

ALFA
GEARS
VALVE ACTUATORS

MECATORK



**VALVE
ACTUATORS**

Time to change Gears!

Introduction

Alfa Gears offers a heavy-duty range of manual quarter-turn Gearboxes for Butterfly – Ball – Plug Valves and Dampers.

The torque range is up to 32.000 Nm. These gearboxes are conform to IP67 or IP68 enclosure. They have high efficiency planetary reduction gears, cast or ductile iron enclosure, ductile iron worm gear, heat treated ground worm, stainless steel shaft.

The bushings are oil impregnated copper nickel steel alloy and Buna-N rubber seals, AF 120 gasket, stainless steel hardware, minimum input torque, rugged construction, removable output drive sleeves as an option and epoxy polyurethane coating as its features. Optional facilities such as specials input shaft, aluminum bronze worm gear, limit switches, padlock flanges, high and low temperatures options and special paint (C3, C4, C5M).

The company is ISO 9001-2015 certified and Alfa Gears has over 35 years of gearbox experience with a young, flexible and highly efficient team, the company having handled every micro element of design, production, assembly and quality control with utmost care. Service highlights include: all types of modern machines and equipment for gear manufacturing; high end testing lab, Includes gear lead profile testing machine, co-ordinate measuring machine, torque checking machine, etc., and ERP system for comprehensive and optimal management of the organization.

CHARACTERS

1. Precision casting cast and ductile iron housing
2. Optimal output torque, range up to 32000 Nm
3. High efficient needle roller bearing
4. High strength steel or stainless steel Input shaft
5. Stroke 0°- 90°(± 5°)
6. Compact structure
7. Grease filled for longer life
8. Adjustable stopper (± 5°)
9. Perfect sealing performance

APPLICATION

Alfa-Series quarter-turn worm gearboxes are applied to ball valves, butterfly valves, dampers and other 90° rotary valves.

OPERATING ENVIRONMENT

Alfa-Series Quarter-turn Worm Gearboxes are with good mechanical quality and steady operating performance which apply to deal with variety climate and temperature. We strive to develop Alfa-Series valve gear operator to meet higher demands.

FACTORY STANDARD

- Enclosure: IP67 or IP68
- Working Temperature: From -45°C to 150°C
- Painting: Black RAL 9005 MAT

CONNECT WITH VALVE

The flange connecting to valve is according to EN ISO5211 or DIN3210 (Customization).

ALFA E RANGE



Economical line Cast Iron (GG25) quarter turn gearbox range. Standard IP 67 enclosure and available in 8 sizes up to 4.500Nm. Insert system available.

ALFA S RANGE



Heavy duty Ductile cast iron (GGG40) quarter turn gearbox range. Standard IP 68 Enclosure and available in 13 sizes up to 32.000 Nm. Insert system available. Optional with heavy duty Marine paint systems, including C3, C4 and C5M.

ALFA M RANGE



Heavy duty Ductile cast iron (GGG40) quarter turn gearbox range. Standard IP 68 Enclosure and available in 11 sizes up to 32.000 Nm. Suitable for worm shaft extensions systems.

ALFA VA RANGE



VA series quarter turn gearboxes are manufactured with a stainless steel 316 Housing, Cover plate, Input shaft and an aluminium bronze Quadrant. Available in 8 models up to 7.000 Nm.

ALFA XK RANGE



ALFA Gears XK-series are designed for the operation of multiple turn valves such as Gate and Globe valves. Our XK Series have Ductile Cast JS1030 Housing and feature high performance axial bearings. Drive sleeve material is Bronze alloy C95400 or Ductile Cast Iron JS1030.

ALFA MO RANGE



Manual Override Ductile cast iron (GGG40) quarter turn gearbox range suitable as emergency operation between actuator and valve. Available in 7 models up to 8.500 Nm

MECATORK

MO range

Manual Override quarter turn gearbox range suitable for mounting between a double or single acting actuator and a valve.

Torque range up to 8.500 Nm • 7 sizes • Stainless steel input shaft IP67
ISO drive adapter • 3/2 Vent valve as an option to relieve air automatically for the system.

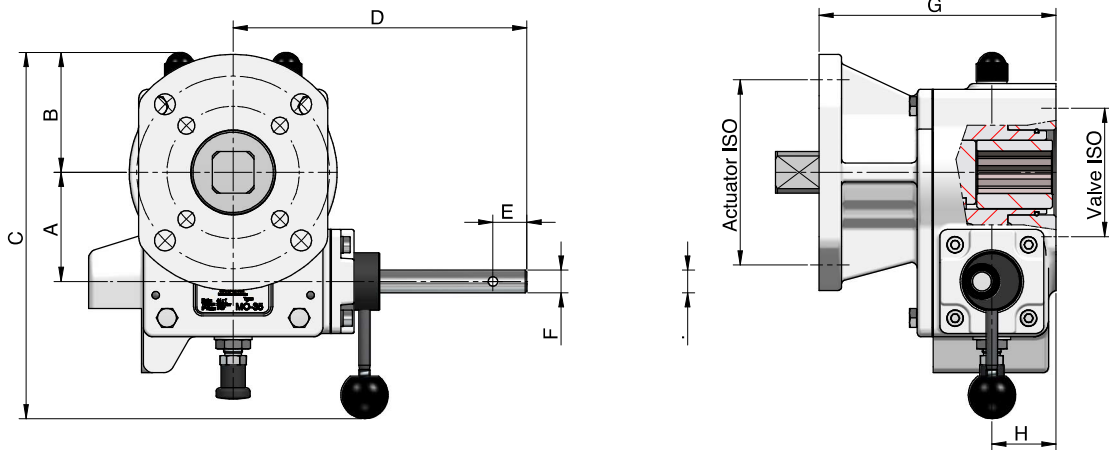


Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover/Flange	Ductile Cast Iron	GGG40
Worm Rack	Ductile Cast Iron	GGG40
Cover/Rack	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS304
Coupling	Steel	C45
Gasket	Nitrile	NBR70
O-rings	Nitrile	NBR70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS/AXK

