rubber | 4030-43Sh | 12.8 | 706 |
| molla spring | MW 04 | 9.8 | 353 |
| molla spring | MW 05 | 15.7 | 579 |
| molla spring | MW 06 | 20.6 | 657 |
| molla spring | MW 08 | 27.5 | 873 |
| molla spring | MW 09 | 38.3 | 1216 |
| molla spring | MW 12 | 49.1 | 1570 |
| molla spring | MV 20 | 73.6 | 1982 |
| molla spring | MV 22 | 94.2 | 2541 |
| molla spring | MV 30 | 115.8 | 3630 |
| molla spring | MV 301 | 147.2 | 4120 |
| molla spring | MV 31 | 176.6 | 4944 |



| 23MK | W | WD | H | HT | HD |
|------|------|------|------|------|------|
| 0304 | 730 | 1460 | 570 | 720 | 1290 |
| 0404 | 730 | 1460 | 730 | 880 | 1610 |
| 0405 | 890 | 1780 | 730 | 880 | 1610 |
| 0406 | 1050 | 2100 | 730 | 880 | 1610 |
| 0407 | 1210 | 2420 | 730 | 880 | 1610 |
| 0408 | 1370 | 2740 | 730 | 880 | 1610 |
| 0409 | 1530 | 3060 | 730 | 880 | 1610 |
| 0410 | 1690 | 3380 | 730 | 880 | 1610 |
| 0411 | 1850 | 3700 | 730 | 880 | 1610 |
| 0412 | 2010 | 4020 | 730 | 880 | 1610 |
| 0413 | 2170 | 4340 | 730 | 880 | 1610 |
| 0505 | 890 | 1780 | 890 | 1040 | 1930 |
| 0506 | 1050 | 2100 | 890 | 1040 | 1930 |
| 0507 | 1210 | 2420 | 890 | 1040 | 1930 |
| 0508 | 1370 | 2740 | 890 | 1040 | 1930 |
| 0509 | 1530 | 3060 | 890 | 1040 | 1930 |
| 0510 | 1690 | 3380 | 890 | 1040 | 1930 |
| 0511 | 1850 | 3700 | 890 | 1040 | 1930 |
| 0512 | 2010 | 4020 | 890 | 1040 | 1930 |
| 0513 | 2170 | 4340 | 890 | 1040 | 1930 |
| 0608 | 1370 | 2740 | 1050 | 1200 | 2250 |
| 0612 | 2010 | 4020 | 1050 | 1200 | 2250 |
| 0613 | 2170 | 4340 | 1050 | 1200 | 2250 |
| 0708 | 1370 | 2740 | 1210 | 1360 | 2570 |
| 0712 | 2010 | 4020 | 1210 | 1360 | 2570 |
| 0713 | 2170 | 4340 | 1210 | 1360 | 2570 |
| 0808 | 1370 | 2740 | 1370 | 1520 | 2890 |
| 0809 | 1530 | 3060 | 1370 | 1520 | 2890 |
| 0810 | 1690 | 3380 | 1370 | 1520 | 2890 |
| 0811 | 1850 | 3700 | 1370 | 1520 | 2890 |
| 0812 | 2010 | 4020 | 1370 | 1520 | 2890 |
| 0813 | 2170 | 4340 | 1370 | 1520 | 2890 |
| 1012 | 2010 | 4020 | 1690 | 1840 | 3530 |
| 1013 | 2170 | 4340 | 1690 | 1840 | 3530 |
| 1212 | 2010 | 4020 | 2010 | 2160 | 4170 |
| 1213 | 2170 | 4340 | 2010 | 2160 | 4170 |
| 1214 | 2330 | 4660 | 2010 | 2160 | 4170 |
| 1216 | 2650 | 5300 | 2010 | 2160 | 4170 |
| 1220 | 3290 | 6580 | 2010 | 2160 | 4170 |
| 1224 | 3930 | 7860 | 2010 | 2160 | 4170 |
| 1416 | 2650 | 5300 | 2330 | 2480 | 4810 |
| 1420 | 3290 | 6580 | 2330 | 2480 | 4810 |
| 1424 | 3930 | 7860 | 2330 | 2480 | 4810 |
| 1428 | 4570 | 9140 | 2330 | 2480 | 4810 |



