General Electric Company
Schenectady, N.Y.

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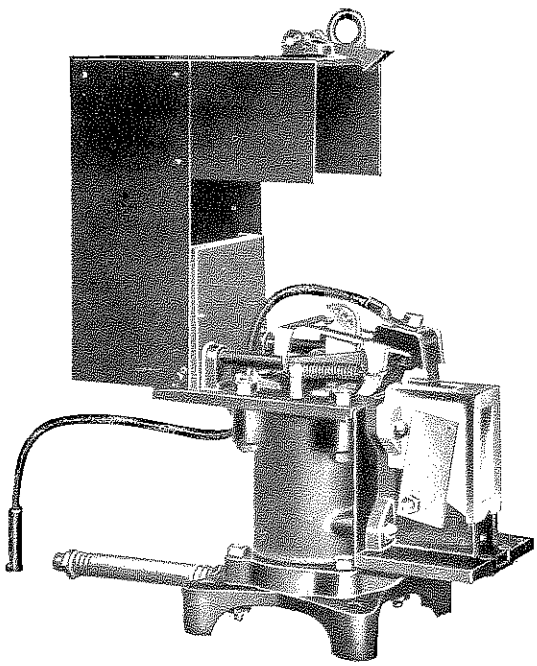
AIR COMPRESSOR GOVERNORS

The function of an air compressor governor is to automatically control the operation of either stationary or railway motor-driven air compressors in order to maintain air pressure in a storage reservoir between predetermined limits.

For such service the General Electric Company manufactures a standard line of governors designated as the types ML, MJ and MH. These governors are of the same general design but differ slightly in construction to permit of different application.



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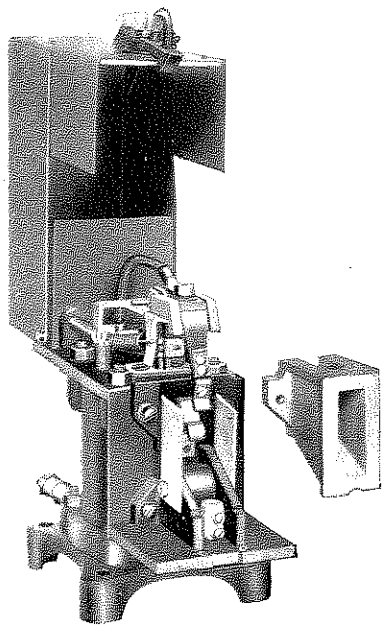


(ARC CHUTE REMOVED)

TWO VIEWS OF TYPE ML FORM A GOVERNOR

TYPE ML FORM A GOVERNOR

The ML Form A governor can be used with all forms of air brake equipment sold by the General Electric Company for 600-volt railway service and with any 600-volt direct-current motor-driven air compressor, the normal full load current of which comes within the limits of the governor.

This governor is essentially a single-pole switch of the contactor type, operated by means of a rubber diaphragm, a piston, and set of levers. The operating mechanism is simple, compact and reliable. The construction of this governor is such that air does not pass through, or come in contact with the operating mechanism, but is restricted to a chamber below the diaphragm, hence troubles resulting from moisture due to condensation are eliminated.

NOTE.—Data subject to change without notice.

The essential points of advantage in this type of governor are:

Interrupting switch provided with an arc chute of highly refractory material, an effective magnetic blowout, and easily renewable contacts. Arc chute can be quickly removed for inspection or repairs without disturbing any other part or any electrical connections.

Operating mechanism is made of punched steel parts, sherardized to prevent corrosion and is arranged to maintain constant pressure on the contact tips until point of tripping is reached, insuring a quick break of the contacts when opening the circuit.

A wiping action takes place between the contact tips when the compressor circuit is opened or closed. This action prevents pitting and materially increases the life of the tips.

All principal bearings are provided with hardened knife edges to reduce friction and to insure a quick snap action.