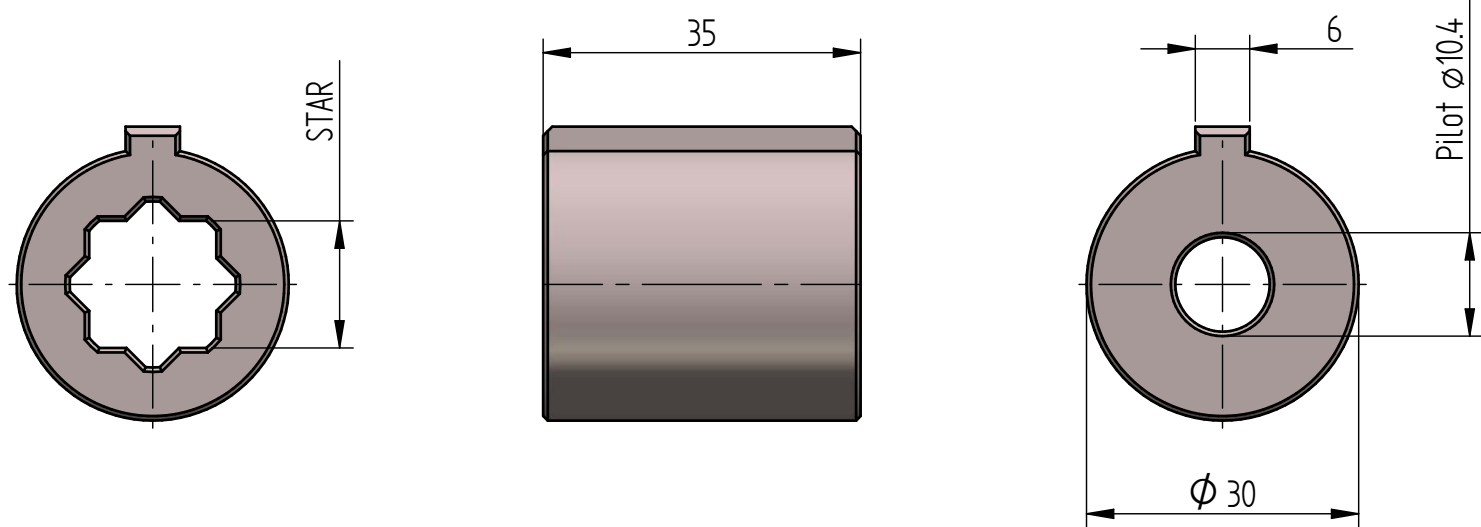
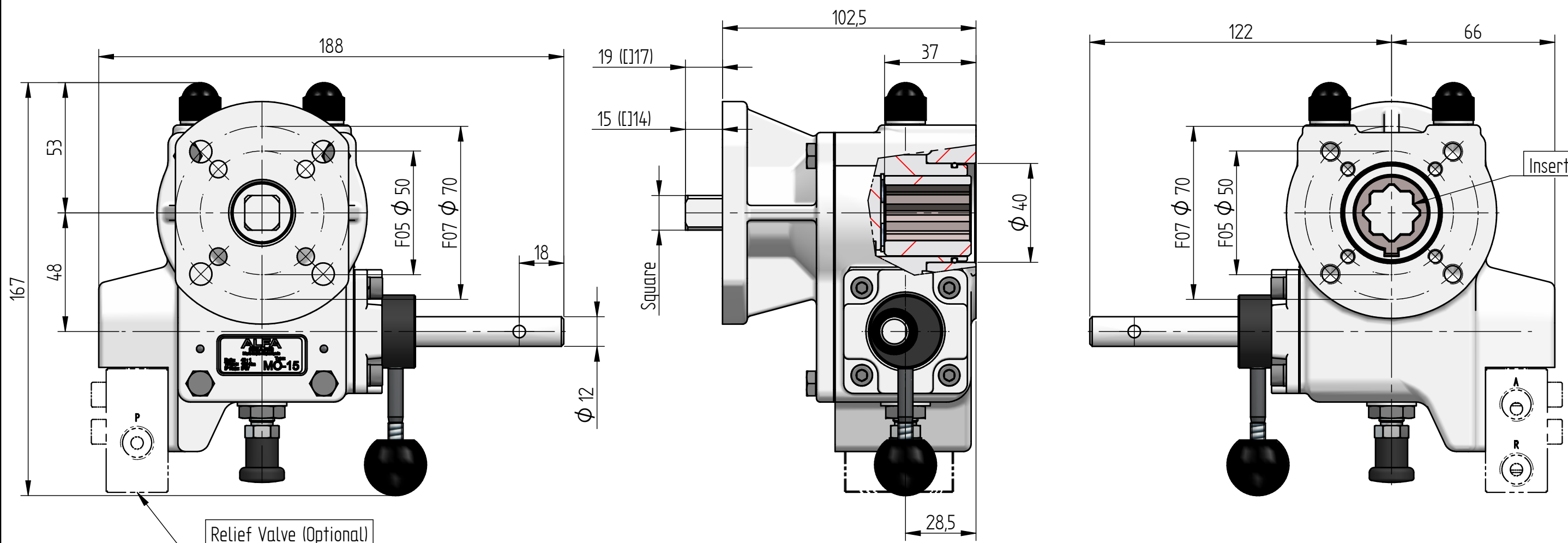
MECATORK

Type	Ratio	Output torque Nm	MA +/- 15%	Weight (Kg)
M015	1:40	150 Nm	12,1	3,5
M035	1:44	350 Nm	11,4	6,5
M075	1:52	750 Nm	15	1,6
M0200	1:38	2000 Nm	13,6	15,6

Type	Ratio	Output torque Nm	MA +/- 15%	Weight (Kg)
M0350	1:55	3.500 Nm	20	19,4
M0550	1:306	5.500 Nm	25	62
M0850	1:408	8.500 Nm	26,8	64



