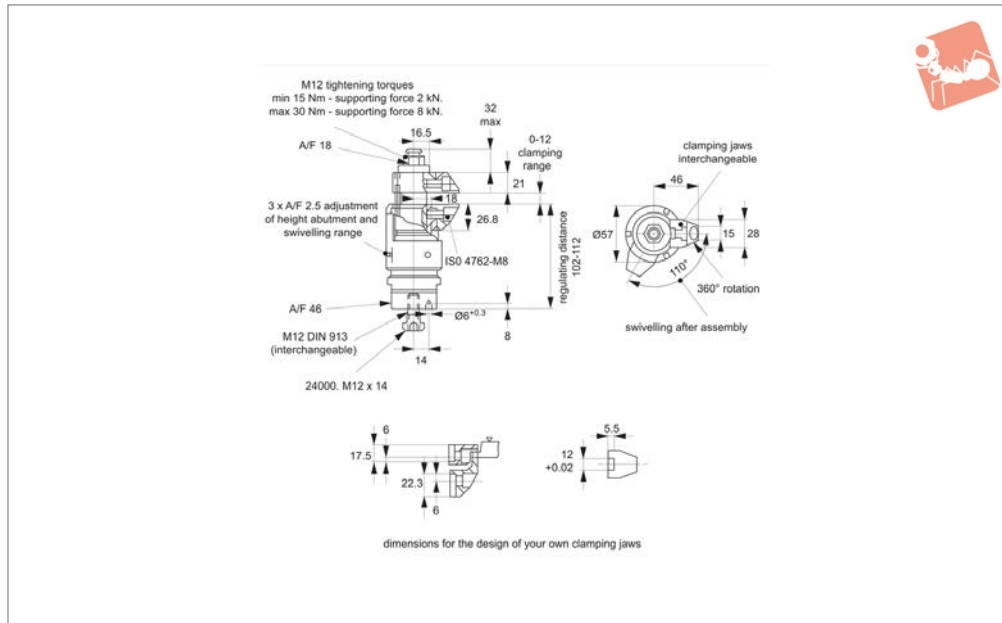




Floating Clamps M12 combined clamping and locking

Adjustable Vertical Clamps



12660.1

ADJUSTABLE VERTICAL CLAMPS

Material

Body: steel case-hardened, nitrided, blackened and ground.

Clamping jaws: steel case-hardened, nitrided, blackened.

Housing: aluminium, red anodised.

Technical Notes

Used to clamp and support additional clamping points on components, whilst minimising distortion in the clamping of components. It also serves to reduce vibration during machining.

Tips

Alternative clamping jaws available, see

part 12660.W0050 to W0058 and 12660.W0148 to W0156.

The benefits of the floating clamp are:

- Avoids vibration during the processing
- Clamps ribs and flanges to reinforce clamped components
- Distortion-free clamping of first op. parts.

Assembly

1. Mount the floating clamp (M 12 connection thread) onto the device with a wrench (A/F 46).
2. Adjust the height limit stop and the rotating area with the red sleeve and clamp with a set screw (3 x A/F 2,5). When setting

the height limit, consider tolerance of workpiece.

Operation

1. Push the floating clamp downwards.
2. Pivot the clamping jaws in as far as possible. The floating clamp contacts the bottom of the workpiece with a slight spring load.
3. Tighten the floating clamp with a hexagonal nut (A/F 18) having a min. torque of 15 Nm and a maximum torque of 30 Nm. In the clamping process, the workpiece is clamped and simultaneously supported.
4. Releasing is done in reverse order.

Order No.	Description	Clamping & support force kN max.	Clamping stroke	Weight g
12660.W0012	Clamping & Support	8	0-12	2076

