Number of vertices $n = 10$.
Adjacencies of Graph

1. vertex 1 adjacent to 8 9 10
2. vertex 2 adjacent to 6 7 10
3. vertex 3 adjacent to 5 7 9
4. vertex 4 adjacent to 5 6 8
5. vertex 5 adjacent to 3 4 10
6. vertex 6 adjacent to 2 4 9
7. vertex 7 adjacent to 2 3 8
8. vertex 8 adjacent to 1 4 7
9. vertex 9 adjacent to 1 3 6
10. vertex 10 adjacent to 1 2 5

Size of automorphism group of the graph=120
Full group: $|Aut(polytope)| = 61440$
Restricted group: $|Aut(G) \times switch| = 61440$
Number of orbits for the full group : 4
List of orbits of facets for the full group: Total number of orbits = 4 Total number of facets = 3614

1. Inequality 1 with incidence 256 and stabilizer of size 2048. Orbit size is 30

(1,8) : 1	(1,9) : 0	(1,10) : 0	(2,6) : 0	(2,7) : 0	(2,10) : 0
(3,5) : 0	(3,7) : 0	(3,9) : 0	(4,5) : 0	(4,6) : 0	(4,8) : 0
(5,10) : 0	(6,9) : 0	(7,8) : 0			

2. Inequality 2 with incidence 160 and stabilizer of size 320. Orbit size is 192

(1,8) : 1	(1,9) : 1	(1,10) : 0	(2,6) : 0	(2,7) : 0	(2,10) : 0
(3,5) : 0	(3,7) : 1	(3,9) : 1	(4,5) : 0	(4,6) : 0	(4,8) : 0
(5,10) : 0	(6,9) : 0	(7,8) : -1			

3. Inequality 3 with incidence 96 and stabilizer of size 192. Orbit size is 320

(1,8) : 1	(1,9) : 0	(1,10) : -1	(2,6) : 1	(2,7) : 0	(2,10) : 1
(3,5) : 0	(3,7) : 0	(3,9) : 0	(4,5) : 0	(4,6) : 1	(4,8) : 1
(5,10) : 0	(6,9) : 0	(7,8) : 0			

4. Inequality 4 with incidence 15 and stabilizer of size 20. Orbit size is 3072

(1,8) : -1	(1,9) : 2	(1,10) : -1	(2,6) : 1	(2,7) : -1	(2,10) : 2
(3,5) : 2	(3,7) : 1	(3,9) : 1	(4,5) : -1	(4,6) : 2	(4,8) : 1
(5,10) : 1	(6,9) : 1	(7,8) : 2			