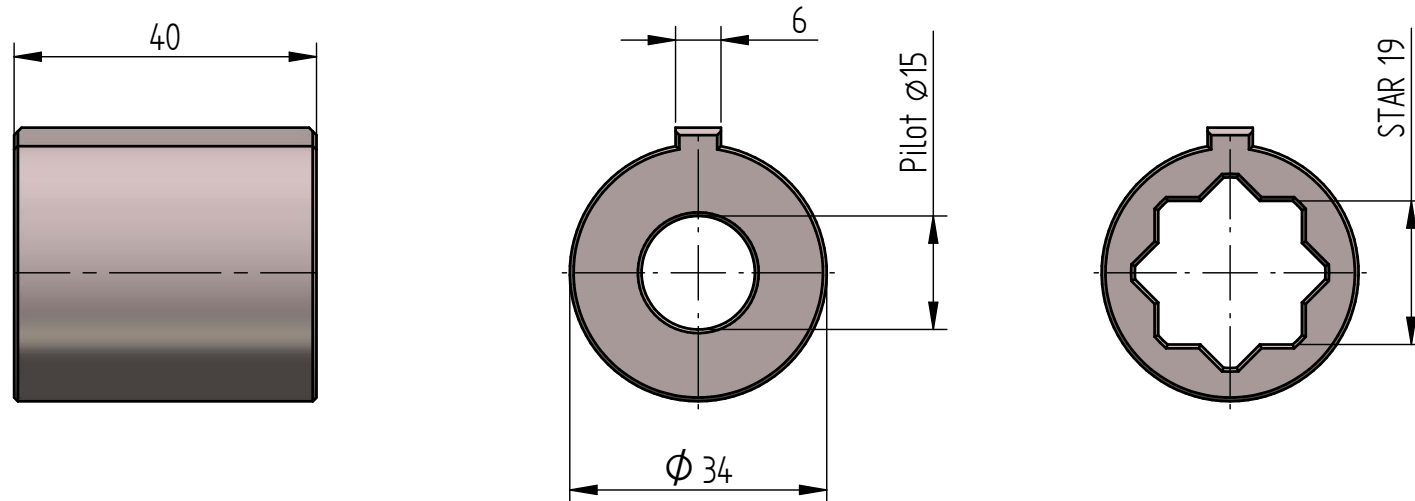
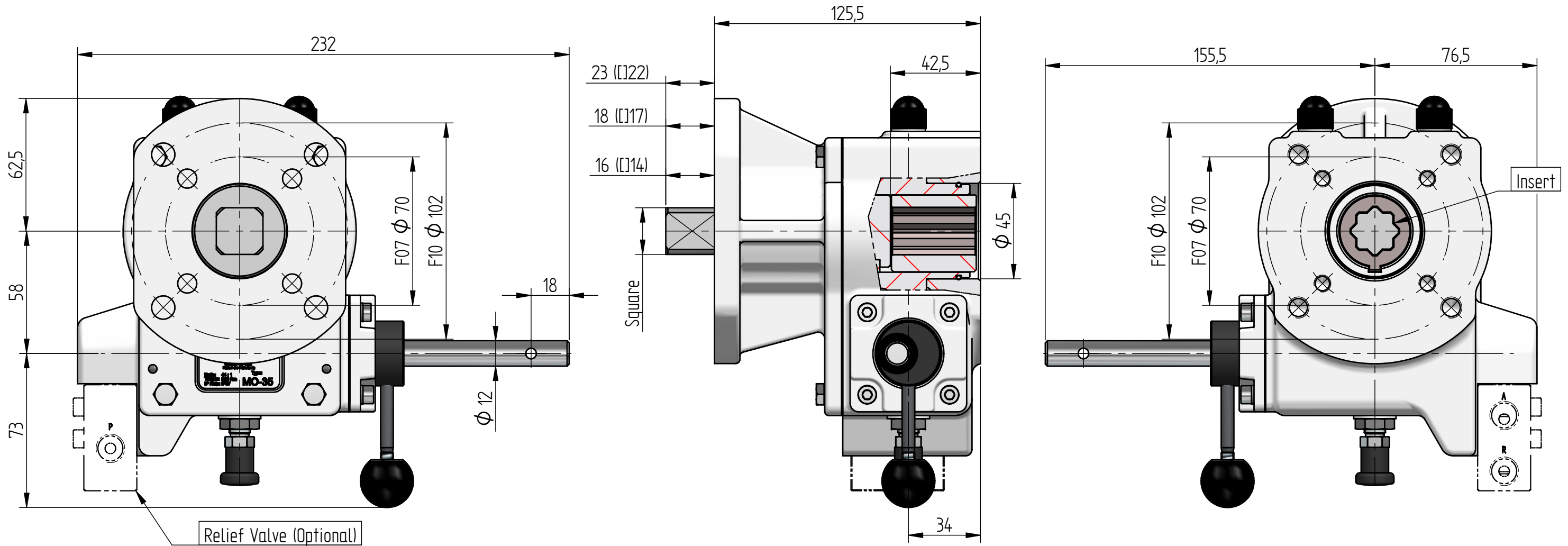
Type	A	B	C	D	E	F	G	H	Valve ISO5211	Actuator ISO5211
M015	48	53	167	122	18	∅12	103	29	F05-F07	F05-F07
M035	58	63	193	156	18	∅12	126	34	F07-F10	F07-F10
M075	75	86	239	165	20	∅15	131	41	F10-F12	F12-F14
M0200	92	105	280	203	24	∅20	161	46	F10-F12-F14	F12-F14-F16
M0350	134	115	333	250	24	∅20	185	54	F14/F16	F14-F16
M0550	148	145	414	365	24	∅20	197	66	F16-F25	F16-F25
M0850	148	145	414	365	24	∅20	197	66	F16-F25	F16-F25



TYPE	Torque	Ratio	MA ± 15%	Weight (Kg)
MO 15	150 Nm	1 : 40	12.1	4.6

CONNECTION	ISO	Bore	Square 90°
Valve	F05-F07	STAR	11-12-14-16-17
Actuator	(F05)-F07	SQUARE	14-17

