



**Nero Valves GmbH**

Industrial Valves: DIN · API · ASME

**Nero pressure seal bonnet Gate Valves**

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## Gate Valves Pressure seal Bonnet



### Body

The valve body is cylindrically shaped to prevent distortion or undue stress under extreme working conditions. Padding is also provided to achieve a sound cast structure in the critical areas. The wall thickness is greater than, or in accordance with, API, ANSI and ASME requirements. The area contacting the pressure seal gasket has a stainless steel 18/8 inlay to eliminate corrosion or wire drawing. The close tolerances of the inside diameter of this area are attained by accurate machining and honing finish.

### Bonnet

The bonnet is of a steel forging identical to the body to ensure high reliability. The bonnet has a perfect body-bonnet seal and both ease of dismantling and reassembly are ensured. The bodies and bonnets of the valve are machine by special purpose machines to achieve perfect coaxiality and eliminate any misalignment which may damage the stems.

### Flexible Wedge

The flexible wedge designed to absorb thermally-included body distortion, thereby making it ideal for high temperature steam or water supply piping. A Stellite 6 layer is applied to the sealing surface, and this deposit is subjected to a special heat treatment to secure required hardness and soundness. The lapped finish then ensures perfect mating with the seats.

### Stem

The machine forged stem comes with a T-shaped head, which connects the slot of the wedge. The contacting surface of the head is spherically shaped, thereby giving it greater strength and durability. It is heat treated to give adequate mechanical properties and surface hardness. Accurate machine and lapping ensure minimized friction during opening and shutting.

### Seat Ring

The Stellite 6 surface of the seat ring is integrally applied to the body by means of welding in all valve sizes. Lapping applied to the sealing surface ensures perfect mating with the wedge surfaces.

Subject to alternation

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Mörfelden – Walldorf / Germany

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**Nero pressure seal bonnet Gate Valves****Back Seat**

All valves are provided with positive backseat, and packing replacement can be done with the valve fully open. The conical seat and the guide are integrally stellite faced.

**Yoke Sleeve**

The upper portion of the Yoke sleeve is hexagonally tapered to fix the handwheel. The standard material of the Yoke sleeve is nodular Ni-resist D2 with over 1150° C (2100° F) dissolution point in accordance with API Std. specifications.

**Available Body Material**

Material	Specification	Material	Specification
Carbon steel	A216 WCB	Alloy 825	UNS N00825
Low temperature Carbon	A352 LCB	Alloy 625	A494 CW6MC
Low temperature Carbon	A352 LCC	Hastelloy C276	A494 CW12MW
5% Cr Steel	A217 C5	Monel 400	A494 M351
9% Cr. Steel	A217 C12	Nickle AL-Bz	B148 C95800
Low temperature 13Cr 4n	A352 CA6NM	Inconel 625	A494 CW6MC
410 stainless steel	A217 CA15	Duplex SS Gr.1	A351 CD4MCu
304 stainless steel	A351 CF8	Duplex SS Gr.2	A890 CE8MN
316 stainless steel	A351 CF8M	Duplex SS Gr.3	A890 CD6MN
317 Stainless steel	A352 CG8M	Duplex SS Gr.5	A890 CE3MN
Alloy 20	A351 CN7M	254SMO	A351 CK3MCuN
Gray iron	A125CLB	940L SS	A351 CN2MCuN
Ductile Iron	A395	Titanium Gr.2	B381 F2

**Available Trim Material**

Nominal Trim	Material Type	Nominal Trim	Material Type
F6	13Cr	F6 and Hard faced	13Cr Ni-Cr
304	18Cr-8Ni	Monel	Ni-Cu alloy
F310	25Cr-20Ni	316	18Cr-88Ni
Hard F6	Hard 13Cr	Monel and hard faced	Ni-Cu alloy; Trim 5 or 5A
Hard faced	Cu-Cr A	316 and hard faced	18Cr-8Ni; Trim 6 or 5A
Hard faced	Ni- Cr	Alloy 20	19Cr-29Ni
F6 and Hard F6	13 Cr Hard 13Cr	Alloy 20 and Hard faced	19Cr-29Ni; trim 5 or 5A
F6 and hard faced	Cu- CrA		