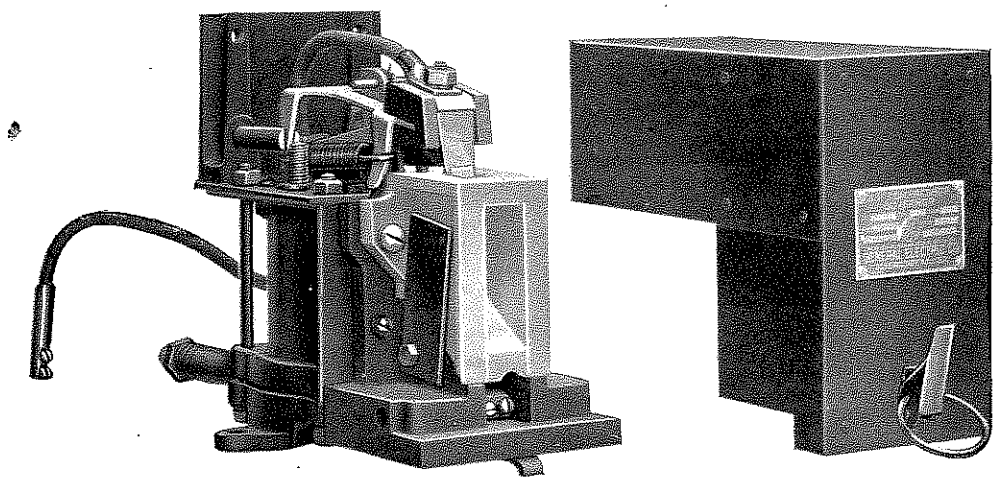
Provision is made for quickly changing the range or difference between opening and closing pressures.

The first number in the rating (page 4) indicates the lowest and the second number the highest opening pressures at which the governor can be set to operate. An accurate adjustment can be obtained by means of two adjusting screws which are located in an accessible place. The difference between the opening and closing pressures can be adjusted for 8, 10, 12 or 15 lb., as desired, by changing the location of a pin in the fulcrum punching.

The ML governor can be relied upon to maintain air pressure in a storage reservoir between the maximum and minimum pressures at which it is set and to operate as often as necessary without frequent adjustment or other attention.

OPERATION

The action of this governor in opening and closing the motor circuit of the compressor is as follows:



TYPE MJ FORM A GOVERNOR

When the compressor operates, thereby increasing the pressure of air in the reservoir, the pressure in the chamber below the diaphragm A rises and forces the piston rod D upward against the action of the operating spring C, turning the lever G around its fulcrum F. This brings the pivot H below the center line of the tension springs J which connect the intermediate lever E with the large or contact carrying lever K. The action of these springs then pulls the end of the intermediate lever upward. This movement

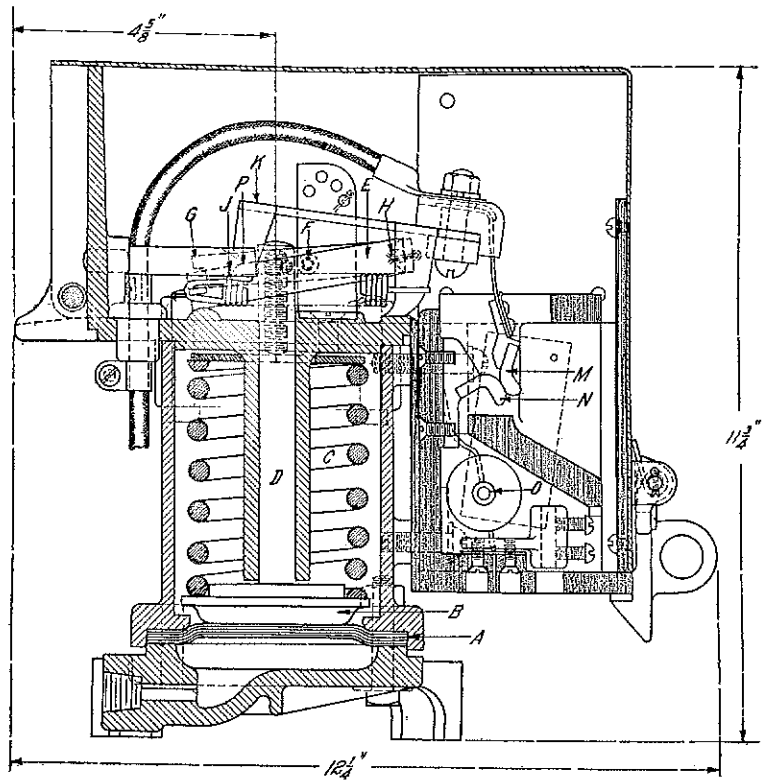
quickly carries the center line of the springs past the knife edge pivot P, thus reversing the action of these springs on the contact carrying lever K and causing the free end of this lever to be drawn upward, separating the contacts M and N with a quick snap. The object of this double system of levers is to maintain a constant pressure between the contacts until the tripping point is reached, thus preventing the possibility of burning at the contacts.