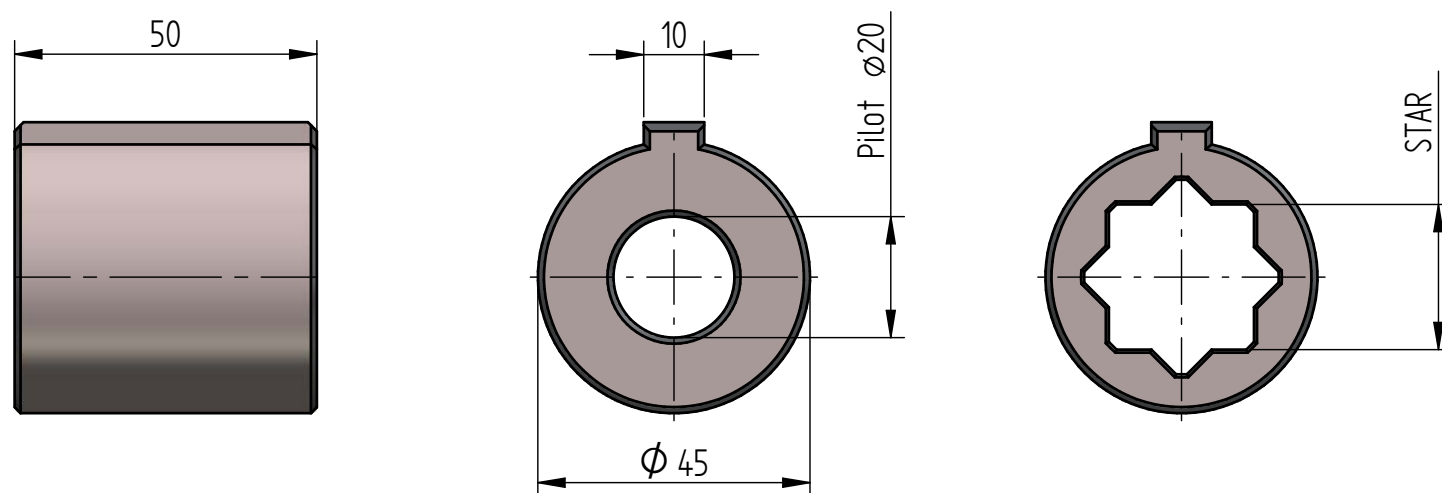
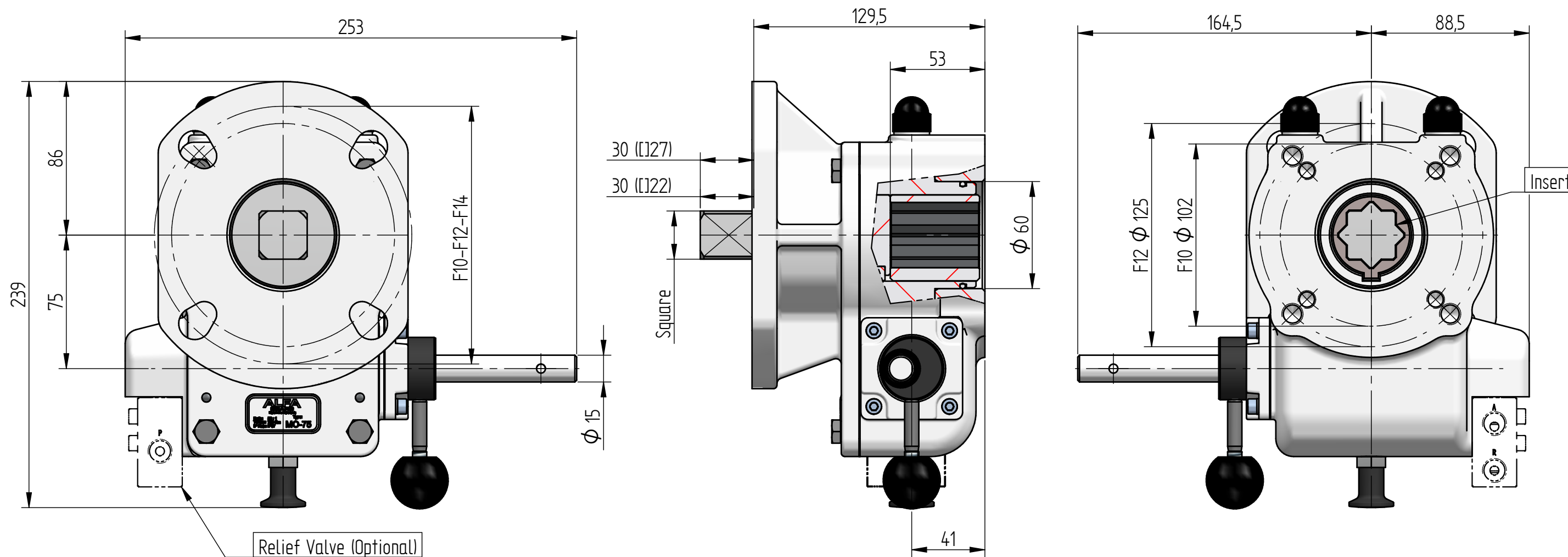
Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS 304
Gasket	Nitrile	NBR 70
O-rings	Nitrile	NBR 70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS



TYPE	Torque	Ratio	MA ± 15%	Weight (Kg)
MO 35	350 Nm	1 : 44	11.4	8.0

CONNECTION	ISO	Bore	Square 90°
Valve	F07-F10	STAR	17-19-22
Actuator	F07-F10	SQUARE	14-17-22