**Rating**

ASME class 600 up to ASME class 2500

**Option**

- Cryogenic service
- Fire safety
- Oxygen service
- Special lining
- Teflon insert

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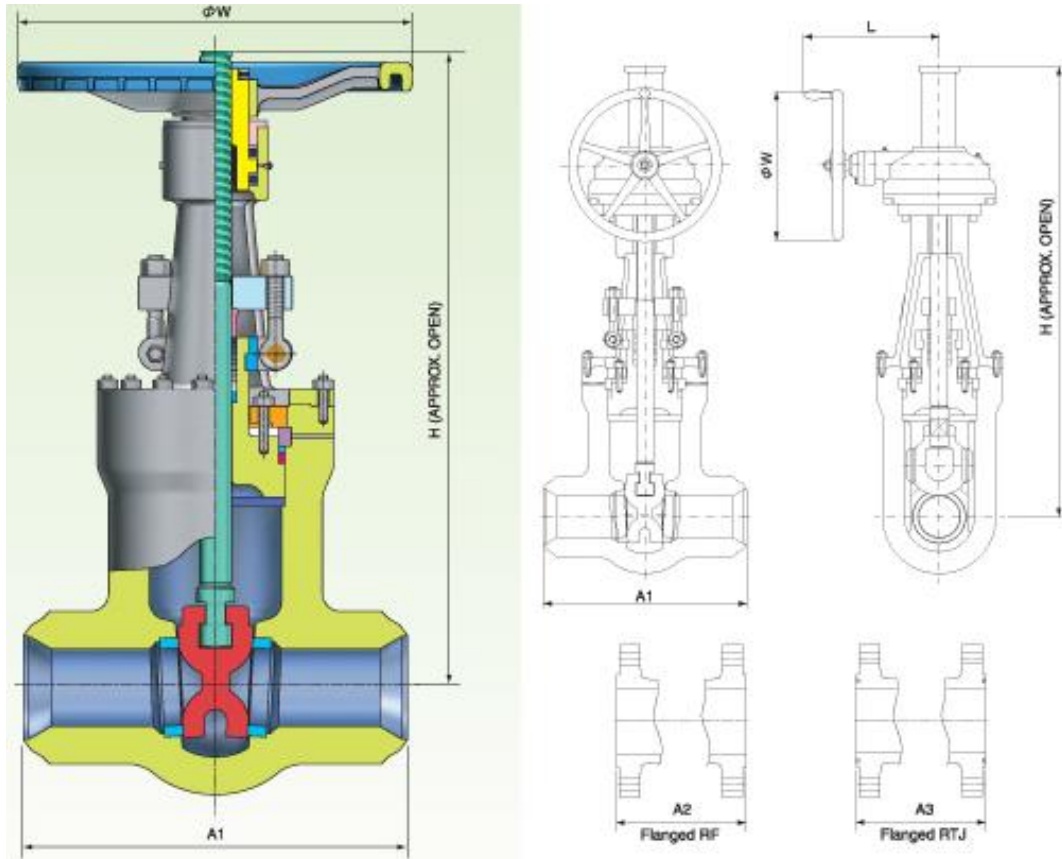


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**Gate Valves**  
Pressure seal Bonnet  
Class 600