limits and to operate as frequently as necessary without adjustment or other attention.

TYPE MJ FORM A GOVERNORS

The MJ governor is suitable for the following air brake equipments:

Air brake and safety car control equipment.
Straight air brake.
Straight air with emergency feature.
Emergency straight air.



SECTIONAL VIEW OF TYPE ML GOVERNOR

As the pressure in the reservoir is reduced the piston rod D lowers the back end of the lever G, the projection of which engages with the intermediate lever E. This carries the center line of the tension springs J below the pivot of the contact carrying lever K and thereby pulls the contact finger downward, quickly closing the circuit.

This type of governor can be relied upon to maintain the pressure between predetermined

This governor is of the same general design as the ML but is lighter in weight and has smaller overall dimensions. The cover, instead of being hinged, is held in place by means of a latch and two pins. This type of construction permits the removal of the cover by sliding it forward in a horizontal plane. It is therefore particularly suitable for installing underneath a car seat, as regular inspection of the governor can be made by

simply sliding off the cover. The total height is $8\frac{11}{16}$ in.; width, $6\frac{3}{4}$ in., and length, $9\frac{7}{8}$ in.

Each Type MJ governor is furnished with a spring rating of 65 to 85 lb. The difference between the opening and closing pressures can be adjusted for 10 to 12 lb. as desired by changing the location of the pin in the fulcrum punching.

TYPE MH FORM A GOVERNOR

This governor is of the same general design as the ML and is similar in construction with the exception that cast parts are used instead of punchings, the contacts have greater current carrying capacity and the governor has no range adjustment. It is used in connection with 600-volt direct-current air compressors whose normal full load current exceeds the maximum current rating (20 amperes) of the Type ML Form A governor.

The MH governor is slightly larger than the ML, the overall dimensions being: length $12\frac{3}{4}$ in., height $12\frac{1}{4}$ in., width $7\frac{3}{4}$ in.

AIR COMPRESSOR GOVERNORS

RATING	AMPERES		CAT. NO.	NET WT. in. Lb. (Appx.)	RATING	AMPERES		CAT. NO.	NET WT. in. Lb. (Appx.)
	Min.	Max.				Min.	Max.		
Type ML 40–60 Form A1	3	12	129972	30	Type ML 40–60 Form A3	0.1	3	135915	30
Type ML 65–100 Form A1	3	12	124593	30	Type ML 65–100 Form A3	0.1	3	135916	30
Type ML 100–140 Form A1	3	12	129974	30	Type ML 100–140 Form A3	0.1	3	135917	30
Type ML 40–60 Form A2	10	20	135912	30	Type MJ 65–85 Form A1	3.0	12	740505G1	20
Type ML 65–100 Form A2	10	20	135913	30	Type MJ 65–85 Form A2	10.0	20	740505G2	20
Type ML 100–140 Form A2	10	20	135914	30	Type MJ 65–85 Form A3	0.1	3	740505G3	20
					Type MH 60–100 Form A1	4.0	50	62409	60
					Type MH 80–130 Form A1	4.0	50	58307	60

All requests for information on governors for direct-current circuits above 600 volts should be referred to the General Office.

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Representatives and agents in all countries