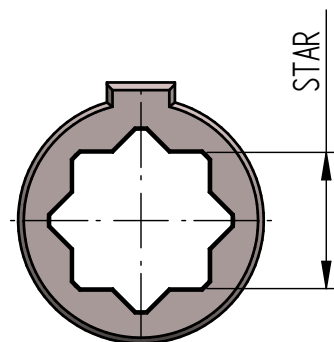
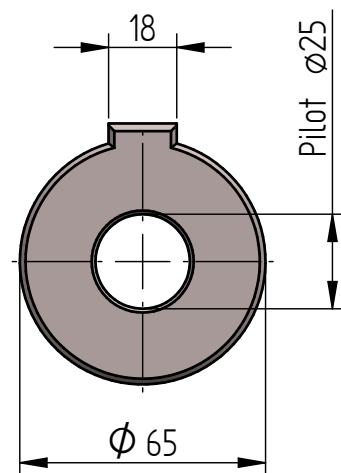
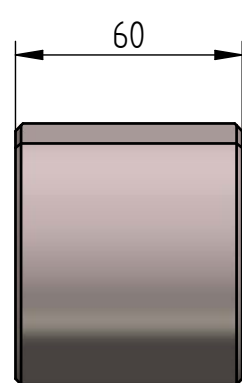
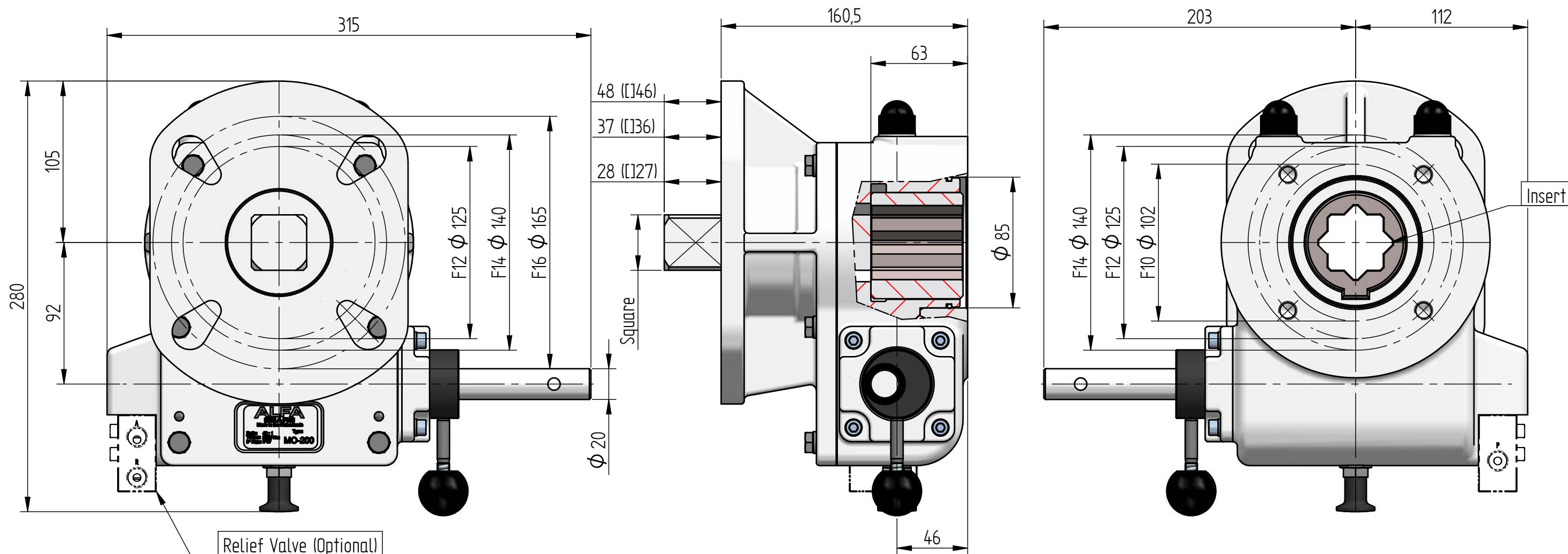
Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS 304
Gasket	Nitrile	NBR 70
O-rings	Nitrile	NBR 70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS-AXK



TYPE	Torque	Ratio	MA ± 15%	Weight (Kg)
MO 75	750 Nm	1 : 52	15	13.5

CONNECTION	ISO	Bore	Square 90°
Valve	F10-F12	STAR	24-27
Actuator	F10-F12-F14	SQUARE	22-27