**Dimensions**

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	
A1	in	11.5	8.5	10.0	12.0	18.0	23.0	28.0	32.0	35.0	38.0	43.0	47.0	55.0	
	mm	292	216	254	305	457	584	711	813	889	991	1092	1194	1397	
A2	in	11.5	13.0	14.0	17.0	22.0	26.0	31.0	33.0	35.0	38.0	43.0	47.0	55.0	
	mm	292	330	356	432	558	660	787	838	889	991	1092	1194	1397	
A3	in	11.6	13.1	14.1	17.1	22.1	26.1	31.1	33.1	35.1	39.1	43.1	47.2	55.4	
	mm	295	333	358	435	562	663	790	841	892	994	1095	1200	1407	
H	in	23.1	21.1	19.9	23.4	37.0	43.3	49.1	66.9	71.6	80.3	95.1	101.1	109.9	
	mm	586	535	505	594	941	1100	1248	1700	1818	2040	2442	2567	2792	
W	in	19.7	11.8	9.8	11.8	17.3	19.7	24.8	24.8	24.8	28.0	31.5	31.5	35.4	
	mm	500	300	250	300	440	500	630	630	630	710	800	800	900	
L	in	-	-	-	-	-	-	-	15.3	15.3	16.0	18.1	18.1	19.1	
	mm	-	-	-	-	-	-	-	389	389	406	461	461	486	
WEIGHT	RF	lb	154.3	209.4	220.5	326.3	555.6	705.5	1071.4	1642.4	1952.1	3104.1	4321.1	5820.2	7407.5
		kg	70	95	100	148	252	320	486	745	890	1408	1960	2640	3360
	BW	lb	136.7	176.4	185.2	253.5	416.7	648.2	974.4	1492.5	1785.7	2821.9	3924.2	4850.2	6172.9
		kg	62	80	84	115	189	294	442	677	810	1280	1780	2200	2800

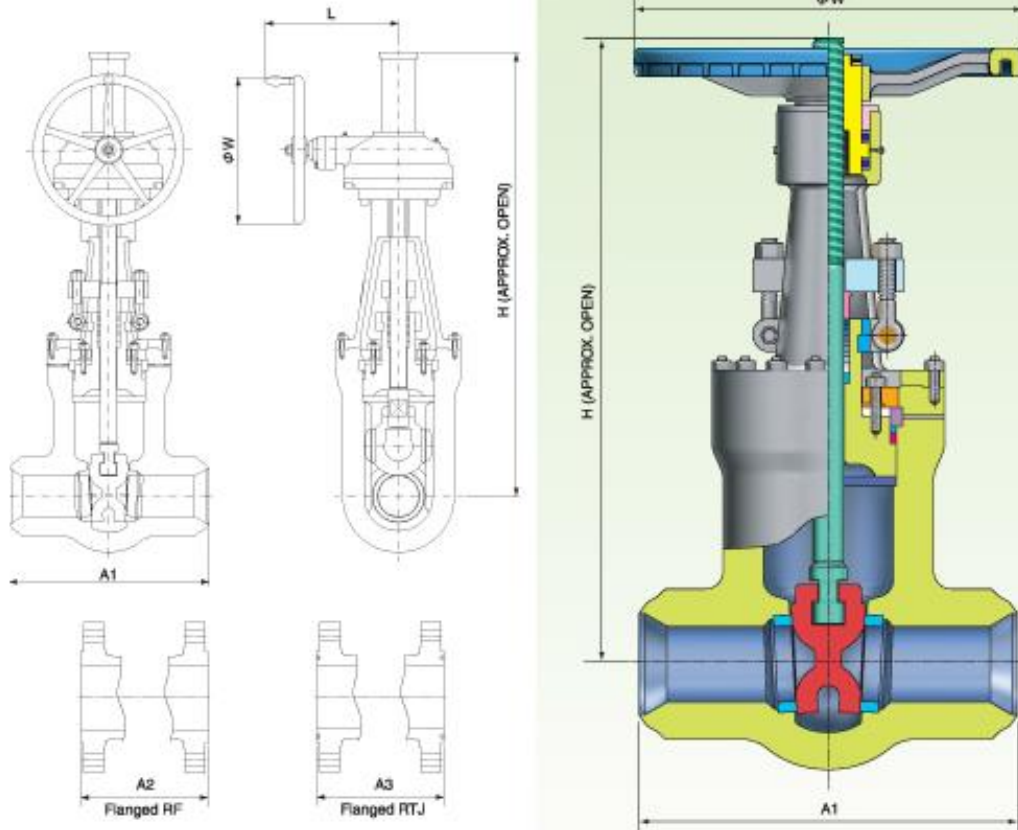
Subject to alternation

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**Gate Valves**  
Pressure seal Bonnet  
Class 900