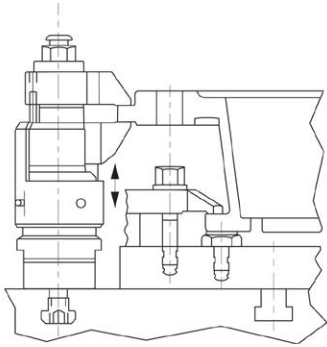
Adjustable Vertical Clamps



Floating Clamps M12 combined clamping and locking



ADJUSTABLE VERTICAL CLAMPS

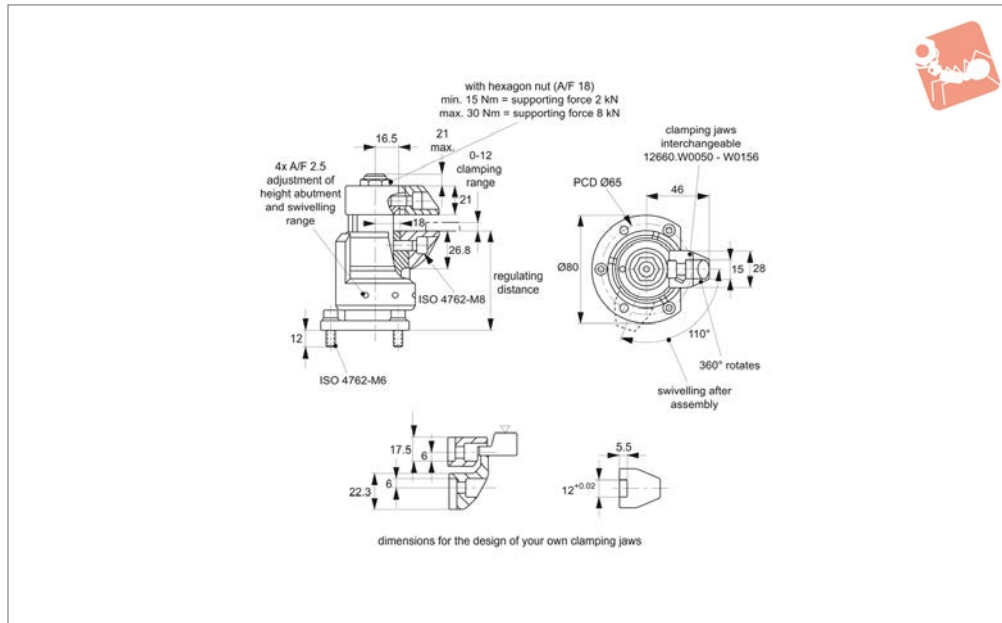




Compact Floating Clamps M12

combined clamping and locking

Adjustable Vertical Clamps



12660.2

ADJUSTABLE VERTICAL CLAMPS

Material

Body: steel case-hardened, nitrided, manganese phosphate treated and ground.
Clamping jaws: steel case-hardened, nitrided, manganese phosphate treated.
Housing: aluminium, red anodised.

Technical Notes

Used to clamp and support additional clamping points on components, whilst minimising distortion in the clamping of components. It also serves to reduce vibration during machining.

Tips

Alternative clamping jaws available, see part 12660.W0050 to W0058 and 12660.W0148 to W0156.

Floating clamp benefits:

Floating Clamp 12660.1 is used to clamp and support over-determined points on a component, offering the following benefits:

1. No deformation in the clamping of unstable components.
2. Eliminates vibration during machining.
3. Clamps on the smallest area to improve clamping stability.

Installation of floating clamp on fixture:

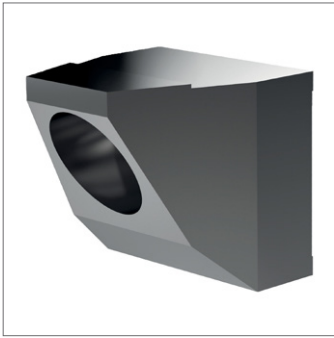
1. Fix clamp on to machine bed with A/F 46 spanner. Clamp has 12mm connection thread, select suitable T-nut for your machine bed.

2. Adjust the clamp's height limit stop and rotating area with the red setting sleeve, set sleeve position through tightening the 3 grub screws (A/F 2,5mm). When setting the height limit, make generous allowance for variation in workpiece tolerance.

Clamping process:

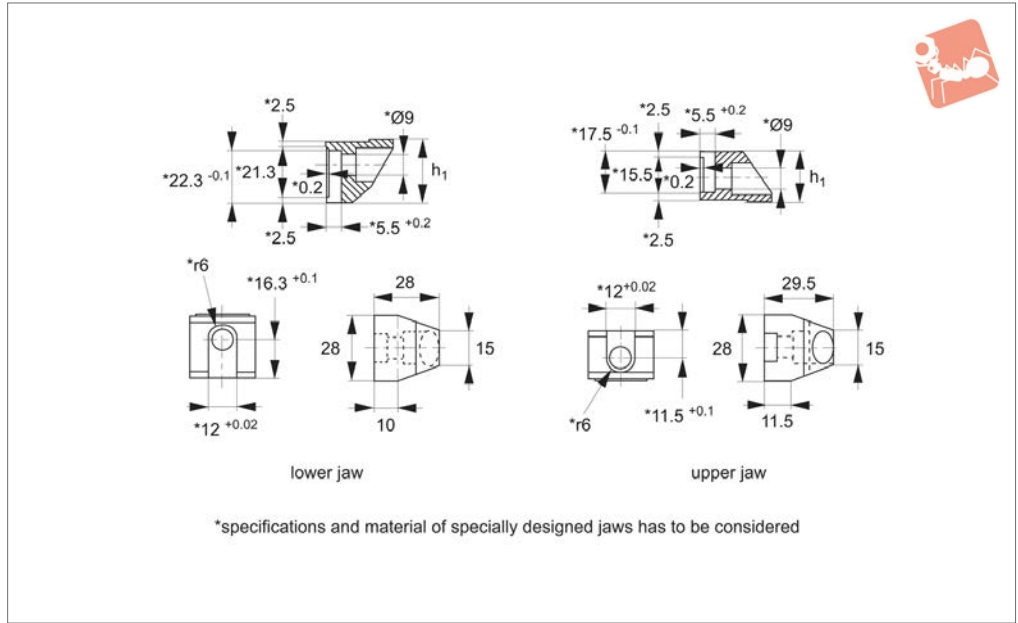
1. Push floating clamp downwards,
2. Pivot clamping jaws into component as far as possible. Clamp will contact bottom of component with a light spring pressure.
3. Tighten floating clamp with A/F 18mm hex nut – torque to min. 15Nm, 30Nm max. In the clamping process workpiece is clamped and simultaneously supported.
4. To release, reverse steps 3 to 1.

Order No.	Description	Clamping & support force kN max.	Clamping stroke	Weight g
12660.W0008	Clamping & Support	8	0-12	1450



12660.3

ADJUSTABLE VERTICAL CLAMPS



Material

Steel, case-hardened, nitrided.

Technical Notes

The clamping jaws can be used for floating clamps 12660.W0008, 12662.W0010,

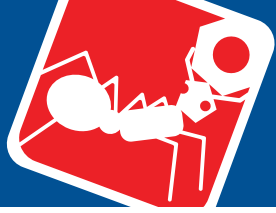
12660.W0012 and 12662.W0014

Tips

When using custom-made jaws it is important to insert the tightening screw (M 8 grade 12,9, 43Nm) 10mm deep into the

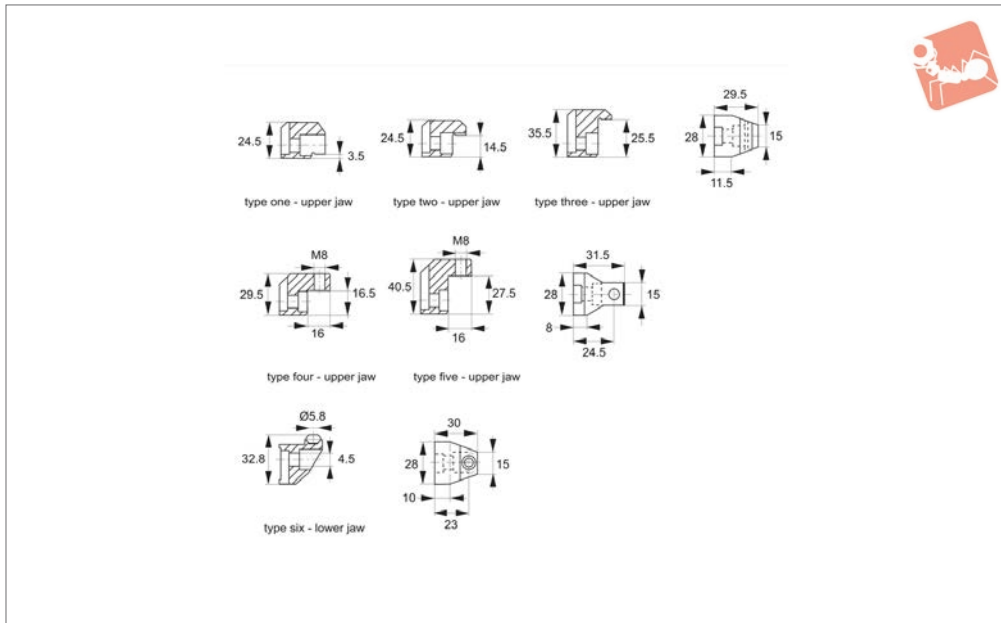
clamp housing on the upper clamping jaw and 9mm deep into the clamp housing on the lower clamping jaw.