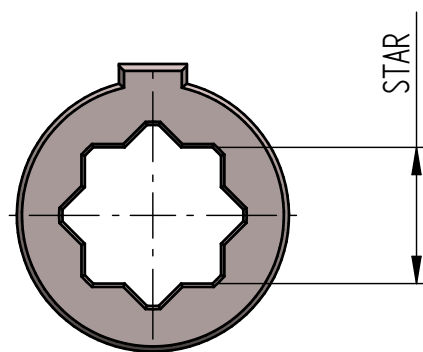
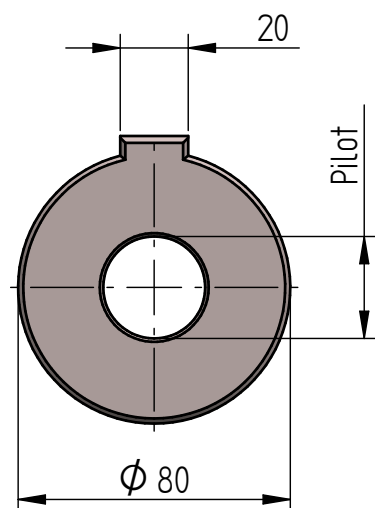
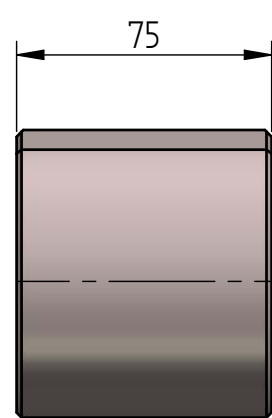
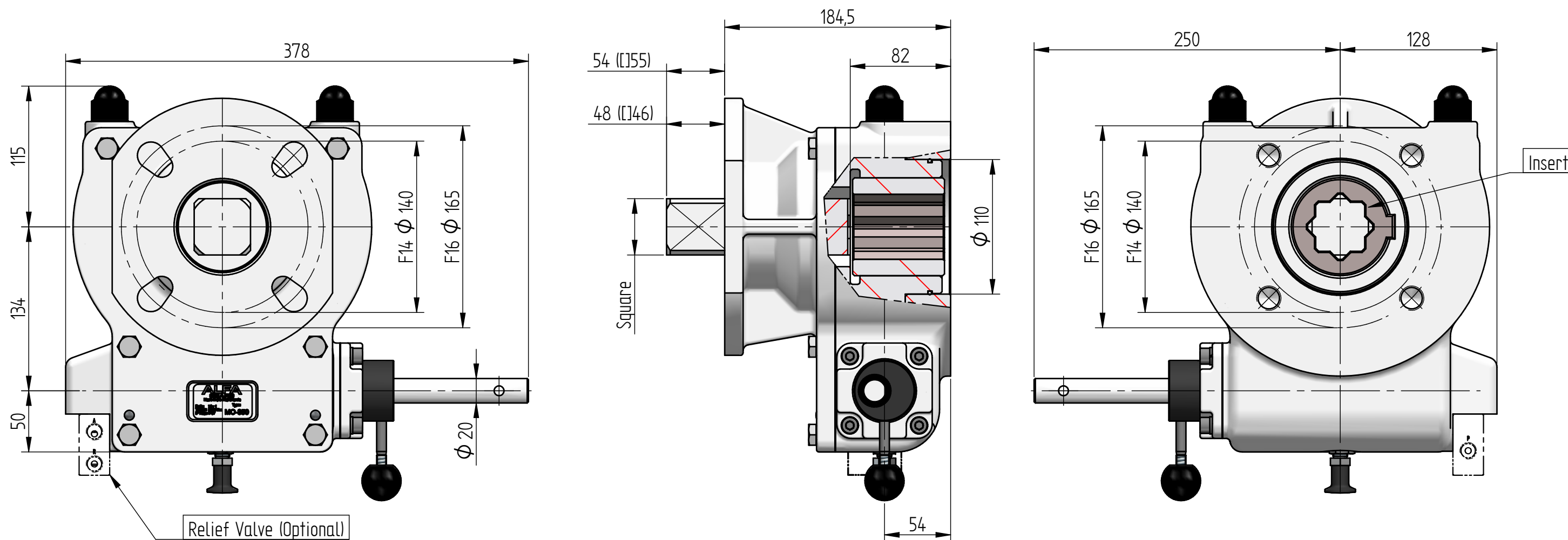
Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS 304
Gasket	Nitrile	NBR 70
O-rings	Nitrile	NBR 70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS-AXK



TYPE	Torque	Ratio	MA ± 15%	Weight (Kg)
MO200	2.000 Nm	1 : 38	13.6	24.5

CONNECTION	ISO	Bore	Square 90°
Valve	F12-F14	STAR	27-30-36
Actuator	F12-F14-F16	SQUARE	27-36-46

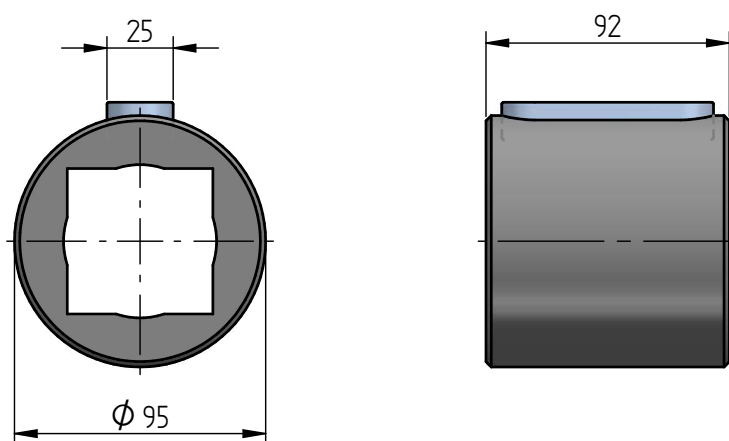
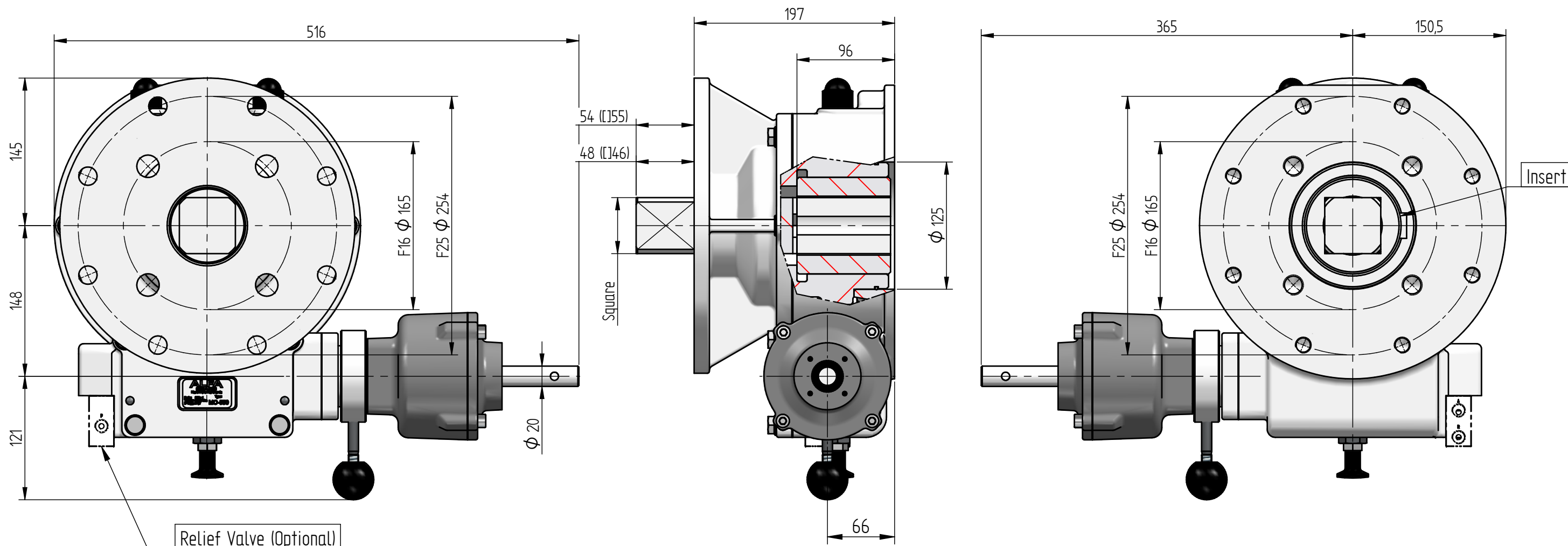
Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS 304
Gasket	Nitrile	NBR 70
O-rings	Nitrile	NBR 70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS-AXK