**Dimensions**

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	800
A1	in	8.5	10.0	12.0	14.0	20.0	26.0	31.0	36.0	38.0	43.0	48.0	52.0	61.0	
	mm	216	254	305	356	508	660	787	914	991	1092	1219	1321	1549	
A2	in	14.5	16.5	15.0	18.0	24.0	29.0	33.0	38.0	40.5	44.5	48.0	52.0	61.0	
	mm	368	419	381	457	610	737	838	965	1029	1130	1219	1321	1549	
A3	in	14.6	16.6	15.1	18.1	24.1	29.1	33.1	38.1	40.9	44.9	48.5	52.5	61.7	
	mm	371	422	384	460	613	740	841	968	1039	1140	1232	1334	1568	
H	in	23.1	21.1	26.2	31.4	40.8	53.3	62.2	70.6	73.2	85.9	97.2	100.2	119.5	
	mm	586	535	666	798	1036	1353	1581	1792	1860	2181	2470	2546	3036	
W	in	18.7	11.8	19.7	19.7	22.0	19.7	24.8	28.0	28.0	31.5	35.4	35.4	39.4	
	mm	500	300	500	500	560	500	630	710	710	800	900	900	1000	
L	in	-	-	-	-	-	13.5	15.3	16.0	16.0	18.1	19.1	20.8	23.2	
	mm	-	-	-	-	-	342	389	406	406	461	486	529	590	
WEIGHT	RF	lb	132.3	207.2	224.9	330.7	617.3	1455.1	2116.4	2976.2	3747.9	5291.1	7319.3	9700.3	14825.3
		kg	60	94	102	150	280	660	960	1350	1700	2400	3320	4400	6770
	BW	lb	88.2	141.1	176.4	220.5	407.9	1081.3	1620.4	2314.9	3086.5	4299.0	6018.6	8124.0	11971.1
		kg	40	64	80	100	185	485	735	1050	1400	1950	2730	3685	5430

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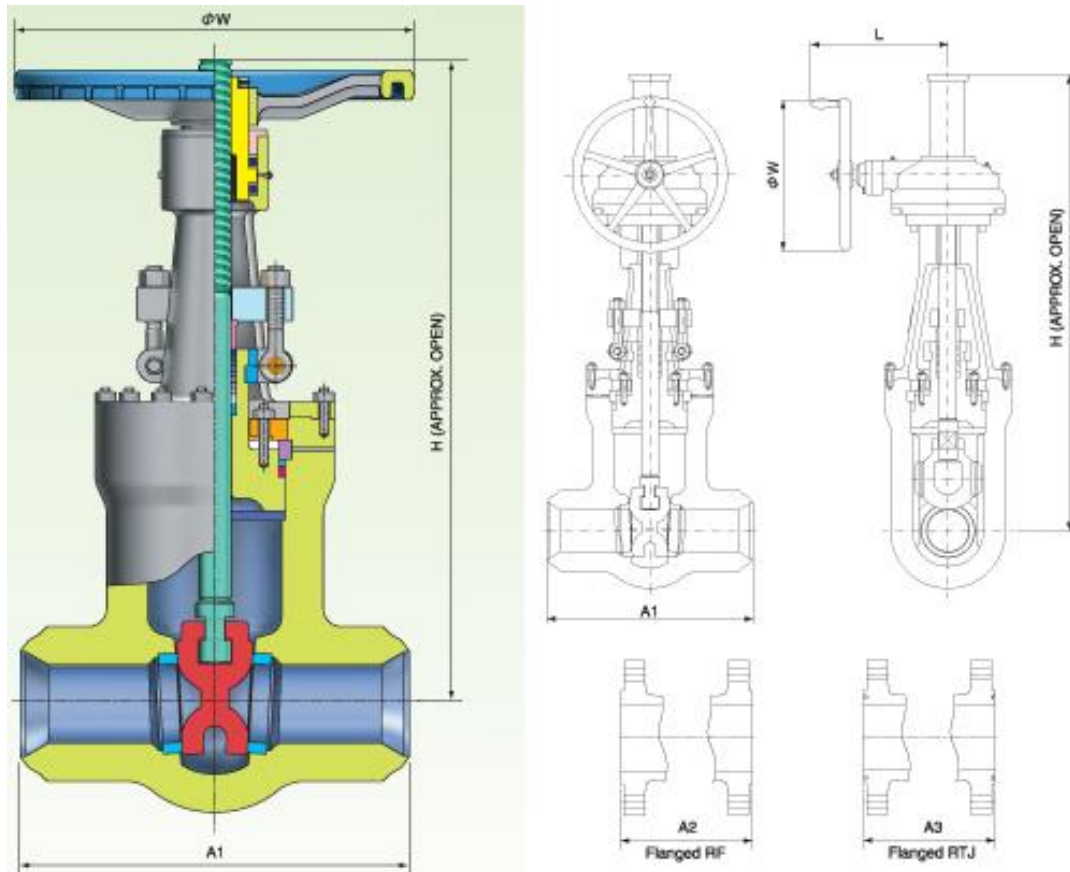