Order No.	Type	Clamping range	h_1 -0.1	Weight g
12660.W0050	Lower Jaw	-	26.8	83
12660.W0052	Upper Jaw	0 - 12	21	69



Clamping Jaws for floating clamp M12

Adjustable Vertical Clamps



12660.4

ADJUSTABLE VERTICAL CLAMPS

Material

Ball: steel ball-bearing
Clamping jaws: steel case-hardened, nitrided.

Technical Notes

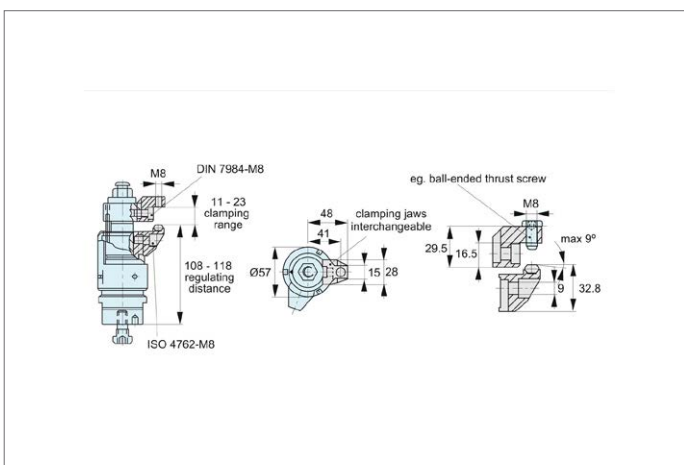
A selection of the alternative upper and

lower jaws for floating clamps. The tightening torque of the floating clamp must be adapted dependent on condition. Note the surface pressure due to the reduced contact surface of the clamping jaws.

Important Notes

The clamping jaws can be used for floating clamps 12660.W0008, 12662.W0010, 12660.W0012 and 12662.W0014.

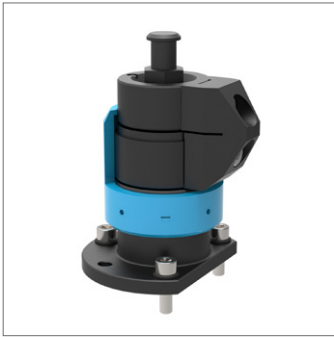
Order No.	Type	Clamping range of clamp in combination with standard lower jaw 12260.W0050	Clamping range in combination with lower jaw 12260.W0148 max.	Weight g
12660.W0054	Upper Jaw (Type One)	4-16		91
12660.W0056	Upper Jaw (Type Two)	15-27		88
12660.W0058	Upper Jaw (Type Three)	26-38		130
12660.W0154	Upper Jaw (Type Four)	29	23	83
12660.W0156	Upper Jaw (Type Five)	40	34	112
12660.W0148	Lower Jaw (Type Six)			98



