Number of vertices $n = 9$.
Adjacencies of Graph

1. vertex 1 adjacent to 4 5 6 7 8 9

2. vertex 2 adjacent to 4 5 6 7 8 9

3. vertex 3 adjacent to 4 5 6 7 8 9

4. vertex 4 adjacent to 1 2 3

5. vertex 5 adjacent to 1 2 3

6. vertex 6 adjacent to 1 2 3

7. vertex 7 adjacent to 1 2 3

8. vertex 8 adjacent to 1 2 3

9. vertex 9 adjacent to 1 2 3

Size of automorphism group of the graph=4320
Full group: $|Aut(polytope)| = 1105920$
Restricted group: $|Aut(G) \times switch| = 1105920$
Number of orbits for the full group : 2
List of orbits of facets for the full group: Total number of orbits $= 2$ Total number of facets $= 396$

1. Inequality 1 with incidence 128 and stabilizer of size 3072. Orbit size is 360 nature: 4-cycle inequality, C=[1, 4, 3, 5] F=[1, 4]

(1,4) : -1	(1,5) : 1	(1,6) : 0	(1,7) : 0	(1,8) : 0	(1,9) : 0
(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 0	(2,8) : 0	(2,9) : 0
(3,4) : 1	(3,5) : 1	(3,6) : 0	(3,7) : 0	(3,8) : 0	(3,9) : 0

2. Inequality 2 with incidence 128 and stabilizer of size 30720. Orbit size is 36 nature: edge inequality e=[2, 9]

(1,4) : 0	(1,5) : 0	(1,6) : 0	(1,7) : 0	(1,8) : 0	(1,9) : 0
(2,4) : 0	(2,5) : 0	(2,6) : 0	(2,7) : 0	(2,8) : 0	(2,9) : 1
(3,4) : 0	(3,5) : 0	(3,6) : 0	(3,7) : 0	(3,8) : 0	(3,9) : 0