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**Nero pressure seal bonnet Gate Valves**

**Gate Valves**  
Pressure seal Bonnet  
Class 1500



**Dimensions**

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	20	24	
	mm	50	65	80	100	150	200	250	300	350	400	450	500	600	
A1	in	8.5	10.0	12.0	16.0	22.0	28.0	34.0	39.0	42.0	47.0	53.0	58.0	64.0	
	mm	216	254	305	406	559	711	864	991	1067	1194	1346	1473	1626	
A2	in	14.5	16.5	18.5	21.5	27.8	32.8	39.0	44.5	49.5	54.5	60.5	65.5	76.5	
	mm	368	419	470	546	705	832	991	1130	1257	1384	1537	1664	1943	
A3	in	14.6	16.6	18.6	21.6	28.0	33.1	39.4	45.1	50.2	55.4	61.4	66.4	77.6	
	mm	371	422	473	549	711	842	1000	1146	1276	1406	1558	1686	1971	
H	in	23.1	21.1	26.2	32.0	53.7	56.1	62.3	66.7	79.6	91.8	111.1	101.5	116.3	
	mm	586	535	668	812	1363	1426	1583	1684	2023	2331	2823	2579	2955	
W	in	19.7	11.8	19.7	19.7	19.7	24.8	29.0	29.0	35.4	35.4	39.4	39.4	39.4	
	mm	500	300	500	500	500	630	710	710	900	900	1000	1000	1000	
L	in	-	-	-	-	13.5	15.3	16.0	16.0	20.8	20.8	23.2	23.2	24.4	
	mm	-	-	-	-	342	389	406	406	529	529	590	590	619	
WEIGHT	RF	lb	132.3	207.2	264.6	458.6	1058.2	2006.2	3108.5	4585.6	5754.1	7936.6	13138.5	16248.1	23391.0
		kg	60	94	120	208	480	910	1410	2080	2610	3600	5960	7370	10610
	BW	lb	86.2	141.1	186.2	308.6	748.6	1499.1	1984.2	3196.7	3968.3	6062.7	10207.4	12610.4	18168.1
		kg	40	64	84	140	340	680	900	1450	1800	2750	4630	5720	8240