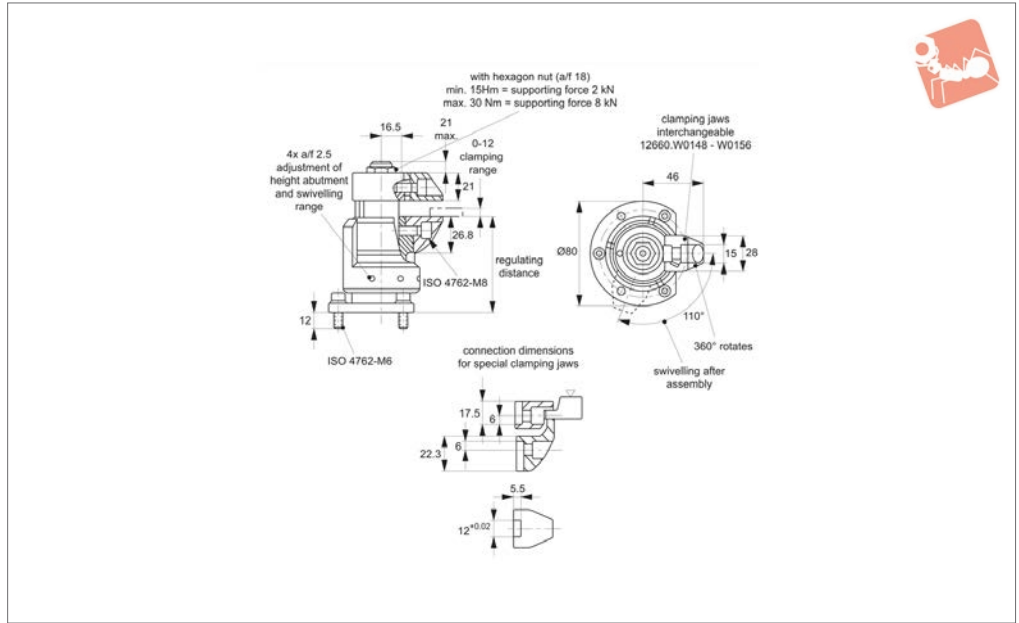
Adjustable Vertical Clamps

Floating Clamps - Compact

combined clamping and locking



12661



ADJUSTABLE VERTICAL CLAMPS

Material

Body: case hardened steel, nitrided, manganese phosphate treated and ground.
Clamping jaws: case hardened steel, nitrided, manganese phosphate treated.
Housing: aluminium, red anodised.

Technical Notes

Used to clamp and support additional

clamping points on components, whilst minimising distortion in the clamping of components. It also serves to reduce vibration during machining.

Tips

The benefits of the floating clamp are:
- avoids vibration during the processing
- clamps ribs, beads and shackles to rein-

force clamped components
- distortion-free clamping of raw parts.
Compact version with reduced height.
Used with:
24000 T-Nuts
12660 Clamp Jaws - upper & lower

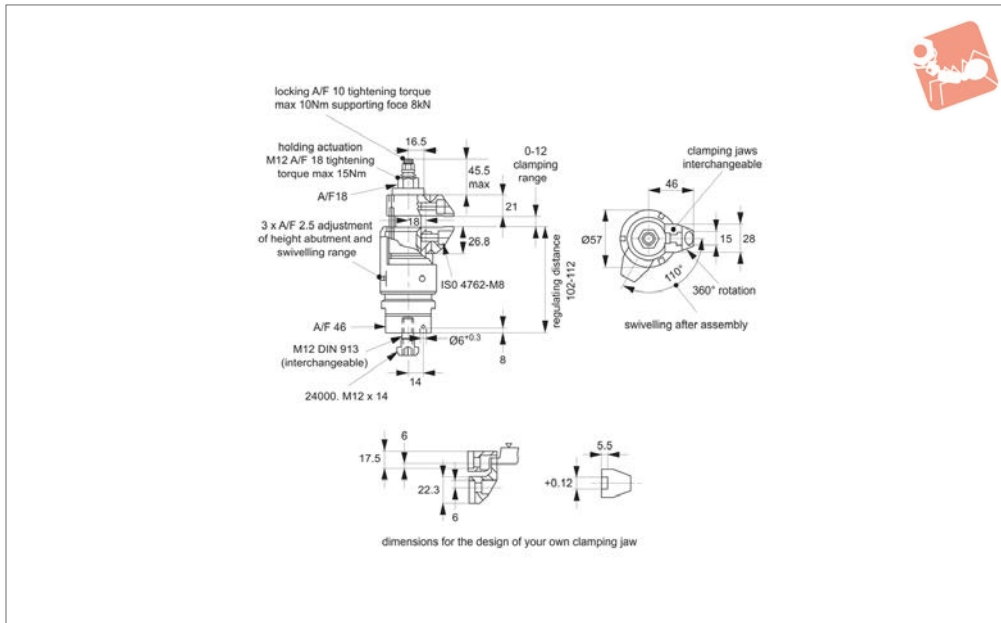
Order No.	Description	Clamping & support force kN max.	Clamping stroke	Weight g
12661.W0008	Clamping & Support	8	0-12	1450



Floating Clamps M12

separate clamping and locking

Adjustable Vertical Clamps



12662.1

ADJUSTABLE VERTICAL CLAMPS

Material

Body: case hardened steel, nitrided and ground.

Clamping jaws: case hardened steel, nitrided.

Housing: aluminium, blue anodised.

Technical Notes

Used to clamp and support additional clamping points on extremely pliable work pieces, whilst minimising deformation of component. It also serves to reduce vibration during machining.

Tips

Alternative clamping jaws available, see part 12660.W0050 to W0058 and 12660.W0148 to W0156.

Floating clamp benefits:

Floating clamp 12662.1 is used to clamp and support over determined points on a component, offering the following benefits:

1. No deformation in the clamping of unstable components.
2. Eliminates vibration during machining.
3. Clamps on the smallest area to improve clamping stability.

