- A.C. motor, flange B14 - CE
- Worm gearbox
- Acme lead screw or ballscrew (VRS)
- Chrome plated steel push rod
- Grease Lubricated
- IP 65, tested according to rule CEI EN 60529
  NB: Only for brake motors Standard IP54, IP65 on request
- Working temperature range -10°C +60°C
- Intermittent duty S3 30% (5 min) a 30°C
- Limit switches on request
- Potentiometer and encoder on request
- At-Ex II 3 D T4 version (A.C.motor) on request

| AV3 (Vac 3-phase) | | | | |
|---|---|---|---|---|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) |
| 13000 * | 55 | M01 | IEC90 | 3 2 poli |
| 20000 | 30 | M02 | IEC90 | 3 2 poli |
| 25000 | 20 | M03 | IEC80 | 1.5 2 poli |
| 25000 | 10 | M04 | IEC80 | 0.75 4 poli |
| 25000 | 5 | M05 | IEC80 | 0.75 4 poli |

| AV3 VRS (ballscrew) (Vac 3-phase) | | | | |
|---|---|---|---|---|
| Fmax (N) | Speed (mm/s) | Version | Motor size | Motor power (KW) |
| 8000 * | 45 | M01 | IEC80 | 0.75 2 poli |
| 13000 | 22 | M02 | IEC80 | 0.55 4 poli |
| 25000 | 15 | M03 | IEC80 | 0.75 2 poli |
| 25000 | 7 | M04 | IEC80 | 0.55 4 poli |

* When speed is more than 40 mm/s and/or strokes longer than 350mm, check STROKE SETUP section.

With single-phase motors type M (see motor choice guideline in paragraph ACCESSORIES) performances are 20% lower than the three-phase motor.

→ The brakemotor is strongly recomended

BEFORE OPERATING ACTUATOR MAKE SURE YOU READ AND UNDERSTOOD BASIC OPERATIONAL INSTRUCTIONS SHOWN ON USERMANUALS, AVAILABLE FROM WEBSITE.

THIS DOCUMENT DISPLAYS MOST TYPICAL STANDARD FEATURES AND SETUPS: CONTACT OUR OFFICES FOR MORE.
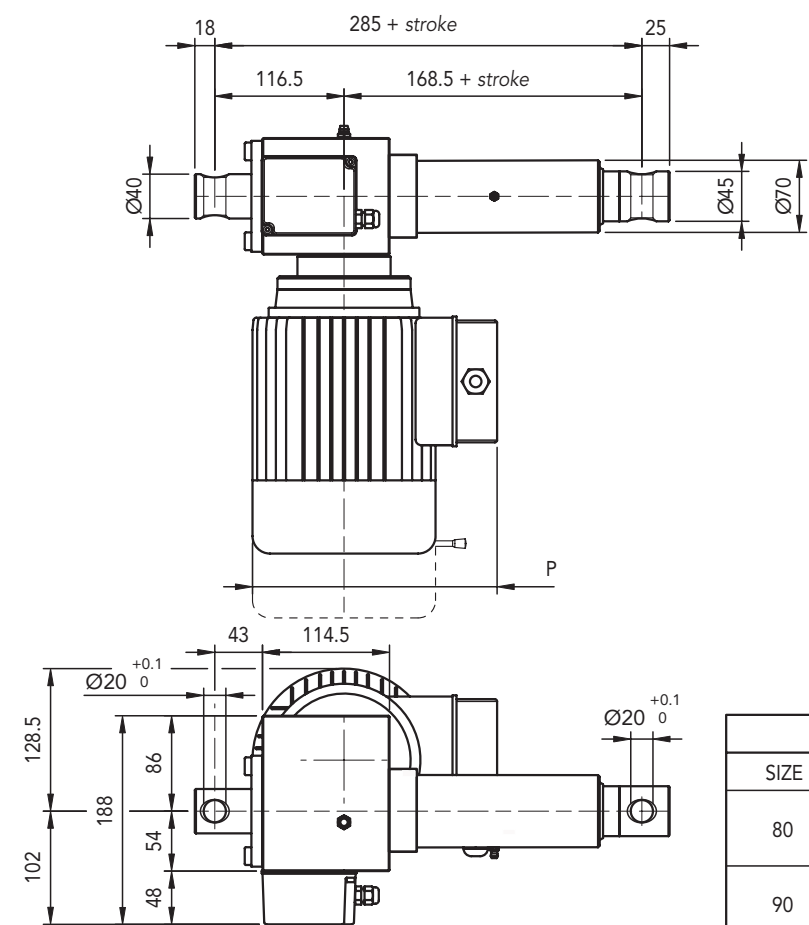
ACTUATOR SHALL NOT COME TO MECHANICAL STROKE-END, TO AVOID FAILURES.
CONSIDER MECVEL's LIMITSWITCHES ( MODEL AV3-F or AV3-FCM) OR PUT THEM ON MACHINE/FRAME.