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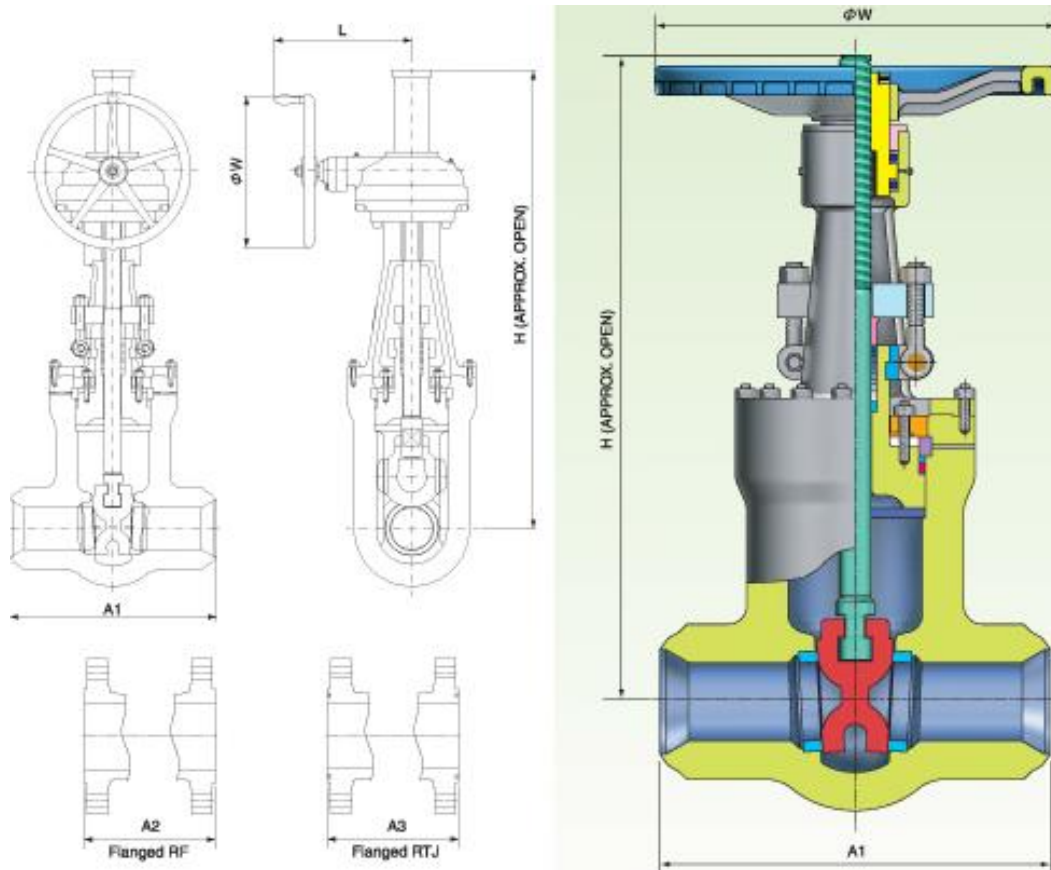


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**Gate Valves**  
Pressure seal Bonnet  
Class 2500



**Dimensions**

VALVE SIZE	in	2	2.5	3	4	6	8	10	12	14	16	18	
	mm	50	65	80	100	150	200	250	300	330	400	450	
A1	in	11.0	13.0	14.5	18.0	24.0	30.0	36.0	41.0	44.0	48.0	55.0	
	mm	279	330	368	457	610	762	914	1041	1118	1245	1397	
A2	in	17.8	20.0	22.8	26.5	36.0	40.2	50.0	56.0	-	-	-	
	mm	451	508	578	673	914	1022	1270	1422	-	-	-	
A3	in	17.9	20.2	23.0	26.9	36.5	40.9	50.9	56.9	-	-	-	
	mm	454	514	584	683	927	1038	1292	1444	-	-	-	
H	in	24.4	25.8	31.9	29.5	46.1	55.0	60.9	76.5	72.7	97.2	116.1	
	mm	619	659	809	750	1170	1397	1548	1942	1846	2470	2950	
W	in	11.8	14.0	17.7	19.7	19.7	28.0	31.5	35.4	35.4	39.4	39.4	
	mm	300	355	450	500	500	710	800	900	900	1000	1000	
L	in	-	-	-	-	13.5	16.0	18.1	20.8	20.8	24.4	24.4	
	mm	-	-	-	-	342	406	461	529	529	619	619	
WEIGHT	RF	lb	187.4	297.6	363.8	766.0	1786.7	2910.1	5233.8	7539.8	-	-	-
		kg	85	135	165	347	810	1320	2374	3420	-	-	-
	BW	lb	110.2	198.4	253.5	418.9	1146.4	1631.4	3627.4	6613.9	7486.7	9259.4	11023.1
		kg	50	90	115	190	520	740	1600	3000	3400	4200	5000

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