Installation of floating clamp on fixture:

1. Fix clamp on to machine bed with A/F 46 spanner. Clamp has 12mm thread, select suitable T-nut for your machine bed.
2. Adjust the clamp's height limit stop and rotating area with the blue setting sleeve, set sleeve position through tightening the 3 grub screws (A/F 2,5mm). When setting the height limit, make generous allowance

for variation in workpiece tolerance.

Clamping process:

1. Push floating clamp downwards.
2. Pivot clamping jaws into component as far as possible. Clamp will contact bottom of component with only light spring pressure.
3. Tighten floating clamp with A/F 18mm hex nut - torque to min. 15Nm, 30Nm max. The jaws are clamping the workpiece, the clamp is still floating.
4. Tighten hexagon collar with A/F 10mm hex to max. 10Nm torque.
5. Clamping process is complete.
6. To release, reverse steps 5 to 1.

Order No.	Type	Weight g
12662.W0014	Steel	1890

Adjustable Vertical Clamps

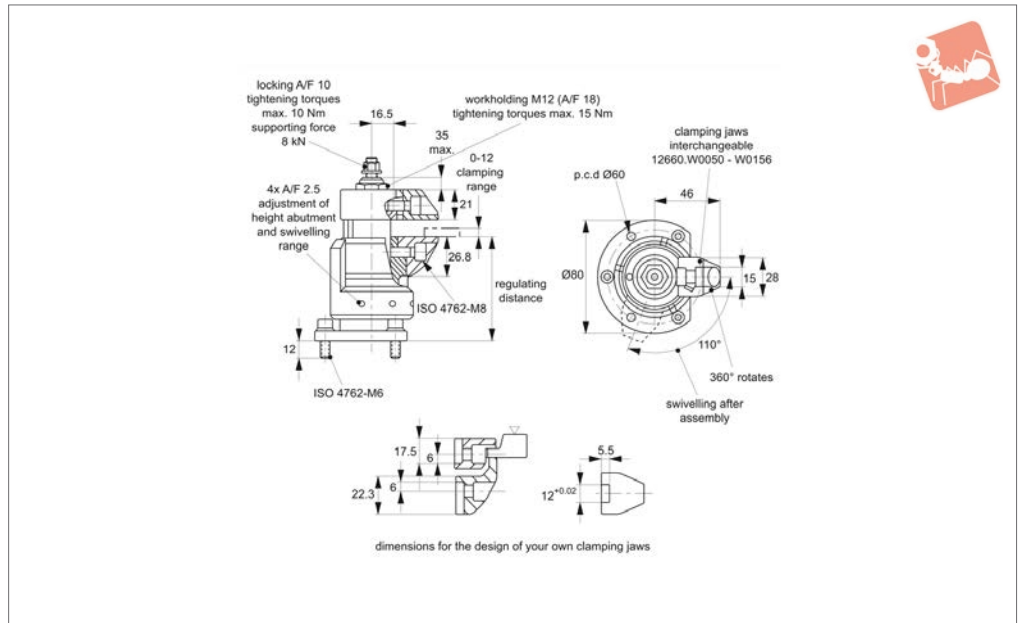
Compact Floating Clamps separate clamping and locking



ADJUSTABLE VERTICAL CLAMPS



12662.2



Material

Body: steel case-hardened, nitrided, manganese phosphate treated and ground.
Clamping jaws: steel case-hardened, nitrided, manganese phosphate treated.
Housing: aluminium, blue anodised.

Technical Notes

Used to clamp and support additional clamping points on extremely pliable work pieces, whilst minimising deformation of component. It also serves to reduce vibration during machining.

Tips

Alternative clamping jaws available, see part 12660.W0050 to W0058 and 12660.W0148 to W0156.

