

D.C. High Duty Solenoid

Rectifier for A.C. supply
Range up to 5 mm and 8,9 Ncm

1

Product group

Types **GTA**

- According to VDE 0580 and ISO 9001 (conform with article 10 of directions 73/23/EEC - according to CENELEC memorandum no. 3 of March 1987).
- Linear force characteristic (fig. 2)
- Small dimensions - three sizes
- Robust cylindrical construction with body mounting for push or pull operation
- High-endurance, maintenance-free bearings
- Coil with insulation to class F for voltages up to 48 volts
- Protection classification - DIN VDE 0470/EN 60529 - IP 20
- Suitable for mounting in any attitude
- Size 032 available as shotbolt/spring return for energize to lock or unlock operation (list G HU Z)
- Fork ends are available (list Z GA)
- Modifications and special designs on request
- General-purpose high-duty solenoid for service on:
Machine tools Office machines
Automation Remote control
Packaging and coin equipment
Textile machinery



Fig. 1
Type G TA F 026 M 20 A 01

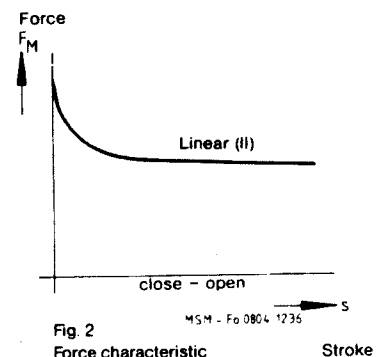


Fig. 2
Force characteristic

G TA F	020					026					032				
	Duty Rating ED (%)	100	40	25	15	5	100	40	25	15	5	100	40	25	15
Stroke s (mm)	3					4					5				
Holding force F _{Th} Stroke 0 mm (N)	5.3	6.6	8.3	11.3	16.5	9.8	15	19.6	23	35	15.5	26.5	35.8	49	72
Magnetic force F _M Stroke s mm (N)	1.7	2.2	2.7	3.7	5.4	2.4	4	5.9	7.2	12.3	3.9	6.9	9	12	17.7
Work Rating A _N (Ncm)	0.51	0.66	0.81	1.11	1.62	0.96	1.6	2.36	2.9	4.9	1.95	3.45	4.5	6	8.9
Power Consumption P ₂₀ (W)	3.9	5.5	7.2	11.8	22.3	5.4	8.6	13.1	15.7	38	6.2	11.6	16.1	25.6	53
Frequency of operation (S _n max.) (%)	28000	13000	10000	7000	3200	24000	11000	8000	5000	3000	22000	10000	7000	4500	2400
Closing time t ₁ (ms)	35	38	39	40	30	50	40	40	40	30	57	50	52	50	40
Opening time t ₂ (ms)	30	28	25	25	25	36	30	30	30	30	40	35	33	33	33
Armature Weight m _A (kg)	0.012					0.02					0.03				
Solenoid Weight m _M (kg)	0.06					0.11					0.16				

Note: - 0 mm is completion of energized stroke.

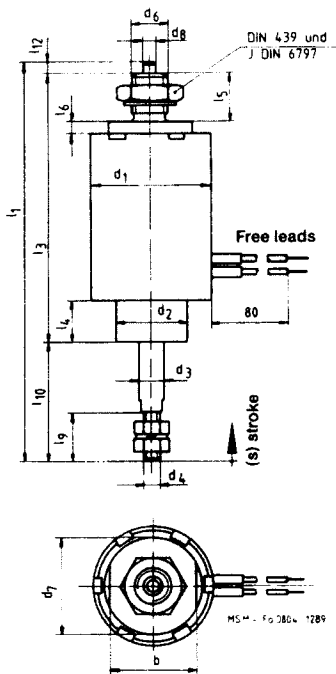


Fig. 3: Pulling M
Type G TA F 020 to 032 M 20 A 01

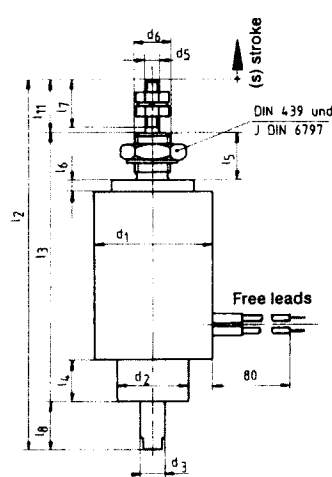


Fig. 4: Pushing N
Type G TA F 020 to 032 N 20 A 01

Type	G	TA	F
Size	020	026	032
Dim.	dim (mm)		
b	14	17	17
∅ d ₁	20	26	32
∅ d ₂	12	17	18
∅ d ₃	4	4	4
d ₄	M3	M3	M3
d ₅	M3	M3	M3
d ₆ ¹⁾	M6	M10	M10
∅ d ₇	16	19	19
∅ d ₈	3	3	3
l ₁	67	68.5	75.5
l ₂	62	68.5	74.5
l ₃	45	49.5	50.5
l ₄	7	7.5	7.5
l ₅	8	10	10
l ₆	2	2	2
l ₇	8	8	10
l ₈	8	10	8.5
l ₉	8	8	10
l ₁₀	20	18	24
l ₁₁	9	9	15.5
l ₁₂	2	1	1
s	3	4	5
Fork end ZGA	030	030	030

¹⁾ Fork End Z GA K 060 or 100 may be used for Trunnion mounting.

Conversion Factors	
1 N	= 0.102 kp ≈ 0.1 kp
1 Ncm	= 0.102 kpcm ≈ 0.1 kpcm
1 kp	= 1 kg = 2.2 lbs
1 mm	= 0.039 ins
1 cmkp	= 0.856 ins lbs

PERFORMANCE TABLE terms are explained in Technical Bulletin G XX & VDE 0580/35.

TABLE BASIS == 24 V/5 - 100% duty. Ambient temp. 35° C. Heat insulated, free/air, horizontal/pull, mounting. Tolerance ± 10% (inherent & manufacture).

MAGNETIC FORCE (F_M) is listed in HOT condition at 90% of rated voltage (increase approx. 20% at rated voltage). Adjust for armature weight.

POWER CONSUMPTION (P₂₀) is listed with a 20° C coil temperature (decrease/HOT).

DUTY RATING (ED%) % of energized time per operation cycle: $\frac{t_{on}}{t_{on} + t_{off}} \times 100$
Max. energized time/cycle: 100%/continuous:
40% - 120 secs., 25% - 75 secs., 15% - 45 secs. 5% - 15 secs.

OPERATING TIMES (t₁/t₂) are listed per cycle of operating in HOT condition at rated voltage with weight load of 70% of Force (F_M) at and over rated stroke.

SUPPLY VOTAGE - Standard == 24 V (max. == 48 V).

PROTECTION - Special finishes available -
Paint (Tropical) - Plating (Special tropical) - Sealed coil.

ORDER EXAMPLE

Type **G TA F 026 M 20 A 01**
Amend M to N for pushing arrangement
ADD voltage (V) == 24V
Duty rating (ED%) - 100 %
Additional requirements:
Special protection, fork end

Type code

