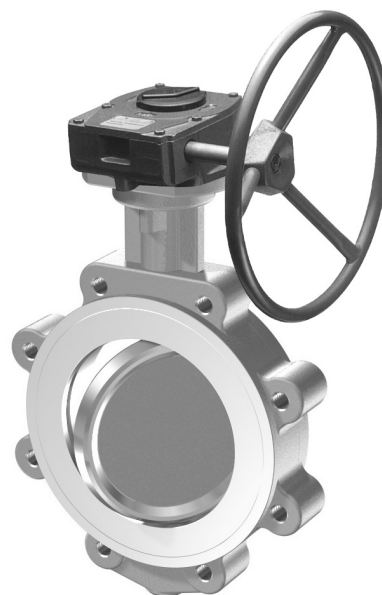


## M SERIES MANUAL VALVE GEAR

The quarter-turn M series manual gear of Metso has been engineered to meet the harduous requirements of demanding industrial environments. It has a cast iron construction and high performance axial bearings to enable smooth and accurate operation.

Corrosion protection is achieved by polyurethane painting. These gear operators are well suited for pulp and paper, energy and hydrocarbon, chemical, power, waterworks, HVAC and most general process industry applications.

Using seals with multiple sealing surfaces, the M range is sealed to IP67 and achieves exceptional durability.



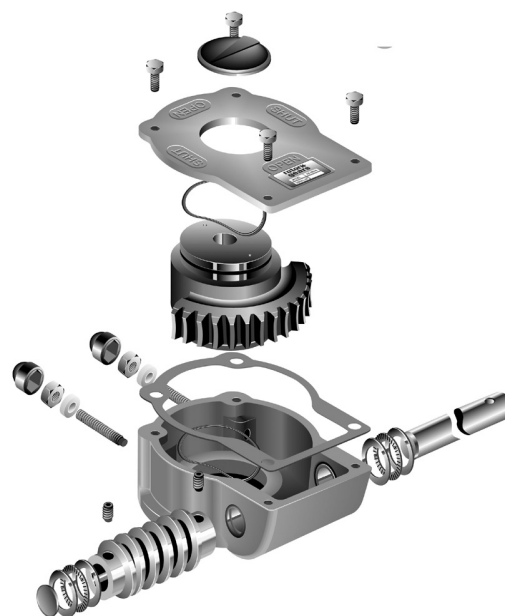
### Features & general specifications:

- Sealed to IP67.
- Aluminum indicator cap as standard
- Self locking/high efficiency.
- Cast iron enclosure, Steel input shaft
- 90° ± 5° (adjustable) travel.
- up to 8400 Nm / 74425 ft lbs output torque.
- 40...+120 °C / -40...+250 °F temperature range for continuous operation.
- 50% grease filled for life, thus maintenance free
- Stroke: 0 - 90 (± 50 adjustable)
- Polyurethane coating

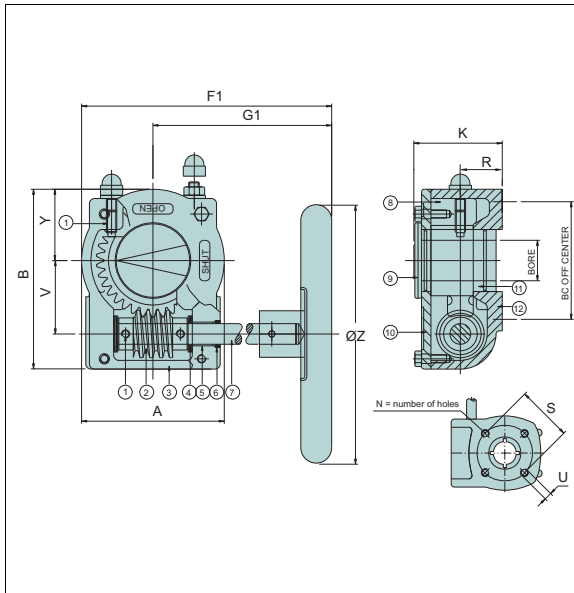
### Options

- Input padlock flange.
- VDI/VDE surface for accessories.
- Chainwheel operation.
- High temperature grease with high temperature O-rings (Tmax 160 °C)
- Oxygen compatible grease
- Extended handwheel shaft
- Low temperature -55 °C