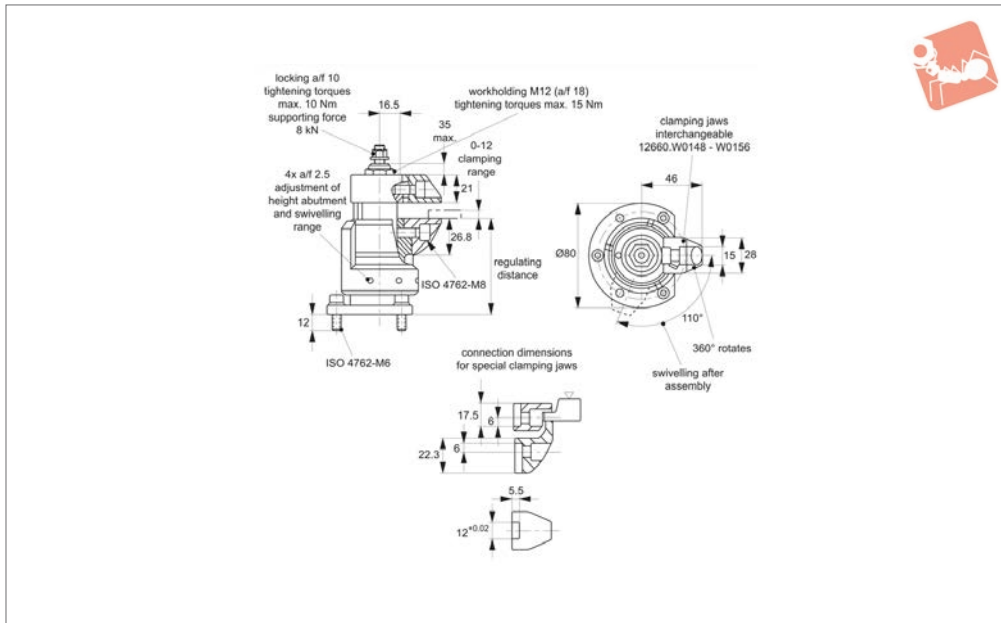
Order No.	Description	Clamping & support force kN max.	Clamping stroke s_1	Weight g
12662.W0010	Clamping & Locking	8	0-12	1650



Floating Clamps - Compact

separate clamping and locking

Adjustable Vertical Clamps



12663

ADJUSTABLE VERTICAL CLAMPS

Material

Body: case hardened steel, nitrided, manganese phosphate treated and ground.
Clamping jaws: case hardened steel, nitrided, manganese phosphate treated.
Housing: aluminium, blue anodised.

Technical Notes

Used to clamp and support additional

clamping points on extremely pliable work pieces, whilst minimising deformation of component. It also serves to reduce vibration during machining.

Tips

The benefits of the floating clamp are:
- avoids vibration during the processing
- clamps ribs, beads and shackles to rein-

force clamped components
- distortion-free clamping of raw parts.
Used with:
24000 T-Nuts
12660 Clamp Jaws - upper & lower

Order No.	Description	Clamping & support force kN max.	Clamping stroke	Weight g
12663.W0010	Clamping and locking	8	0-12	1650

Adjustable Vertical Clamps

Floating Clamps M16

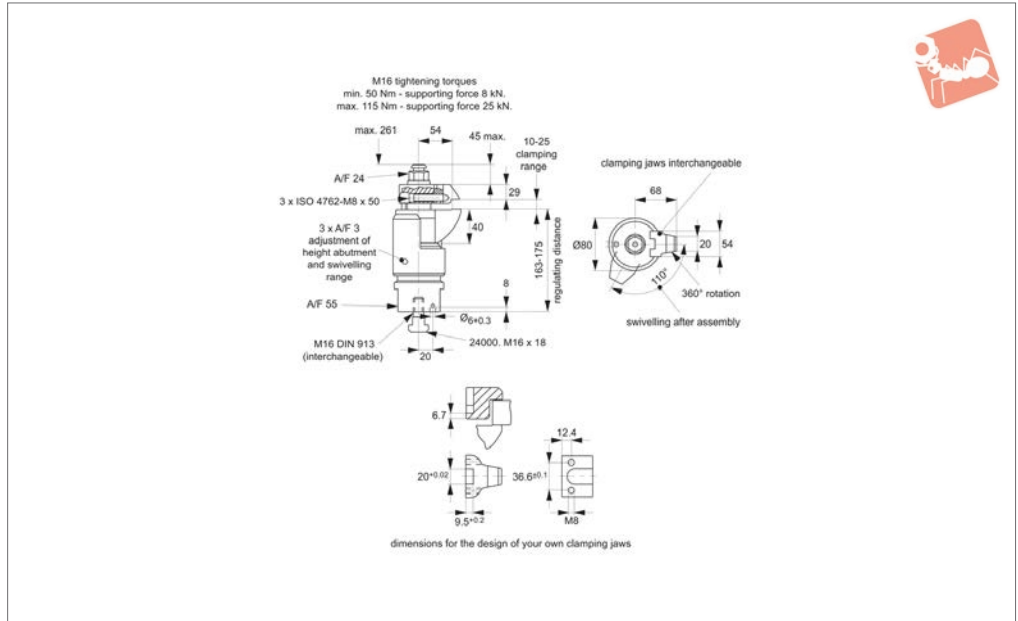
combined clamping and locking



ADJUSTABLE VERTICAL CLAMPS



12664.1



Material

Body: steel case-hardened, nitrided and ground.