TYPE	Torque	Ratio	MA ± 15%	Weight (Kg)
MO350	3.500 Nm	1 : 55	20	40

CONNECTION	ISO	Bore	Square 90°
Valve	F14-F16	STAR	40-46
Actuator	F14-F16	SQUARE	46-55

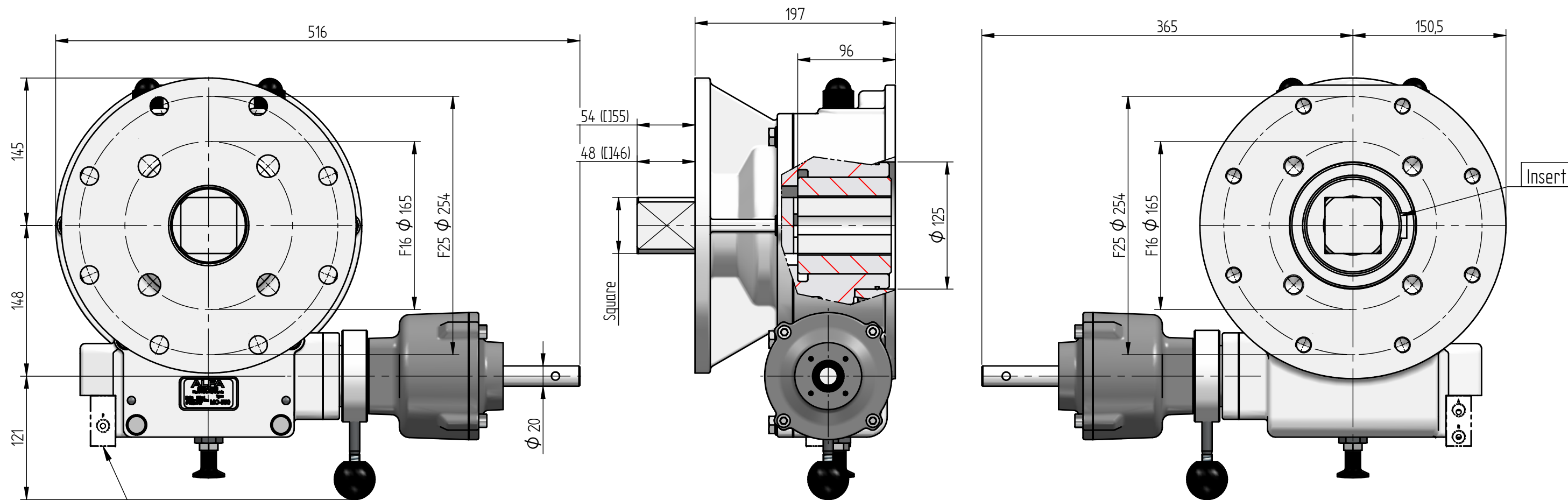
Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS 304
Gasket	Nitrile	NBR 70
O-rings	Nitrile	NBR 70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS-AXK



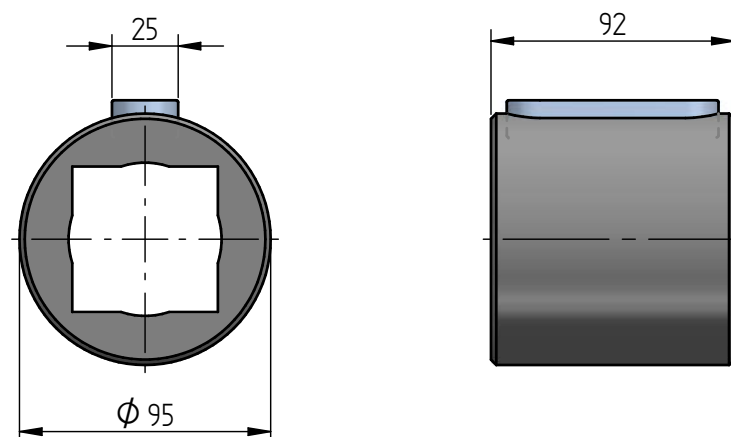
TYPE	Torque	Ratio	MA ± 15%	Weight (Kg)
MO550	5.500 Nm	1 : 306	25	62

CONNECTION	ISO	Bore	Square 90°
Valve	F16-F25	STAR	55
Actuator	F16-F25	SQUARE	46-55

Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS 420
Gasket	Nitrile	NBR 70
O-rings	Nitrile	NBR 70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS-AXK



Relief Valve (Optional)