# AV3

| A.C. MOTORS DIMENSIONS | | | | | |
|---|---|---|---|---|---|
| SIZE | VERSION | H | K | Ø | P |
| 80 | Standard | 238 | | 165 | 220 |
| 80 | Brake motors | | 296 | 165 | 220 |
| 90 | Standard | 280 | | 182 | 251 |
| 90 | Brake motors | | 344 | 182 | 251 |

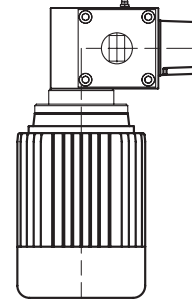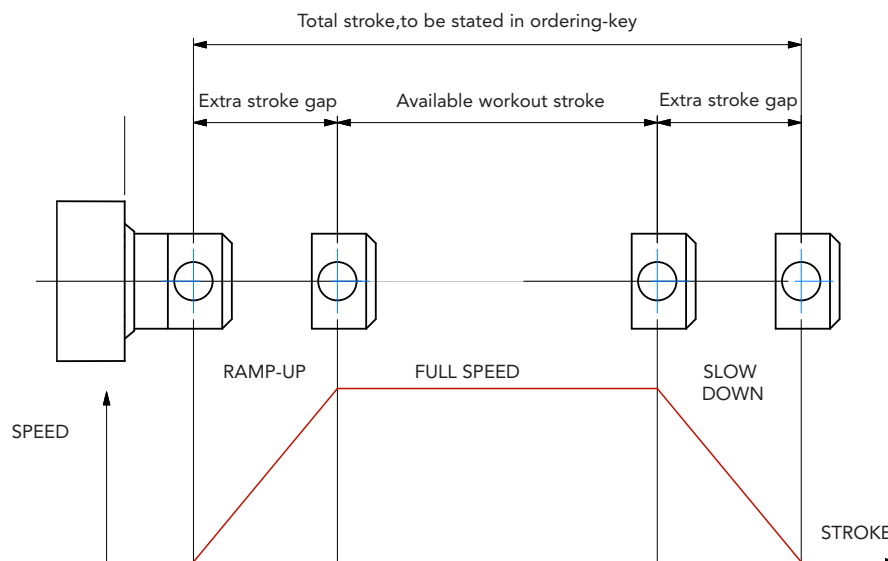| REAR END | | E-BOX POSITION | MOTOR AND LIMIT-SWITCH POSITION |
|---|---|---|---|
| P1 (standard) | P2 (rotated 90°) | 1 (standard) | M1 FC1 (standard) |
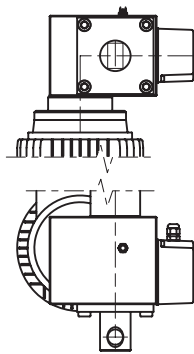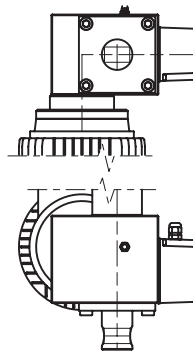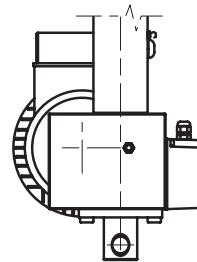
## STROKE SETUP

Useful tips for handling stroke and avoid run-on-block collision.

• When stroke is more than 350 mm, add 50 mm extra-stroke as guidance, and put corresponding value in ordering-key.
• **WARNING SPEED-TIMING ALONG STROKELENGHT**: ramps are extremely important when speed is >30 mm/s!!!  Inverter or PWM drive recommended!
• The more speed raises the more extra stroke has to raise too.

Total stroke,to be stated in ordering-key

Extra stroke gap   Available workout stroke   Extra stroke gap

RAMP-UP     FULL SPEED     SLOW DOWN

SPEED

STROKE

## BUCKLING

When stroke is longer than 500mm, BUCKLING can be a risk: please check mounting with our offices and/or see usermanuals.

