

Low sound YHV compressors

Mounting parts change

1 Statements about the mounting parts

Low sound compressors are variable speed scroll compressors, which can run with R290 and R454C. The first generation of these products (-RG and -RT versions) were released in April 2022 for production. The second generation of low sound compressors (HG version) which can run up to 120 Hz, were released in April 2024 for production. The second generation of these compressors are qualified for R290 applications only.

Low sound YHV compressors are delivered without mounting parts. Mounting part kits have to be ordered separately. Initially, two sets of rubber mounting kits were proposed as accessories, namely soft (8411211) and hard mounting (8844415) kits.

To reduce compressor movement during unit transport, a new kit of soft mounting parts with shorter metal sleeves (8902586) is now offered for the following models:

- YHV072RG-4X9, YHV072RG-9X9, YHV072RT-4X9,
- YHV072RT-9X9, YHV072HG-4X9, YHV072HG-9X9
- YHV094RG-4X9, YHV094RT-4X9, YHV094HG-4X9

This change does not have any impact on the vibrational characteristics of the above compressors.

If the qualification campaign has been completed with the initial soft mounting kit (8411211), the customer can continue using this mounting kit.

The following summary table lists the models and the recommendations for mounting kits.

Compressor model	Refrigerant	Speed range (min/max)	Ident nr Soft mounting kit	Ident nr Hard mounting kit
YHV029RG-9X9 YHV046RG-9X9 YHV046RG-4X9	R290	1100 rpm – 5500 rpm	8411211	8844415
YHV029RT-9X9 YHV046RT-9X9 YHV046RT-4X9	R454C	1800 rpm – 5500 rpm		
YHV029HG-9X9 YHV046HG-9X9 YHV046HG-4X9	R290	1100 rpm – 7200 rpm		
YHV072RG-4X9 YHV072RG-9X9 YHV094RG-4X9	R290	1100 rpm – 5500 rpm	New! 8902586	
YHV072RT-4X9 YHV072RT-9X9 YHV094RT-4X9	R454C	1800 rpm – 5500 rpm		
YHV072HG-4X9 YHV072HG-9X9 YHV094HG-4X9	R290	1100 rpm – 7200 rpm		

Table 1: Mounting kit recommendations for low sound YHV compressors

2 Mounting kits technical specifications

The mounting kits mentioned above are composed of 3 rubber grommets and 3 metal sleeves packed in a plastic bag with a label.


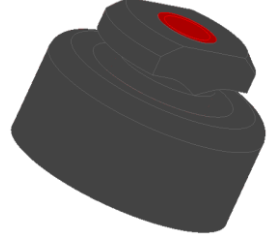
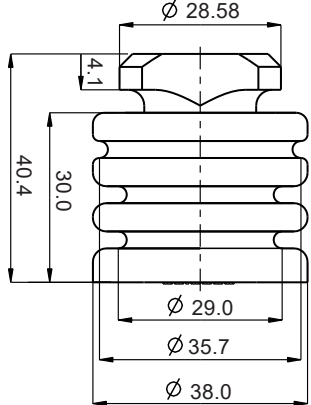
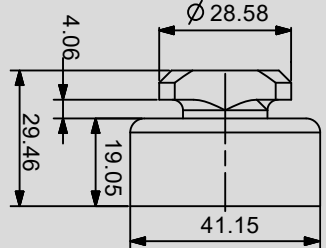

Ident number	8411211 (527-0239-00)	8902586 (527-0239-02)	8844415 (527-0116-05)
Description	MTG 3XRUB D30-35 H40 OD38 ID14 Soft mounting kit with long sleeves	MTG-KIT_3RUB 35.8 MTG KIT ACCY Soft mounting kit with short sleeves	MTG 3XRUB D30-35 H30 OD41 ID9 Hard mounting kit
Mounting kit 3D view			
Rubber grommet material & physical properties	Color: black Material: Neoprene rubber or EPDM Rubber Hardness: 30-35 Durometer shore A		
Grommet drawing and dimensions			
Metal sleeve material & appearance	Color: silver Material: zinc-plated steel tubing		
Tube drawing			
Tube diameter	OD: 11.02 – 11.23 mm		
Tube length	39.91-40.91 mm	35.56-36.07 mm	29.21-29.72 mm

Table 2: Mounting kits specifications

3 Guideline for installation

The compressors are designed to be mounted on vibration absorber grommets. The grommets dampen the start-up surge of the compressor and minimize sound and vibration transmission to the compressor base during operation. The metal sleeve inside is a guide designed to hold the grommet in place. It is not designed as a load-bearing member, and application of excessive torque to the bolts can crush the sleeve. Its inner diameter is approximately 8.5 mm to suit, eg, an M8 screw.

The mounting torque should be 13 ± 1 Nm. It is critically important for the grommet not to be compressed.

To provide good vibration damping from low to high speed the grommets are soft.

To avoid any compression the grommets and sleeves are designed so that there can be a gap of up to 2 mm once the compressor is mounted.

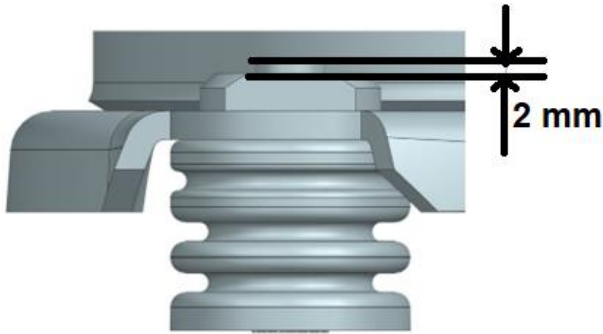


Figure 1: Correct distance between the top surface of the mounting sleeve and mounting part

NOTE: Depending on the system design, a transport fixation may be needed to hold the compressor and the piping in a fixed position during transport of the refrigerant circuit assembly, especially for designs with the soft mounting parts. Alternatively harder grommets can be used instead of soft grommets, to avoid the usage of a transport fixation. In this case, the sound and vibration transmission behaviour of the compressor with hard grommets may differ from the sound and vibration behaviour with soft grommets.

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