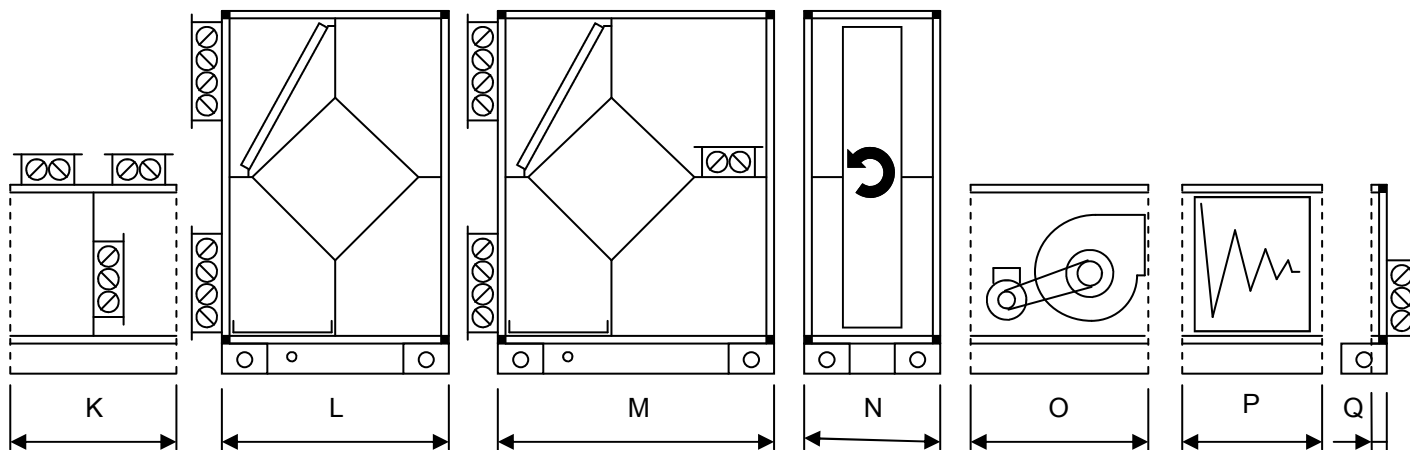
| 23MK | A | B | C | D | E | F | G | H | I | J |
|------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 0304 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0404 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0405 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0406 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0407 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0408 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0409 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0410 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0411 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0412 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0413 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0505 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0506 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0507 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0508 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0509 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0510 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0511 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0512 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0513 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0608 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0612 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0613 | 45 | 205 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0708 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0712 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0713 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0808 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0809 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0810 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0811 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0812 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 0813 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1012 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1013 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1212 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1213 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1214 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1216 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1220 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1224 | 45 | 365 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1416 | 45 | 525 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1420 | 45 | 525 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1424 | 45 | 525 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |
| 1428 | 45 | 525 | 685 | 160 | 320 | 640 | 320 | 320 | 480 | 800 |