LOAD

Stroke longer
> 500mm
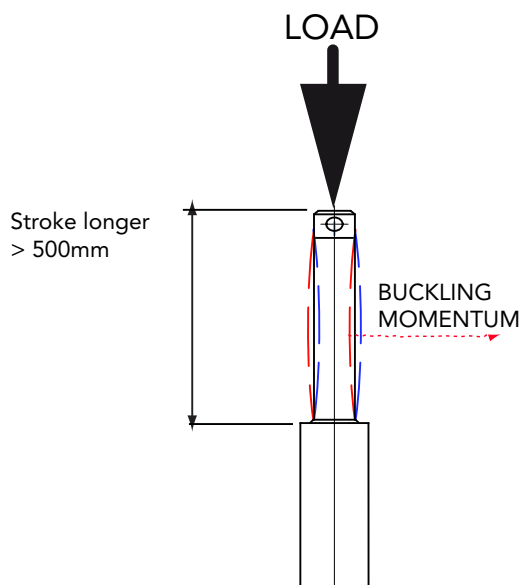
BUCKLING
MOMENTUM

**IMPORTANT:**
Long strokes, even if load is low, can generate significant buckling momentums, as sketch slows. This happens when actuator is in its all-opened position: that's the reason why we recommend 100 mm extra-stroke.
Pushtube will have this100 mm-portion always inside the overtube, improving guidance against buckling.

For more information on this, contact our office.

# AV3

**AV3/0250/M05/CA-400/50-T-80-4-0,75/AB/M1-FC1/1/E06/2FC1/POT01A/P1/A1/**

**MODEL**
AV3                    AV3-VRS
**STROKE**
es. 250 mm = 0250
**VERSION**
M01 / M02 / M03 / M04 / M05
M00 = Not standard speed
Flanged Version = Rpm, indicate reduction ratio and screw pitch
**MOTOR**
Advise only if with motor: version, voltage, type, size, n°pole, power
With motorflange only put 0
With special motorflange put: PD
**AC MOTOR OPTIONS**
Motorflange: for motorflange version only advise size - i.e.for IEC80 B14 put 80B14
Protection Degree: IP65, for selfbrake motor IP54 standard
Brake type: for brakemotors only (es. FECA)
Options: Advise if needed (es. AB 2'shaft)
**MOTOR AND LIMIT SWITCHES POSITION**
M1-FC1                 None: Leave blank
**E-BOX POSITION**
1                      No Motor: Leave blank
**ENCODER**
Options pg.76          None: Leave blank
**LIMIT SWITCHES**
None: Leave blank
**POTENTIOMETER**
POT01A (1Kohm)         POT10A (10Kohm)        None: Leave blank
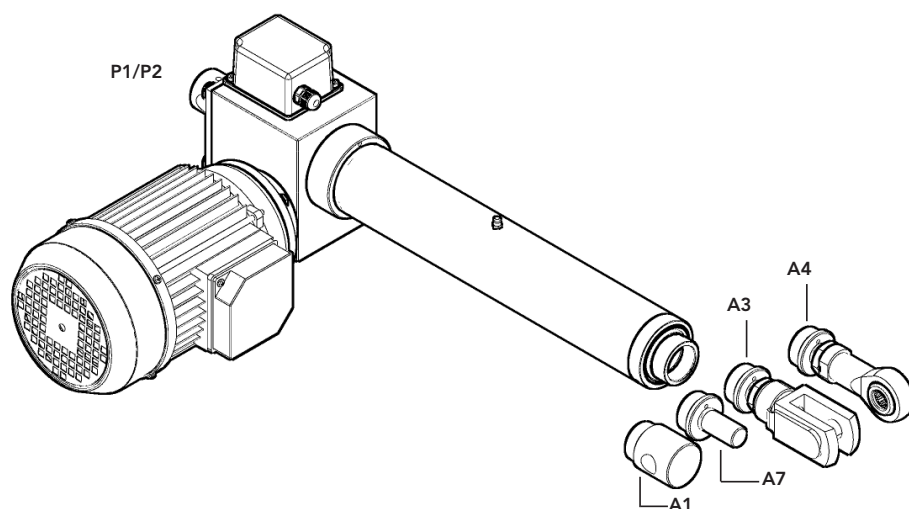**REAR END**
P1 = Eyelet (standard) P2 = Eyelet (90°)
**FRONT END**
A1 = Eyelet (standrad) A4 = Rod end           A3 = Yoke + Clip       A7 = M20 male
**NOTE:** COMPLETE THE ORDERING KEY ADDING THE OPTIONS YOU CAN FIND IN THE
"ACCESSORIES AND OPTIONS" SECTION

P1/P2

A4
A3
A7
A1

Note: "B" dimension changes according to model

AV3 = see picture
AV3 with safety nut "G" = + 40 mm
AV3-VRS = + 20 mm
AV3 with Bellows = + 25mm

Ø40   18   B = 367 + stroke   40   25
Ø20   Ø20   40
A3 = YOKE + CLIP DIN 71752 / UNI 1676

Ø40   18   B = 364 + stroke   25   18
Ø20   Ø20 H7
A4 = FIXING WITH ROD END DIN 648 serie K / ISO 6126

Ø40   18   B = 270 + stroke   44
Ø20   M20x1.5
A7 = M20 MALE END