Clamping jaws: steel case-hardened, nitrided, manganese phosphate treated.
Housing: aluminium, red anodised.

Technical Notes

Used to clamp and support additional clamping points on extremely pliable work pieces, whilst minimising deformation of component. It also serves to reduce vibration during machining.

Tips

Alternative clamping jaws available, see part 12664.W0060 to W0066.

Floating clamp benefits:

Floating clamp 12664.1 is used to clamp and support over-determined points on a component, offering the following benefits:

1. No deformation in the clamping of unstable components.
2. Eliminates vibration during machining.
3. Clamps on the smallest area to improve clamping stability.

Installation of floating clamp on fixture:

1. Fix clamp onto machine bed with A/F 46 spanner. Clamp has 16mm connection thread, select suitable T-nut for your machine bed.
2. Adjust the clamp's height limit stop and rotating area with the red setting sleeve, set sleeve position through tightening the

3 grub screws (A/F 2,5mm). When setting the height limit, make generous allowance for variation in workpiece tolerance.

Clamping process:

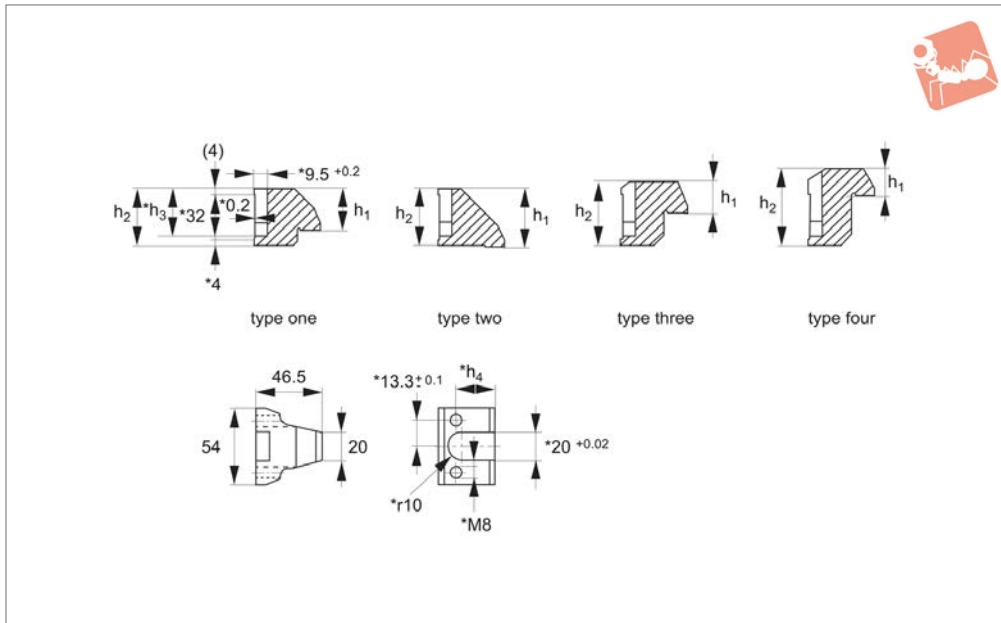
1. Push floating clamp downwards.
2. Pivot clamping jaws in to component as far as possible. Clamp will contact bottom of component with only low spring pressure.
3. Tighten floating clamp with A/F 24mm hex nut - torque 50Nm, 115Nm max. **In the clamping process the workpiece is clamped and simultaneously supported.**
4. To release, reverse steps 3 to 1.

Order No.	Type	Weight g
12664.W0016	Steel	6250



Clamping Jaws M16 for floating clamp

Adjustable Vertical Clamps



12664.2

ADJUSTABLE VERTICAL CLAMPS

Material

Steel case-hardened, nitrided, manganese phosphate treated.

Technical Notes

For use with 12664.1 clamps. A selection of alternative clamping jaws.

Order No.	Type	Clamping range	h_1	h_2	h_3	h_4	Weight g
12664.W0060	1	10-25	29.0	40	33.3	27.6	402
12664.W0062	2	0-14	41.0	40	33.3	27.6	380
12664.W0064	3	23-28	21.6	45	38.3	32.6	435
12664.W0066	4	35-50	18.6	54	47.3	41.6	490