Type	Ratio	Torque output		Torque input		M.A ±10%	Weight		Turns to close
		Nm	lbf. In	Nm	lbf. In		kg	lbs.	
M07	37:1	330	2920	29	253	11.6	3.8	7.7	9,25
M10	37:1	500	4430	43	381	11.6	4.3	7.7	9,25
M12	34:1	1000	8860	83	735	12.0	10.0	18.7	8,5
M14	38:1	2000	17720	152	1347	13.2	18.2	30.9	9,5
M15	55:1	3250	28795	171	1515	19.0	26.2	48.5	13,75
M16	84:1	4500	39870	159	1409	28.3	36.8	70.5	21
M25	78:1	8400	74425	305	2702	27.5	60.8	123.5	19,5



## DIMENSIONS



## HOW TO ORDER

M07/20F05SR6P, where  
 M07 = type of manual gear  
 /20 = bore diameter  
 F05 = mounting flange type  
 SR6 = handwheel type  
 P = padlock for handwheel

Other options  
 V = VDI / VDE surface (only with 'P')  
 C = chain wheel  
 HT = high temp  
 OX = oxygen grease  
 CT = low temp

Nr.	Description	Material	Specification/Notes
1	Set-screw	Carbon Steel	8.8 / DIN 916
2	Worm	Carbon Steel	C45 / AISI 1045
3	Gasket	NBR	70° Shore
4	Needle-Bearing	AXK-AS	-
5	Bushing	Sintered Steel	FP15
6	Oil-seal	Nitrile	-
7	Shaft	Carbon Steel	C45 / AISI 1045
8	Grease	Lithium-Calcium	Multipurpose EP-2
9	Position indicator	Aluminum	-
10	Coverplate	Cast Iron	GG25 / ASTM A48-40
11	Quadrant	Ductile Iron	GGG40 / ASTM D60-40-18
12	Body	Cast Iron	GG25 / ASTM A48-40

Unit size	Bore size	Valve mounting flange ISO 5211	Dimensions, mm										S	N, number of holes	U, dia	U, depth	Hand wheel dia ØZ/ type
			G1, with std input shaft	F1, with std input shaft	A	B	V	Y	K	R	Max. stem height	ød, max valve shaft diameter					
M07	insert 15	F05+F07+F10	185	241	102	124	52	44	65	29	45	15	50, 70, 102	4,4,4	M6, M8, M10	8, 11, 13	160/SR6
M07	straight 20 or 25	F05+F07+F10	185	241	102	124	52	44	65	29	55	25	50, 70, 102	4,4,4	M6, M8, M10	8, 11, 13	
M10	straight 20 or 25	F05+F07+F10	187	243	102	124	52	44	65	29	55	25	50, 70, 102	4,4,4	M6, M8, M10	8, 11, 13	200/SR8
M12	insert 25 or 30	F10+F12	235	304	138	174	71	69	88	41	79	30	102, 125	4,4	M10, M12	13, 16	315/SR12
M12	straight 35	F10+F12	235	304	138	174	71	69	88	41	79	35	102, 125	4,4	M10, M12	13, 16	
M14	insert 35 or 40	F12+F16	305	405	200	226	86	100	93	42	82	40	125, 165	4,4	M12, M20	16, 18	400/R16
M14	straight 45	F12+F16	305	405	200	226	86	100	93	42	82	45	125, 165	4,4	M12, M20	16, 18	
M14	insert 35 or 40	F10+F14	305	405	200	226	86	100	93	42	82	40	102, 140	4,4	M10, M16	13, 16	
M14	straight 45	F10+F14	305	405	200	226	86	100	93	42	82	45	102, 140	4,4	M10, M16	13, 16	
M15	straight 35, 40, 45, 50 or 55	F10+F14	346	456	220	258	105	110	102	48	91	55	102, 140	4,4	M10, M16	13, 18	500/R20
M15	straight 35, 40, 45, 50 or 55	F12+F16	346	456	220	258	105	110	102	48	91	55	125, 165	4,4	M12, M20	16, 18	
M16	insert 45 or 55	F16+F25	387	530	285	323	130	143	124	55	111	55	165, 254	4,8	M20, M16	18, 18	600/R24
M16	straight 65 or 70	F16+F25	387	530	285	323	130	143	124	55	111	70	165, 254	4,8	M20, M16	18, 18	
M25	straight 75 or 85	F16+F25	412	597	370	402	182	170	160	59	121	85	165, 254	4,8	M20, M16	18, 18	

Subject to change without prior notice.

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