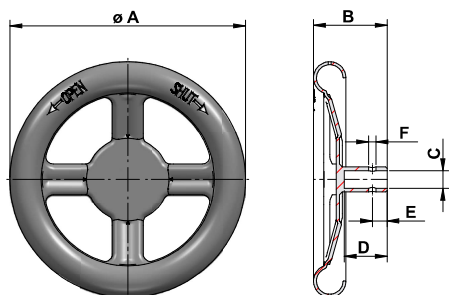


TYPE	Torque	Ratio	MA ± 15%	Weight (Kg)
MO850	8.500 Nm	1 : 408	26.8	64

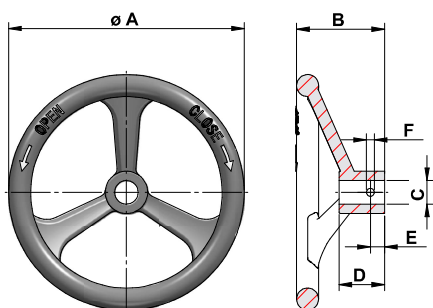
CONNECTION	ISO	Bore	Square 90°
Valve	F16-F25	STAR	55
Actuator	F16-F25	SQUARE	46-55

Description	Material	Specs/Standard
Body	Ductile Cast Iron	GGG40
Cover	Ductile Cast Iron	GGG40
Quadrant	Ductile Cast Iron	GGG40
Worm	Carbon Steel	C45
Shaft	Stainless Steel	SS 420
Gasket	Nitrile	NBR 70
O-rings	Nitrile	NBR 70
Grease	Lithium	EP2
Fasteners	Stainless Steel	A2
Axial Bearing	Steel	AS-AXK

HANDWHEELS PRESSED



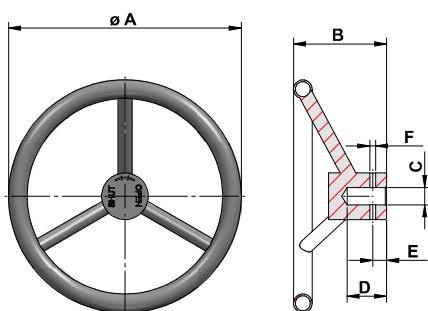
Type	A	B	C	D	E	F
SP-100-10	$\varnothing 100$	34	$\varnothing 10$	21	5	$\varnothing 4$
SP-100-12	$\varnothing 100$	38	$\varnothing 12$	24	5	$\varnothing 5$
SP-125-10	$\varnothing 125$	35	$\varnothing 10$	21	5	$\varnothing 4$
SP-125-12	$\varnothing 125$	38	$\varnothing 12$	24	5	$\varnothing 5$
SP-160-12	$\varnothing 160$	50	$\varnothing 12$	29	10	$\varnothing 5$
SP-160-15	$\varnothing 160$	51	$\varnothing 15$	22	10	$\varnothing 5$
SP-200-15	$\varnothing 200$	57	$\varnothing 15$	21	10	$\varnothing 5$
SP-250-15	$\varnothing 250$	53	$\varnothing 15$	35	10	$\varnothing 5$
SP-250-20	$\varnothing 250$	70	$\varnothing 20$	37	12	$\varnothing 8$



HANDWHEELS CASTED

Type	A	B	C	D	E	F
SC-125-10	$\varnothing 125$	40	$\varnothing 10$	23	8	$\varnothing 4$
SC-150-10	$\varnothing 150$	50	$\varnothing 10$	23	8	$\varnothing 4$
SC-150-12	$\varnothing 150$	50	$\varnothing 12$	23	8	$\varnothing 5$

HANDWHEELS WELDED & STAINLESS STEEL WELDED



Type	A	B	C	D	E	F
SW-150-12	$\varnothing 150$	80	$\varnothing 12$	30	8	$\varnothing 5$
SW-200-12	$\varnothing 200$	80	$\varnothing 12$	32	12	$\varnothing 5$
SW-200-15	$\varnothing 200$	80	$\varnothing 15$	34	12	$\varnothing 5$
SW-250-15	$\varnothing 250$	110	$\varnothing 15$	34	12	$\varnothing 5$
SW-250-20	$\varnothing 250$	110	$\varnothing 20$	46	20	$\varnothing 8$
SW-300-20	$\varnothing 300$	115	$\varnothing 20$	46	20	$\varnothing 8$
SW-400-20	$\varnothing 400$	130	$\varnothing 20$	46	20	$\varnothing 8$
SW-500-20	$\varnothing 500$	150	$\varnothing 20$	46	20	$\varnothing 8$
SW-600-20	$\varnothing 600$	150	$\varnothing 20$	46	20	$\varnothing 8$
SW-700-20	$\varnothing 700$	150	$\varnothing 20$	46	20	$\varnothing 8$
SW-800-20	$\varnothing 800$	150	$\varnothing 20$	46	20	$\varnothing 8$

EASY FORMULA TO CALCULATE YOUR HAND WHEEL SIZE

How to size the diameter of the handwheel:

1. Get the output torque required:

$$\text{Handwheel diameter} = \left(\frac{\text{Output Required}}{\text{M.A.}} \right) \times 5^*$$

2. Select the Handwheel diameter

*RIM pull 400N

NAMUR ASSEMBLING KIT



The Alfa Gears NAMUR kits are easy to assemble, no extra machining necessary. Available in Steel (Painted) or Stainless Steel 316.

EXTENSIONS / BRACKETS / ADAPTERS



Alfa Gears can offer a large variation of Inserts, Mounting brackets, Adapters, valve Shaft extensions and Wormshaft extensions.

CHAINWHEEL / CHAINHOLDER



Alfa Gears KW Chainwheel and chain acc. DIN766 (6mm) are available for the Alfa gearboxes type 55 and larger. Available diameter: $\varnothing 135$, $\varnothing 215$, $\varnothing 335$.

SWITCHBOX



Alfa Gears S series with our S200 switchbox is available in polycarbonate housing. With a stainless-steel bracket. V3 micro or Inductive sensors.

PADLOCK



Padlock flanges can be mounted on all series-S Alfa gearboxes, in both steel, and full stainless steel.

VANE INDICATOR



Alfa Gears S series can be provided with a VANE Indicator. Available in coated and stainless steel.

ALFA
GEARS
VALVE ACTUATORS

MECATORK

Time to change Gears!

ALFA GEARS

Oosterveldsingel 44

7558 PK Hengelo

The Netherlands

e info@alfa-gears.com

w www.alfa-gears.com

t +31 (0)74 303 19 49