TABELLE DIMENSIONALI

DIMENSIONS

Lunghezza tipica dei principali componenti

Typical length of the main components



| 23MK | K | L | M | N | O | P | Q |
|------|------|------|------|-----|------|-----|----|
| 0304 | 480 | 890 | 1050 | 820 | 800 | 960 | 45 |
| 0404 | 800 | 1210 | 1370 | 820 | 800 | 960 | 45 |
| 0405 | 800 | 1210 | 1370 | 820 | 800 | 960 | 45 |
| 0406 | 800 | 1210 | 1370 | 820 | 800 | 960 | 45 |
| 0407 | 800 | 1210 | 1370 | 820 | 960 | 960 | 45 |
| 0408 | 800 | 1210 | 1370 | 820 | 960 | 960 | 45 |
| 0409 | 800 | 1210 | 1370 | 820 | 960 | 960 | 45 |
| 0410 | 800 | 1210 | 1370 | 820 | 960 | 960 | 45 |
| 0411 | 800 | 1210 | 1370 | 820 | 960 | 960 | 45 |
| 0412 | 800 | 1210 | 1370 | 820 | 960 | 960 | 45 |
| 0413 | 800 | 1210 | 1370 | 820 | 960 | 960 | 45 |
| 0505 | 800 | 1370 | 1530 | 820 | 960 | 960 | 45 |
| 0506 | 800 | 1370 | 1530 | 820 | 960 | 960 | 45 |
| 0507 | 800 | 1370 | 1530 | 820 | 960 | 960 | 45 |
| 0508 | 800 | 1370 | 1530 | 820 | 960 | 960 | 45 |
| 0509 | 800 | 1370 | 1530 | 820 | 1120 | 960 | 45 |
| 0510 | 800 | 1370 | 1530 | 820 | 1120 | 960 | 45 |
| 0511 | 800 | 1370 | 1530 | 820 | 960 | 960 | 45 |
| 0512 | 800 | 1370 | 1530 | 820 | 960 | 960 | 45 |
| 0513 | 800 | 1370 | 1530 | 820 | 960 | 960 | 45 |
| 0608 | 800 | 1530 | 1850 | 820 | 1120 | 960 | 45 |
| 0612 | 800 | 1530 | 1850 | 820 | 1120 | 960 | 45 |
| 0613 | 1120 | 1530 | 1850 | 820 | 1280 | 960 | 45 |
| 0708 | 1120 | 1530 | 1850 | 820 | 1120 | 960 | 45 |
| 0712 | 1120 | 1530 | 1850 | 820 | 1280 | 960 | 45 |
| 0713 | 1120 | 1530 | 1850 | 820 | 1280 | 960 | 45 |
| 0808 | 1120 | 1690 | 1850 | 820 | 1120 | 960 | 45 |
| 0809 | 1120 | 1690 | 1850 | 820 | 1280 | 960 | 45 |
| 0810 | 1120 | 1690 | 1850 | 820 | 1280 | 960 | 45 |
| 0811 | 1120 | 1690 | 1850 | 820 | 1280 | 960 | 45 |
| 0812 | 1120 | 1690 | 1850 | 820 | 1440 | 960 | 45 |
| 0813 | 1120 | 1690 | 1850 | 820 | 1440 | 960 | 45 |
| 1012 | 1440 | 2010 | 2790 | 820 | 1600 | 960 | 45 |
| 1013 | 1440 | 2010 | 2790 | 820 | 1600 | 960 | 45 |
| 1212 | 1760 | 2170 | 3110 | 820 | 1600 | 960 | 45 |
| 1213 | 1760 | 2170 | 3110 | 820 | 1760 | 960 | 45 |
| 1214 | 1760 | 2170 | 3110 | 820 | 1760 | 960 | 45 |
| 1216 | 1760 | 2170 | 3110 | 820 | 1920 | 960 | 45 |
| 1220 | 1760 | 2170 | 3110 | 820 | 2080 | 960 | 45 |
| 1224 | 1760 | 2170 | 3110 | 820 | 2080 | 960 | 45 |
| 1416 | 2080 | 2170 | 3110 | 820 | 2080 | 960 | 45 |
| 1420 | 2080 | 2170 | 3110 | 820 | 2080 | 960 | 45 |
| 1424 | 2080 | 2170 | 3110 | 820 | 2080 | 960 | 45 |
| 1428 | 2080 | 2170 | 3110 | 820 | 2080 | 960 | 45 |